“SCHEDULE 6
GUYANA AVIATION REQUIREMENTS

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June 1st 2007
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PART 1 – GENERAL POLICIES, PROCEDURES AND DEFINITIONS

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1.1 RULES OF CONSTRUCTION

1.1.1 RULES OF CONSTRUCTION

(a) Throughout these regulations the following word usage applies:

(1) Shall indicates a mandatory requirement.

(2) The words “no person may...” or “a person may not...” mean that no person is required, authorised, or permitted to do an act described in the requirement.

(3) May indicates that discretion can be used when performing an act described in a requirement.

(4) Will indicates an action incumbent upon the requirement.

(5) Includes means “includes but is not limited to.”

(6) Approved means the Authority has reviewed the method, procedure, or policy in question and issued a formal written approval.

(7) Acceptable means the Authority has reviewed the method, procedure, or policy and has neither objected to nor approved its proposed use or implementation.

(8) Prescribed means the Authority has issued written policy or methodology which imposes either a mandatory requirement, if the written policy or methodology states “shall,” or a discretionary requirement if the written policy or methodology states “may.”

1.1.2 APPLICABILITY

(a) These requirements shall apply to all persons operating or maintaining the following—

(1) Guyana registered aircraft;

(2) Aircraft registered in another Contracting State that are operated by a person licensed by Guyana, and must be maintained in accordance with the standards of the aircraft State of Registry, wherever that maintenance is performed;

(3) Aircraft of other Contracting States operating in Guyana.

(b) Those requirements addressing persons certificated under any Part of these requirements, apply also to any person who engages in an operation governed by any Part of these requirements, without the appropriate certificate, operations specification, or similar document required as part of the certification.

(c) Requirements addressing general matters establish minimum standards for all aircraft operated in Guyana. Specific standards applicable to the holder of a certificate shall apply if they conflict with a more general regulation.

(d) Foreign air operators who conduct commercial air transport into, from or within Guyana, shall be governed by the provisions of the Operations Specification issued by the Authority, and by those provisions in Parts 7, 8, and 10 that specifically address commercial air transport. Regulations that address AOC holders apply only to operators certificated by Guyana.
1.1.3 ORGANISATION OF REGULATIONS

(a) These regulations are subdivided into five hierarchical categories:
   (1) Part refers to the primary subject area.
   (2) Subpart refers to any subdivision of a Part.
   (3) Section refers to any subdivision of a Subpart.
   (4) Subsection refers to the title of a regulation and can be a subdivision of a Subpart or Section,
   (5) Paragraph refers to the text describing the regulations. All paragraphs are outlined alphanumerically in the
       following hierarchical order: (a), (1), (i), (A).

(b) Definitions used throughout these regulations are organised as follows:
   (1) Definitions applicable to two or more Parts appear in Part 1, Subsection 1.1.4;
   (2) Definitions applicable only to one Part appears at the beginning of that Part; and
   (3) Definitions contained in the Civil Aviation Act of Guyana are presented therein, and not in these
       regulations

(c) Acronyms used within each Part are defined at the beginning of those Parts, and if a definition is supplied, a
    note will indicate the Part where the definition is located.

(d) Notes appear in Subsections to provide exceptions, explanations, and examples to individual requirements.

(e) Subsections may refer to Implementing Standards, which provide additional detailed requirements that support
    the purpose of the subsection, and where specifically referenced by the subsection, gain the legal force and
    effect of the referring subsection. The rules of construction, Subsection 1.1.1, apply to Implementing Standards.
1.1.4 DEFINITIONS
(a) For the purpose of these regulations, the following definitions shall apply:

(1) **Accountable manager.** The manager who has corporate authority for ensuring that all prescribed actions are performed to the standard required by the Authority. When authorised by the Authority, the accountable manager may delegate all or part of his or her authority in writing to another person within the organisation, who becomes the accountable manager for the matters delegated.

(2) **Aerodrome.** A defined area on land or water (including any buildings. Installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.

(3) **Aeronautical experience.** Pilot time obtained in an aircraft, approved flight simulator, or approved flight-training device for meeting the training and flight time requirements of these regulations.

(4) **Aeronautical product.** Any aircraft, aircraft engine, propeller, or subassembly, appliance, material, part, or component to be installed thereon.

(5) **Aeroplane.** A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(6) **Air Traffic Control.** A service that promotes the safe, orderly, and expeditious flow of air traffic at aerodromes and during the approach, departure, and en route environments.

(7) **Air Traffic Control (ATC) facility.** A building holding the persons and equipment responsible for providing ATC services (e.g., airport tower, approach control, centre).

(8) **Aircraft category.** Classification of aircraft according to specified basic characteristics (e.g., aeroplane, helicopter, glider, free balloon).

(9) **Aircraft component.** Any component part of an aircraft up to and including a complete powerplant and/or any operational/emergency equipment.

(10) **Aircraft type.** All aircraft of the same basic design.

(11) **Airframe.** The fuselage, booms, nacelles, cowlings, fairings, airfoil surfaces (including rotors but excluding propellers and rotating airfoils of a powerplant), and landing gear of an aircraft and their accessories and controls.

(12) **Airworthiness data.** Any information necessary to ensure that an aircraft or aircraft component can be maintained in a condition such that airworthiness of the aircraft, or serviceability of operational and emergency equipment, as appropriate, is assured.

(13) **Airworthiness release.** A certification signed by a licensed mechanic authorised by the AOC holder indicating that work was performed in accordance with the AOC holder's maintenance manual, was inspected by a licensed mechanic, and the aircraft was found satisfactory for safe operation.

(14) **Appliance.** Any instrument, mechanism, equipment, part, apparatus, appurtenance, or accessory, including communications equipment, that is used or intended to be used in operating or controlling an aircraft in flight, is installed in or attached to the aircraft, and is not part of an airframe, powerplant, or propeller.

(15) **Approved by the Authority.** Approved by the Authority directly or in accordance with a procedure approved by the Authority.
(16) **Approved Maintenance Organisation (AMO).** An organisation approved to perform specific aircraft maintenance activities by the Authority. These activities may include the inspection, overhaul, maintenance, repair and/or modification and release to service of aircraft or aeronautical products.

(17) **Approved continuous maintenance program.** A maintenance program approved by the State of Registry.

(18) **Approved standard.** A manufacturing, design, maintenance, or quality standard approved by the Authority.

(19) **Approved training.** Training carried out under special curricula and supervision approved by the Authority.

(20) **Authorised instructor.** A person who—

(i) Holds a valid ground instructor certificate issued under Part 2 when conducting ground training;

(ii) Holds a current flight instructor certificate issued under Part 2 when conducting ground training or flight training; or

(iii) Is authorised by the Authority to provide ground training or flight training under Part 2 and Part 3.

(21) **Authority.** The Civil Aviation Authority responsible for the oversight of civil aviation in Guyana.

(22) **Balloon.** A non-power-driven lighter-than-air aircraft.

(23) **Category II (CAT II) operations.** With respect to the operation of aircraft, means a straight-in ILS approach to the runway of an airport under a Category II ILS instrument approach procedure issued by the Authority or other appropriate authority.

(24) **Category III (CAT III) operations.** With respect to the operation of aircraft, means an ILS approach to, and landing on, the runway of an airport using a Category III ILS instrument approach procedure issued by the Authority or other appropriate authority.

(25) **Certify as airworthy.** The required maintenance record entry completed by a properly authorised person after the modification, overhaul, repair, or the inspection of an aircraft, or aeronautical product required by the Authority.

(26) **Certifying staff.** Those personnel who are authorised by the Approved Maintenance Organisation in accordance with a procedure acceptable to the Authority to certify aircraft or aircraft components for release to service.

(27) **Commercial air transport.** An aircraft operation involving the transport of passengers, cargo, or mail for remuneration or hire.

(28) **Contracting States.** All States that are signatories to the Convention on International Civil Aviation (Chicago Convention).

(29) **Course.** A program of instruction to obtain an airman license, rating, qualification, authorisation, or currency.

(30) **Courseware.** Instructional material developed for each course or curriculum, including lesson plans, flight event descriptions, computer software programs, audio-visual programs, workbooks, and handouts.
(31) **Crew Resource Management.** A program designed to improve the safety of flight operations by optimising the safe, efficient, and effective use of human resources, hardware, and information through improved crew communication and co-ordination.

(32) **Cross-country time.** That time a pilot spends in flight in an aircraft which includes a landing at a point other than the point of departure and, for the purpose of meeting the cross-country time requirements for a private pilot license (except with a rotorcraft rating), commercial pilot license, or an instrument rating, includes a landing at an aerodrome which must be a straight-line distance of more than 50 nautical miles from the original point of departure.

(33) **Dual instruction time.** Flight time during which a person is receiving flight instruction from a properly authorised pilot on board the aircraft.

(34) **Evaluator.** A person employed by a certified Aviation Training Organisation who performs tests for licensing, added ratings, authorisations, and proficiency checks that are authorised by the certificate holder's training specification, and who is authorised by the Authority to administer such checks and tests.

(35) **Examiner.** Any person authorised by the Authority to conduct a pilot proficiency test, a practical test for an airman license or rating, or a knowledge test under these Requirements.

(36) **Flight crewmember.** A licensed crewmember charged with duties essential to the operation of an aircraft during flight time.

(37) **Flight simulator.** A device that—

(i) Is a full-size aircraft cockpit replica of a specific type of aircraft, or make, model, and series of aircraft;

(ii) Includes the hardware and software necessary to represent the aircraft in ground operations and flight operations;

(iii) Uses a force cueing system that provides cues at least equivalent to those cues provided by a 3 degree freedom of motion system;

(iv) Uses a visual system that provides at least a 45 degree horizontal field of view and a 30 degree vertical field of view simultaneously for each pilot; and

(v) Has been evaluated, qualified, and approved by the Authority.

(38) **Flight time.** The total time from the moment an aircraft first moves under its own power for the purpose of taking off until the moment it comes to rest at the end of the flight.

*Note: Flight time as here defined is synonymous with the term "block-to-block" time or "chock-to-chock" time in general usage, which is measured from the time an aircraft moves from the loading point until it stops at the unloading point.*

(39) **Flight training device.** A device that—

(i) Is a full-size replica of the instruments, equipment, panels, and controls of an aircraft, or set of aircraft, open or in an enclosed cockpit, including the hardware and software for the systems installed, that is necessary to simulate the aircraft in ground and flight operations;

(ii) Need not have a force (motion) cueing or visual system; and

(iii) Has been evaluated, qualified, and approved by the Authority.
Note: A set of aircraft are those that share similar performance characteristics, such as similar airspeed and altitude operating envelopes, similar handling characteristics, and the same number and type of propulsion systems.

(40) **Flight training.** Training, other than ground training, received from an authorised instructor in flight in an aircraft.

(41) **Glider.** A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces, which remain, fixed under given conditions of flight.

(42) **Helicopter.** A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axis.

(iv) **Class 1 helicopter.** A helicopter with performance such that, in case of critical engine failure, it is able to land on the rejected take-off area or safely continue the flight to an appropriate landing area, depending on when the failure occurs.

(v) **Class 2 helicopter.** A helicopter with performance such that, in case of critical engine failure, it is able to safely continue the flight, except when the failure occurs prior to a defined point after take-off or after a defined point before landing, in which case a forced landing may be required.

(vi) **Class 3 helicopter.** A helicopter with performance such that, in case of engine failure at any point in the flight profile, a forced landing must be performed.

(43) **Inspection.** The examination of an aircraft or aeronautical product to establish conformity with a standard approved by the Authority.

(44) **Instrument approach.** An approach procedure prescribed by the Authority having jurisdiction over the aerodrome.

(45) **Instrument time.** Time in which cockpit instruments are used as the sole means for navigation and control.

(46) **Instrument training.** Training which is received from an authorised instructor under actual or simulated instrument meteorological conditions.

(47) **Knowledge test.** A test on the aeronautical knowledge areas required for an airman license or rating that can be administered in written form or by a computer.

(48) **Large aeroplane.** An aeroplane of a maximum certificated take–off mass of over 5700kg.

(49) **Maintenance.** Tasks required to ensure the continued airworthiness of an aircraft or aeronautical product including any one or combination of overhaul, repair, inspection, replacement, modification, and defect rectification.

(50) **Maintenance release.** A document containing a certification that inspection and maintenance work has been performed satisfactorily in accordance with the methods prescribed by the Authority.

(51) **Minimum equipment list (MEL).** A list approved by the Authority which provides for the operation of aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the Master Minimum Equipment List established for the aircraft type by the aircraft manufacturer, and approved by the State of Design.

(52) **Night.** The hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise. Civil twilight ends in the evening when the centre of the sun's disc is 6 degrees below the horizon and begins in the morning when the centre of the sun's disc is 6 degrees below the horizon.

(53) **Operational control.** The exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of the safety of the aircraft and the regularity and efficiency of the flight.
(54) **Pilot in command.** The pilot responsible for the operation and safety of the aircraft during flight time.

(55) **Pilot time.** That time a person—
  (i) Serves as a required pilot;
  (ii) Receives training from an authorised instructor in an aircraft, approved flight simulator, or approved flight training device; or
  (iii) Gives training as an authorised instructor in an aircraft, approved flight simulator, or approved flight-training device.

(56) **Powered-lift.** A heavier-than-air aircraft capable of vertical takeoff, vertical landing, and low speed flight that depends principally on engine-driven lift devices or engine thrust for lift during these flight regimes and on nonrotating airfoil(s) for lift during horizontal flight.

(57) **Powerplant.** An engine that is used or intended to be used for propelling aircraft. It includes turbo superchargers, appurtenances, and accessories necessary for its functioning, but does not include propellers.

(58) **Practical test.** A competency test on the areas of operations for a license, certificate, rating, or authorisation that is conducted by having the applicant respond to questions and demonstrate manoeuvres in flight, in an approved flight simulator, or in an approved flight training device, or in a combination of these.

(59) **Pre-flight inspection.** The inspection carried out before flight to insure that the aircraft is fit for the intended flight.

(60) **Pressurised aircraft.** For airman-licensing purposes, means an aircraft that has a service ceiling or maximum operating altitude, whichever is lower, above 25,000 feet MSL.

(61) **Propeller.** A device for propelling an aircraft that has blades on a powerplant driven shaft and that, when rotated, produces by its action on the air, a thrust approximately perpendicular to its plane of rotation. It includes control components normally supplied by its manufacturer, but does not include main and auxiliary rotors or rotating airfoils of powerplants.

(62) **Rating.** An authorisation entered on or associated with a license or certificate and forming part thereof, stating special conditions, privileges or limitations pertaining to such license or certificate.

(63) **Repair.** The restoration of an aircraft/aeronautical product to a serviceable condition in conformity with an approved standard.

(64) **Second in command.** A licensed pilot serving in a piloting capacity other than as pilot-in-command, who is designated as second in command and who meets second in command requirements of Part 8 of these regulations.

(65) **Small aeroplane.** An aeroplane having a maximum certified take-off mass of less than 5,700 kg. (12,500 lbs.).

(66) **Solo flight.** Flight time during which a student pilot is the sole occupant of the aircraft, or that flight time during which the student acts as a PIC of a gas balloon or an airship requiring more than one flight crewmember.

(67) **State of Registry.** The Contracting State on whose registry an aircraft is entered.

(68) **Technical log.** A document carried on an aircraft that contains information to meet ICAO requirements; a technical log contains two independent sections: a journey record section and an aircraft maintenance record section.
(69) **Training program.** Program that consists of courses, courseware, facilities, flight training equipment, and personnel necessary to accomplish a specific training objective. It may include a core curriculum and a specialty curriculum.

(70) **Training time.** The time spent receiving from an authorised instructor flight training, ground training, or simulated flight training in an approved flight simulator or approved flight-training device.
1.2 GENERAL ADMINISTRATIVE RULES GOVERNING TESTING, LICENSES, AND CERTIFICATES

1.2.1 DISPLAY AND INSPECTION OF LICENSES AND CERTIFICATES

(a) Pilot license:
   (1) To act as a pilot of a civil aircraft of Guyana registry, a pilot shall have in his or her physical possession or readily accessible in the aircraft a valid pilot license or special purpose authorisation issued under these requirements.
   (2) To act as a pilot of a civil aircraft of foreign registry within Guyana, a pilot shall be the holder of an appropriate pilot's license, granted or rendered valid under the Law of the country in which the aircraft is registered, or granted and rendered valid under these requirements and have the pilot license in his or her physical possession or readily accessible in the aircraft.

(b) Flight instructor license: A person who holds a flight instructor license shall have that license, or other documentation acceptable to the Authority, in that person’s physical possession or readily accessible in the aircraft when exercising the privileges of that license.

(c) Other airman license: A person required by any part of these regulations to have an airman’s license shall have it in their physical possession or readily accessible in the aircraft or at the work site when exercising the privileges of that license.

(d) Medical certificate: A person required by any part of these regulations to have a current medical certificate shall have it in their physical possession or readily accessible in the aircraft or at the work site when exercising the privileges of that certificate.

(e) Pilot School certificate and Aviation Maintenance Technician School certificate: Each holder of a Pilot School certificate or a provisional Pilot School certificate or Aviation Maintenance Technician School certificate shall display that certificate in a place in the school that is normally accessible to the public and that is not obscured.

(f) Training Centre Certificate: Each holder of a Training Centre certificate shall prominently display that certificate in a place accessible to the public in the principal business office of the training centre.

(g) Aircraft Airworthiness Certificate: Each owner or operator of an aircraft shall display that certificate in the cabin of the aircraft or at the entrance to the aircraft flight deck or have such certificate readily accessible.

(h) Approved Maintenance Organisation (AMO) Certificate: Each holder of an AMO certificate shall prominently display that certificate in a place accessible to the public in the principal business office of the AMO.

(i) Inspection of license: Each person who holds an airman or crewmember license, medical certificate, or authorisation required by these requirements shall present it for inspection upon a request from:
   (1) The Authority; or
   (2) Any law enforcement officer.
1.2.2 Change of Name

(a) A holder of a license or certificate issued under these regulations may apply to change the name on a license or certificate. The holder shall include with any such request—

(1) The current license or certificate; and

(2) A copy of the marriage license, court order, or other document verifying the name change.

(b) The Authority will return to the airman the documents specified in paragraph (a) of this subsection.

1.2.3 Change of Address

The holder of an airman license or pilot school, training centre, or aviation maintenance school certificate who has made a change in permanent mailing address may not, after 30 days from that date, exercise the privileges of the license or certificate unless the holder has notified the Authority in writing of the new permanent mailing address, or current residential address if the permanent mailing address includes a post office box number.

1.2.4 Replacement of a Lost or Destroyed Airman or Medical Certificate or Knowledge Test Report

(a) An applicant who has lost or destroyed one of the following documents issued under these regulations shall request a replacement in writing from the office designated by the Authority:

(1) An airman license.

(2) A medical certificate.

(3) A knowledge test report.

(b) The airman or applicant shall state in the request letter—

(1) The name of the airman or applicant;

(2) The permanent mailing address, or if the permanent mailing address includes a post office box number, the person’s current residential address;

(3) The national identification number; or passport number

(4) The date and place of birth of the airman or applicant; and

(5) Any available information regarding the—

(i) Grade, number, and date of issuance of the license, and the ratings, if applicable;

(ii) Date of the medical examination, if applicable; and

(iii) Date the knowledge test was taken, if applicable.

(c) After receiving a facsimile from the Authority confirming that the lost or destroyed document was issued, an airman may carry the facsimile in lieu of the lost or destroyed document for up to 60 days pending the airman’s receipt of a duplicate document
1.2.5 **FALSIFICATION, REPRODUCTION, OR ALTERATION OF APPLICATIONS, CERTIFICATES, LOGBOOKS, REPORTS, OR RECORDS**

(a) No person may make or cause to be made concerning any license, certificate, rating, qualification, or authorisation, application for or duplicate thereof, issued under these regulations:

1. Any fraudulent or intentionally false statement;
2. Any fraudulent or intentionally false entry in any logbook, record, or report that these regulations require, or used to show compliance with any requirement of these regulations;
3. Any reproduction for fraudulent purpose; or
4. Any alteration.

(b) Any person who commits any act prohibited under paragraph (a) of this section may have his or her airman license, rating, certificate, qualification, or authorisation revoked or suspended.

1.2.6 **SURRENDER, SUSPENSION, OR REVOCATION OF LICENSE OR CERTIFICATE**

(a) Any license or certificate issued under these regulations ceases to be effective if it is surrendered, suspended, or revoked.

(b) The holder of any license or certificate issued under these regulations that has been suspended or revoked shall return that license or certificate to the Authority when requested to do so by the Authority.

1.2.7 **REAPPLICATION AFTER REVOCATION**

Unless otherwise authorised by the Authority, a person whose license, certificate, rating, or authorisation has been revoked may not apply for any license, certificate, rating, or authorisation for 1 year after the date of revocation.

1.2.8 **REAPPLICATION AFTER SUSPENSION**

Unless otherwise authorised by the Authority, a person whose license has been suspended may not apply for any license, rating, or authorisation during the period of suspension.

1.2.9 **VOLUNTARY SURRENDER OR EXCHANGE OF LICENSE**

(a) The holder of a license or certificate issued under these regulations may voluntarily surrender it for:

1. Cancellation;
2. Issuance of a lower grade license; or
3. Another license with specific ratings deleted.

(b) An applicant requesting voluntary surrender of a license shall include the following signed statement or its equivalent: "This request is made for my own reasons, with full knowledge that my (insert name of license or rating, as appropriate) may not be reissued to me unless I again pass the tests prescribed for its issuance."
1.2.10 **PROHIBITION ON PERFORMANCE DURING MEDICAL DEFICIENCY**

(a) A person who holds a current medical certificate issued under these regulations shall not act in a capacity for which that medical certificate is required while that person:

1. Knows or has reason to know of any medical condition that would make the person unable to meet the requirements for the required medical certificate; or
2. Is taking medication or receiving other treatment for a medical condition that results in the person being unable to meet the requirements for the required medical certificate.

1.2.11 **DRUG AND ALCOHOL TESTING AND REPORTING**

(a) An employee who performs any function requiring a license, rating, qualification, or authorisation prescribed by these regulations directly or by contract for a certificate holder under the provisions of these regulations may be tested for drug or alcohol usage.

1. Be denied any license, certificate, rating, qualification, or authorisation for a period of up to 1 year after the date of such refusal; and
2. Have his or her license, certificate, rating, qualification, or authorisation issued under these regulations suspended or revoked.

(b) Any person subject to these regulations who is convicted for the violation of any local or national statute relating to the growing, processing, manufacture, sale, disposition, possession, transportation, or importation of narcotic drugs, marijuana, or depressant or stimulant drugs or substances, may—

1. Be denied any license, certificate, rating, qualification, or authorisation issued under these regulations for a period of up to 1 year after the date of final conviction; or
2. Have his or her license, certificate, rating, qualification, or authorisation issued under these regulations suspended or revoked.

(c) Any person subject to these regulations who refuses to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer, or refuses to furnish or to authorise the release of the test results requested by the Authority may—

1. Be denied any license, certificate, rating, qualification, or authorisation issued under these regulations for a period of up to 1 year after the date of that refusal; or
2. Have his or her license, certificate, rating, qualification, or authorisation issued under these regulations suspended or revoked.

(d) Any person, subject to these Requirements, who is convicted for the violation of any national statute relating to the growing processing, manufacture, sale, disposition, possession, transportation or importation of narcotic drugs marijuana, or depressant or stimulant drugs substances may—

1. Be denied any licence, certificate, rating, qualification or authorization issued under these Requirements for a period of up to one year after the date of final conviction; or
2. Have his or her licence, certificate rating, qualification or authorization issued under these Requirements suspended or revoked.
1.3  EXEMPTIONS AND EQUIVALENT SAFETY CASE

1.3.1  EXEMPTIONS AND EQUIVALENT SAFETY CASE

No person may introduce procedures contrary to those prescribed in these regulations unless needed and an equivalent safety case has first been approved by the Authority.
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**PART 2**

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### Experience and Flight Instructions Requirements for the PPL

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**Notes**
- **PPL**: Private Pilot Licence
- **CPL**: Commercial Pilot Licence
- **ATPL**: Airline Transport Pilot Licence
- **IR**: Instrument Rating
- **IR(R)**: Instrument Rating with Radiotelephone (R) Authorization
- **IR(L)**: Instrument Rating with Lidar (L) Authorization
- **IR(S)**: Instrument Rating with Synthetic Vision (S) Authorization
- **IR(N)**: Instrument Rating with Night (N) Authorization
- **IR(R/L)**: Instrument Rating with Radiotelephone and Lidar Authorization
- **IR(R/S)**: Instrument Rating with Radiotelephone and Synthetic Vision Authorization
- **IR(R/L/S)**: Instrument Rating with Radiotelephone, Lidar, and Synthetic Vision Authorization
- **IR(R/N)**: Instrument Rating with Radiotelephone and Night Authorization
- **IR(L/N)**: Instrument Rating with Lidar and Night Authorization
- **IR(S/N)**: Instrument Rating with Synthetic Vision and Night Authorization
- **IR(R/L/S/N)**: Instrument Rating with Radiotelephone, Lidar, Synthetic Vision, and Night Authorization

**Relevant Authorities**
- **FAA**: Federal Aviation Administration
- **EASA**: European Aviation Safety Agency
- **ICAO**: International Civil Aviation Organization

**Additional Information**
- **Crediting of Flight Time**
- **General Rule Concerning Pilot Licences, Rating and Authorizations**
- **Revocation of Licenses, Ratings and Authorizations**
- **Suspension of Licenses, Ratings and Authorizations**

**Notes on Flight Time Recording**
- Flight time must be recorded accurately and kept for at least 10 years.
- Flight time logs must be available upon request by regulatory authorities.

**Notes on Approval and Authorization**
- Licences, ratings, and authorizations are granted based on successful completion of required training and examination.
- Licences, ratings, and authorizations are subject to periodic renewal based on continued competency and adherence to safety regulations.

**Additional Resources**
- **FAA Pilot's Handbook**
- **ICAO Training Manual**
- **EASA Flight Crew Member's Guide**

**Contact Information**
- For further inquiries, contact the respective aviation authority responsible for the category of licence or rating.

**Legal Compliance**
- Ensure compliance with all relevant regulations and standards to avoid penalties and revocation of licences.

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**Part 2**

**GUYANA AVIATION REQUIREMENTS**

**June 1st 2007**

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2.1 GENERAL

2.1.1 Applicability

Part 2 prescribes:
(a) the requirements for issuing, renewal and re-issue of aviation personnel licences, ratings, authorizations and certificates;
(b) the conditions under which those licences, ratings, authorizations and certificates are necessary; and
(c) the privileges and limitations granted to the holders of those licences, ratings, authorizations and certificates.

2.1.2 Definitions

(a) For the purpose of Part 2, the definitions in the Law, in Part 1 and the following definitions shall apply:

(1) Accredited medical conclusion. The conclusion reached by one or more medical experts acceptable to the Licensing Authority for the purposes of the case concerned, in consultation with flight operations or other experts as necessary.

(2) Aeroplane. A power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(3) Aircraft. Any machine that can derive support in the atmosphere from the reactions of the air other than the reactions of the air against the earth’s surface.

(4) Aircraft avionics. A term designating any electronic device – including its electrical part – for use in an aircraft, including radio, automatic flight control and instrument systems.

(5) Aircraft – category. Classification of aircraft according to specific basic characteristics, e.g. aeroplane, helicopter, glider, free balloon.

(6) Aircraft certificated for single-pilot operation. A type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of one pilot.

(7) Aircraft certificated for multi-pilot operation. A type of aircraft which the State of Registry has determined, during the certification process, can be operated safely with a minimum crew of two pilots.

Note: During the certification process, Guyana may issue a certificate of airworthiness designating an aircraft for single-pilot operation based upon the Type Certificate issued by the State of Design, but might also require that the same aircraft be operated by more than one pilot under certain conditions, such as use in air transportation.

(8) Aircraft required to be operated with a co-pilot. A type of aircraft that is required to be operated with a co-pilot as specified by the type certificate or the air operator certificate.

(9) Aircraft – type of. All aircraft of the same basic design including all modifications thereto except those modifications which result in a change in handling or flight characteristics.

(10) Airmanship. The consistent use of good judgement and well-developed knowledge, skill and attitudes to accomplish flight objectives.

(11) Airship. A power-driven lighter-than-air aircraft.

(12) Approved maintenance organisation. An organisation approved by Guyana to perform maintenance of aircraft or parts thereof and operating under supervision approved by Guyana.
(13) **Approved training.** Training conducted under special curricula and supervision approved by Guyana.

(14) **Approved training organisation.** An organisation approved by Guyana in accordance with the requirements of Part 3 to perform flight crew training and operating under the supervision of Guyana.

(15) **ATS surveillance service.** Term used to indicate a service provided directly by means of an ATS surveillance system.

(16) **ATS surveillance system.** A generic term meaning variously, ADS-B, PSR, SSR or any comparable ground-based system that enables the identification of aircraft.

(17) **Balloon.** A non-power-driven lighter-than-air aircraft. (This definition applies to free balloons).

(18) **Calendar month.** A period of a month beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered year (as January 1 through January 31 in the Gregorian calendar).

(19) **Calendar year.** A period of a year beginning and ending with the dates that are conventionally accepted as marking the beginning and end of a numbered year (as January 1 through December 31 in the Gregorian calendar).

(20) **Certify as airworthy (to).** To certify that an aircraft or parts thereof comply with current airworthiness requirements after maintenance has been performed on the aircraft or parts thereof.

(21) **Commercial air transport operation.** An aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire.

(22) **Competency.** A combination of skills, knowledge and attitudes required to perform a task to the prescribed standard.

(23) **Competency element.** An action that constitutes a task that has a triggering event and a terminating event that clearly defines its limits, and an observable outcome.

(24) **Competency unit.** A discrete function consisting of a number of competency elements.

(25) **Conversion.** Conversion is the action taken by Guyana in issuing its own licence on the basis of a licence issued by another Contracting State for use on aircraft registered in Guyana.

(26) **Co-pilot.** A licensed pilot serving in any piloting capacity other than as plot-in-command but excluding a pilot who is on board the aircraft for the sole purpose of receiving flight instruction.

(27) **Credit.** Recognition of alternative means or prior qualifications.

(28) **Cross country.** A flight between a point of departure and a point of arrival following a pre-planned route using standard navigation procedures.

(29) **Dual instruction time.** Flight time during which a person is receiving flight instruction from a properly authorised pilot on board the aircraft.

(30) **Error.** An action or inaction by an operational person that leads to deviations from organisational or operational person intentions or expectations.

(31) **Error management.** The process of detecting and responding to errors with countermeasures that reduce or eliminate the consequences of errors, and mitigate the probability of errors or undesired states.

(32) **Flight crew member.** A licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period.

(33) **Flight plan.** Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft.

(34) **Flight time – aeroplanes.** The total time from the moment an aeroplane first moves for the purpose of taking off until the moment it finally comes to rest at the end of the flight.
(35) **Flight time – helicopters**. The total time from the moment a helicopter’s rotor blades start turning until the moment the helicopter finally comes to rest at the end of the flight, and the rotor blades are stopped.

(36) **Flight simulation training device (also known as synthetic flight trainer).** Any one of the following three types of apparatus in which flight conditions are simulated on the ground:

- A *flight simulator*, which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, etc. aircraft systems control functions, the normal environment of flight crew members, and the performance and flight characteristics of that type of aircraft are realistically simulated.
- A *flight procedures trainer*, which provides a realistic flight deck environment, and which simulates instrument responses, simple control functions of mechanical, electrical, electronic, etc. aircraft systems, and the performance and flight characteristics of aircraft of a particular class;
- A *basic instrument flight trainer*, which is equipped with appropriate instruments and which simulates the flight deck environment of an aircraft in flight in instrument flight conditions.

(37) **Glider.** A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.

(38) **Glider flight time.** The total time occupied in flight, whether being towed or not, from the moment the glider first moves for the purpose of taking off until the moment it comes to rest at the end of the flight.

(39) **Helicopter.** A heavier-than-air aircraft supported in flight chiefly by the reactions of the air on one or more power-driven rotors on substantially vertical axes.

(40) **High performance aircraft.** With respect to a rating, means an aircraft that, in accordance with its type certificate, requires only one pilot and that has a maximum speed (V<sub>ne</sub>) of an indicated airspeed of 250 knots or greater or a stall speed (V<sub>so</sub>) of an indicated airspeed of 80 knots or greater.

(41) **Human performance.** Human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations.

(42) **Instrument flight time.** Time during which a pilot is piloting an aircraft solely by reference to instruments and without external reference points.

(43) **Instrument ground time.** Time during which a pilot is practising, on the ground, simulated instrument flight in a synthetic flight trainer approved by the Guyana Civil Aviation Authority.

(44) **Instrument time.** Instrument flight time or instrument ground time.

(45) **Licensing Authority.** The Guyana Civil Aviation Authority (sometimes referred to as “the Authority”).

**NOTE —** The Licensing Authority have the following responsibilities:
- assessment of an applicant’s qualification to hold a licence or rating;
- issue and endorsement of licences and ratings;
- designation and authorisation of approved persons;
- approval of training courses;
- approval of the use of synthetic flight trainers and authorisation for their use for gaining the experience or in demonstrating the skill required for the use of a licence or rating; and
- validation and conversion of licences issued by other Contracting States.
(46) **Likely.** In the context of the medical provisions in chapter 2.10, likely means with a probability of occurring that is unacceptable to the Medical Assessor/Authority.

(47) **Maintenance.** The performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

(48) **Medical Assessment.** The evidence issued by the Guyana Civil Aviation Authority that the licence holder meets specific requirements of medical fitness. A Medical Assessment may also be referred to as a Medical Certificate.

(49) **Medical Assessor.** A physician qualified and experienced in the practice of aviation medicine who evaluates medical reports submitted to the Licensing Authority by medical examiners.

(50) **Medical Examiner.** A physician with training in aviation medicine and practical knowledge and experience of the aviation environment, who is designated by the Licensing Authority to conduct medical examinations of fitness of applicants for licences or ratings for which medical requirements are prescribed.

(51) **Night.** The hours between the end of evening civil twilight and the beginning of morning civil twilight. (Civil twilight ends in the evening when the centre of the sun’s disc is 6 degrees below the horizon and begins in the morning when the centre of the sun’s disc is 6 degrees below the horizon)

(52) **Performance criteria.** A simple, evaluative statement on the required outcome of the competency element and a description of the criteria used to judge if the required level of performance has been achieved.

(53) **Pilot (to).** To manipulate the flight controls of an aircraft during flight time.

(54) **Pilot-in-command.** The pilot designated by the operator, or in the case of general aviation, the owner, as being in command and charged with the safe conduct of a flight.

(55) **Pilot-in-command under supervision.** Co-pilot performing, under the supervision of the pilot-in-command, the duties and functions of a pilot-in-command, provided that the method of supervision employed is acceptable to the Guyana Civil Aviation Authority.

(56) **Powered-lift.** A heavier-than-air-aircraft capable of vertical take-off, vertical landing, and low speed flight that depend principally on engine-driven lift devices or engine thrust for the lift during these flight regimes and on non-rotating aerofoil(s) for lift during horizontal flight.

(57) **Problematic use of substances.** The use of one or more psychoactive substances by aviation personnel in a way that:

(i) Constitutes a direct hazard to the user or endangers the lives, health or welfare of others; and/or

(ii) Causes or worsens an occupational, social, mental or physical problem or disorder.

(58) **Psychoactive substances.** Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded.

(59) **Quality system.** Documented organisational policies and procedures; internal audit of those policies and procedures; management review and recommendation for quality improvement.

(60) **Rated air traffic controller.** An air traffic controller holding a licence and valid ratings appropriate to the privileges to be exercised.

(61) **Rating.** An authorisation entered on or associated with a licence and forming part thereof, stating special conditions, privileges or limitations pertaining to such licence.

(62) **Rendering (a licence) valid.** The action taken by Guyana, as an alternative to issuing its own licence, in accepting a licence issued by any other Contracting State as the equivalent of its own licence.
(63) **Renewal of licence, rating, authorization or certificate.** The administrative action taken within the period of validity of a licence, rating, authorization or certificate that allows the holder to continue to exercise the privileges of a licence, rating, authorization or certificate for a further specified period consequent upon the fulfilment of specified requirements.

(64) **Re-issue of a licence, rating, authorization or certificate.** The administrative action taken after a licence, rating, authorization or certificate has lapsed that re-issues the privileges of the licence, rating, authorization or certificate for a further specified period consequent upon the fulfilment of specified requirements.

(65) **Route sector.** A flight comprising take off, departure, cruise of not less than 15 minutes, arrival, approach and landing phases.

(66) **Sign a maintenance release (to).** To certify that maintenance work has been completed satisfactorily in accordance with the applicable Standards of airworthiness by issuing the maintenance release referred to in Part 5.

(67) **Significant.** In the context of the medical provisions in chapter 2.10, significant means to a degree or of a nature that is likely to jeopardise flight safety.

(68) **Solo flight time.** Flight time during which a student is the sole occupant of an aircraft.

(69) **Synthetic flight trainer.** (see flight simulation training device).

(70) **Threat.** Events or errors that occur beyond the influence of an operational person, increase operational complexity and which must be managed to maintain the margin of safety.

(71) **Threat management.** The process of detecting and responding to the threats with countermeasures that reduce or eliminate the consequences of threats, and mitigate the probability of errors or undesired states.

(72) **Validation.** The action taken by Guyana as an alternative to issuing its own licence, in accepting a licence issued by another Contracting State as the equivalent of its own licence for use on aircraft registered in Guyana.
2.1.3 Abbreviations

(a) The following abbreviations are used in Part 2:

(1) A - Aeroplane
(2) AIP – Aeronautical Information Publication
(3) AMEX – Aviation Medical Examiner
(4) AME - Aircraft Maintenance Engineer also known as Aircraft Maintenance Technician
(5) (Reserved)
(6) AS – Airship
(7) ATCO – Air Traffic Controller
(8) ATPL – Airline Transport Pilot Licence
(9) B – Balloon
(10) CAT II/III – Category II/III
(11) CPL – Commercial Pilot Licence
(12) CRM – Crew Resource Management
(13) FE – Flight Engineer
(14) FI – Flight Instructor
(15) G – Glider
(16) IA – Inspection Authorisation
(17) IFR – Instrument Flight Rules
(18) ILS – Instrument Landing System
(19) IR – Instrument Rating
(20) H - Helicopter
(21) ICAO – International Civil Aviation Organisation
(22) MPA – Multi-pilot Aeroplane
(23) MPH – Multi-pilot Helicopter
(24) MPL – Multi-crew Pilot Licence
(25) NOTAM – Notice to airmen
(26) PIC – Pilot-in-Command
(27) PL – Powered-lift
(28) PPL – Private Pilot Licence
(29) RT – Radiotelephony
(30) SPA – Single-pilot Aeroplane
(31) SPH – Single-pilot Helicopter
(32) VFR – Visual Flight Rules
2.2  GENERAL LICENSING REQUIREMENTS

2.2.1  GENERAL

(a) The Authority will issue, renew or re-issue a licence, rating, authorization, designation and/or certificate when the applicant complies with the requirements of Part 2 and the procedures in IS:2.2.1.

(b) Privileges. The holder of a licence, certificate, authorisation or designation shall not exercise privileges other than those granted by the licence, certificate, authorisation or designation.

(c) Medical fitness. An applicant for a flight crew or air traffic controller licence shall hold an appropriate Medical Assessment issued in accordance with the provisions of this Part.

2.2.2  LICENCES, RATINGS, AUTHORIZATIONS AND CERTIFICATES

2.2.2.1  LICENCES

The Authority may issue the following licences under this Part to an applicant who satisfactorily accomplishes the requirements in this Part for the licence sought:

(a) Pilot licences:
   (1) Private pilot licence (PPL) – aeroplane, helicopter, airship, powered-lift, free balloon or glider categories;
   (2) Commercial pilot licence (CPL) – aeroplane, helicopter, airship, powered-lift, free balloon or glider categories;
   (3) Multi-crew pilot licence (MPL) – aeroplane category; and
   (4) Airline Transport pilot licence (ATPL) – aeroplane, helicopter or powered-lift categories;

(b) Flight engineer licence;

(c) Reserved;

(d) Aircraft maintenance engineer licence (AMEL);

(e) Air traffic controller licence (ATCOL);

(f) Flight operations officer licence (also known as Flight Dispatcher licence);

(g) Aeronautical station operator licence;

(h) Flight radio-telephone operator licence.
2.2.2.2 RATINGS

(a) The Authority may issue the following ratings which are placed on a pilot licence when an applicant satisfactorily accomplishes the requirements in this Part for the rating sought:

(1) Category ratings in the following aircraft:
   (i) Aeroplane
   (ii) Airship (apply only to airship of a volume of more than 4 600 cubic metres)
   (iii) Free Balloon
   (iv) Glider
   (v) Helicopter
   (vi) Powered-lift

(2) Class ratings in the following aircraft:
   (i) Single-engine land - aeroplane
   (ii) Single-engine sea - aeroplane
   (iii) Multi-engine land - aeroplane
   (iv) Multi-engine sea- aeroplane
   (v) A class rating may be issued for those helicopters certificated for single-pilot operations and which have comparable handling, performance and other characteristics.
   (vi) Hot air – balloon;
   (vii) Gas – balloon;
   (viii) Any other rating considered necessary by the Authority.

(3) Type ratings in the following aircraft:
   (i) Aircraft certificated for operation with a minimum crew of at least two pilots;
   (ii) Small turbojet or turbofan powered aeroplanes;
   (iii) Helicopters and powered-lift aircraft certificated for single-pilot operations except where a class rating has been established under (2)(v) above; and
   (iv) Any aircraft considered necessary by the Authority.

   **Note:** A common type rating shall only be established for aircraft with similar characteristics in terms of operating procedures, systems and handling.

(4) Instrument ratings (IR) in the following aircraft:
   (i) Instrument – Aeroplane;
   (ii) Instrument – Helicopter;
   (iii) Instrument – Powered-lift.

   **Note:** The IR is included in the CPL – airship, the MPL and the ATPL – Aeroplane and Powered-lift

(5) Instructor ratings:
   (i) Flight instructors
   (ii) Instructors for additional class/type/instrument ratings
(b) The Authority may issue the following ratings which are placed on a flight engineer’s licence when an applicant satisfactorily accomplishes the requirements in this Part for the rating sought:
   (1) Type rating
   (2) Instructor rating

(c) The Authority may issue the following ratings which are placed on an air traffic controller licence when an applicant satisfactorily accomplishes the requirements in this Part for the rating sought:
   (1) Aerodrome control rating
   (2) Approach control procedural rating
   (3) Approach control surveillance rating
   (4) Approach precision radar control rating
   (5) Area control procedural rating; and
   (6) Area control surveillance rating

(d) The Authority may issue the following ratings which are placed on an aircraft maintenance engineer licence when an applicant satisfactorily accomplishes the requirements in this Part for the rating sought:
   (1) Airframe
   (2) Powerplant
   (3) Avionics

2.2.2.3 AUTHORISATIONS

(a) The Authority may issue the following authorizations when an applicant satisfactorily accomplishes the requirements in this Part for the authorisation sought:
   (1) Student pilot authorisation
   (2) Examiner authorisation
   (3) Instructor authorisation for flight simulation training
   (4) Ground Instructor authorisation

(b) The Authority may issue the following authorisations which are placed on a licence when an applicant satisfactorily accomplishes the requirements in this Part for the authorization sought:
   (1) Category II pilot authorisation
   (2) Category III pilot authorisation

2.2.2.4 CERTIFICATES/ASSESSMENTS

(a) The following certificates and Medical Assessments are issued when an applicant satisfactorily accomplishes the requirements in this Part for the certificate/assessment sought:
   (1) Medical Assessment Class 1 for IR, CPL, MPL and ATPL,
   (2) Medical Assessment Class 2 for PPL and flight engineer licence
   (3) Medical Assessment Class 3 for Air traffic controller licence
   (4) Validation certificates
2.2.3 VALIDITY OF LICENCES, RATINGS, AUTHORISATIONS AND CERTIFICATES

(a) The privileges granted by a licence, or by related ratings, may not be exercised unless the holder maintains competency and meets the requirements for recent experience of this Part.

(b) Maintenance of competency shall be indicated in the airman’s personal licence or record (e.g. logbook).

(c) The maintenance of competency of flight crew members, engaged in commercial air transport operations, may be satisfactorily established by demonstration of skill during proficiency flight checks completed in accordance with Part 8.

(d) All licences issued by the Authority are without a specific expiration date.

(e) A student pilot authorisation expires 24 calendar months from the month in which it is issued.

(f) A flight instructor rating expires 24 calendar months from the month in which it is issued or renewed and is valid only while the holder has a valid pilot licence.

(g) An instrument rating expires 12 calendar months from the month in which it is issued or renewed.

(h) A Certificate of Validity issued with a licence will indicate the period during which the privileges of the licence may be exercised.
2.2.4 VALIDATION AND CONVERSION OF FOREIGN LICENCES AND RATINGS

2.2.4.1 VALIDATION OF FLIGHT CREW LICENCES

(a) General requirements for validation.

(1) A person who holds a current and valid pilot licence issued by another Contracting State in accordance with ICAO Annex 1, may apply for a validation of such licence for use on aircraft registered in Guyana.

(2) The applicant for the validation certificate shall present to the GCAA the foreign licence and evidence of the experience required, by presenting the record (e.g. logbook).

(3) The applicant for the validation certificate shall present to the GCAA evidence that he/she holds a current Medical Assessment issued under Part 2 or a current Medical Assessment/Certificate issued by the Contracting State that issued the applicant’s licence. The applicant may be allowed to use his/her foreign Medical Assessment/Certificate with the validation certificate provided that the medical certification requirements on which the foreign Medical Assessment/Certificate was issued meet the requirements of Part 2, relevant to the licence held.

(4) The applicant for the validation certificate shall present to the GCAA evidence of language proficiency in the English language as specified in 2.2.7.

(5) The GCAA will verify the authenticity of the licence, ratings, authorisations and the Medical Assessment/Certificate with the state of licence issue prior to issuing the validation.

(6) The GCAA will only validate ratings or authorisations on the foreign licence together with the validation of a licence.

(7) The validation certificate will be issued with a validity period of up to one year, provided the foreign licence, ratings, authorisations and the Medical Assessment/Certificate, if applicable, remain valid.

(b) Validation Certificate with PPL privileges.

(1) In addition to the requirements in item (a) above, the applicant for a validation certificate with PPL privileges shall hold a foreign licence with at least PPL privileges; and

(2) Demonstrate to the satisfaction of the GCAA knowledge of the local Air Law.

(c) Validation certificate with PPL/IR, CPL, CPL/IR, ATPL or FE privileges:

In addition to the requirements in item (a) above, the applicant for a validation certificate for either PPL/IR, CPL, CPL/IR, ATPL or FE privileges, shall have the relevant foreign licence and meet the following requirements:

(1) The applicant for the validation certificate shall demonstrate to the satisfaction of the GCAA the knowledge relevant to the licence to be validated of:

   (i) Air Law;
   (ii) Aeronautical Weather codes;
   (iii) Flight Performance and Planning; and
   (iv) Human Performance.

(2) The applicant for the validation certificate shall complete a skill test for the relevant licence and ratings that he/she wants to be validated relevant to the privileges of the licence held; and

(3) Comply with the experience requirements set out in the table below:
<table>
<thead>
<tr>
<th>LICENCE</th>
<th>EXPERIENCE</th>
<th>VALIDATION PRIVILEGES</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATPL(A)</td>
<td>&gt; 1 500 hours as PIC in multi-pilot * certificated aeroplanes</td>
<td>Commercial air transport in multi-pilot aeroplanes as PIC</td>
</tr>
<tr>
<td>ATPL(H)</td>
<td>&gt; 1 000 hours as PIC on multi-pilot helicopters</td>
<td>Commercial air transport multi-pilot helicopters as PIC</td>
</tr>
<tr>
<td>ATPL(A) or CPL(A)/IR with ATPL(A) knowledge</td>
<td>&gt; 500 hours as PIC or co-pilot on multi-pilot aeroplanes</td>
<td>Commercial air transport in multi-pilot aeroplanes as co-pilot</td>
</tr>
<tr>
<td>ATPL(A) or CPL(H)/IR with ATPL(H) knowledge</td>
<td>&gt; 500 hours as PIC or co-pilot on multi-pilot helicopters</td>
<td>Commercial air transport in multi-pilot helicopters as co-pilot</td>
</tr>
<tr>
<td>CPL(A)/IR</td>
<td>&gt; 1 000 hours as PIC in commercial air transport since gaining an IR</td>
<td>Commercial air transport in single-pilot aeroplanes as PIC</td>
</tr>
<tr>
<td>CPL(H)/IR</td>
<td>&gt; 1 000 hours as PIC in commercial air transport since gaining an IR</td>
<td>Commercial air transport in single-pilot helicopters as PIC</td>
</tr>
<tr>
<td>CPL(A)</td>
<td>&gt; 700 hours in aeroplanes other than gliders, including 200 hours in the activity role for which validation is sought, and 50 hours in that role in the last 12 months</td>
<td>Activities in aeroplanes other than commercial air transport</td>
</tr>
<tr>
<td>CPL(H)</td>
<td>&gt; 700 hours in helicopters including 200 hours in the activity role for which validation is sought, and 50 hours in that role in the last 12 months</td>
<td>Activities in helicopters other than commercial air transport</td>
</tr>
<tr>
<td>PPL(A)/IR</td>
<td>&gt; 100 hours PIC instrument flight time</td>
<td>Private flights under IFR</td>
</tr>
<tr>
<td>Flight engineer</td>
<td>&gt; 1 500 hours as flight engineer on aeroplanes in commercial air transport</td>
<td>Commercial air transport in aeroplanes as flight engineer</td>
</tr>
<tr>
<td>Flight engineer</td>
<td>&gt; 1 000 hours as flight engineer on aeroplanes in other than commercial air transport</td>
<td>Other than commercial air transport in aeroplanes as flight engineer</td>
</tr>
</tbody>
</table>

> = greater than

*Note: The term multi-pilot is used to indicate experience in an aircraft required to be operated with a co-pilot.*
2.2.4.2 CONVERSION OF FLIGHT CREW LICENCES

(a) PPL: A person who holds a current and valid pilot licence with at least PPL privileges issued by another Contracting State in accordance with ICAO Annex 1, may apply for a conversion and be issued with a PPL for use on aircraft registered in Guyana provided the following requirements are met.

(1) The holder shall:
   (i) present to the GCAA the foreign licence, evidence of experience required by presenting the record (e.g. logbook), and current Medical Assessment;
   (ii) present to the GCAA evidence of language proficiency in the English language as specified in 2.2.7;
   (iii) obtain a class 2 Medical Assessment issued under this Part;
   (iv) demonstrate to the satisfaction of the GCAA the knowledge of Air Law ; and
   (v) complete a PPL skill test .

(2) The GCAA will verify the authenticity of the licence, ratings, authorisations and the Medical Assessment with the state of licence issue prior to converting the licence.

(b) PPL/IR, CPL, CPL/IR, ATPL and Flight Engineer licences, which have been validated in accordance with paragraph 2.2.4.1. The holder of a current and valid PPL/IR, CPL, CPL/IR, ATPL and Flight Engineer licences which have been issued by another Contracting State in accordance with ICAO Annex 1, and an appropriate Medical Assessment, may apply for conversion to the appropriate licence and ratings issued by Guyana provided the following requirements are met:

(1) The applicant is the holder of a current validation certificate issued under 2.2.4.1.

(2) The applicant has completed 200 flight hours in Guyana registered aircraft which are operated by an operator established in Guyana, exercising the privileges granted by the validation certificate.

(3) The applicant for the conversion shall present to the GCAA the foreign licence and evidence of the 200 flight hours by presenting the record (e.g. logbook).

(4) The applicant shall hold or obtain a Medical Assessment issued under this Part appropriate to the level of licence to be converted.

(c) Ratings listed on a person’s foreign pilot licence that have been validated in accordance with paragraph 2.2.4.1, may be placed on that person’s converted licence.

2.2.4.3 VALIDATION AND CONVERSION OF FLIGHT CREW LICENCES OR CERTIFICATES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE

(a) Notwithstanding paragraphs 2.2.4.1 and 2.2.4.2 the GCAA may issue a validation certificate or a licence with the applicable ratings to the holder of a current and valid foreign licence, provided:

(1) the licence or certificate is issued by another Contracting State;

(2) the GCAA is convinced that the licence or certificate has been issued on the basis of at least Part 2; and

(3) there is an agreement between the Guyana Civil Aviation Authority and the other Contracting State about recognition of licences and, if applicable, keeping the licences and ratings current and valid.

(b) The applicant for the validation certificate or conversion shall present to the GCAA the foreign licence or certificate and evidence of the currency of the licence by presenting the record (e.g. logbook).
(c) The applicant shall hold a Medical Assessment appropriate to the licence or certificate to be converted or validated provided that the foreign Medical Assessment meets the requirements of Part 2. If the applicant’s Medical Assessment does not meet the requirements of Part 2, the applicant shall obtain a Medical Assessment under Part 2.

(d) If applicable, the applicant shall pass a knowledge test on Air Law.

*Implementing Standard: See IS 2.2.4.3 Appendix A, B and C for procedure for validation or conversion of flight crew licences*

### 2.2.4.4 Validation in Case of Leased, Chartered or Interchanged Aircraft

(a) The requirements stated in 2.2.4.1 shall not apply where aircraft, registered in Guyana, are leased to, chartered by or interchanged by an operator of another Contracting State, provided that during the term of the lease the State of the Operator has accepted the responsibility for the technical and/or operational supervision in accordance with Article 83 bis of the ICAO Convention.

(b) The licences of the flight crew of the other Contracting State may be validated, provided that the privileges of the flight crew licence validation are restricted for use during the lease, charter or interchange period only on nominated aircraft in specified operations not involving a Guyana operator, directly or indirectly through a wet lease or other commercial arrangement.

### 2.2.4.5 Temporary Validation of Foreign Pilot Licences Held by Manufacturer Test Pilots

(a) In circumstances where validation of a foreign pilot licence is needed to fulfil specific tasks of finite duration, the GCAA may issue a temporary validation of such a licence for those tasks as described in this paragraph.

(b) Notwithstanding the requirements contained in Sections 2.2.4.1, 2.2.4.2, 2.2.4.3 or 2.2.4.4, the GCAA may temporarily validate a licence issued by another ICAO Contracting State in accordance with the provisions of ICAO Annex 1, including an instructor rating or examiner authorisation issued by that State provided that the holder of the licence or authorisation shall:

1. Possess an appropriate licence, Medical Assessment, type ratings and qualifications, to include instructor or examiner qualifications, valid in the State of licence issue for the duties proposed.

2. Be employed by an aircraft manufacturer or Approved Training Organisation located outside Guyana performing training on behalf of an aircraft manufacturer; and

3. Be limited to performing flight instruction and testing for initial issue of type ratings, the supervision of initial line flying by pilots of an operator in Guyana, delivery or ferry flights, initial line flying, flight demonstrations or test flights.

(c) Whenever conducting or supervising line flying, the pilot shall also be required to meet the relevant requirements of Part 8.

(d) The GCAA will verify the authenticity of the licence, rating, authorisations and Medical Assessment with the State of licence issue prior to issuing a temporary validation.

(e) The duration of a temporary validation shall be for six months.
2.2.5 **RESERVED**

2.2.6 **TRAINING AND TESTING REQUIREMENTS**

2.2.6.1 **APPROVED TRAINING**

(a) The Authority may provide for some reduction in the experience requirements for the issue of certain licences and ratings prescribed in this Part when training is conducted within an Approved Training Organization under special curricula approved by the Authority under Part 3.

(b) Approved training shall provide a level of competency at least equal to that provided by the minimum experience requirements for personnel not receiving such approved training.

(c) Part 3 prescribes the requirements for certifying and administering Approved Training Organisations for conducting approved training.

2.2.6.2 **USE OF FLIGHT SIMULATION TRAINING DEVICES (SYNTHETIC FLIGHT TRAINERS)**

(a) Except as specified in paragraph (b) of this subsection, no airman may receive credit for use of any flight simulation training device for satisfying any training, testing, or checking requirement of this part unless that flight simulation training device is approved by the Authority for:

(1) The training, testing, and checking for which it is used;

(2) Each particular manoeuvre, procedure, or crewmember function performed; and

(3) The representation of the specific category and class of aircraft, type of aircraft, particular variation within the type of aircraft, or set of aircraft for certain flight training devices.

(b) The Authority may approve a device other than a flight simulation training device for specific purposes.

2.2.6.3 **KNOWLEDGE AND SKILL TESTS AND CHECKS: TIME, PLACE, DESIGNATED PERSONS AND FORMAT**

(a) Knowledge and Skill Tests and Checks prescribed by or under Part 2 are given at times and places, and by persons authorized and designated by the Guyana Civil Aviation Authority.

(b) Most knowledge test will be performed in written or computer format. The knowledge test for an instructor rating or an additional instructor rating within the same aircraft category, may be performed in written or computer format, or may be performed orally.

(c) In addition to the written knowledge test, candidates may be questioned orally during the skill test, as appropriate.
2.2.6.4 Knowledge and Skill Tests and Checks: Prerequisites and Passing Grades

(a) An applicant for a knowledge test or a skill test shall have received any required endorsement as specified in this part for the applicable licence, rating or authorisation to show that the applicant has met the training and/or experience requirements to take the knowledge or skill test.

Note: The endorsement requirements may differ between licences and will appear in each licence section as applicable.

(b) An applicant for a knowledge or skill test must be authorised in writing or otherwise by the Guyana Civil Aviation Authority to take, or retake the test.

(c) An applicant shall show proper identification in the form of a Government issued identification document at the time of application that contains the applicant’s:

1. photograph;
2. signature;
3. date of birth; and
4. actual residential address, if different from applicant’s mailing address.

(d) The Authority will specify the minimum passing grades.

(e) Retesting after failure of a test.

1. An applicant for a knowledge or skill test who fails that test may reapply for the test only after the applicant has received:
   
   i. the necessary training from an authorised instructor who has determined that the applicant is proficient to pass the test; and
   
   ii. an endorsement from the authorised instructor who gave the applicant the additional training.

2. An applicant for a flight instructor rating in the aeroplane category, or for a flight instructor rating in the glider category who has failed the skill test due to deficiencies in instructional proficiency on stall awareness, spin entry, spins or spin recovery shall:

   i. comply with the requirements of paragraph (e)(1) of this subsection before being retested;

   ii. bring an aircraft that is of the appropriate aircraft category for the rating sought and is certified for spins; and

   iii. demonstrate satisfactorily instructional proficiency on stall awareness, spin entry, spins and spin recovery to an examiner during the retest.

Implementing Standard: See IS 2.2.6. for requirements for testing

2.2.6.5 Reliance on Training and Testing in Another Contracting State

(a) The Guyana Civil Aviation Authority may rely on the training and/or testing system administered by another Contracting State as the basis for its own written or practical test requirement for airman licences provided that the Authority has an agreement with the other Contracting State whose training and/or testing system is used.

(b) The applicant shall apply for and receive written approval from the Guyana Civil Aviation Authority prior to receiving training and/or testing in a system administered by another Contracting State.
2.2.7  LANGUAGE PROFICIENCY

(a) Pilots, flight engineers, air traffic controllers and aeronautical station operators shall demonstrate the ability to speak and understand the English language used for radio telephony communications in Guyana.

(b) The airmen mentioned in (a) above shall demonstrate the ability to speak and understand the English language to at least the Operational Level (Level 4) with the aim to speak at the Expert Level (Level 6) as specified in the language proficiency requirements in IS: 2.2.7.

(c) The language proficiency of airmen mentioned in (a) above shall be formally evaluated at intervals in accordance with an individual’s demonstrated proficiency level as follows:

1. those demonstrating language proficiency at the Operational Level (Level 4) shall be evaluated at intervals not greater than 3 years;
2. those demonstrating language proficiency at the Extended Level (Level 5) shall be evaluated at intervals not greater than 6 years; and
3. those demonstrating language proficiency at the Expert Level (Level 6) will be exempted from further language evaluation.

Implementing Standard IS 2.2.7 contains detailed requirements for language proficiency.

Note: Formal evaluation is not required for applicants who demonstrate expert language proficiency, e.g. native and very proficient non-native speakers of the English language with a dialect or accent intelligible to the international aeronautical community.

2.2.8  RECORDING OF FLIGHT TIME

(a) Each person shall document and record the following time in a manner acceptable to the Guyana Civil Aviation Authority as outlined in IS:2.2.8:

1. training and experience used to meet the requirements for a licence, rating and authorization of Part 2; and
2. the experience required to show recent flight experience according to the requirements of Part 2.

2.2.9  FORMAT OF THE LICENCE

(a) The licence format shall be in a form and manner prescribed by the Guyana Civil Aviation Authority.

(b) The items required on the licence are indicated in IS 2.2.9.

(c) The licence shall be issued in the English language.

(d) The required items as detailed in IS 2.2.9 shall be clearly printed on first quality paper or other suitable material.
2.2.10  SUSPENSION OR REVOCATION OF A LICENCE, RATING, AUTHORIZATION OR CERTIFICATE.

2.2.10.1  SUSPENSION OF A LICENCE, RATING AUTHORIZATION OR VALIDATION CERTIFICATE

If, in accordance with the Guyana Civil Aviation Act and the applicable Regulations and Requirements the Guyana Civil Aviation Authority determines that the interests of safety require that a licence, rating, authorization or certificate must be suspended, the Authority may act as follows:

(a) If the Authority discovers facts indicating either a lack of competency or lack of qualification, the Authority may, require an applicant for or the holder of any licence, rating, authorization, or validation certificate to retake all or part of the knowledge or practical tests required for any licence, rating, authorization, or validation certificate at issue, renewal or re-issue. The Authority may suspend the validity of any such licence, rating, authorization and/or validation certificate pending the results of such re-testing.

(b) A person whose licence, rating, authorization, or certificate has been amended, modified, suspended, or revoked shall be provided with notice and an opportunity to be heard.

(c) After notifying the person involved, in writing, stating the reasons for such action, the Guyana Civil Aviation Authority may also suspend the validity of any licence, rating, authorization and/or validation certificate in the following cases:

(1) during the investigation of an aircraft disaster or incident;
(2) in cases of proven misconduct, recklessness or excessive carelessness;
(3) if the holder has acted in contradiction to his or her privileges; and/or
(4) pending the investigation of a suspected violation of these regulations or the aviation law under which these regulations are effected.

(d) Once the suspension is effective, the person involved shall immediately cease exercising the privileges of the affected licence, certificate, rating, or authorization. The person involved shall surrender to the Guyana Civil Aviation Authority all licences or validation certificates in his or her possession that are subject to the suspension within 8 days of receiving the notification of the order. If the person fails to surrender the documents under suspension, the Authority may revoke all such certificate(s) held by that person.

(e) When a suspension is limited to one or more ratings mentioned on the licence or validation certificate, the Guyana Civil Aviation Authority shall provide the person involved with a new licence or validation certificate omitting all ratings which are subject to the suspension.

(f) The Guyana Civil Aviation Authority may cancel a suspension in the following cases:

(1) if person under suspension has taken and passed the knowledge or practical tests required for any licence, rating, or authorization at issue indicated in item (a) above;
(2) if the person involved has gained the required additional experience; or
(3) by revocation of the licence, rating, authorization and/or validation certificate.

(g) Once the suspension has been cancelled, other than by revocation, the Authority may issue the person involved a new licence or validation certificate or cancel the applicable ratings on the existing licence or certificate.
2.2.10.2 SUSPENSION OF A MEDICAL ASSESSMENT

(a) In case of doubt concerning the medical fitness of the holder of a Medical Assessment the Guyana Civil Aviation Authority may determine that the person involved shall again repeat a complete or partial medical examination, and may suspend the validity of that Medical Assessment until the repeat examination is completed with favourable results.

(b) The validity of a Medical Assessment may also be suspended in case of a temporary rejection on medical grounds.

(c) The person holding the Medical Assessment will be notified in writing of a suspension stating the reasons for that suspension.

(d) The person holding the suspended Medical Assessment shall surrender the Medical Assessment in his or her possession to the Authority within 8 days after the date of receiving the notification.

(e) In cases in which the medical fitness of the person involved allows it, the Authority may provide the person with a suspended Medical Assessment of a particular class with a new Medical Assessment of a lower class.

(f) A suspension may be lifted if the medical examination intended in (a) has been passed satisfactorily. If a suspension is lifted, the person involved shall receive a new Medical Assessment unless the Medical Assessment was revoked.

2.2.10.3 REVOCATION OF LICENCES, RATINGS AUTHORIZATIONS OR CERTIFICATES

(a) A licence, rating, authorization or certificate shall be revoked if the holder has lost the skills for exercising the privileges mentioned in the document or fails to meet the appropriate medical standards as shown by the results of a medical examination or a test.

(b) A licence, rating, authorization and/or certificate may be revoked if the holder has made a statement contrary to the truth in obtaining or maintaining that licence, rating authorization or certificate, or has provided incorrect data at a medical examination and/or test required for the issue, maintenance or renewal of the licence, rating, authorization and certificate.

(c) A licence, rating, authorization or certificate shall be revoked in case of proven misconduct, recklessness or excessive carelessness. The holder of the licence will be notified in writing of the revocation with the reasons therefore.

(d) A person who has had a licence or certificate revoked shall be obliged to hand over to the Guyana Civil Aviation Authority all the licences or certificates in his or her possession applicable to the revocation within 8 days after the date of receiving notification from the Authority.

(e) The person who has been denied the privilege to manipulate the controls of an aircraft by judgement of a court, shall be equally obliged to hand over to the Authority all licences and certificates in his or her possession within 8 days after he or she has taken cognisance of the judgement or after it can be reasonably assumed that he or she has taken cognisance thereof.
2.3  PILOT LICENCES, CATEGORIES, RATINGS AND AUTHORIZATIONS

2.3.1  GENERAL

2.3.1.1  APPLICABILITY

This Section prescribes the requirements for the issue, renewal and re-issue, if applicable, of pilot licences, ratings and authorizations.

2.3.1.2  GENERAL RULE CONCERNING PILOT LICENCES, RATINGS AND AUTHORISATIONS

(a) An applicant shall, before being issued with any pilot licence, rating or authorisation, meet such requirements in respect of age, knowledge, experience, flight instruction, skill, medical fitness and language proficiency as are specified for that licence, rating or authorisation.

(b) A person shall not act either as pilot-in-command or as co-pilot of an aircraft in any of the categories unless that person is the holder of a pilot licence issued in accordance with the provisions of Part 2.

(c) An applicant shall for renewal or re-issue of a licence, rating, authorization or designation meet the requirements as are specified for that licence, rating, authorization or designation.

2.3.1.3  AUTHORITY TO ACT AS A FLIGHT CREW MEMBER

(a) A person shall not act as a flight crew member of an aircraft registered in Guyana unless a valid licence or a validation certificate is held showing compliance with the specifications of this Part and appropriate to the duties to be performed by that person.

(b) No person may act as the PIC or co-pilot of an aircraft unless that person holds the appropriate category, class and type rating for the aircraft to be flown.

Note: During a skill test, the applicant acts as PIC but the safety pilot will intervene in safety situations.

2.3.1.4  CREDITING OF FLIGHT TIME

(a) A student pilot or the holder of a pilot licence shall be entitled to be credited in full with all solo, dual instruction and pilot-in-command flight time towards the total flight time required for the initial issue of a pilot licence or the issue of a higher grade of pilot licence.

(b) The holder of a pilot licence, when acting as co-pilot at a pilot station of an aircraft certificated for operation by a single pilot but required by Guyana to be operated with a co-pilot shall be entitled to be credited with not more than 50 per cent of the co-pilot flight time towards the total flight time required for a higher grade of pilot licence. [The flight time may be credited in full if the aircraft is equipped to be operated by a co-pilot, and it is operated in a multi-crew operation].

(c) The holder of a pilot licence, when acting as co-pilot at a pilot station of an aircraft certificated to be operated with a co-pilot, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.

(d) The holder of a pilot licence, when acting as pilot-in-command under supervision, shall be entitled to be credited in full with this flight time towards the total flight time required for a higher grade of pilot licence.
2.3.1.5 RESERVED

2.3.1.6 RECENT EXPERIENCE REQUIREMENTS

(a) A pilot shall not operate an aircraft carrying passengers as pilot-in-command or co-pilot unless he or she has carried out at least three take-offs and three landings as pilot-flying in an aircraft of the same type/class or an approved flight simulator of the aircraft type/class to be used, in the preceding 90 days.

(b) The holder of a licence that does not include an instrument rating shall not act as pilot-in-command of an aircraft carrying passengers at night unless he or she has carried out at least three take-offs and three landings at night during the previous 90 days.

(c) Each person shall document and record the experience required to show recent flight experience.
2.3.2 CATEGORY, CLASS AND TYPE RATINGS AND CATEGORY II/III AUTHORIZATIONS

2.3.2.1 GENERAL

(a) The holder of a pilot licence shall not be permitted to act as pilot-in-command or as co-pilot of an aircraft unless the holder has received authorization as follows:

(1) the appropriate class rating specified in this Part;

(2) a type rating when required in accordance with this Part;

(3) an authorization when required in accordance with this Part; or

(4) an endorsement when required in accordance with this Part.

(b) The applicant shall meet the appropriate requirements of this Part for the aircraft rating, authorization or endorsement sought.

(c) When an applicant demonstrates skill and knowledge for the initial issue or re-issue of a pilot licence, the category and ratings appropriate to the class or type of aircraft used in the demonstration will be entered on the licence.

(d) For the purpose of training, testing or specific special purpose non-revenue, non-passenger carrying flights, special authorization may be provided in writing to the licence holder by the Guyana Civil Aviation Authority in place of issuing the class or type rating in accordance with (a). This authorization shall be limited in validity to the time needed to complete the specific flight.

(e) When a type rating is issued limiting the privileges to act as co-pilot, or limiting the privileges to act as pilot only during the cruise phase of a flight, such limitation shall be endorsed on the rating.

2.3.2.2 CATEGORY RATING

(a) The category of aircraft shall be endorsed on the licence as a rating when the category is not included in the title of the licence

(b) Initial category rating.

(1) An applicant for a pilot’s licence, after successfully meeting all the requirements for the issuance of the licence as contained in this Part, shall receive the appropriate licence with the aircraft category, and if applicable, class and type rating endorsed on the licence.

(c) Additional category ratings.

(1) Any additional category rating endorsed on a pilot licence shall indicate the level of licensing privileges at which the category rating is granted.

(2) The holder of a pilot licence seeking an additional category rating shall:

(i) meet the requirements of this Part appropriate to the privileges for which the category rating is sought;

(ii) have an endorsement in his/her log book or training record from an authorised instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas;

(iii) pass the required knowledge test unless the applicant holds an aeroplane, helicopter, powered-lift or airship category rating and is seeking an additional category rating from among those categories, at the same level of pilot licence at either the private or commercial levels; and

(iv) pass the required skill test for the aircraft category, and if applicable, class rating being sought.

(d) Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a category rating are to act as a pilot on the category of aircraft specified in the licence.
2.3.2.3 CLASS RATINGS

(a) The class of aircraft, if applicable, shall be endorsed on the licence as a rating.

(b) Initial class rating.
   (1) An applicant for a pilot’s licence, after successfully meeting all the requirements for the issuance of the licence as contained in this Part, shall receive the appropriate licence with the aircraft category, and if applicable, class and type rating endorsed on the licence.

(c) Additional class ratings.
   (1) The holder of a licence seeking an additional class rating shall:
      (i) meet the requirements of this Part appropriate to the privileges for which the class rating is sought;
      (ii) have an endorsement in his/her logbook or training record from an authorised instructor that the applicant has been found competent in the required aeronautical knowledge and flight instruction areas;
      (iii) pass the required knowledge test unless the applicant holds a class rating within the same category of aircraft at the same level of pilot licence at either the private or commercial levels; and
      (iv) pass the required skill test for the aircraft class rating being sought.

(d) Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a class rating are to act as a pilot on the class of aircraft specified in the rating.

(e) Validity: Subject to compliance with the requirements specified in this Part, the validity period of:
   (1) a multi-engine class rating is 1 calendar year;
   (2) a single-engine class rating, balloon – gas or balloon – hot air is 2 calendar years.

(f) Renewal.
   (1) For the renewal of a single-engine class rating, a balloon – gas or balloon – hot air rating, the pilot shall:
      (i) within the preceding 24 calendar months, complete a proficiency check on areas of operation listed in the skill test that is applicable to the level of licence, category and class rating; or
      (ii) have completed 12 hours flight time within the 12 months preceding the expiry date if the pilot also holds a valid multi-engine class or type rating.
   (2) For the renewal of a multi-engine class rating the pilot shall:
      (i) within the preceding 12 calendar months, complete a proficiency check on the subjects listed in the skill test that is applicable to the level of licence, category and class rating; and
      (ii) have completed 10 route sectors within the 3 months preceding the expiry date.
   (3) Where applicable the proficiency check shall include instrument procedures, including instrument approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.
   (4) If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.

(g) Re-issue. If the class rating has expired the applicant shall:
   (1) Have received refresher training from an authorised instructor with an endorsement that the person is prepared for the required skill test; and
   (2) Pass the required skill test for the applicable aircraft category and/or class on the areas of operation listed in the appropriate section of the Implementing Standards.
(3) Where applicable the skill test shall include instrument procedures, including instrument approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.

2.3.2.4 TYPE RATINGS

(a) The type rating shall be endorsed on the licence as a rating.
(b) Knowledge. The applicant for a type rating shall have completed the theoretical knowledge instruction and demonstrated in a test the relevant knowledge subjects as listed in IS 2.3.2.4 Appendix A.
(c) Experience.
   (1) An applicant for a type rating shall:
      (i) have at least 100 hours as pilot-in-command applicable to the category of aircraft;
      (ii) where applicable, have an instrument rating applicable to the category of aircraft;
      (iii) have completed a CRM course as listed in IS 2.3.2.4 Appendix B; and
      (iv) for multi-pilot aeroplanes, have demonstrated in a test, the ATPL knowledge on the basis of the requirements listed in IS 2.3.3.5 applicable to the category of aircraft.
(d) Flight instruction.
   (1) The applicant for a type rating shall have completed the flight instruction for the type rating:
      (i) for single-pilot aircraft: on the subjects listed in IS: 2.3.3.5 applicable to the category of aircraft; and
      (ii) for multi-pilot aircraft: on the subjects listed in IS: 2.3.3.5 applicable to the category of aircraft.
   (2) Where applicable the flight instruction shall include:
      (i) instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure;
      (ii) Procedures for crew incapacitation and crew coordination including allocation of pilot tasks; crew cooperation and use of checklist.
(e) Skill.
   (1) The applicant for a type rating shall:
      (i) have received an endorsement from an authorised instructor who certifies that the person is prepared for the required skill test;
      (ii) pass the required skill test:
         (A) for single pilot aircraft: on the subjects listed in IS: 2.3.3.5 applicable to the category of aircraft; and
         (B) for multi-pilot aircraft on the subjects listed in IS: 2.3.3.5 applicable to the category of aircraft.
   (2) Where applicable the skill test shall include instrument procedures, including instrument approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.
   (3) The applicant shall demonstrate the skill and knowledge required for the safe operation of the applicable type of aircraft, relevant to the duties of a pilot-in-command or a co-pilot as applicable.
(f) Privileges.
   (1) Subject to compliance with the requirements specified in this Part, the privileges of the holder of a type rating are to act as a pilot on the type of aircraft specified in the rating.
   (2) When the skill test for a type rating has been performed under VFR the type rating will be issued limiting the privileges to VFR flight and such limitation will be endorsed on the rating.
(g) **Validity.** Subject to compliance with the requirements in this Part, the validity period of a type rating is 1 year.

(h) **Renewal.** For the renewal of a type rating the pilot shall:

1. within the preceding 12 calendar months, complete a proficiency check in the areas of operation listed in the skill test for the appropriate category, type and if applicable, class of aircraft.
2. have completed 10 route sectors within the 3 months preceding the expiry date.
3. Where applicable the proficiency check shall include instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.
4. If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.

(i) **Re-issue.** If the type rating has been expired the applicant shall:

1. have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
2. pass the required skill test for the appropriate category, type and if applicable, class of aircraft.
3. Where applicable the skill test shall include instrument procedures, including instrument approach, missed approach and landing procedures under normal, abnormal and emergency conditions, including simulated engine failure.
2.3.2.5 CATEGORY II AND III AUTHORIZATION

(a) General.
   (1) A person, not flying under Part 8, may not act as pilot of an aircraft during Category II or III operations unless that person holds a Category II or III pilot authorization for that category, class or type of aircraft.
   (2) The applicant for a Category II or III pilot authorization shall:
       (i) hold a pilot licence with an instrument rating; and
       (ii) hold a category and class or type rating for the aircraft for which the authorization is sought.

(b) Knowledge. The applicant for a Category II or III pilot authorization shall have completed the theoretical knowledge instruction and demonstrated in a test the knowledge subjects as listed in IS 2.3.2.5.

(c) Experience. The applicant for a Category II or III pilot authorization shall have at least:
   (1) 50 hours of night flight time as PIC;
   (2) 75 hours of instrument time under actual or simulated instrument conditions; and
   (3) 250 hours of cross-country flight time as PIC.

(d) Flight instruction. The applicant for a Category II or III pilot authorization shall have completed the flight instruction on the subjects listed in IS 2.3.2.5.

(e) Skill. The applicant for a Category II or III pilot authorization shall pass a skill test including the subjects listed in IS 2.3.2.5.

(f) Validity. Subject to compliance with the requirements specified in this Part, the validity period of a Category II and III authorization is 6 months.

(g) Renewal. For the renewal of a Category II or III pilot authorization the pilot shall have completed a proficiency check including the subjects listed in IS 2.3.2.5.

(h) Re-issue. If the Category II or the Category III have been expired the applicant shall:
   (1) have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
   (2) pass the required skill test on the subjects listed in IS 2.3.3.4 Appendix B (Section 10) for aeroplane or IS 2.3.3.8 Appendix B (Section 9) for helicopter, as applicable.

2.3.2.6 COMPLEX AEROPLANE ENDORSEMENT

(a) No person shall act as pilot in command of a complex aeroplane, including a seaplane, unless the person has:
   (1) Received and logged ground and flight training from an authorised instructor in a complex aeroplane or flight simulation training device that is representative of a complex aeroplane and has been found proficient in the operation and systems of the aeroplane; and
   (2) Received a one-time endorsement in the pilot’s logbook from an authorised instructor who certifies that person is proficient to operate a complex aeroplane.

2.3.2.7 HIGH PERFORMANCE AEROPLANE ENDORSEMENT

(a) No person shall act as pilot in command of a high performance aeroplane unless the person has
   (1) Received and logged ground and flight training from an authorised instructor in a high performance aeroplane or flight simulation training device that is representative of a high performance aeroplane and has been found proficient in the operation and systems of the aeroplane; and
   (2) Received a one-time endorsement in the pilot’s logbook from an authorised instructor who certifies that person is proficient to operate a high performance aeroplane.
2.3.2.8 **HIGH ALTITUDE AIRCRAFT ENDORSEMENT**

(a) No person shall act as pilot in command of a pressurized aircraft capable of operating at high altitudes (i.e. an aircraft that has a service ceiling or maximum operating altitude, whichever is lower, above 25,000 MSL) unless the person has:

(1) Received and logged ground training from an authorised instructor and received an endorsement in the logbook from the instructor certifying the person has satisfactorily accomplished ground training in at least the in the following subjects:
   (i) High-altitude aerodynamics and meteorology
   (ii) Respiration
   (iii) Effects, symptoms, and causes of hypoxia and any other high-altitude sickness;
   (iv) Duration of consciousness without supplemental oxygen
   (v) Effects of prolonged usage of supplemental oxygen
   (vi) Causes and effects of gas expansion and gas bubble formation
   (vii) Physical phenomena and incidents of decompression; and any other physiological aspects of high-altitude flight.

(2) Received and logged flight training from an authorised instructor and received an endorsement in the logbook from the instructor certifying the person has satisfactorily accomplished flight training in an aircraft or in a flight simulation training device that is representative of a pressurized aircraft, in at least the in the following subjects:
   (i) Normal cruise flight operations while operating above 25,000 feet MSL;
   (ii) Proper emergency procedures for simulated rapid decompression without actually depressurizing the aircraft; and
   (iii) Emergency descent procedures.
2.3.3 STUDENT PILOTS, PILOT LICENCES, INSTRUMENT AND INSTRUCTOR RATINGS

2.3.3.1 STUDENT PILOTS

(a) **Age.** The applicant for a student pilot authorization shall be not less than 16 years of age.

(b) **Knowledge.** The applicant for a student pilot authorization shall receive and log ground training from an authorized instructor on the following subjects:

   (1) applicable sections of Part 2 and Part 8;
   (2) airspace rules and procedures for the airport where the student will perform solo flight; and
   (3) flight characteristics and operation limitations for the make and model of aircraft to be flown.

(c) **Pre-solo flight instruction.** Prior to conducting a solo flight, a student pilot shall have:

   (1) received and logged flight training for the manoeuvres and procedures as listed in IS 2.3.3.1.
   (2) demonstrated satisfactory proficiency and safety, as judged by an authorized instructor, on the manoeuvres and procedures as listed in IS 2.3.3.1.

(d) **Solo Flight Requirements:**

   (1) A student pilot shall not fly solo:
       (i) unless holding at least a Class 2 Medical Assessment; and
       (ii) unless with the authority of an authorized flight instructor.

   (2) A student pilot shall not fly solo on an international flight unless authorised by the Guyana Civil Aviation Authority.

(e) **Validity** The validity period of a student pilot authorisation is 2 years

(f) **Reissue** An applicant for reissue of a student pilot authorisation that has expired shall receive and log refresher training from an authorised instructor on the subjects listed in (b) above.
2.3.3.2 PRIVATE PILOT LICENCE (PPL) – GENERAL REQUIREMENTS FOR THE AEROPLANE, HELICOPTER, POWERED-LIFT, AIRSHIP, BALLOON AND GLIDER CATEGORIES

(a) Age.
(1) The applicant for a PPL shall be not less than 17 years of age.
(2) The applicant for a PPL in the balloon or glider category shall be not less than 16 years of age.

(b) Knowledge. The applicant shall receive and log ground training from an authorized instructor, to a level of knowledge appropriate to the privileges granted to the holder of a PPL and appropriate to the category of aircraft intended to be included in the licence, in at least the following subjects:

(1) Air law: rules and regulations relevant to the holder of a PPL with the appropriate aircraft category; rules of the air; altimeter setting procedures; appropriate air traffic services practices and procedures.

(2) Aircraft general knowledge for aeroplane, helicopter, powered-lift and airship:
   (i) Principles of operation and functioning of powerplants, systems and instruments;
   (ii) Operating limitations of the relevant category of aircraft and powerplants; relevant operational information from the flight manual or other appropriate document;
   (iii) For helicopter and powered-lift — transmission (power-trains) where applicable;
   (iv) For airship— physical properties and practical application of gases;

(3) Flight performance and planning:
   (i) effects of loading and mass distribution on flight characteristics; mass and balance calculations;
   (ii) use and practical application of take-off, landing and other performance data;
   (iii) pre-flight and en-route flight planning appropriate to private operations under VFR; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; position reporting procedures; altimeter setting procedures; operations in areas of high-density traffic;

(4) Human performance: human performance including principles of threat and error management

(5) Meteorology: application of elementary aeronautical meteorology; use of, and procedures for obtaining, meteorological information; altimetry; hazardous whether conditions;

(6) Navigation: practical aspects of air navigation and dead-reckoning techniques; use of aeronautical charts;

(7) Operational procedures:
   (i) Application of threat and error management to operational performance;
   (ii) Altimetry setting procedures;
   (iii) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
   (iv) appropriate precautionary and emergency procedures, including action to be taken to avoid hazardous weather, wake turbulence and other operating hazards;
   (v) in the case of the helicopter, and if applicable, powered-lift, settling with power; ground resonance; retreating blade stall; dynamic roll-over and other operation hazards; safety procedures, associated with flight under VFR;

(8) Principles of flight:
   (i) principles of flight;
(9) Radiotelephony:
   (i) communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure;
   (ii) as listed in IS 2.3.3.2 Appendix A;

(c) Knowledge testing. The applicant for a PPL:
   (1) shall have received an endorsement for the knowledge test from an authorized instructor who:
      (i) conducted the training to the required level on the knowledge subjects;
      (ii) certifies that the person is prepared for the required knowledge test; and
   (2) shall pass the required knowledge test on the knowledge areas listed in IS 2.3.3.2 appropriate to the category of aircraft

(d) Experience and flight instruction. An applicant for a PPL shall have completed the experience and flight instruction requirements appropriate to the aircraft category as specified in IS: 2.3.3.2.

(e) Skill. The applicant for a PPL shall:
   (1) have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and
   (2) have demonstrated by passing a skill test the ability to perform as pilot-in-command of an aircraft within the appropriate category, the areas of operation described in the applicable section at IS 2.3.3.2, with a degree of competency appropriate to the privileges granted to the holder of a PPL, and to
      (i) recognize and manage threats and errors;
      (ii) operate the aircraft within its limitations;
      (iii) complete all manoeuvres with smoothness and accuracy;
      (iv) exercise good judgement and airmanship;
      (v) apply aeronautical knowledge; and
      (vi) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(f) Medical fitness. The applicant for a PPL shall hold a current Class 2 Medical Assessment.

(g) Privileges.
   (1) Subject to compliance with the requirements specified in this Part, the privileges of the holder of a PPL shall be to act, but not for remuneration, as pilot-in-command or co-pilot of aircraft within the appropriate aircraft category engaged in non-revenue flights.
   (2) Before exercising the privileges at night, the holder shall have received dual instruction in aircraft within the appropriate category of aircraft in night flying including take-off, landing and navigation.
2.3.3.2.1 **EXPERIENCE AND FLIGHT INSTRUCTION REQUIREMENTS FOR THE PPL – AEROPLANE CATEGORY**

(a) **Experience.**

(1) The applicant for a PPL (A) shall have completed not less than 40 hours of flight time or 35 hours if completed during a course of approved training as pilot of aeroplanes appropriate to the class rating sought.

(2) The holder of pilot licences in other categories may be credited with 10 hours of the total flight time as pilot-in-command towards a PPL(A).

(3) The applicant shall have completed in aeroplanes not less than 10 hours of solo flight time appropriate to the class rating sought under the supervision of an authorized flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.

(b) **Flight Instruction.**

(1) The applicant for a PPL(A) shall have received and log not less than 20 hours of dual instruction time in aeroplanes appropriate to the class rating sought from an authorised flight instructor on the subjects listed in IS 2.3.3.2.1. These 20 hours may include 5 hours completed in a flight simulation training device, and shall include:

(i) 3 hours of cross country flight training;

(ii) 3 hours of night flight training that includes one cross country flight of over 100 NM and 10 take-offs and 10 landings to a full stop at an airport with each landing involving a flight in the traffic pattern.

(iii) 3 hours of instrument flight training

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot:

(i) recognize and manage threats and errors;

(ii) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;

(iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

(iv) control of the aeroplane by external visual reference;

(v) flight at critically slow airspeeds; recognition of, and recovery from, incipient and full stalls;

(vi) flight at critically high airspeeds; recognition of, and recovery from, spiral dives;

(vii) normal and cross-wind take-offs and landings;

(viii) maximum performance (short field and obstacle clearance take-offs, short-field landings;

(ix) flight by reference solely to instruments, including the completion of a level 180 degrees turn;

(x) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids;

(xi) emergency operations, including simulated aeroplane equipment malfunctions; and

(xii) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures; and

(xiii) communication procedures and phraseology
2.3.3.2 EXPERIENCE AND FLIGHT INSTRUCTION REQUIREMENTS FOR THE PPL – HELICOPTER CATEGORY

(a) **Experience.**

(1) The applicant for a PPL-H shall have completed not less than 40 hours of flight time or 35 hours if completed during a course of approved training as pilot of helicopters. A total of 5 hours as pilot under instruction in an approved flight simulation training device may be accepted as part of the total flight time.

(2) The holder of pilot licences in other categories may be credited with 10 hours of the total flight time as pilot-in-command towards a PPL(H).

(3) The applicant shall have completed in helicopters not less than 10 hours of solo flight time under the supervision of an authorized flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 180 km (100 NM) in the course of which full-stop landings at two different points shall be made.

(b) **Flight instruction.**

(1) The applicant for a PPL(H) shall have received and log not less than 20 hours of dual instruction time in aeroplanes appropriate to the class rating sought from an authorised flight instructor on the subjects listed in IS 2.3.3.2.2. These 20 hours may include 5 hours completed in a flight simulation training device, and shall include:

(i) 3 hours of cross country flight training;

(ii) 3 hours of night flight training that includes one cross country flight of over 50 NM.

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot:

(i) recognize and manage threats and errors;

(ii) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;

(iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

(iv) control of the helicopter by external visual reference;

(v) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;

(vi) ground manoeuvring and run-ups; hovering; take-offs and landings – normal, out of wind and sloping ground;

(vii) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;

(viii) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour;

(ix) flight by reference solely to instruments, including the completion of a level 180 degrees turn;

(x) emergency operations, including simulated helicopter equipment malfunctions; autorotative approach; and

(xi) operations to, from and transiting controlled aerodromes, compliance with air traffic services procedures,

(xii) communication procedures and phraseology.
2.3.3.2.3 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE PPL – POWERED-LIFT CATEGORY

(a) Experience

(1) The applicant for a PPL(PL) shall have completed not less than 40 hours of flight time as pilot of powered-lift.

(2) The holder of pilot licences in other categories may be credited with 10 hours of the total flight time as pilot-in-command towards a PPL(PL).

(3) The applicant shall have completed in powered-lift not less than 10 hours of solo flight time under the supervision of an authorized flight instructor, including 5 hours of solo cross-country flight time with at least one cross-country flight totalling not less than 270 km (150 NM) in the course of which full-stop landings at two different aerodromes shall be made.

(b) Flight Instruction.

(1) The applicant for a PPL(PL) shall have received and log not less than 20 hours of dual instruction time in aeroplanes appropriate to the class rating sought from an authorised flight instructor on the subjects listed in IS 2.3.3.2.3. These 20 hours may include 5 hours completed in a flight simulation training device, and shall include:

(i) 3 hours of cross country flight training;

(ii) 3 hours of night flight training that includes one cross country flight of over 100 NM and 10 take-offs and 10 landings to a full stop at an airport with each landing involving a flight in the traffic pattern.

(iii) 3 hours of instrument flight training

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the private pilot:

(i) recognize and manage threats and errors;

(ii) pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;

(iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;

(iv) control of the powered-lift by external visual reference;

(v) ground manoeuvring and run-ups; hover and rolling take-offs and climb out; hover and rolling approach and landings – normal, out of wind and sloping ground;

(vi) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;

(vii) flight by reference solely to instruments, including the completion of a level 180˚ turn;

(viii) recovery at the incipient stages from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;

(ix) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour;

(x) emergency operations, including simulated powered-lift equipment malfunctions; power off reconversion to autorotation and autorotative approach, where applicable; transmission and interconnect driveshaft failure, where applicable and

(xi) operations to, from and transitting controlled aerodromes, compliance with air traffic services procedures;

(xii) communication procedures and phraseology
2.3.3.2.4 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE PPL – AIRSHIP CATEGORY

(a) Experience.
(1) The applicant shall have completed not less than 25 hours of flight time as pilot of airships including at least:
   (i) 3 hours of cross-country flight training in an airship with a cross-country flight totalling not less than 45 km (25 NM);
   (ii) 5 take-offs and 5 landings to a full stop at an aerodrome with each landing involving a flight in the traffic pattern;
   (iii) 3 hours of instrument time; and
   (iv) 5 hours as pilot assuming the duties of the pilot-in-command under the supervision of the pilot-in-command.

(b) Flight Instruction.
(1) The applicant shall have received dual instruction in airships from an authorised flight instructor. The instructor shall ensure that the applicant has received instruction in at least the following areas to the level of performance required for the private pilot:
   (i) recognize and manage threats and errors;
   (ii) pre-flight operations, including mass and balance determination, airships inspection and servicing;
   (iii) ground reference manoeuvres;
   (iv) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
   (v) techniques and procedures for take-off, including appropriate limitations, emergency procedures and signals used;
   (vi) control of the airships by external visual reference;
   (vii) take-offs and landings and go-around;
   (viii) maximum performance (obstacle clearance) take-offs;
   (ix) flight by reference solely to instruments, including the completion of a level 180 degrees turn;
   (x) navigation cross-country flying using visual reference, dead reckoning and radio navigation aids;
   (xi) emergency operations (recognition of leaks), including simulated airships equipment malfunctions; and
   (xii) communication procedures and phraseology
2.3.3.2.5 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE PPL – BALLOON CATEGORY

(a) **Experience.**
   (1) The applicant shall have completed not less than 16 hours of flight time as pilot of free balloons including at least 8 launches and ascents of which one must be solo.

(b) **Flight Instruction.**
   (1) The applicant shall have received dual instruction in free balloons from an authorised flight instructor in the areas of operation listed in IS 2.3.3.2.5 that includes:
      (i) **Gas Balloon.** If the training is being performed in a gas balloon, at least 2 flights of 2 hours each that consists of at least:
         - one training flight within 60 days prior to application for the rating on the areas of operation for a gas balloon;
         - one flight performing the functions of PIC in a gas balloon; and
         - one flight involving a controlled ascent to 3000 feet above the launch site
      (ii) **Hot Air Balloon.** If the training is being performed in a balloon with an airborne heater, at least:
         - two flights of one hour each within 60 days prior to application for the rating on the areas of operation appropriate to a hot air balloon
         - one solo flight in a hot air balloon; and
         - one flight involving a controlled ascent to 2000 feet above the launch site

   (2) The instructor shall ensure that the applicant has received instruction in at least the following areas to the level of performance required for the private pilot.
      (i) pre-flight operations;
      (ii) techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;
      (iii) collision avoidance precautions;
      (iv) control of a free balloon by external visual reference;
      (v) recognition of, and recovery from, rapid descents;
      (vi) cross-country flying using visual reference and dead reckoning;
      (vii) approaches and landings, including ground handling;
      (viii) emergency procedures

   (3) If the privileges of the licence are to be exercised at night, the applicant shall have gained, under appropriate supervision operational experience in free balloons in night flying.
2.3.3.2.6 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE PPL – GLIDER CATEGORY

(a) **Experience.** The applicant shall have completed not less than 6 hours of flight time as a pilot of gliders including 2 hours' solo flight time during which not less than 20 launches and landings have been performed.

(b) **Flight Instruction.** The applicant for a glider pilot licence shall have received from an authorised instructor dual instruction in a glider in at least the following areas:
   
   1. pre-flight operations, including glider assembly and inspection;
   2. techniques and procedures for the launching method used, including appropriate airspeed limitations, emergency procedures and signals used;
   3. traffic pattern operations, collision avoidance precautions and procedures;
   4. control of the glider by external visual reference;
   5. flight throughout the flight envelope;
   6. recognition of, and recovery from, incipient and full stalls and spiral dives;
   7. normal and cross-wind launches, approaches and landings;
   8. cross-country flying using visual reference and dead reckoning;
   9. emergency procedures.

(c) **Crediting of flight time in other aircraft categories.** The holder of a pilot licence in the aeroplane category may be credited with 3 hours towards the 6 hours of flight time required for the glider licence.
2.3.3.3 COMMERCIAL PILOT LICENCE

(a) Age. The applicant for a CPL shall be not less than 18 years of age.

(b) Knowledge areas. The applicant for a CPL shall receive and log ground training from an authorized instructor, to a level of knowledge appropriate to the privileges granted to the holder of a commercial pilot licence and appropriate to the category of aircraft intended to be included in the licence in at least the following subjects:

1. Air law:
   (i) rules and regulations relevant to the holder of a CPL;
   (ii) rules of the air; appropriate air traffic services practices and procedures

2. Aircraft general knowledge:
   (i) principles of operation and functioning of powerplants, systems and instruments;
   (ii) operating limitations of the relevant category of aircraft and powerplants; relevant operational information from the flight manual or other appropriate document;
   (iii) use and serviceability checks of equipment and systems of appropriate aircraft;
   (iv) maintenance procedures for airframes, systems and powerplants of appropriate aircraft;
   (v) for helicopters and powered-lift, transmission (power trains) where applicable;
   (vi) for airship and balloons, physical properties and practical application of gases;

3. Flight performance, planning and loading:
   (i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;
   (ii) use and practical application of take-off, landing and other performance data;
   (iii) pre-flight and en-route flight planning appropriate to commercial operations under VFR; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures;
   (iv) in the case of helicopter and powered-lift, effects of external loading;

4. Human performance:
   (i) human performance relevant to the appropriate aircraft type;
   (ii) principles of threat and error management;

5. Meteorology:
   (i) interpretation and application of aeronautical meteorological reports, charts and forecasts; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;
   (ii) aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the moment of pressure systems, the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;
   (iii) causes, recognition and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;

6. Navigation:
   (i) air navigation, including the use of aeronautical charts, instruments and navigation aids; understanding of the principles and characteristics of appropriate navigation systems; operation of air borne equipment
(7) Operation procedures:
   (i) Application of threat and error management to operational performance;
   (ii) use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
   (iii) altimeter setting procedures;
   (iv) appropriate precautionary and emergency procedures;
   (v) operational procedures for carriage of freight; potential hazards associated with dangerous goods;
   (vi) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;
   (vii) in the case of helicopter, and if applicable powered-lift, settling with power, ground resonance; retreating blade stall, dynamic roll-over and other operational hazards; safety procedures associated with flight under VFR.

(8) Principles of flight:
   (i) principles of flight relating to the appropriate category of aircraft;

(9) Radiotelephony:
   (i) communication procedures and phraseology as applied to VFR operations; action to be taken in case of communication failure;
   (ii) as further specified in IS 2.3.3.3 Appendix A.

(c) Knowledge testing. The applicant for a CPL shall:
   (1) have received an endorsement for the knowledge test from an authorized instructor who:
      (i) conducted the training to the required level on the knowledge subjects; and
      (ii) certifies that the person is prepared for the required knowledge test; and
   (2) Pass the required knowledge test on the knowledge subjects listed in IS 2.3.3.3.

(d) Skill. The applicant for a CPL shall:
   (1) have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and
   (2) shall have demonstrated by passing a skill test the ability to perform as pilot-in-command of an aircraft within the appropriate category of aircraft, the areas of operation described in IS 2.3.3.3, with a degree of competency appropriate to the privileges granted to the holder of a CPL, and to
      (i) recognise and manage threats and errors
      (ii) operate the aircraft within its limitations;
      (iii) complete all manoeuvres with smoothness and accuracy;
      (iv) exercise good judgement and airmanship;
      (v) apply aeronautical knowledge; and
      (vi) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

(e) Medical fitness. The applicant for a CPL shall hold a current Class 1 Medical Assessment.
Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a CPL shall be:

1. to exercise all the privileges of the holder of a PPL in an aircraft within the appropriate aircraft category;

2. to act as pilot-in-command in any aircraft within the appropriate aircraft category engaged in operations other than commercial air transportation;

3. to act as pilot-in-command in commercial air transportation in any aircraft within the appropriate aircraft category certificated for single-pilot operation;

4. to act as co-pilot in aircraft within the appropriate aircraft category required to be operated with a co-pilot; and

5. for the airship category, to pilot the airship under IFR.

(g) Exercising of privileges at night. Before exercising the privileges at night, the licence holder shall have received dual instruction in aircraft within the appropriate category in night flying, including take-off landing and navigation.

2.3.3.3.1 EXPERIENCE AND FLIGHT INSTRUCTION FOR CPL — AEROPLANE CATEGORY

(a) Experience

1. The applicant for a CPL(A) shall have completed not less than 200 hours of flight time, or 150 hours if completed during an approved training course provided for in an Approved Training Organisation under Part 3, as a pilot of aeroplanes. Not more than 10 hours of the total required time may have been completed in an approved flight simulation training device.

2. The applicant shall have completed in aeroplanes not less than:

   (i) 100 hours as pilot-in-command or, in the case of a course of approved training, 70 hours as pilot-in-command;

   (ii) 20 hours of cross-country flight time as pilot-in-command including a cross-country flight totalling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made;

   (iii) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and

   (iv) if the privileges of the licence are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as pilot-in-command.

3. The holder of a pilot licence in another category may be credited towards the 200 hours of flight time as follows:

   (i) 10 hours as PIC in a category other than helicopters;

   (ii) 30 hours as pilot-in-command holding a PPL(H) on helicopters; or

   (iii) 100 hours as pilot-in-command holding a CPL(H) on helicopters.

4. The applicant for a CPL(A) shall hold a PPL(A) issued under this Part.

(b) Flight Instruction

1. The applicant for a CPL(A) shall receive and log not less than 25 hours of dual instruction appropriate to the class and/or type rating sought from an authorized instructor. These 25 hours may include 5 hours completed in a flight simulation training device.
(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:
   (i) recognise and manage threats and errors;
   (ii) pre-flight operations, including mass and balance determination, aeroplane inspection and servicing;
   (iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
   (iv) control of the aeroplane by external visual reference;
   (v) flight at critically slow airspeeds; spin avoidance; recognition of, and recovery from, incipient and full stalls
   (vi) flight with asymmetrical power for multi-engine class or type ratings;
   (vii) flight at critically high airspeeds; recognition of, and recovery from, spiral dives;
   (viii) normal and cross-wind take-offs and landings;
   (ix) maximum performance (short field and obstacle clearance take-offs, short-field landings;
   (x) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
   (xi) cross-country flying using visual reference, dead reckoning and radio navigation aids; diversion procedures;
   (xii) abnormal and emergency procedures and manoeuvres including simulated aeroplane equipment malfunctions;
   (xiii) operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures; and
   (xiv) communication procedures and phraseology.

(3) If the privileges of the CPL(A) are to be exercised at night, the applicant shall have received 4 hours dual instruction in aeroplanes in night flying, including take-offs, landings and 1 hour of navigation.

2.3.3.2 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE CPL – HELICOPTER CATEGORY

(a) Experience

(1) The applicant for a CPL(H) shall have completed not less than 150 hours of flight time, or 100 hours if completed during an approved training course provided for in an Approved Training Organisation under Part 3, as a pilot of helicopters. Not more than 10 hours of the total required time may have been completed in a flight simulation training device.

(2) The applicant shall have completed in helicopters not less than:
   (i) 35 hours as pilot-in-command;
   (ii) 10 hours of cross-country flight time as pilot-in-command including a cross-country flight in the course of which full-stop landings at two different points shall be made;
   (iii) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and
   (iv) if the privileges of the licence are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as pilot-in-command.

(3) The holder of a pilot licence in another category may be credited towards the 150 hours of flight time as follows:
   (i) 20 hours as pilot-in-command holding a PPL(A) in aeroplanes; or
   (ii) 50 hours as pilot-in-command holding a CPL(A) in aeroplanes.

(4) The applicant for a CPL(H) shall hold a PPL(H) issued under this Part.
(b) **Flight Instruction**

1. The applicant for a CPL(H) shall receive and log not less than 30 hours of dual instruction appropriate to the class and/or type rating sought from an authorized instructor. These 25 hours may include 5 hours completed in a flight simulation training device.

2. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:
   - (i) recognise and manage threats and errors;
   - (ii) pre-flight operations, including mass and balance determination, helicopter inspection and servicing;
   - (iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
   - (iv) control of the helicopter by external visual reference;
   - (v) recovery at the incipient stage from settling with power; recovery techniques from low-rotor rpm within the normal range of engine rpm;
   - (vi) ground manoeuvring and run-ups; hovering; take-offs and landings – normal, out of wind and sloping ground; steep approaches;
   - (vii) take-offs and landings with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;
   - (viii) hovering out of ground effect; operations with external load, if applicable; flight at high altitude;
   - (ix) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
   - (x) cross-country flying using visual reference, dead reckoning and radio navigation aids; diversion procedures;
   - (xi) abnormal and emergency procedures and manoeuvres including simulated helicopter equipment malfunctions, autorotative approach and landing; and
   - (xii) operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures, and
   - (xiii) communication procedures and phraseology.

3. If the privileges of the CPL(H) are to be exercised at night, the applicant shall have received dual instruction in aeroplanes in night flying, including take-offs, landings and navigation.

### 2.3.3.3 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE CPL – POWERED-LIFT CATEGORY

(a) **Experience**

1. The applicant shall have completed not less than 200 hours of flight time in a powered lift, or 150 hours if completed during an approved training course provided for in an Approved Training Organisation under Part 3, as a pilot of aircraft. Not more than 10 hours of the total required time may have been completed in a flight simulation training device.

2. The applicant shall have completed in a powered-lift not less than:
   - (i) 50 hours as pilot-in-command;
   - (ii) 10 hours of cross-country flight time as pilot-in-command including a cross-country flight totalling not less than 540 km (300 NM) in the course of which full-stop landings at two different aerodromes shall be made;
   - (iii) 10 hours of instrument instruction time of which not more than 5 hours may be instrument ground time; and
(iv) if the privileges of the licence are to be exercised at night, 5 hours of night flight time including 5 take-offs and 5 landings as pilot-in-command.

(3) The holder of a pilot licence in another category may be credited towards the 200 hours of flight time as follows:
   (i) 10 hours as PIC in a category other than aeroplanes or helicopters;
   (ii) 30 hours as pilot-in-command holding a PPL on aeroplanes or helicopters; or
   (iii) 100 hours as pilot-in-command holding a CPL on aeroplanes or helicopters.

(b) Flight Instruction
   (1) The applicant shall receive and log not less than 25 hours of dual instruction in a powered-lift from an authorized instructor. These 25 hours may include 5 hours completed in a flight simulation training device.
   (2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:
      (i) recognise and manage threats and errors;
      (ii) pre-flight operations, including mass and balance determination, powered-lift inspection and servicing;
      (iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
      (iv) control of the powered-lift by external visual reference;
      (v) ground manoeuvring and run-ups; hover and rolling take-offs and climb out; hover and rolling approach and landings – normal, out of wind and sloping ground; steep approaches;
      (vi) take-offs and landing with minimum necessary power; maximum performance take-off and landing techniques; restricted site operations; quick stops;
      (vii) hovering out of ground effect; operations with external load, if applicable; flight at high altitude;
      (viii) basic flight manoeuvres and recovery from unusual attitudes by reference solely to basic flight instruments;
      (ix) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids, including a flight of at least one hour;
      (x) emergency operations, including simulated powered-lift equipment malfunctions, where applicable; power off reconversion to autorotation; autorotative approach; transmission and interconnect driveshaft failure;
      (xi) operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures; and
      (xii) communication procedures and phraseology.
   (3) If the privileges are to be exercised at night, the applicant shall have received 4 hours dual instruction in aeroplanes in night flying, including take-offs, landings and 1 hour of navigation

2.3.3.4 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE CPL – AIRSHIP CATEGORY

(a) Experience
   (1) The applicant shall have completed not less than 200 hours of flight time as a pilot
   (2) The applicant shall have completed not less than:
      (i) 50 hours as a pilot in airships;
      (ii) 30 hours as pilot-in-command or pilot-in-command under supervision in airships, to include not less than:
          - 10 hours of cross-country flight time; and
          - 10 hours of night flight;
(iii) 40 hours of instrument time, of which 20 hours shall be in flight and 10 hours shall be in flight in airships; and
(iv) 20 hours of training in airships on the areas of operation listed in item (b) below.

(b) Flight Instruction

(1) The applicant shall receive and log dual instruction in airships from an authorized instructor.

(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

(i) recognise and manage threats and errors;
(ii) pre-flight operations, including mass and balance determination, airships inspection and servicing;
(iii) aerodrome and traffic pattern operations, collision avoidance precautions and procedures;
(iv) techniques and procedures for take-off, including appropriate limitations, emergency procedures and signals used;
(v) control of the airships by external visual reference;
(vi) Recognition of leak;
(vii) Normal take-offs and landings;
(viii) Maximum performance (short field and obstacle clearance) take-offs; short field landings;
(ix) Flight under IFR;
(x) cross-country flying using visual reference, dead reckoning and, where available, radio navigation aids;
(xi) emergency operations, including simulated airship equipment malfunctions;
(xii) operations to, from and transmitting controlled aerodromes, compliance with air traffic services procedures,
(xiii) communication procedures and phraseology.

2.3.3.5 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE CPL – BALLOON CATEGORY

(a) Experience. The applicant shall have completed at least:

(1) 35 hours of flight time as a pilot, including at least:

(i) 20 hours as a pilot of free balloons;
(ii) 10 flights in a free balloon; and
(iii) 2 flights in a free balloon as the pilot-in-command.

(2) 10 hours of flight training that includes at least 10 training flights in a free balloon on the areas of operation listed in (b) below, including at least:

(i) for a gas balloon rating:
   - 2 training flights of 2 hours each in a gas balloon on the areas of operations appropriate to a gas balloon within 60 days prior to application for the rating;
   - 2 flights performing the functions of PIC in a gas balloon on the appropriate areas of operation; and
   - 1 flight involving a controlled ascent to 5000 feet above the launch site.
(ii) for a hot air balloon:
- 3 training flights of 1 hour each in a balloon with an airborne heater on the areas of operation appropriate to a balloon with an airborne heater within 60 days prior to application for the rating;
- 2 solo flights in a balloon with an airborne heater on the appropriate areas of operations; and
- 1 flight involving a controlled ascent to 3000 feet above the launch site.

(b) Flight Instruction
(1) The applicant shall receive and log dual instruction in balloons from an authorized instructor.
(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:
   (i) technical subjects;
   (ii) pre-flight operations, including balloon assembly, rigging, inflation, mooring and inspection;
   (iii) Pre-flight lessons on a manoeuvre to be performed in flight;
   (iv) Aerodromes operations, transiting controlled aerodromes, compliance with air traffic services procedures, communication procedures and phraseology
   (v) techniques and procedures for the launching and ascent, including appropriate limitations, emergency procedures and signals used;
   (vi) collision avoidance precautions;
   (vii) control of a free balloon by external visual reference;
   (viii) recognition of, and recovery from, rapid descents;
   (ix) navigation and cross-country flying using visual reference and dead reckoning;
   (x) approaches and landings, including ground handling;
   (xi) emergency procedures
   (xii) Post-flight procedures.

2.3.3.6 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE CPL – GLIDER CATEGORY

(a) Experience. The applicant shall have completed at least:
(1) 25 hours of flight time as a pilot in a glider during which at least 100 flights in a glider as PIC must be completed, and including at least:
   (i) 3 hours of flight training or 10 training flights in gliders on the areas of operation listed in item (b) below; and;
   (ii) 2 hours of solo flight time that includes not less than 10 solo flights in gliders on the areas of operation listed in item (b) below; or
(2) 200 hours of flight time as a pilot in aeroplanes, helicopters or powered-lift aircraft, and 20 flights in gliders as PIC, including at least:
   (i) 3 hours of flight training or 10 training flights in gliders on the areas of operations listed in item (b) below, and
   (ii) 5 solo flights in gliders on the areas of operation listed in item (b) below.

(b) Flight Instruction
(1) The applicant shall receive and log dual instruction in gliders from an authorized instructor.
(2) The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the commercial pilot:

(i) pre-flight preparations;
(ii) pre-flight procedures;
(iii) aerodrome and glider port operations;
(iv) launches and landings;
(v) performance speeds;
(vi) soaring techniques;
(vii) performance manoeuvres;
(viii) navigation;
(ix) slow flight and stalls;
(x) emergency procedures; and
(xi) post-flight procedures.
2.3.3.4 MULTI-CREW PILOT LICENCE

(a) **Age.** The applicant shall be not less than 18 years of age.

(b) **Knowledge.** The applicant shall have met the requirements specified in 2.3.3.5 (b) for the airline transport pilot licence appropriate to the aeroplane category in an approved training course.

(c) **Skill.** The applicant for a MPL shall:

1. have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and
2. shall have demonstrated by passing a skill test, the skills required for fulfilling all the competency units specified in IS 2.3.3.4 Appendix A as pilot flying and pilot not flying, to the level required to perform as co-pilot of turbine-powered aeroplanes certificated for operation with a minimum crew of at least two pilots under VFR and IFR, and to:
   i. recognise and manage threat and errors;
   ii. smoothly and accurately manually control the aeroplane within its limitation at all times, such that the successful outcome of a procedure or manoeuvre is assured;
   iii. operate the aeroplane in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;
   iv. perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight; and
   v. communicate effectively with other crew members and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to standard operating procedures (SOPs) and use of checklists.

   (3) Progress in acquiring the skills specified in (2) above shall be continuously assessed.

(d) **Medical Fitness.** The applicant shall hold a Class 1 Medical Assessment

(e) **Privileges of the holder of the MPL and the conditions to be observed in exercising such privileges.**

1. Subject to compliance with the requirements of this Part, the privileges of the holder of a MPL shall be:
   i. to exercise all the privileges of the holder of a PPL in the appropriate aeroplane category provided the requirements of 2.3.3.2.1 have been met;
   ii. to exercise the privileges of the IR in a multi-crew operation; and
   iii. to act as co-pilot in an aeroplane required to be operated with a co-pilot.

2. Before exercising the privileges of the IR in a single pilot operation, the licence holder shall have demonstrated the ability to act as pilot-in-command in a single pilot operation exercised solely by reference to instruments and met the skill requirements specified in paragraph 2.3.3.6.(f).

3. Before exercising the privileges of a commercial pilot licence in a single pilot operation, the licence holder shall have:
   i. completed 70 hours, either as PIC, or made up by not less than 10 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;
   ii. completed 20 hours of cross-country flight time as PIC, or made up by not less than 10 hours as PIC and 10 hours as PIC under supervision, including a cross-country flight totalling not less than 540km (300 NM) in the course of which full-stop landings shall be made at two different aerodromes; and
   iii. met the relevant requirements for the commercial pilot licence specified in 2.3.3.3.
(f) **Experience.**

(1) The applicant shall have completed in an approved training course not less than 240 hours as pilot flying and as pilot not flying of actual and simulated flight.

(2) Flight experience in actual flight shall include at least the experience requirements in 2.3.3.2.1(a), upset recovery training, night flying, cross-country and flight solely by reference to instruments.

(3) In addition to meeting the provisions of item (2) above, the applicant shall have gained, in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, or in a flight simulation training device approved for that purpose by the GCAA in accordance with IS 2.3.3.4 Appendix A(d), the experience necessary to achieve the advanced level of competency defined in IS 2.3.3.4 Appendix B.

(g) **Flight Instruction.**

(1) The applicant shall have completed a course of approved training covering all the knowledge and experience requirements specified in paragraph (f) above.

(2) The applicant shall have received dual flight instruction in all the competency units specified in IS 2.3.3.4 Appendix B to the level required for the issue of the multi-crew pilot licence, to include the competency units required to pilot under Instrument Flight Rules.
2.3.3.5 AIRLINE TRANSPORT PILOT LICENCE — GENERAL REQUIREMENTS FOR THE AEROPLANE, HELICOPTER AND POWERED-LIFT CATEGORIES

(a) Age. The applicant for an ATPL shall be not less than 21 years of age.

(b) Knowledge. The applicant for an ATPL shall receive and log ground training from an authorized instructor, to a level of knowledge appropriate to the privileges granted to the holder of an airline transport pilot licence and appropriate to the category of aircraft intended to be included in the licence in at least the following subjects:

(1) Air law:
   (i) rules and regulations relevant to the holder of an ATPL; rules of the air; appropriate air traffic services practices and procedures

(2) Aircraft general knowledge for aeroplane and helicopter and powered-lift:
   (i) general characteristics and limitations of electrical, hydraulic, pressurization and other aircraft systems; flight control systems, including autopilot and stability augmentation;
   (ii) principles of operation, handling procedures and operating limitations of aircraft powerplants; effects of atmospheric conditions on engine performance; relevant operational information from the flight manual or other appropriate document;
   (iii) operating procedures and limitations of the relevant category of aircraft; effects of atmospheric conditions on aircraft performance in accordance to the relevant operational information from the flight manual;
   (iv) use and serviceability checks of equipment and systems of appropriate aircraft;
   (v) flight instruments; compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments and electronic display units;
   (vi) maintenance procedures for airframes, systems and powerplants of appropriate aircraft;
   (vii) for helicopter and powered-lift, transmission (power-trains) where applicable.

(3) Flight performance and planning:
   (i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;
   (ii) use and practical application of take-off, landing and other performance data, including procedures for cruise control;
   (iii) pre-flight and en-route operational flight planning; preparation and filing of air traffic services flight plans; appropriate air traffic services procedures; altimeter setting procedures
   (iv) in the case of helicopter or powered-lift, effects of external loading on handling.

(4) Human performance:
   (i) human performance relevant to the appropriate aircraft category
   (ii) principles of threat and error management

(5) Meteorology:
   (i) interpretation and application of aeronautical meteorological reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information, pre-flight and in-flight; altimetry;
   (ii) aeronautical meteorology; climatology of relevant areas in respect of the elements having an effect upon aviation; the movement of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;
   (iii) causes, recognition and effects of icing; frontal zone penetration procedures; hazardous weather avoidance;
(iv) in the case of aeroplane and powered-lift, practical high altitude meteorology, including interpretation and use of weather reports, charts and forecasts, jetstreams.

(6) Navigation:
   (i) air navigation, including the use of aeronautical charts, radio navigation aids and area navigation systems; specific navigation requirements for long-range flights;
   (ii) use, limitation and serviceability of avionics and instruments necessary for the control and navigation of aircraft;
   (iii) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids;
   (iv) principles and characteristics of self-contained and external-referenced navigation systems; operation of airborne equipment;

(7) Operation procedures:
   (i) Application of threat and error management to operational performance;
   (ii) interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations;
   (iii) precautionary and emergency procedures; safety practices;
   (iv) operational procedures for carriage of freight and dangerous goods;
   (v) requirements and practices for safety briefing to passengers, including precautions to be observed when embarking and disembarking from aircraft;
   (vi) in the case of the helicopter, and if applicable, powered-lift, settling with power; ground resonance; retreating blade stall; dynamic roll-over and other operation hazards; safety procedures, associated with flight under VFR

(8) Principles of flight:
   (i) principles of flight relating to the appropriate aircraft category;

(9) Radiotelephony:
   (i) communication procedures and phraseology;
   (ii) action to be taken in case of communication failure.

(10) Instrument Rating knowledge requirement. In addition to the above subjects, the applicant for an airline transport pilot licence applicable to the aeroplane or powered-lift category, shall have met the knowledge requirements for the instrument rating at 2.3.3.6

(c) Knowledge Testing. The applicant for the ATPL shall:
   (1) have received an endorsement for the knowledge test from an authorised instructor who:
      (i) conducted the training on the knowledge subjects; and
      (ii) certifies that the person is prepared for the required knowledge test; and
   (2) pass the required written knowledge test on the subjects listed in item (c) above.

(d) Experience and flight instruction. An applicant for an ATPL shall have completed the experience and flight instruction requirements appropriate to the aircraft categories specified in this Part.

(e) Skill. The applicant for an ATPL shall:
   (1) have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test;
(2) have demonstrated by passing a skill test the ability to perform, as pilot-in-command of an aircraft of the appropriate category required to be operated with a co-pilot, the following procedures and manoeuvres:
   (i) pre-flight procedures, including the preparation of the operational flight plan and filing of the air traffic services flight plan;
   (ii) normal flight procedures and manoeuvres during all phases of flight;
   (iii) abnormal and emergency procedures and manoeuvres related to failures and malfunctions of equipment, such as powerplant, systems and airframe;
   (iv) procedures for crew incapacitation and crew coordination, including allocation of pilot tasks, crew cooperation and use of checklists;
   (v) in the case of the aeroplane and the powered-lift, procedures and manoeuvres for instrument flight described in this Part, including simulated engine failure;
   (vi) in the case of an aeroplane, the applicant shall have demonstrated the ability to perform the procedures and manoeuvres described in (i) to (v) above as pilot-in-command of a multi-engined aeroplane.

(3) have demonstrated by passing a skill test the ability to perform the areas of operation for flight instruction and skill test relevant to the aircraft category described in IS 2.3.3.5, with a degree of competency appropriate to the privileges granted to the holder of an ATPL, and to:
   (i) recognize and manage threats and errors;
   (ii) smoothly and accurately manually control the aircraft within its limitations at all times, such that the successful outcome of a procedure or manoeuvre is assured;
   (iii) operate the aircraft in the mode of automation appropriate to the phase of flight and to maintain awareness of the active mode of automation;
   (iv) perform, in an accurate manner, normal, abnormal and emergency procedures in all phases of flight;
   (v) exercise good judgement and airmanship, to include structured decision making and the maintenance of situational awareness; and
   (vi) communicate effectively with the other flight crew members and demonstrate the ability to effectively perform procedures for crew incapacitation, crew coordination, including allocation of pilot tasks, crew cooperation, adherence to standard operating procedures (SOPs) and use of checklists.

(f) Medical fitness. The applicant for an ATPL shall hold a current Class 1 Medical Assessment.

(g) Privileges.:
   (1) Subject to compliance with the applicable requirements specified in this Part, the privileges of the holder of an ATPL shall be:
      (i) to exercise all the privileges of the holder of a PPL and CPL of an aircraft within the appropriate aircraft category and class if applicable,
      (ii) in the case of a licence for the aeroplane and powered-lift categories, to exercise the privileges of the holder of an instrument rating; and
      (iii) to act as pilot-in-command and co-pilot in commercial air transportation in an aircraft of the appropriate category, and class if applicable.
   (2) When the holder of an ATPL in the aeroplane category has only previously held a MPL, the privileges of the licence shall be limited to multi-crew operations unless the holder has met the requirements established in 2.3.3.4 (e) as appropriate. Any limitation of privileges shall be endorsed on the licence.
2.3.3.5.1 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE ATPL – AEROPLANE CATEGORY

(a) Experience.

(1) The applicant for an ATPL (A) shall have completed at least 1500 hours of flight time as a pilot of aeroplanes of which not more than 100 hours may have been completed as pilot under instruction in a flight simulator. The applicant shall have completed in aeroplanes not less than:

(i) 500 hours as pilot-in-command under supervision or 250 hours, either as pilot-in-command, or made up by not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;

(ii) 200 hours of cross-country flight time, of which not less than 100 hours shall be as pilot-in-command or as pilot-in-command under supervision;

(iii) 75 hours of instrument time, of which not more than 30 hours may be instrument ground time; and

(iv) 100 hours of night flight as pilot-in-command or as co-pilot.

(2) Holders of a CPL(H) will be credited with 50% of their helicopter flight time as pilot-in-command towards the flight time required in (1).

(3) The applicant shall have completed a CRM course on the subjects listed in IS 2.3.2.4 Appendix B.

(4) The applicant for an ATPL(A) shall be the holder of a CPL(A) with instrument and multi-engine rating issued under this Part.

(b) Flight Instruction

(1) The applicant for an ATPL(A) shall have received the dual flight instruction required for the issue of the CPL and for the issue of the IR, or for the issue of the multi-crew pilot licence.

2.3.3.5.2 EXPERIENCE AND FLIGHT INSTRUCTION FOR THE ATPL – HELICOPTER CATEGORY

(a) Experience.

(1) The applicant for an ATPL (H) shall have completed at least 1000 hours of flight time as a pilot of helicopters of which not more than 100 hours may have been completed in a flight simulator. The applicant shall have completed in helicopters not less than:

(i) 250 hours, either as pilot-in-command, or made up by not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under the supervision;

(ii) 200 hours of cross-country flight time, of which not less than 100 hours shall be as pilot-in-command or as pilot-in-command under supervision;

(iii) 30 hours of instrument time, of which not more than 10 hours may be instrument ground time; and

(iv) 50 hours of night flight as pilot-in-command or as co-pilot.

(2) Holders of a CPL(A) will be credited with 50% of their aeroplane flight time as pilot-in-command towards the flight time required in item (1) above.

(3) The applicant shall have completed a CRM course on the subjects listed in IS 2.3.2.4 Appendix B.

(4) The applicant for an ATPL(H) shall be the holder of a CPL(H) issued under this Part.

(b) Flight Instruction

(1) The applicant for an ATPL(H) shall have received the flight instruction required for the issue of the CPL

Note. – The instrument time specified in (a)(1)(iii) above and the night flying time specified in (a)(1)(iv) above do not entitle the holder of the ATPL (H) to pilot helicopters under IFR.
2.3.3.5.3 **EXPERIENCE AND FLIGHT INSTRUCTION FOR THE ATPL – POWERED-LIFT CATEGORY**

(a) **Experience.**

(1) The applicant shall have completed at least 1500 hours of flight time as a pilot of powered-lifts of which not more than 100 hours may have been completed in a flight simulator. The applicant shall have completed in powered-lifts not less than:

(i) 250 hours, either as pilot-in-command, or made up by not less than 70 hours as pilot-in-command and the necessary additional flight time as pilot-in-command under supervision;

(ii) 100 hours of cross-country flight time, of which not less than 50 hours shall be as pilot-in-command or as pilot-in-command under supervision;

(iii) 75 hours of instrument time, of which not more than 30 hours shall be instrument ground time; and

(iv) 25 hours of night flight as pilot-in-command or as co-pilot.

(2) The Authority will determine if pilot flight time in other aircraft categories will be credited toward meeting the flight time required in item (1) above.

(3) The applicant shall have completed a CRM course on the subjects listed in IS 2.3.2.4 Appendix B

(4) The applicant for an ATPL(PL) shall be the holder of a CPL(PL) issued under this Part.

(b) **Flight Instruction.**

(1) The applicant shall have received the dual flight instruction required in this Part for the issue of the CPL (PL) and for the issue of the Instrument Rating.
2.3.3.6 INSTRUMENT RATING

(a) **General.** The holder of a pilot licence shall not act either as pilot-in-command or as co-pilot of an aircraft under instrument flight rules (IFR) unless such holder has an instrument rating appropriate to the aircraft category.

(b) **Knowledge.** The applicant for an IR shall have received and logged ground training from an authorized instructor on the following subjects:

1. **Air law:**
   - (i) rules and regulations relevant to flight under IFR; related air traffic services practices and procedures;

2. **Aircraft general knowledge for the aircraft category being sought:**
   - (i) use, limitation and serviceability of avionics, electronic devices and instruments necessary for the control and navigation under IFR and in instrument meteorological conditions; use and limitations of autopilot;
   - (ii) compasses, turning and acceleration errors; gyroscopic instruments, operational limits and precession effects; practices and procedures in the event of malfunctions of various flight instruments;

3. **Flight performance and planning for the category of aircraft being sought:**
   - (i) pre-flight preparations and checks appropriate to flight under IFR;
   - (ii) operational flight planning; preparation and filing of air traffic services flight plans under IFR; altimeter setting procedures;

4. **Human performance for the category of aircraft being sought:**
   - (i) human performance relevant to instrument flight in aircraft
   - (ii) principles of threat and error management;

5. **Meteorology for the category of aircraft being sought:**
   - (i) application of aeronautical meteorology; interpretation and use of reports, charts and forecasts; codes and abbreviations; use of, and procedures for obtaining, meteorological information; altimetry;
   - (ii) causes, recognition and effects of engine and airframe icing; frontal zone penetration procedures; hazardous weather avoidance;
   - (iii) in the case of helicopter and powered-lift, effects of rotor icing;

6. **Navigation for the category of aircraft sought:**
   - (i) practical air navigation using radio navigation aids;
   - (ii) use, accuracy and reliability of navigation systems used in departure, en-route, approach and landing phases of flight; identification of radio navigation aids;

7. **Operation procedures for the category of aircraft being sought:**
   - (i) application of threat and error management to operational procedures
   - (ii) interpretation and use of aeronautical documentation such as AIP, NOTAM, aeronautical codes and abbreviations, and instrument procedure charts for departure, en-route, descent and approach;
   - (iii) precautionary and emergency procedures; safety practices associated with flight under IFR; obstacle clearance criteria;

8. **Radiotelephony:**
   - (i) Communication procedures and phraseology as applied to aircraft operations under IFR;
   - (ii) action to be taken in case of communication failure;
(c) **Knowledge Testing.** An applicant for an Instrument Rating shall:

1. have received an endorsement for the knowledge test from an authorized instructor who:
   i. conducted the training on the knowledge subjects;
   ii. certifies that the person is prepared for the required knowledge test; and
2. pass the required knowledge test on the knowledge subjects listed in item (b) above.

(d) **Experience.**

1. The applicant for an IR shall hold a pilot licence for the aircraft category being sought.
2. The applicant shall have completed not less than:
   i. 50 hours of cross-country flight time as pilot-in-command of aeroplanes, airships, helicopters or powered-lifts, and of which not less than 10 hours shall be in the aircraft category being sought; and
   ii. 40 hours of instrument time in aircraft of which not more than 20 hours, or 30 hours where a flight simulator is used, may be instrument ground time. The ground time shall be under the supervision of an authorized instructor.

(e) **Flight Instruction.**

1. The applicant for an IR shall have not less than 10 hours of the instrument flight time required in item (d) above while receiving and logging dual instrument flight instruction in the aircraft category being sought from an authorized flight instructor on the subjects listed in IS 2.3.3.6 Appendix B.
2. The instructor shall ensure that the applicant has operational experience in at least the following areas to the level of performance required for the holder of an instrument rating:
   i. pre-flight procedures, including the use of the flight manual or equivalent document, and appropriate air traffic services documents in the preparation of an IFR flight plan;
   ii. pre-flight inspection, use of checklists, taxing and pre-take-off checks;
   iii. procedures and manoeuvres for IFR operation under normal, abnormal and emergency conditions covering at least:
      a. transition to instrument flight on take-off;
      b. standard instrument departures and arrivals;
      c. en-route IFR procedures and navigation;
      d. holding procedures;
      e. instrument approaches to specified minima;
      f. missed approach procedures;
      g. landings from instrument approaches;
3. in flight manoeuvres and particular flight characteristics.
4. If the privileges of the instrument rating are to be exercised on multi-engine aeroplanes, the applicant shall have received dual instrument flight instruction in such an aeroplane from an authorized flight instructor. The instructor shall ensure that the applicant has operational experience in the operation of the aeroplane solely by reference to instruments with one engine inoperative or simulated inoperative.
(f) **Skill.** The applicant for an IR shall:

1. have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and
2. have demonstrated by passing a skill test the ability to perform the areas of operation described in IS 2.3.3.6 Appendix B, with a degree of competency appropriate to the privileges granted to the holder of an IR, and to:
   - (i) recognise and manage threats and errors
   - (ii) operate the aircraft for the category being sought, within its limitations;
   - (iii) complete all manoeuvres with smoothness and accuracy;
   - (iv) exercise good judgement and airmanship;
   - (v) apply aeronautical knowledge; and
   - (vi) maintain control of the aircraft at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured;
3. have demonstrated by passing a skill test the ability to operate multi-engine aeroplanes solely by reference to instruments with one engine inoperative, or simulated inoperative, described in IS 2.3.3.6 Appendix B, if the privileges of the instrument rating are to be exercised on multi-engined aeroplanes.

(g) **Medical fitness.** The applicant for an IR shall hold a current Class 1 Medical Assessment

(h) **Privileges of the holder of an IR and conditions to be observed while exercising the privileges.**

1. Subject to compliance with the requirements specified in this Part, the privileges of the holder of an IR with a specific aircraft category shall be to pilot that category of aircraft under IFR.
2. Before exercising the privileges on multi-engine aeroplanes the holder of the rating shall have complied with the requirements of (f)(3) above.

(i) **Validity.** Subject to compliance with the requirements specified in this Part, the validity period of an Instrument Rating is 1 year.

(j) **Renewal:**

1. For the renewal of a single-engine instrument rating the applicant shall within the preceding 12 calendar months, complete a proficiency check on the subjects listed in IS 2.3.3.6 Appendix B.
2. For the renewal of a multi-engine instrument rating the applicant shall within the preceding 12 calendar months, complete a proficiency check on the subjects listed in IS 2.3.3.6 Appendix B.
3. If a pilot takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the pilot is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.

(k) **Re-issue.** If the instrument rating has been expired the applicant shall:

1. have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
2. pass the required skill test on the subjects listed in IS 2.3.3.6 Appendix B.
2.3.4 FLIGHT INSTRUCTOR RATING AND GROUND INSTRUCTOR AUTHORIZATION – AEROPLANES, AIRSHIPS, HELICOPTERS AND POWERED-LIFT

2.3.4.1 GENERAL

(a) Applicability. This section prescribes the requirements for the issuance of instructor ratings or authorisations, the conditions under which those ratings and authorisations are necessary, and the privileges and limitations of those ratings and authorisations.

(b) Licence requirements. The applicant for a flight instructor rating or authorization shall:

(1) hold at least the licence and rating for which instruction will be given, in the appropriate aircraft category; and

(2) hold the licence and rating necessary to act as the pilot-in-command of the aircraft on which the instruction is given; or

(3) hold a specific authorization granted by the Guyana Civil Aviation Authority.

(c) Endorsement of FI privileges on licence. A person shall not exercise the privileges of a flight instructor unless the flight instructor privileges are entered in his/her licence.

2.3.4.2 FLIGHT INSTRUCTORS

(a) Age. The applicant for a flight instructor rating (FI) shall be not less than 18 years of age.

(b) Knowledge:

(1) The applicant for a FI rating shall have met the knowledge requirements for the issue of a CPL as appropriate to the category of aircraft included in the licence.

(2) In addition, the applicant for a FI rating shall receive and log ground training from an authorized instructor in at least the following areas:

(i) techniques of applied instruction;

(ii) assessment of student performance in those subjects in which ground instruction is given;

(iii) the learning process;

(iv) elements of effective teaching;

(v) student evaluation and testing, training philosophies;

(vi) training programme development;

(vii) lesson planning

(viii) classroom instructional techniques;

(ix) use of training aids including flight simulation training devices as appropriate;

(x) analysis and correction of student errors;

(xi) human performance relevant to flight instruction including principles of threat and error management;

(xii) hazards involved in simulating system failures and malfunctions in the aircraft; and

(xiii) principles of threat and error management.

(3) The applicant shall have received an endorsement for the knowledge test from an authorized instructor who:

(i) conducted the training on the relevant knowledge subjects; and

(ii) certifies that the person is prepared for the required knowledge test.
(4) The applicant shall pass the required knowledge test on the knowledge subjects listed in item (2) above. This test may be combined with the skill test in paragraph (c) below.

(5) The holder of a FI rating, issued under this Part, applying for an additional FI rating is exempted from the requirements of this paragraph (b).

(c) **Skill.** The applicant for an FI rating:

1. shall have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and

2. shall pass the required skill test by demonstrating, in the category and class of aircraft for which flight instructor privileges are sought, the ability to instruct in those areas in which flight instruction is to be given, including pre-flight, post-flight and ground instruction as appropriate.

(d) **Experience.** The applicant for a FI rating shall have completed not less than 200 hours of PIC time on single-pilot aircraft of the appropriate category.

(e) **Flight Instruction.** The applicant for a FI rating shall, under the supervision of an instructor approved by the Guyana Civil Aviation Authority for that purpose

1. have received instruction in flight instructional techniques including demonstration, student practices, recognition and correction of common student errors; and

2. have practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide flight instruction listed in the relevant section in IS: 2.3.4.2, as applicable.

(f) **Privileges.** Subject to compliance with the requirements specified in this Part,

1. the privileges for the holder of a FI rating shall be:
   
   i. to supervise solo flights by student pilots;
   
   ii. to carry out flight instruction for the issue of a PPL;
   
   iii. to carry out flight instruction for the issue of a CPL, if he or she has completed 500 hrs of flight time and 200 hours of flight instruction;
   
   iv. to carry out flight instruction for the issue of a single-engine class rating if he or she has 15 hrs on the applicable type in the preceding 12 months;
   
   v. to carry out flight instruction for the issue of a multi-engine class rating if he or she has 500 hrs flight time and 15 hours on the applicable type in the preceding 12 months; and
   
   vi. to carry out flight instruction for the issue of an instructor rating, if he or she has completed 500 hours of instruction in the appropriate category.

2. the privileges of the holder of a FI instrument rating shall be to carry out flight instruction for the issue of an IR, if he or she has completed 200 hours flight in accordance with instrument flight rules and passed the test on the subjects listed in IS 2.3.4.2.7.

3. The applicant, in order to carry out instructions for the multi-crew pilot licence, shall have also met all the instructor qualifications requirements as detailed in Chapter 4 of the ICAO document “Procedures for Air Navigation Services — Training” (PANS-TRG, Doc 9868).
(g) **Instructor rating for additional type ratings:**

(1) Subject to compliance with this Subpart, pilots having experience in accordance with (3) below, may apply for an instructor rating for additional type ratings.

(2) **Knowledge.** The applicant for an instructor rating for additional type ratings
   (i) shall receive and log ground training from an authorized instructor on the subjects listed at Paragraph (b)(2) above;
   (ii) shall have received an endorsement for the knowledge test from an authorized instructor who:
       — conducted the training on the knowledge subjects; and
       — certifies that the person is prepared for the required knowledge test; and
   (iii) pass the required knowledge test on the subjects listed in item (i) above. This knowledge test may be combined with the skill test at item (5) below.
   (iv) The holder of an instructor rating for additional type ratings is exempted from this paragraph.

(3) **Experience:** The applicant for an instructor rating for additional type ratings shall have completed:
   (i) for single-pilot type rating instruction 500 hours of flight time as pilot-in-command
   (ii) for multi-pilot type rating instruction 500 hours of flight time as pilot-in-command on multi-pilot aircraft of the appropriate category including 30 route sectors in the preceding 12 months of which 15 sectors may have been completed in a flight simulator.

(4) **Flight Instruction:** The applicant for an instructor rating for additional type ratings shall, under the supervision of an instructor approved by the Guyana Civil Aviation Authority for that purpose:
   (i) have received instruction in instructional techniques including demonstration, student practices, recognition and correction of common student errors; and
   (ii) have practised instructional techniques in those flight manoeuvres and procedures in which it is intended to provide instruction on the subjects listed in IS 2.3.4.2.8 for type rating instructor.

(5) **Skill.** The applicant shall have demonstrated in a skill test, in the category and in type of aircraft for which instructor privileges are sought, the ability to instruct in those areas in which instruction is to be given, including pre-flight, post-flight and ground instruction as appropriate on the subjects listed in IS 2.3.4.2.8 for type rating instructor.

(6) **Privileges.** Subject to compliance with the requirements specified in this Part, the privileges of the holder of an instructor rating for additional type ratings are to carry out flight instruction for the issue of an additional type rating including CRM training in the appropriate category.

(h) **Instructor authorization for synthetic flight training.**

(1) Notwithstanding 2.3.4.1, Former holders of professional pilot licences, having instructional experience can apply for an authorization to provide flight instruction in a flight simulation training device (synthetic flight trainer), provided the applicant has at least 2 years experience as instructor in flight simulation training devices.

(2) **Skill.** The applicant shall have demonstrated in a skill test, in the category and in the class or type of aircraft for which instructor authorization privileges are sought, the ability to instruct in those areas in which ground instruction is to be given.

(3) **Privileges.** Subject to compliance with the requirements specified in this Part, the privileges of the holder of an authorization are to carry out synthetic flight training instruction for the issue of a class or type rating in the appropriate category.

(i) **Validity.** Subject to compliance with the requirements specified in this Part, the validity period of instructor ratings and authorization is 2 years.
(j) **Renewal.** A flight instructor rating that has not expired may be renewed for an additional 24 calendar months if the holder—

1. Passes a skill test for—
   i. Renewal of the flight instructor rating; or
   ii. An additional flight instructor rating; or

2. Presents to the Authority —
   i. A record of training students that shows during the preceding 24 calendar months the flight instructor has endorsed at least five students for a skill test for a license or rating, and at least 80 percent of those students passed that test on the first attempt;
   ii. A record that shows that within the preceding 24 calendar months, served as a company check pilot, chief flight instructor, company check airman, or flight instructor in a Part 9 operation, or in a position involving the regular evaluation of pilots; or
   iii. A graduation certificate showing that the pilot has successfully completed an approved flight instructor refresher course consisting of ground training or flight training, or both, within the 90 days preceding the expiration month of his or her flight instructor license.

3. If a flight instructor accomplishes the renewal requirements within the 90 days preceding the expiration month of his or her flight instructor rating—
   i. The Authority shall consider that the flight instructor accomplished the renewal requirement in the month due; and
   ii. The Authority shall renew the current flight instructor rating for an additional 24 calendar months from its expiration date.

4. A flight instructor may accomplish the skill test required by this subsection in an approved course conducted by an ATO certified under Part 3.

(k) **Re-issue.** If the instructor rating or authorization has been expired the applicant shall:

1. have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and

2. pass the required skill test on the subjects listed in the relevant section in IS 2.3.4.2 as applicable.

### 2.3.4.3 **GROUND INSTRUCTOR AUTHORIZATION**

(a) **Age.** The applicant for a Ground Instructor Authorization shall be at least 18 years of age.

(b) **Knowledge.** The applicant for a Ground Instructor Authorization shall:

1. Receive and log training from an authorised instructor and pass a knowledge test on the aeronautical knowledge areas appropriate to the aircraft category, for the licence and ratings below as applicable—
   i. For a basic rating, the knowledge for a student and private pilot licence as listed in this Part;
   ii. For an advanced rating, the student, private, commercial and airline transport pilot knowledge areas as listed in this Part.
   iii. For an instrument rating, the knowledge for the instrument rating as listed in this Part.

2. Meet the requirements of for fundamentals of knowledge instructing as listed in 2.3.4.2(b).

(c) **Privileges.** The holder of a Ground Instructor Authorization may exercise the privileges appropriate to the licence and rating held.

1. A person who holds a Ground Instructor Authorization with a basic rating is authorised to provide—
   i. Ground training in the aeronautical knowledge areas required for the issue or re-issue of a student pilot authorisation;
(ii) Ground training required for issue, re-issue or renewal of a private pilot licence; and
(iii) A recommendation for a knowledge test required for the issue re-issue or renewal of a private pilot licence.

(2) A person who holds a Ground Instructor Authorization with an advanced rating is authorised to provide—
(i) Ground training in the aeronautical knowledge areas required for the issue, re-issue or renewal of any licence or rating; and
(ii) A recommendation for a knowledge test required for the issue, re-issue or renewal of any licence or rating.

(3) A person who holds an instrument Ground Instructor Authorization is authorised to provide—
(i) Ground training in the aeronautical knowledge areas required for the issue, re-issue or renewal of an instrument rating;
(ii) Ground training required for an instrument proficiency check; and
(iii) A recommendation for a knowledge test required for the issue, re-issue or renewal of an instrument rating.

(4) A person who holds a Ground Instructor Authorization is authorised, within the limitations of the Authorization and the ratings included, to endorse the logbook or other training record of a person to whom the holder has provided the training or recommendation specified in (1) through (3) of this subsection.

(d) Currency Requirements.
(1) The holder of a Ground Instructor Authorization may not perform the duties of a ground instructor unless, within the preceding 12 months—
(i) The person has served for at least 3 months as a ground instructor; or
(ii) The person has received an endorsement from an authorised ground or flight instructor certifying that the person has demonstrated satisfactory proficiency with the standards prescribed in this part for the authorisation and ratings.
2.3.5 EXAMINERS

(a) General Requirements. An applicant for an examiner authorisation shall:
   (1) hold at least the licence and the rating for which examining authority is sought;
   (2) hold the privilege to instruct for this licence or rating;
   (3) have a reputation for integrity and honesty in the industry and the community;
   (4) have a good record as a pilot and flight instructor with regard to accidents, incidence and violations; and
   (5) have a pilot licence and instructor rating that have never been revoked for falsification or forgery.

(b) Experience. The applicant for the examiner’s authorization shall have 1500 hours of flight time and 200 hours of flight instruction.

(c) Training. The ground, flight and simulator training for Examiners shall include the subjects listed in IS 2.3.5

(d) Skill test. The applicant for an examiner authorization shall have conducted at least one skill test in the role of an examiner for which authorization is sought, including briefing, conduct of the skill test, assessment of the applicant to whom the skill test is given, debriefing and recording/documentation. This skill test shall be supervised by an inspector of the Guyana Civil Aviation Authority or by a senior examiner specifically authorized by the Guyana Civil Aviation Authority for this purpose.

(e) Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the examiner’s authorization are to conduct skill tests and proficiency checks for a licence and rating(s) as specified in the authorisation.

(f) Validity. Subject to compliance with the requirements specified in this Part, the validity period of an examiner’s authorization is 3 years. Re-authorisation will be at the discretion of the Guyana Civil Aviation Authority.

(g) Reduction in requirements. The Authority may authorise reductions in the requirements for examiner authorisation and/or waive certain portions of the training and test requirements taking into account the overall experience and qualifications of the applicant, provided that a request is made in writing by the applicant and the basis under which the request is made is clearly outlined.
2.4 FLIGHT ENGINEER LICENCE AND RATINGS

2.4.1 Applicability

This section prescribes the requirements for the issue, renewal and re-issue of a flight engineers licence and ratings.

2.4.2 General

(a) A person shall not act as a flight engineer of an aircraft registered in Guyana unless a valid licence or a validation certificate is held showing compliance with the specifications of this Part 2, and appropriate to the duties to be performed by that person.

(b) For the purpose of training, testing or specific special purpose non-revenue, non-passerger carrying flights, special authorization may be provided in writing to the licence holder by the Guyana Civil Aviation Authority in place of issuing the class or type rating in accordance with this Part. This authorization will be limited in validity to the time needed to complete the specific flight.

(c) An applicant shall, before being issued with a flight engineer licence, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that licence or rating.

(d) An applicant shall for renewal or re-issue of a licence, rating or authorization meet the requirements as are specified for that licence, rating or authorization.

2.4.3 Flight Engineer Licence

(a) Age. The applicant for a flight engineer licence shall be not less than 18 years of age.

(b) Knowledge. The applicant for a flight engineer licence shall receive and log ground training from an authorized instructor on the following subjects:
   (1) Air law:
      (i) rules and regulations relevant to the holder of a flight engineer licence; rules and regulations governing the operation of civil aircraft pertinent to the duties of a flight engineer;
   (2) Aircraft general knowledge:
      (i) basic principles of powerplants; gas turbines and/or piston engines; characteristics of fuels; fuel systems including fuel control; lubricants and lubrication systems; afterburners and injection systems, function and operation of engine ignition and starter systems;
      (ii) principles of operation; handling procedures and operating limitations of aircraft powerplants; effects of atmospheric conditions on engine performance;
      (iii) airframes; flight controls; structures; wheel assemblies; brakes and anti-skid units; corrosion and fatigue life; identification of structural damage and defects;
      (iv) ice and rain protection systems;
      (v) pressurization and air-conditioning systems; oxygen systems;
      (vi) hydraulic and pneumatic systems;
      (vii) basic electrical theory, electric systems (AC and DC); aircraft wiring systems; bonding and screening;
(viii) principles of operation of instruments, compasses, autopilots, radio communication equipment, radio and radar navigation aids, flight management systems, displays and avionics;

(ix) limitations of appropriate aircraft;

(x) fire protection, detection, suppression and extinguishing systems;

(xi) use and serviceability checks of equipment and systems of appropriate aircraft;

(3) Flight performance and planning:
   (i) effects of loading and mass distribution on aircraft handling, flight characteristics and performance; mass and balance calculations;
   (ii) use and practical application of performance data including procedures for cruise control;

(4) Human performance:
   (i) human performance relevant to the flight engineer
   (ii) principles of threat and error management;

(5) Navigation:
   (i) fundamentals of navigation; and
   (ii) principles and operation of self-contained systems;

(6) Meteorology:
   (i) operational aspects of meteorology;

(7) Operational procedures:
   (i) principles of maintenance; procedures for the maintenance of airworthiness; defect reporting; pre-flight inspections; precautionary procedures for fuelling and use of external power; installed equipment and cabin systems;
   (ii) normal, abnormal and emergency procedures;
   (iii) operational procedures for carriage of freight and dangerous goods;

(8) Principles of flight:
   (i) fundamentals of aerodynamics;

(9) Radiotelephony:
   (i) communication procedures and phraseology;

(c) Knowledge Testing. The applicant for a flight engineer licence shall:
   (1) have received an endorsement for the knowledge test from an authorized instructor who:
       (i) conducted the training on the knowledge subjects listed in item (b) above;
       (ii) certifies that the person is prepared for the required knowledge test; and
   (2) pass the required knowledge test.

(d) Experience.
   (1) The applicant for a flight engineer licence shall have completed under the supervision of a person accepted by the Guyana Civil Aviation Authority for that purpose, not less than 100 hours of flight time in the performance of the duties of a flight engineer, of which 50 hours may have been completed in an approved flight simulation training device.
   (2) The holder of a pilot licence may be credited with 30 hours towards the 100 hours of flight time.
(3) The applicant shall have operational experience in the performance of the duties of a flight engineer, under the supervision of a flight engineer accepted by the Guyana Civil Aviation Authority for that purpose, in at least the following areas:

(i) Normal procedures:
- pre-flight inspections
- fuelling procedures, fuel management
- inspection of maintenance documents
- normal flight deck procedures during all phases of flight
- crew coordination and procedures in case of crew incapacitation
- defect reporting

(ii) Abnormal and alternate (standby) procedures:
- recognition of abnormal functioning of aircraft systems
- use of abnormal and alternate (standby) procedures

(iii) Emergency procedures:
- recognition of emergency conditions
- use of appropriate emergency procedures

as further specified in IS 2.4.3.

(4) The applicant shall have completed a CRM course as listed in IS 2.3.2.4 Appendix B.

(e) **Skill.** The applicant for a flight engineer licence shall:

(1) have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and

(2) have demonstrated by passing the required skill test, the ability to perform as flight engineer of an aircraft, the duties and procedures described in paragraph (d)(3) above with a degree of competency appropriate to the privileges granted to the holder of a flight engineer licence, and to

(i) recognize and manage threats and errors;

(ii) use aircraft systems within the aircraft’s capabilities and limitations;

(iii) exercise good judgement and airmanship;

(iv) apply aeronautical knowledge;

(v) perform all the duties as part of an integrated crew with the successful outcome assured; and

(vi) communicate effectively with the other flight crew members.

(f) **Medical fitness.** The applicant for a flight engineer licence shall hold a current Class 2 Medical Assessment.

(g) **Privileges.** Subject to compliance with the requirements specified in this Part, the privileges of the holder of a flight engineer licence shall be to act as flight engineer of any type of aircraft on which the holder has demonstrated a level of knowledge and skill, on the basis of those requirements specified in paragraphs (c) and (e) above which are applicable to the safe operation of that type of aircraft.
2.4.4 **Flight Engineer Type Rating**

(a) **Knowledge.** The applicant for a type rating shall have completed the theoretical knowledge instruction and demonstrated by passing a knowledge test on the knowledge subjects as listed in IS 2.3.2.4 Appendix A.

(b) **Experience.** The applicant for a type rating shall:
   (1) have at least 100 hours flight time in the performance of the duties of a flight engineer; and
   (2) have completed a CRM course as listed in IS 2.3.2.4 Appendix B.

(c) **Flight instruction.** The applicant for a type rating shall have completed the flight instruction for the type rating on the subjects listed in IS 2.4.4.

(d) **Skill.** The applicant for a type rating shall:
   (1) have received an endorsement from an authorized instructor who certifies that the person is prepared for the required skill test; and
   (2) pass the required skill test on the subjects listed in IS 2.4.3.

(e) **Privileges.** Subject to compliance with the requirements specified in this Part, the privileges of the holder of a type rating are to act as flight engineer on the type of aircraft entered on the licence.

(f) **Validity.** Subject to compliance with the requirements specified in this Part, the validity period of a type rating is 1 year.

(g) **Renewal.** For the renewal of a type rating the flight engineer shall:
   (1) within the preceding 12 calendar months complete a proficiency check on the subjects as listed in IS 2.4.4; and
   (2) have completed 10 route sectors.
   (3) If a flight engineer takes the proficiency check required in this section in the calendar month before or the calendar month after the month in which it is due, the flight engineer is considered to have taken it in the month in which it was due for the purpose of computing when the next proficiency check is due.

(h) **Re-issue.** If a type rating has been expired the applicant shall:
   (1) have received refresher training from an authorized instructor with an endorsement that the person is prepared for the required skill test; and
   (2) pass the required skill test on the subjects listed in IS 2.4.4.

2.5 **RESERVED**
2.6 AIRCRAFT MAINTENANCE LICENCING

2.6.1 General

2.6.1.1 APPLICABILITY

(a) Subpart 2.6 prescribes the requirements for issuing the Aircraft Maintenance Engineer licence and associated ratings and/or authorisations.

2.6.2 Aircraft Maintenance Engineer

Note: The term “Aircraft Maintenance Engineer” is used in this section, but under ICAO Annex 1, 4.2, the terms “Aircraft Maintenance Technician and “Aircraft Maintenance Mechanic” are accepted with equal validity.

2.6.2.1 APPLICABILITY

This Subpart prescribes the requirements for issuance of an AME licence and associated ratings.

2.6.2.2 ELIGIBILITY REQUIREMENTS: GENERAL

(a) An applicant for an AME licence and any associated rating shall—

(1) Be at least 18 years of age;
(2) Demonstrate the ability to read, write, speak, and understand the English language by reading and explaining appropriate maintenance publications and by writing defect and repair statements;
(3) Comply with the knowledge, experience, and competency requirements prescribed for the licence and rating sought; and
(4) Pass all of the prescribed tests for the licence and rating sought, within a period of 24 months.

A licenced AME who applies for an additional rating must meet the requirements of 2.6.2.6 and, within a period of 24 months, pass the tests prescribed by 2.6.2.5 and 2.6.2.7 for the additional rating sought.

2.6.2.3 RATINGS

(a) The following ratings are issued under this subpart:

(1) Airframe.
(2) Powerplant.
(3) Avionics
(4) Other ratings as may be determined by the Authority.

2.6.2.4 KNOWLEDGE REQUIREMENTS FOR THE AME LICENCE.

(a) The applicant for an aircraft maintenance technician/engineer/mechanic licence shall have pass a knowledge test covering at least the following areas:

(1) Air law and airworthiness requirements:
   (i) rules and regulations relevant to an aircraft maintenance technician licence holder including applicable airworthiness requirements governing certification and continuing airworthiness of aircraft and approved aircraft maintenance organization procedures;
(2) Natural science and aircraft general knowledge
   (i) basic mathematics; units of measurement; fundamental principles and theory of physics and chemistry applicable to aircraft maintenance;
(3) Aircraft engineering
   (i) characteristics and applications of the materials of aircraft construction including principles of construction and functioning of aircraft structures, fastening techniques; powerplants and their associated systems; mechanical, fluid, electrical and electronic power sources; aircraft instrument and display systems; aircraft control systems; and airborne navigation and communication systems;
(4) Aircraft maintenance:
   (i) tasks required to ensure the continuing airworthiness of an aircraft including methods and procedures for the overhaul, repair, inspection, replacement, modification or defect rectification of aircraft structures, components and systems in accordance with the methods prescribed in the relevant Maintenance Manuals and the applicable requirements of airworthiness;
(5) Human performance:
   (i) human performance and limitations relevant to the duties of an aircraft maintenance licence holder;

2.6.2.5 Knowledge Requirements for the ratings

(a) The applicant for an airframe rating shall pass a knowledge test covering at least the following areas:
   (1) Airframe Maintenance practices and materials
   (2) Airframe systems and structures-fixed wing
   (3) Airframe systems and structures-rotary wing
   (4) Airship systems and structures
(b) The applicant for a powerplant rating shall pass a knowledge test covering at least the following areas:
   (1) Piston engines
   (2) Propellers
   (3) Gas turbine engines
   (4) Fuel systems
(c) The applicant for an avionics rating shall pass a knowledge test covering at least the following areas:
   (1) Aircraft electrical systems
   (2) Aircraft instrument systems
   (3) Automatic flight control systems
   (4) Aircraft radio and radio navigation systems
(d) The applicant shall pass each section of the test before applying for the oral and practical tests prescribed by 2.6.2.7.

2.6.2.6 Experience Requirements
An applicant for an AME licence and associated ratings may qualify by either practical experience or through training in an ATO.

(a) Practical experience. Each applicant for an AME licence and rating(s) relying on practical experience shall provide documentary evidence, acceptable to the Authority, of the following experience in the inspection, servicing and maintenance of aircraft or its components—
   (1) Airframe and Powerplant ratings – 48 months;
(2) Avionics rating – 36 months;
(3) Airframe, Powerplant and Avionics ratings – 60 months.

(b) Approved Training. Each applicant for an AME licence relying on completion of training in an Approved Training Organization shall provide documentary evidence, acceptable to the Authority, of the following training:

(1) Airframe and Powerplant ratings – 36 months
(2) Avionics rating – 24 months in an ATO, plus 12 months practical work experience.
(3) Airframe, Powerplant and Avionics ratings – 42 months in an ATO, plus 12 months practical work experience.

2.6.2.7 SKILL REQUIREMENTS
Each applicant for an AME licence or rating must pass an oral and a skill test on the licence or rating he seeks. The tests cover the applicant’s basic skill in performing practical projects on the subjects covered by the written test for the licence or rating, and shall contain at least the subjects in the Implementing Standard 2.6.2.7. appropriate to the licence or rating sought.

2.6.2.8 PRIVILEGES AND LIMITATIONS

(a) General.

(1) The primary function of an AME is to certify for the completion of maintenance tasks performed on aeronautical products or components of the type indicated on the licence. This may take the form of a Certificate of Release to Service (CRS), a Maintenance Release, a Duplicate Inspection, a Certificate of Fitness for Flight, or a Certificate of Maintenance Review as defined in the Aircraft Maintenance Engineer Licensing Standards Manual published by the Authority.

(2) Only an individual holding a valid, current and appropriately type-rated AME Licence may exercise certification privileges with respect to the completion of the tasks listed in (1) above.

(b) Responsibilities and limitations.

(1) The holder of a type-rated licence may only issue certifications as defined in this Part and in the Aircraft Maintenance Engineer Licensing Standards Manual published by the Authority. Certification is restricted to repairs, replacements, modifications, mandatory inspections, scheduled or unscheduled maintenance inspections, or any other tasks as described in the Aircraft Manufacturer’s Maintenance or Service Manuals, FAA Advisory Circular AC43.13–1B/2A as amended, or the equivalent publication issued by the European Aviation Safety Agency (EASA) or Transport Canada. When making these certifications, the holder of a type-rated licence is responsible for the Condition, Assembly, Installation and Functioning, of all parts of the airframe, powerplant, or avionics system, as applicable, affected by the work carried out.

(2) The holder of a type-rated “A” Licence may not issue a Maintenance Release, or Certificate of Release to Service in respect of an airframe or component where work has been done involving the repair, replacement or modification by riveting, bonding, welding or laminating, or the manufacture of:

(i) a fuselage longeron (stringer), or frame;
(ii) a box or truss beam, wing stringer or chord member, wing main rib, or spar;
(iii) a seat support brace or bracket;
(iv) an engine mount assembly or part thereof;
(v) repairs to fibre-reinforced plastic/opoxy primary structures;
(vi) covering of a complete fuselage or airfoil with cotton, linen, polyester or glass-fibre fabric;
(vii) disturbing of individual parts of units which are supplied as bench-tested units, except for the replacement or adjustment of items normally replaceable or adjustable in service where subsequent functioning may be proved without the use of test apparatus used for normal functioning checks;

(viii) repairs to any surface, of damage extending more than six inches (6") in length in any direction, where the surface is subject to pressurization loads;

(ix) any repair to aircraft skin, whether or not subject to pressurization loads, where the use of a support, jig or fixture is required.

(3) The holder of a type-rated “C” Licence may not issue a CRS for:

(i) repairs to a wooden or composite bladed propeller;

(ii) re-assembly of the crankcase of a reciprocating engine;

(iii) overhaul or re-assembly of a turbine engine or turbine engine module;

(iv) repairs to a propeller that is beyond the limits recommended in the manufacturer’s maintenance manual or service instructions;

(v) re-assembly of a controllable pitch or variable-pitch propeller;

(vi) an engine mount assembly or part thereof.

(4) The holder of a Category “A” Licence may issue CRS in relation to aircraft for which the Licence is Type-Rated, for the replacement of instruments, and the replacement of such parts in the electrical, automatic pilot and radio systems:

(i) as are included in the syllabus for the approved type course attended;

(ii) that do not require the use of specialised test equipment; and

(iii) that can be tested using aircraft systems on the ground.

Note: — The multi-meter (AVO), when used for continuity checks and to confirm voltage, but not for adjustments or specific readings, and the Pitot-Static test set when used for leak testing only, are not considered specialised test equipment and may be used by an AME. However, the AME must first have been trained in the use of the specific Pitot-Static test set.)

(5) The holder of an “E” Licence may issue a Maintenance Release for work carried out on any aircraft system covered under the group or groups for which his or her licence is endorsed, provided that for a fixed-wing aircraft, it has an MCTOM of 5700 kg or less, and for a rotary wing aircraft, an MCTOM of 2730 kg or less. For a fixed wing aircraft with an MCTOM of more than 5700 kg (or 2730 kg for a rotorcraft), the holder of an “E” Licence must have received a type endorsement course on that aircraft prior to making any certification. The licence holder must retain documentary proof of the successful completion of each endorsement course in his training records. Certification privilege for an “E” licence is limited to the removal and replacement of components, system testing, trouble shooting, repairs to wiring, connectors or installations, as well as any calibration or adjustment described in the Aircraft Maintenance Manual. The holder is not allowed to open any component, or to carry out any repair to a component, unless the procedure to be carried out is specifically defined in the Aircraft Maintenance Manual.

2.6.2.9 RECENT EXPERIENCE REQUIREMENTS

(a) A licenced AME may not exercise the privileges of his/her licence or rating unless, within the preceding 24 months—

(1) the Authority has found that he/she is able to do that work; or

(2) for at least 6 months within the preceding 24 months—

(i) Served as an AME under his/her licence and rating;

(ii) Technically supervised other AMEs;
(iii) Provided aviation maintenance instruction or served as the direct supervisor of persons providing aviation maintenance instruction for an AME course or program acceptable to the Authority;

(iv) Supervised the maintenance, preventive maintenance, or alteration of any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof; or b

(v) been engaged in any combination of paragraphs (a)(1)(i) through (a)(1)(iv) of this subsection; and

2.6.2.10 DISPLAY OF LICENCE
Each person who holds an AME licence shall keep it within the immediate area where he/she normally exercises the privileges of the licence and shall present it for inspection upon the request of the Authority or an authorised representative of the Director General.
2.7 AIR TRAFFIC CONTROLLER LICENCES, CATEGORIES AND RATINGS

2.7.1 APPLICABILITY
This section prescribes the requirements for the issue, renewal and re-issue of an air traffic controller licence and ratings.

2.7.2 GENERAL

(a) An applicant shall, before being issued with an air traffic controllers licence, rating or authorization, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that licence, rating or authorization.

(b) An applicant shall for renewal or re-issue of a licence, rating or authorization meet the requirements as are specified for that licence, rating or authorization.

2.7.3 STUDENT AIR TRAFFIC CONTROLLER

(a) Student air traffic controllers shall not provide air traffic control service in any air traffic control unit except under the direct supervision of an appropriately rated and licensed or authorised air traffic controller.

(b) Student air traffic controllers shall hold a current Class 3 Medical Assessment when receiving instruction in an operational environment.

2.7.4 AIR TRAFFIC CONTROLLER LICENCE

(a) Age. The applicant for an air traffic controller licence shall be not less than 21 years of age.

(b) Knowledge. The applicant for an air traffic controller licence shall receive knowledge instruction through an approved training course from an authorized instructor, in at least the following knowledge areas:

1. Air law:
   (i) rules and regulations relevant to the air traffic controller;

2. Air traffic control equipment:
   (ii) principles, use and limitations of equipment used in air traffic control;

3. General knowledge:
   (i) principles of flight;
   (ii) principles of operation and functioning of aircraft, powerplants and systems;
   (iii) aircraft performances relevant to air traffic control operations;

4. Human performance:
   (i) human performance including principles of threat and error management;

5. Meteorology:
   (i) aeronautical meteorology;
   (ii) use and appreciation of meteorological documentation and information;
   (iii) origin and characteristics of weather phenomena affecting flight operations and safety; and
   (iv) altimetry;
(6) Navigation:
   (i) principles of air navigation;
   (ii) principle, limitation and accuracy of navigation systems and visual aids; and

(7) Operational procedures:
   (i) air traffic control, communication, radiotelephony and phraseology procedures (routine, non
       routine and emergency);
   (ii) use of the relevant aeronautical documentation; and
   (iii) safety practices associated with flight.

(c) Knowledge testing. An applicant for an air traffic control licence shall pass the required knowledge test
    on the knowledge areas listed in paragraph (b) above.

(d) Experience. The applicant shall have completed an approved training course and not less than three
    months' satisfactory service engaged in the actual control of air traffic under the supervision of an
    appropriately rated air traffic controller. The experience requirements specified for air traffic controller
    ratings in 2.7.4 will be credited as part of the experience specified in this paragraph.

(e) Medical fitness. The applicant for an air traffic controller licence shall hold a current Class 3 Medical
    Assessment.

2.7.5 AIR TRAFFIC CONTROLLER RATINGS

(a) Air traffic controller ratings shall comprise the following categories:
   (1) aerodrome control rating;
   (2) approach control procedural rating;
   (3) approach control surveillance rating;
   (4) approach precision radar control rating;
   (5) area control procedural rating; and
   (6) area control surveillance rating.

(b) Knowledge. The applicant for an air traffic controller rating shall receive knowledge instruction through
    an approved training course from an authorized instructor on the following subjects:

   (1) aerodrome control rating:
      (i) aerodrome layout; physical characteristics and visual aids;
      (ii) airspace structure;
      (iii) applicable rules, procedures and source of information;
      (iv) air navigation facilities;
      (v) air traffic control equipment and its use;
      (vi) terrain and prominent landmarks;
      (vii) characteristics of air traffic;
      (viii) weather phenomena; and
      (ix) emergency and search and rescue plans;

   (2) approach control procedural and area control ratings:
      (i) airspace structure;
      (ii) applicable rules, procedures and source of information;
      (iii) air navigation facilities;
      (iv) air traffic control equipment and its use;
(v) terrain and prominent landmarks;
(vi) characteristics of air traffic and traffic flow;
(vii) weather phenomena; and
(viii) emergency and search and rescue plans; and

(3) approach control surveillance, approach precision radar control and area control surveillance ratings:

The applicant shall meet the requirements specified in item (2) above in so far as they affect the area of responsibility, and shall have demonstrated a level of knowledge appropriate to the privileges granted, in at least the following additional subjects:

(i) principles, use and limitations of applicable ATS surveillance systems and associated equipment; and

(ii) procedures for the provision of ATS surveillance services, as appropriate, including procedures to ensure appropriate terrain clearance;

(c) Knowledge testing. An applicant for an air traffic controller rating shall:

(1) have received an endorsement for the knowledge test from an authorized instructor who:
   (i) conducted the training on the knowledge areas;
   (ii) certifies that the person is prepared for the required knowledge test; and

(2) pass the required knowledge test.

(d) Experience. The applicant for an air traffic controller rating shall have:

(1) satisfactorily completed an approved training course;

(2) provided, satisfactorily, under the supervision of an appropriately rated air traffic controller:
   (i) aerodrome control rating: an aerodrome control service, for a period of not less than 90 hours or one month, whichever is greater, at the unit for which the rating is sought;
   (ii) approach control procedural, approach control surveillance, area control procedural or area control surveillance rating: the control service for which the rating is sought, for a period of not less than 180 hours or three months, whichever is greater, at the unit for which the rating is sought; and
   (iii) approach precision radar control rating: not less than 200 precision approaches of which not more than 100 shall have been carried out on a radar simulator approved for that purpose by the Guyana Civil Aviation Authority. Not less than 50 of those precision approaches shall have been carried out at the unit and on the equipment for which the rating is sought; and

(3) if the privileges of the approach control surveillance rating include surveillance radar approach duties, the experience shall include not less than 25 plan position indicator (PPI) approaches on the surveillance equipment of the type in use at the unit for which the rating is sought and under the supervision of an appropriately rated approach radar controller.

(4) The experience specified under item (2)(ii) above shall have been completed within the 6-month period immediately preceding application.

(e) Skill. The applicant shall have demonstrated by passing the required skill test, at a level appropriate to the privileges being granted, the skill, judgement and performance required to provide a safe orderly and expeditious air traffic control service.
(f) Privileges.

(1) Subject to compliance with the requirements specified in this Part, the privileges of the holder of an air traffic controller licence with the following applicable rating(s) shall be:

(i) aerodrome control rating: to provide or to supervise the provision of aerodrome control service for the aerodrome for which the licence holder is rated;

(ii) approach control procedural rating: to provide or to supervise the provision of approach control service for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;

(iii) approach control surveillance rating: to provide and/or supervise the provision of approach control service with the use of applicable ATS surveillance systems for the aerodrome or aerodromes for which the licence holder is rated, within the airspace or portion thereof, under the jurisdiction of the unit providing approach control service;

--- subject to compliance with the provisions of (d) (3) above, the privileges shall include the provision of surveillance radar approaches;

(iv) approach precision radar control rating: to provide and/or supervise the provision of precision approach radar service at the aerodrome for which the licence holder is rated;

(v) area control procedural rating: to provide and/or supervise the provision of area control service within the control area or portion thereof, for which the licence holder is rated; and

(vi) area control surveillance rating: to provide and/or supervise the provision of area control service with the use of an ATS surveillance system, within the control area or portion thereof, for which the licence holder is rated.

(2) Before exercising the privileges indicated in (d)(1) above, the licence holder shall be familiar with all pertinent and current information.

(3) A holder of an air traffic controller licence and rating(s) shall not provide instruction in an operational environment unless the holder has received proper authorisation from the Authority.

(g) Validity of ratings. A rating shall become invalid when an air traffic controller has ceased to exercise the privileges of the rating for a period of 3 months, and shall remain invalid until the controller's ability to exercise the privileges of the rating has been re-established.
2.8 FLIGHT OPERATIONS OFFICER LICENCE

2.8.1 Applicability

This section prescribes the requirements for the issue, renewal and re-issue of a flight operations officer licence.

2.8.2 General

(a) An applicant shall, before being issued with a flight operations officer licence, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that licence.

(b) An applicant shall for renewal or re-issue of a licence meet the requirements as are specified for that licence.

2.8.3 Flight operations officer licence

(a) Age. The applicant for a flight operations officer licence shall be not less than 21 years of age.

(b) Knowledge. The applicant for a flight operations officer licence shall receive and log training from an authorized instructor on the following knowledge areas appropriate to the privileges of the flight operations officer:

(1) Air Law:
   (i) rules and regulations relevant to the holder of a flight operations officer licence;
   (ii) appropriate air traffic services practices and procedures;

(2) Aircraft general knowledge:
   (i) principles of operation of aeroplane powerplants, systems and instruments
   (ii) operating limitations of aeroplanes and powerplants;
   (iii) minimum equipment list;

(3) Flight performance calculation, planning procedures and loading:
   (i) effects of loading and mass distribution on aircraft performance and flight characteristics; mass and balance calculations;
   (ii) operational flight planning; fuel consumption and endurance calculations; alternate airport selection procedures; en-route cruise control; extended range operation;
   (iii) preparation and filing of air traffic services flight plans;
   (iv) basic principles of computer-assisted planning systems;

(4) Human performance:
   (i) human performance relevant to dispatch duties;

(5) Meteorology
   (i) aeronautical meteorology; the movement of pressure systems; the structure of fronts, and the origin and characteristics of significant weather phenomena which affect take-off, en-route and landing conditions;
(ii) interpretation and application of aeronautical meteorological reports, charts and forecasts, codes and abbreviations; use of, and procedures for obtaining meteorological information;

(6) Navigation:
   (i) principles of air navigation with particular reference to instrument flight;

(7) Operational procedures:
   (i) use of aeronautical documentation;
   (ii) operational procedures for the carriage of freight and dangerous goods;
   (iii) procedures relating to aircraft accidents and incidents; emergency flight procedures;
   (iv) procedures relating to unlawful interference and sabotage of aircraft;

(8) Principles of flight:
   (i) principles of flight relating to the appropriate category of aircraft;

(9) Radio communication:
   (i) procedures for communicating with aircraft and relevant ground stations;

(c) Knowledge testing:
   (1) The applicant for a flight operations officer licence shall have received an endorsement for the knowledge test from an authorized instructor who:
      (i) conducted the training on the knowledge areas;
      (ii) certifies that the person is prepared for the required knowledge test; and
   (2) the applicant shall pass the required knowledge test.

(d) Experience.
   (1) The applicant for a flight operations officer licence shall have gained the following experience:
      (i) a total of 2 years' service in any one or in any combination of the capacities specified below in (A) to (C) inclusive, provided that in any combination of experience the period serviced in any one capacity shall be at least one year:
         (A) a flight crew member in air transportation; or
         (B) a meteorologist in an organization dispatching aircraft in air transportation; or
         (C) an air traffic controller; or a technical supervisor of flight operations officers or air transportation flight operations systems; or
      (ii) at least one year as an assistant in the dispatching of air transport; or
      (iii) have satisfactorily completed a course of approved training.
   (2) The applicant shall have served under the supervision of a flight operations officer for at least 90 working days within the 6 months immediately preceding the application.

(c) Skill. The applicant shall have demonstrated the ability to:
   (1) make an accurate and operationally acceptable weather analysis from a series of daily weather maps and weather reports; provide an operationally valid briefing on weather conditions prevailing in the general neighbourhood of a specific air route; forecast weather trends pertinent to air transportation with particular reference to destination and alternates;
   (2) determine the optimum flight path for a given segment, and create accurate manual and/or computer generated flight plans; and
(3) provide operating supervision and all other assistance to a flight in actual or simulated adverse weather conditions as appropriate to the duties of the holder of a flight operations officer licence.

(d) Privileges. Subject to compliance with the requirements specified in this Part, the privileges of the holder of a flight operations officer licence shall be to serve in that capacity with responsibility for each area for which the applicant meets the requirements in ICAO Annex 6, as contained in Parts 8 and 9 of these Requirements.
2.9 AERONAUTICAL STATION OPERATOR LICENCES

2.9.1 Applicability

This section prescribes the requirements for the issue, renewal or re-issue of an aeronautical station operator licence.

2.9.2 General

(a) An applicant shall, before being issued with an aeronautical station operator licence, meet such requirements in respect of age, knowledge, experience, skill, medical fitness and language proficiency as are specified for that licence.

(b) An applicant shall for renewal or re-issue of a licence, rating or authorization meet the requirements as are specified for that licence.

2.9.3 Aeronautical station operator licence

(a) Age. The applicant for an aeronautical station operator licence shall be not less than 18 years of age.

(b) Knowledge. The applicant for an aeronautical station operator licence shall receive and log ground training from an authorized instructor on the following subjects appropriate to the privileges of an aeronautical station operator:
   (1) General Knowledge:
      (i) air traffic services provided within Guyana;
   (2) Operational Procedures:
      (i) radiotelephony procedures; phraseology; telecommunication network;
   (3) Rules and regulations:
      (i) rules and regulations applicable to the aeronautical station operator;
   (4) Telecommunication equipment:
      (i) principles, use and limitations of telecommunication equipment in an aeronautical station

(c) Knowledge testing. An applicant for an aeronautical station operator licence shall:
   (1) have received an endorsement for the knowledge test from an authorized instructor who:
      (i) conducted the training on the knowledge areas;
      (ii) certifies that the person is prepared for the required knowledge test; and
   (2) pass the required knowledge test.

(d) Experience. The applicant for an aeronautical station operator licence shall have:
   (1) satisfactorily completed an approved training course within the 12-month period immediately preceding application, and have served satisfactorily under a qualified aeronautical station operator for not less than 2 months; or
   (2) satisfactorily served under a qualified aeronautical station operator for not less than 6 months during the 12-month period immediately preceding application.

(e) Skill. The applicant for an aeronautical station operator licence shall demonstrate, or have demonstrated, competency in:
   (1) operating the telecommunication equipment in use; and
   (2) transmitting and receiving radiotelephony messages with efficiency and accuracy.
(f) **Privileges.** Subject to compliance with the requirements specified in this Part, the privileges of the holder of an aeronautical station operator licence shall be to act as an operator in an aeronautical station. Before exercising the privileges of the licence, the holder shall be familiar with all pertinent and current information regarding the types of equipment and operating procedures used at that aeronautical station.
2.10 MEDICAL PROVISIONS FOR LICENSING

2.10.1 GENERAL

2.10.1.1 APPLICABILITY

This Section prescribes the requirements and procedures for issuing, renewing and re-issuing Class 1, Class 2 and Class 3 Medical Assessments.

2.10.1.2 MEDICAL FITNESS

(a) The applicants for a flight crew licence and air traffic controller licence shall hold a Medical Assessment issued in accordance with this Part.

(b) The flight crew members or air traffic controllers shall not exercise the privileges of their licence unless they hold a current Medical Assessment appropriate to the licence.

2.10.1.3 AVIATION MEDICAL EXAMINERS (AMEX)

(a) Subject to compliance with the requirements specified in this Part, the Guyana Civil Aviation Authority will designate qualified and licensed physicians in the practice of medicine, to conduct medical examinations of fitness of applicants for the issue, renewal or re-issue of licences or ratings specified in this Part. Those designated physicians shall be referred to as Aviation Medical Examiners (AMEXs) and may be designated outside of Guyana.

(b) AMEXs shall have received:

   (1) Basic training in aviation medicine for Class 2 and 3 medical examinations on the subjects listed in IS 2.10.1.3 Appendix A; and

   (2) Advance training in aviation medicine for Class 1 medical examinations on the subjects listed in IS 2.10.1.3 Appendix B.

(c) AMEXs shall have knowledge and experience of the conditions in which the holders of licences and ratings carry out their duties.

(d) AMEXs shall demonstrate adequate competency in aviation medicine before designation.

(e) AMEXs shall receive refresher training in aviation medicine every three years.

(f) The authorization of an AMEX is valid for 3 years. The AMEX shall have completed at least 10 examinations for a Medical Assessment per year. Re-authorization will be at the discretion of the Guyana Civil Aviation Authority.

(g) Having completed the medical examination of an applicant in accordance with this Section, the AMEX shall coordinate the results of the examination and submit a signed report to the Guyana Civil Aviation Authority, detailing the results of the examination and evaluating the findings with regard to medical fitness.
(h) If the medical examination is carried out by a constituted group of AMEXs, the head of the group will be appointed by the Guyana Civil Aviation Authority, who will be responsible for coordinating the results of the examination and signing the report.

(i) The Guyana Civil Aviation Authority will use the services of a Medical Assessor to evaluate and audit reports/Medical Assessments submitted to the Authority by medical examiners.

(j) The AMEX shall submit sufficient medical information to the Authority that will enable the Authority to audit the Medical Assessments.

(k) Medical confidentiality shall be respected at all times.

(l) All medical records and reports shall be securely held with accessibility restricted to authorised personnel.

(m) When justified by operational considerations, the Medical Assessor shall determine to what extent pertinent medical information is presented to relevant officials of the Authority.

(n) The Guyana Civil Aviation Authority retains the right to reconsider any action of an AMEX.

2.10.1.4 AVIATION MEDICAL EXAMINATIONS

(a) Applicants for licences or ratings for which medical fitness is prescribed shall sign and furnish to the AMEX a declaration stating whether they have previously undergone such an examination and, if so, the date, place and result of the last examination.

(b) Applicants for a Medical Assessment shall inform the AMEX whether a Medical Assessment has previously been refused, revoked or suspended and, if so, the reason for such refusal, revocation or suspension.

(c) Each applicant for a Medical Assessment shall provide the AMEX with a personally certified statement of medical facts concerning personal, familial and hereditary history.

(d) Each applicant for a Medical Assessment shall produce proof of identification.

(e) Any false declaration to an AMEX made by an applicant for a licence or rating shall be reported to the Guyana Civil Aviation Authority for such action as may be considered appropriate.

(f) The applicant shall complete the appropriate application form provided by the Authority.

(g) Deferral of a medical examination. The prescribed re-examination of a licence holder operating in an area distant from designated medical examination facilities may be deferred at the discretion of the Authority, provided that such deferment shall only be made as an exception and shall not exceed:

1. a single period of six months in the case of a flight crew member engaged in non-commercial operations;

2. two consecutive periods each of three months in the case of a flight crew member of an aircraft engaged in commercial operations provided that in each case a favourable medical report is obtained after examination by a designated medical examiner of the area concerned, or, in cases where such designated medical examiner is not available, by a physician legally qualified to practise medicine in that area. A report of the medical examination shall be sent to the Authority.

3. in the case of a private pilot, a single period not exceeding 24 months where the medical examination is carried out by an examiner designated by the Contracting State in which the applicant is temporarily located. A report of the examination shall be sent to the Authority.
2.10.1.5 **SPECIAL CIRCUMSTANCES**

(a) If the medical requirements prescribed in Part 2 for a particular licence are not met, the appropriate Medical Assessment will not be issued, renewed or re-issued unless the following conditions are fulfilled:

1. accredited medical conclusion indicates that in special circumstances the applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence applied for is not likely to jeopardize flight safety;
2. relevant ability, skill and experience of the applicant and operational conditions have been given due consideration; and
3. the licence is endorsed by the Guyana Civil Aviation Authority with any special limitation or limitations when the safe performance of the licence holder's duties is dependent on compliance with such limitation or limitations.

(b) The AMEX shall report to the Guyana Civil Aviation Authority any individual case where, in the AMEX's judgement, an applicant's failure to meet any requirement, whether numerical or otherwise, is such that exercise of the privileges of the licence being applied for, or held, is not likely to jeopardize flight safety.

2.10.1.6 **DECREASE OF MEDICAL FITNESS**

Holders of licences provided for in this Part shall not exercise the privileges of their licences and related ratings at any time when they are aware of any decrease in their medical fitness which might render them unable to safely and properly exercise these privileges.

2.10.1.7 **USE OF PSYCHOACTIVE SUBSTANCES**

(a) Holders of licences provided for in this Part shall not exercise the privileges of their licences and related ratings while under the influence of any psychoactive substance which might render them unable to safely and properly exercise these privileges.

(b) Holders of licences provided for in this Part shall not engage in any problematic use of substances.

2.10.1.8 **MEDICAL ASSESSMENTS**

(a) The Medical Assessment shall be in a form and manner prescribed by the Guyana Civil Aviation Authority.

(b) **Issue of Medical Assessments**

1. A Medical Assessment will be issued to any person who meets the medical requirements prescribed in this Subpart, based on medical examination and evaluation of the applicant's history and condition as follows:
   (i) The Guyana Civil Aviation Authority will issue the Class 1, Class 2 and Class 3 Medical Assessments.
   (ii) The issue of a temporary Medical Assessment for a period of up to 30 days may be delegated to the authorized Aviation Medical Examiner.
(2) Each person to be issued a Medical Assessment shall undergo a medical examination based on the physical and mental requirements contained in this Subpart.

(3) Any person who does not meet the medical requirements of this Subpart may apply for the discretionary issuance of a certificate under 2.10.1.5.

(c) **Validity:**

(1) A Medical Assessment issued in accordance with this Part shall be valid from the date of the examination for a period not greater than:

   (i) 6 months for the Class 1 for the CPL, MPL, ATPL and flight engineer licence.
   (ii) 24 months for the Class 2 for the PPL, and for the Class 1 for holders of PPL with IR.
   (iii) 24 months for the Class 3 for the air traffic controller licence;

(2) When the holders have passed their 40th birthday the period of validity specified in (1)(ii) and (1)(iii) above for the PPL and air traffic controller licence will be reduced to 12 months.

(3) For initial issuance of the Medical Assessment, the period of validity shall begin on the date the medical examination is performed. For any renewal or re-issuance of a Medical Assessment, based on a medical examination that takes place during the period of validity of the current Medical Assessment, but no more than 45 days before its expiry date, the new period of validity shall begin on that date. For any renewal or re-issuance, based on a medical examination taking place after the expiry date or earlier than 45 days before the expiry date, the new period of validity shall begin on the date of the examination.

(d) **Renewal or re-issue of a Medical Assessment**

(1) The requirements to be met for the renewal or re-issue of a Medical Assessment are the same as those for the initial certificate except where otherwise specifically stated.

(2) The renewal or re-issue of the Class 1, 2 and 3 Medical Assessment will be done by the Guyana Civil Aviation Authority.

(e) **Limitation or denial**

(1) The Guyana Civil Aviation Authority may for medical reasons justified and notified to the applicant limit or deny a Medical Assessment.

(f) **Suspension or revocation of a Medical Assessment**

(1) The Guyana Civil Aviation Authority may in accordance with 2.2.10 suspend or revoke a Medical Assessment issued, if it is established that an applicant or a certificate holder has not met, or no longer meets the requirements of Part 2.
2.10.2 **MEDICAL REQUIREMENTS**

2.10.2.1 **REQUIREMENTS FOR MEDICAL ASSESSMENTS**

2.10.2.1.1 **GENERAL**
An applicant for a Medical Assessment issued in accordance with this Part, shall undergo a medical examination based on the following requirements:

(a) physical and mental;
(b) visual and colour perception; and
(c) hearing.

2.10.2.1.2 **PHYSICAL AND MENTAL REQUIREMENTS**
An applicant for any class of Medical Assessment shall be required to be free from:

(a) any abnormality, congenital or acquired; or
(b) any active, latent, acute or chronic disability; or
(c) any wound, injury or sequelae from operation; or
(d) any effect or side-effect of any prescribed or non-prescribed therapeutic, diagnostic or preventative medication taken;

such as would entail a degree of functional incapacity which is likely to interfere with the safe operation of an aircraft or with the safe performance of duties.

*Note: Use of herbal medication and alternative treatment modalities require particular attention to possible side-effects*

2.10.2.1.3 **VISUAL ACUITY TEST REQUIREMENTS**

(a) Visual acuity tests must be conducted in an environment with a level of illumination that corresponds to ordinary office illumination (30-60cd/m²).

(b) Visual acuity must be measured by means of a series of Landolt rings or similar optotypes, placed at a distance from the applicant appropriate to the method of testing adopted.

2.10.2.1.4 **COLOUR PERCEPTION REQUIREMENTS**

(a) Aviation medical examiners shall only use such methods of examination as will guarantee reliable testing of colour perception.

(b) The applicant shall be required to demonstrate the ability to perceive readily those colours the perception of which is necessary for the safe performance of duties.

(c) The applicant shall be tested for the ability to correctly identify a series of pseudoisochromatic plates in daylight or in artificial light of the same colour temperature such as that provided by CIE standard illuminants C or D65 as specified by the International Commission of Illumination (CIE).
(d) An applicant obtaining a satisfactory result as prescribed by the Guyana Civil Aviation Authority shall be assessed as fit. An applicant failing to obtain a satisfactory result in such a test shall be assessed as unfit unless able to readily distinguish the colours used in air navigation and correctly identify aviation coloured lights. Applicants who fail to meet these criteria shall be assessed as unfit except for Class 2 assessment with the following restriction: valid daytime only.

(d) Sunglasses worn during the exercise of the privileges of the licence or rating held shall be non-polarizing and of a neutral grey tint.

2.10.2.1.5 HEARING REQUIREMENTS

(a) Aviation medical examiners shall only use such methods of examination as will guarantee reliable testing of hearing.

(b) Applicants shall be required to demonstrate a hearing performance sufficient for the safe exercise of their licence and rating privileges.

(c) Applicants for Class 1 Medical Assessments shall be tested by pure-tone audiometry at first issue of the Assessment, not less than once every five years up to the age of forty years, and thereafter not less than once every two years.

(d) Applicants for Class 3 Medical Assessments shall be tested by pure-tone audiometry at first issue of the Assessment, not less than once every four years up to the age of forty years, and thereafter not less than once every two years.

(e) Applicants for a Class 2 Medical Assessment shall be tested by pure-tone audiometry at first issue of the Assessment and, after the age of 50 years, not less than once every two years.

(f) Alternatively, other methods providing equivalent results may be used.

(g) At medical examinations, other than those mentioned in (c), (d) and (e) above, where audiometry is not performed, applicants shall be tested in a quiet room by whispered and spoken voice tests

Note 1: The reference zero for calibration of pure-tone audiometers is that of the pertinent Standards of the current edition of the Audiometric Test Methods, published by the International Organization for Standardization (ISO).

Note 2: For the purpose of testing hearing in accordance with the requirements a quiet room is a room in which the intensity of the background noise is less than 35 dB (A).

Note 3: For the purposes of testing hearing in accordance with the requirements, the sound level of an average conversational voice at 1 m from point of output (lower lip of speaker) is c. 60 dB(A) and that of a whispered voice c. 45dB(A). At 2 m from the speaker, the sound level is 6 dB(A) lower.
2.10.2.2 **CLASS 1 MEDICAL ASSESSMENT**

2.10.2.2.1 **CERTIFICATE ISSUE AND RENEWAL**

(a) An applicant for a CPL, MPL or ATPL licence shall undergo an initial medical examination for the issue of a Class 1 Medical Assessment.

(b) Except where otherwise stated in this subpart, holders of CPL, MPL or ATPL licence shall have their Class 1 Medical Assessment renewed at intervals not exceeding those specified in 2.10.1.8. (c).

(c) A Class 1 Medical Assessment will be issued when the applicant complies with the requirements of this Part.

2.10.2.2.2 **PHYSICAL AND MENTAL REQUIREMENTS**

The examination for a Class 1 Medical Assessment shall be based on the following requirements.

(a) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.

(b) The applicant shall have no established medical history or clinical diagnosis of:

1. an organic mental disorder;
2. a mental or behavioral disorder due to the use of psychoactive substances; this includes dependence syndrome induced by alcohol or other psychoactive substances;
3. schizophrenia or a schizotypal or delusional disorder;
4. a mood (affective) disorder;
5. a neurotic, stress-related or somatoform disorder;
6. A behavioural syndrome associated with psychological disturbance or physical factors;
7. A disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
8. Mental retardation;
9. A disorder of psychological development;
10. A behavioural or emotional disorder, with onset in childhood or adolescence; or
11. A mental disorder not otherwise specified;

such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.

*Note: — A history of acute toxic psychosis need not be regarded as disqualifying, provided that the applicant has suffered no permanent impairment.*

(c) The applicant shall have no established medical history or clinical diagnosis of any of the following:

1. a progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges;
2. epilepsy;
3. any disturbance of consciousness without satisfactory medical explanation of cause;
(d) Cases of head injury, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges shall be assessed as unfit.

(e) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant's licence and rating privileges. A history of proven myocardial infarction shall be disqualifying.

(f) An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant’s cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

(g) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant's licence or rating privileges.

(h) Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment/Certificate and shall be included in re-examination of applicants between the ages of 30 and 50 no less frequently than every two years, and thereafter no less frequently than annually.

Note: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

(i) The systolic and diastolic blood pressures shall be within normal limits.

(j) The use of drugs for control of high blood pressure shall be disqualifying except for those drugs, the use of which, according to accredited medical conclusion is compatible with the safe exercise of the applicant’s licence and rating privileges.

(k) There shall be no significant functional nor structural abnormality of the circulatory system

(l) There shall be no acute disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal and emergency operations. Radiography shall form a part of the medical examination in all doubtful clinical cases.

(m) Chest radiography shall form a part of the initial examination.

Note: Periodic chest radiography is usually not necessary but may be a necessity in situations where asymptomatic pulmonary disease can be expected.

(n) Applicants with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant's condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(o) Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal and emergency operations shall be assessed as unfit.

(p) The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant's licence and ratings privileges.

(q) Applicants with active pulmonary tuberculosis shall be assessed as unfit.

(r) Applicants with quiescent or healed lesions which are known to be tuberculosis, or are presumably tuberculosis in origin, may be assessed as fit.

(s) Applicants with significant impairment of function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

(t) Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.
(u) Applicants with sequelae of disease of, or surgical intervention on, any part of the digestive tract or its adnexa, likely to cause incapacitation in flight, in particular any obstruction due to stricture or compression, shall be assessed as unfit.

(v) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as the medical assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation in flight.

(w) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of the applicant’s licence and rating privileges shall be assessed as unfit.

(x) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.

(y) Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

(z) Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

Note: — Sickle cell trait or other haemoglobinopathic traits are usually compatible with a fit assessment.

(aa) Applicants with renal or genito-urinary disease shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

(bb) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(cc) Applicants with sequelae of disease of, or surgical procedures on the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(dd) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(ee) Applicants with acquired immunodeficiency syndrome (AIDS) shall be assessed as unfit.

(ff) Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless full investigation provides no evidences of clinical disease.

Note. — Evaluation of applicants who are seropositive for human immunodeficiency virus (HIV) requires particular attention to their mental state, including the psychological effects of the diagnosis.

(gg) Applicants with gynaecological disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(hh) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

(ii) For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with (hh) above, the fit assessment shall be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

(jj) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and rating privileges.
(kk) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

Note. — Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

(ii) The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(mm) There shall be:

1. no disturbance of vestibular function;
2. no significant dysfunction of the Eustachian tubes; and
3. no unhealed perforation of the tympanic membranes.

Note. — A single dry perforation of the tympanic membrane need not render the applicant unfit.

(nn) There shall be:

1. no nasal obstruction; and
2. no malformation nor any disease of the buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(oo) Applicants with stuttering or other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

2.10.2.2.3 VISUAL REQUIREMENTS
The medical examination shall be based on the following requirements.

(a) The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant’s licence and rating privileges.

(b) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

1. such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
2. in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant’s licence.

Note: — An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Guyana Civil Aviation Authority. Both uncorrected and correct visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity; any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

(c) Applicants may use contact lenses to meet the requirement of (b) provided that:

1. the lenses are monofocal and non-tinted;
2. the lenses are well tolerated; and
3. a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.
(d) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(e) Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.

Note: The purpose of the required ophthalmic examination is 1) to ascertain normal visual performance and 2) to identify any significant pathology.

(f) Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

(g) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by (b), the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correction already prescribed in accordance with (b); if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 1: N5 and N14 refer to the size of typeface used. For further details, see the ICAO Manual of Civil Aviation Medicine (Doc 8984).

Note 2: Any applicant who needs near correction to meet this requirement will require “look-over”, bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 3: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

(h) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(i) The applicant shall be required to have normal fields of vision.

(j) The applicant shall be required to have normal binocular function.

Note. Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

2.10.2.2.4 HEARING REQUIREMENTS
The medical examination shall be based on the following requirements.

(a) The applicant, when tested on a pure-tone audiometer, shall not have a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1,000 or 2,000 Hz, or more than 50 dB at 3,000 Hz.

(b) An applicant with a hearing loss greater than the above may be declared fit provided that the applicant has normal hearing performance against a background noise that reproduces or simulates the masking properties of flight deck noise upon speech and beacon signals.
Note 1: It is important that the background noise be representative of the noise in the cockpit of the type of aircraft for which the applicant's licence and ratings are valid.

Note 2: In the speech material for discrimination testing, both aviation-relevant phrases and phonetically balanced words are normally used.

Note 3: A practical hearing test conducted in flight in the cockpit of an aircraft of the type for which the applicant's licence and ratings are valid may be used.

2.10.2.3 Class 2 Medical Assessment

2.10.2.3.1 Certificate Issue and Renewal

(a) An applicant for a PPL and a flight engineer licence shall undergo an initial medical examination for the issue of a Class 2 Medical Assessment.

(b) Except where otherwise stated in this subpart, holders of a PPL and a flight engineer licence shall have their Class 2 Medical Assessment renewed at intervals not exceeding those specified in 2.10.1.8. (b).

(c) A Class 2 Medical Assessment will be issued when the applicant complies with the requirements of this Part.

2.10.2.3.2 Physical and Mental Requirements

The medical examination shall be based on the following requirements.

(a) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable either to operate an aircraft safely or to perform assigned duties safely.

(b) The applicant shall have no established medical history or clinical diagnosis of:

   (1) an organic mental disorder;
   (2) a mental or behavioral disorder due to the use of psychoactive substances; this includes dependance syndrome induced by alcohol or other psychoactive substances;
   (3) schizophrenia or a schizotypal or delusional disorder;
   (4) a mood (affective) disorder;
   (5) a neurotic, stress-related or somatoform disorder;
   (6) A behavioural syndrome associated with psychological disturbance or physical factors;
   (7) A disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
   (8) Mental retardation;
   (9) A disorder of psychological development;
   (10) A behavioural or emotional disorder, with onset in childhood or adolescence; or
   (11) A mental disorder not otherwise specified;

   such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.

   Note: Mental and behavioural disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organisation as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition – Classification of Mental and Behavioural Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements, which may be useful for their application to Medical Assessment.

(c) The applicant shall have no established medical history or clinical diagnosis of any of the following:

   (1) a progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges;
(2) epilepsy;
(3) any disturbance of consciousness without satisfactory medical explanation of cause;

(d) The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(e) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(f) An applicant who has undergone coronary by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant’s cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

(g) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(h) Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment.

Note: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

(i) Electrocardiography shall be included in re-examination of applicants after the age of 50 no less than every two years.

(j) The systolic and diastolic blood pressures shall be within normal limits.

(k) The use of drugs for control of high blood pressure shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

(l) There shall be no significant functional nor structural abnormality of the circulatory system.

(m) There shall be no disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms during normal or emergency operations.

(n) Chest radiography shall form a part of the initial and periodic examinations in cases where asymptomatic pulmonary disease can be expected.

(o) Applicants with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

(p) Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal and emergency operations shall be assessed as unfit.

(q) The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant’s licence and ratings privileges.

(r) Applicants with active pulmonary tuberculosis, shall be assessed as unfit.

(s) Applicants with quiescent or healed lesions which are known to be tuberculosis, or are presumably tuberculosis in origin, may be assessed as fit.

(t) Applicants shall be completely free from those hernias that might give rise to incapacitating symptoms.

(u) Applicants with significant impairment of function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

(v) Applicants with sequelae of disease of or surgical intervention on any part of the digestive tract or its adnexae, likely to cause incapacitation in flight, in particular any obstructions due to stricture or compression, shall be assessed as unfit.
(w) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexae with a total or partial excision or a diversion of any of these organs should be assessed as unfit until such time as the medical assessor having access to the details of the operation concerned considers that the effects of the operation are not likely to cause incapacitation in flight.

(x) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(y) Applicants with insulin treated diabetes mellitus shall be assessed as unfit.

(z) Applicants with non-insulin-treated diabetes mellitus shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

(aa) Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

Note: — Sickle cell trait and other haemoglobinophatic traits are usually compatible with fit assessment.

(bb) Applicants with renal or genito-urinary disease shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

(cc) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(dd) Applicants with sequelae of disease of, or surgical procedures on the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

(ee) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(ff) Applicants with acquired immunodeficiency syndrome (AIDS) shall be assessed as unfit.

(gg) Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless full investigation provides no evidences of clinical disease.

Note — Evaluation of applicants who are seropositive for human immunodeficiency virus (HIV) requires particular attention to their mental state, including the psychological effects of the diagnosis.

(hh) Applicants with gynaecological disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(ii) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

Note: — For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with (jj), the fit assessment should be limited to the period from the end of the 12th week until the end of the 26th week of gestation.

(jj) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone re-evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

(kk) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicants licence and rating privileges.

Note: Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

(ll) The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicants licence and rating privileges.
There shall be:

1. no disturbance of vestibular function;
2. no significant dysfunction of the Eustachian tubes; and
3. no unhealed perforation of the tympanic membranes.

Note: A single dry perforation of the tympanic membrane need not render the applicant unfit.

There shall be:

1. no nasal obstruction: and
2. no malformation nor any disease of the buccal cavity or upper respiratory tract;
   which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

Applicants with stuttering and other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.

2.10.2.3.3 VISUAL REQUIREMENTS

The medical examination shall be based on the following requirements.

(a) The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant’s licence and rating privileges.

(b) Distant visual acuity with or without correction shall be 6/12 or better in each eye separately, and binocular visual acuity shall be 6/9 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:
   1. such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
   2. in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant’s licence.

Note: — An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Guyana Civil Aviation Authority. Both uncorrected and corrected visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity; any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.

(c) Applicants may use contact lenses to meet the requirement of (b) provided that:
   1. the lenses are monofocal and non-tinted;
   2. the lenses are well tolerated; and
   3. a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

Note: — Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.

(d) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

Note: — If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.

(e) Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 shall be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.
Note: The purpose of the required ophthalmic examination is 1) to ascertain normal visual performance and 2) to identify any significant pathology.

(f) Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

(g) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by (b), the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correcting already prescribed in accordance with (b); if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

Note 1: N5 and N14 refer to the size of typeface used.

Note 2: Any applicant who needs near correction to meet this requirement will require “look-over”, bifocal or perhaps multifocal lenses in order to read the instruments and a chart or manual held in the hand, and also to make use of distant vision, through the windscreen, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) significantly reduces distant visual acuity and is therefore not acceptable.

Note 3: Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the visual flight deck tasks relevant to the types of aircraft in which the applicant is likely to function.

(h) When near correction is required in accordance with this section, a second pair of near-correction spectacles shall be kept available for immediate use.

(i) The applicant shall be required to have normal fields of vision.

(j) The applicant shall be required to have normal binocular function.

Note: Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

2.10.2.3.4 HEARING REQUIREMENTS

(a) Applicants who are unable to hear an average conversational voice in a quiet room, using both ears, at a distance of 2 m from the examiner and with the back turned to the examiner, shall be assessed as unfit.

(b) When tested by pure-toned audiometry, an applicant with a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz, shall be assessed as unfit.

(c) An applicant who does meet the requirements in (a) or (b) above should undergo further testing in accordance with 2.10.2.2.4(b).
2.10.2.4 Class 3 Medical Assessment

2.10.2.4.1 Certificate Issue and Renewal

(a) An applicant for an Air Traffic Controller licence shall undergo an initial medical examination for the issue of a Class 3 Medical Assessment.

(b) Except where otherwise stated in this subpart, holders of an Air Traffic Controller licence shall have their Class 3 Medical Assessment renewed at intervals not exceeding those specified in 2.10.1.8. (b).

(c) A Class 3 Medical Assessment will be issued when the applicant complies with the requirements of this Part.

2.10.2.4.2 Physical and Mental Requirements

(a) The applicant shall not suffer from any disease or disability which could render that applicant likely to become suddenly unable to perform assigned duties safely.

(b) The applicant shall have no established medical history or clinical diagnosis of:

   (1) an organic mental disorder;
   (2) a mental or behavioural disorder due to psychoactive substance use; this includes dependance syndrome induced by alcohol or other psychoactive substances;
   (3) schizophrenia or a schizotypal or delusional disorder;
   (4) a mood (affective) disorder;
   (5) a neurotic, stress-related or somatoform disorder;
   (6) a behavioural syndrome associated with psychological disturbances or physical factors;
   (7) a disorder of adult personality or behaviour, particularly if manifested by repeated overt acts;
   (8) mental retardation;
   (9) a disorder of psychological development;
   (10) a behavioural or emotional disorder, with onset in childhood or adolescence; or
   (11) a mental disorder not otherwise specified;

such as might render the applicant unable to safely exercise the privileges of the licence applied for or held.

Note 3: Mental and behavioural disorders are defined in accordance with the clinical descriptions and diagnostic guidelines of the World Health Organisation as given in the International Statistical Classification of Diseases and Related Health Problems, 10th Edition – Classification of Mental and Behavioural Disorders, WHO 1992. This document contains detailed descriptions of the diagnostic requirements, which may be useful for their application to medical assessment.

(c) The applicant shall have no established medical history or clinical diagnosis of any of the following:

   (1) a progressive or non-progressive disease of the nervous system, the effects of which, according to accredited medical conclusion, are likely to interfere with the safe exercise of the applicant's licence and rating privileges;
   (2) epilepsy;
   (3) any disturbance of consciousness without satisfactory medical explanation of cause.

(d) The applicant shall not have suffered any head injury, the effects of which are likely to interfere with the safe exercise of the applicant's licence and rating privileges.
(e) The applicant shall not possess any abnormality of the heart, congenital or acquired, which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(f) An applicant who has undergone by-pass grafting or angioplasty (with or without stenting) or other cardiac intervention or who has a history of myocardial infarction or who suffers from any other potentially incapacitating cardiac condition shall be assessed as unfit unless the applicant’s cardiac condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

(g) An applicant with an abnormal cardiac rhythm shall be assessed as unfit unless the cardiac arrhythmia has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

(h) Electrocardiography shall form part of the heart examination for the first issue of a Medical Assessment.

(i) Electrocardiography shall be included in re-examination of applicants after the age of 50 no less than every two years.

Note: The purpose of routine electrocardiography is case finding. It does not provide sufficient evidence to justify disqualification without further thorough cardiovascular investigation.

(j) The systolic and diastolic blood pressures shall be within normal limits.

(k) The use of drugs for control of high blood pressure shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

(l) There shall be no significant functional nor structural abnormality of the circulatory system.

(m) There shall be no disability of the lungs nor any active disease of the structures of the lungs, mediastinum or pleura likely to result in incapacitating symptoms.

Note: Chest radiography is usually not necessary but may be indicated in cases where asymptomatic pulmonary disease can be expected.

(n) Applicants with chronic obstructive pulmonary disease shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

(o) Applicants with asthma causing significant symptoms or likely to cause incapacitating symptoms during normal and emergency operations shall be assessed as unfit.

(p) The use of drugs for control of asthma shall be disqualifying except for those drugs, the use of which is compatible with the safe exercise of the applicant’s licence and ratings privileges.

(q) Applicants with active pulmonary tuberculosis, shall be assessed as unfit.

Note: Applicants with quiescent or healed lesions which are known to be tuberculosis, or are presumably tuberculosis in origin, may be assessed as fit.

(r) Applicants with significant impairment of function of the gastrointestinal tract or its adnexa shall be assessed as unfit.

(s) Applicants with sequelae of disease or surgical intervention on any part of the digestive tract or its adnexae, likely to cause incapacitation in flight, in particular any obstructions due to stricture or compression, shall be assessed as unfit.

(t) An applicant who has undergone a major surgical operation on the biliary passages or the digestive tract or its adnexa with a total or partial excision or a diversion of any of these organs shall be assessed as unfit until such time as the medical assessor, having access to the details of the operation concerned, considers that the effects of the operation are not likely to cause incapacitation.

(u) Applicants with metabolic, nutritional or endocrine disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(v) Applicants with insulin-treated diabetes mellitus shall be assessed as unfit.
(w) Applicants with non-insulin-treated diabetes shall be assessed as unfit unless the condition is shown to be satisfactorily controlled by diet alone or by diet combined with oral anti-diabetic medication, the use of which is compatible with the safe exercise of the applicant’s licence and rating privileges.

(x) Applicants with diseases of the blood and/or the lymphatic system shall be assessed as unfit, unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

(y) Applicants with renal or genito-urinary disease shall be assessed as unfit unless adequately investigated and their condition found unlikely to interfere with the safe exercise of their licence and rating privileges.

(z) Urine examination shall form part of the medical examination and abnormalities shall be adequately investigated.

(aa) Applicants with sequelae of disease of, or surgical procedures on the kidneys or the genito-urinary tract, in particular obstructions due to stricture or compression, shall be assessed as unfit unless the applicant’s condition has been investigated and evaluated in accordance with best medical practice and is assessed not likely to interfere with the safe exercise of the applicant’s licence or rating privileges.

(bb) Applicants who have undergone nephrectomy shall be assessed as unfit unless the condition is well compensated.

(cc) Applicants with acquired immunodeficiency syndrome (AIDS) shall be assessed as unfit.

(dd) Applicants who are seropositive for human immunodeficiency virus (HIV) shall be assessed as unfit unless full investigation provides no evidences of clinical disease.

   Note: Evaluation of applicants who are seropositive for human immunodeficiency virus (HIV) requires particular attention to their mental state, including the psychological effects of the diagnosis.

(ee) Applicants with gynaecological disorders that are likely to interfere with the safe exercise of their licence and rating privileges shall be assessed as unfit.

(ff) Applicants who are pregnant shall be assessed as unfit unless obstetrical evaluation and continued medical supervision indicate a low-risk uncomplicated pregnancy.

   Note: During the gestational period, precautions should be taken for the timely relief of an Air Traffic Controller in the event of early onset of labour or other complications.

(gg) For applicants with a low-risk uncomplicated pregnancy, evaluated and supervised in accordance with (ff) above, the fit assessment shall be limited to the period until the end of the 34th week of gestation.

(hh) Following confinement or termination of pregnancy, the applicant shall not be permitted to exercise the privileges of her licence until she has undergone evaluation in accordance with best medical practice and it has been determined that she is able to safely exercise the privileges of her licence and ratings.

(ii) The applicant shall not possess any abnormality of the bones, joints, muscles, tendons or related structures which is likely to interfere with the safe exercise of the applicants licence and rating privileges.

   Note: Any sequelae after lesions affecting the bones, joints, muscles or tendons, and certain anatomical defects will normally require functional assessment to determine fitness.

(jj) The applicant shall not possess any abnormality or disease of the ear or related structures which is likely to interfere with the safe exercise of the applicants licence and rating privileges.

(kk) There shall be no malformation nor any disease of the nose, buccal cavity or upper respiratory tract which is likely to interfere with the safe exercise of the applicant’s licence and rating privileges.

(ll) Applicants with stuttering and other speech defects sufficiently severe to cause impairment of speech communication shall be assessed as unfit.
2.10.2.4.3 **VISUAL REQUIREMENTS**

The medical examination shall be based on the following requirements.

(a) The function of the eyes and their adnexa shall be normal. There shall be no active pathological condition, acute or chronic, nor any sequelae of surgery or trauma of the eyes or their adnexa likely to reduce proper visual function to an extent that would interfere with the safe exercise of the applicant’s licence and rating privileges.

(b) Distant visual acuity with or without correction shall be 6/9 or better in each eye separately, and binocular visual acuity shall be 6/6 or better. No limits apply to uncorrected visual acuity. Where this standard of visual acuity can be obtained only with correcting lenses, the applicant may be assessed as fit provided that:

1. such correcting lenses are worn during the exercise of the privileges of the licence or rating applied for or held; and
2. in addition, a pair of suitable correcting spectacles is kept readily available during the exercise of the privileges of the applicant’s licence.

*Note: An applicant accepted as meeting these provisions is deemed to continue to do so unless there is reason to suspect otherwise, in which case an ophthalmic report is required at the discretion of the Guyana Civil Aviation Authority. Both uncorrected and correct visual acuity are normally measured and recorded at each re-examination. Conditions which indicate a need to obtain an ophthalmic report include: a substantial decrease in the uncorrected visual acuity; any decrease in best corrected visual acuity, and the occurrence of eye disease, eye injury or eye surgery.*

(c) Applicants may use contact lenses to meet the requirement of (b) provided that:

1. the lenses are monofocal and non-tinted;
2. the lenses are well tolerated; and
3. a pair of suitable correcting spectacles is kept readily available during the exercise of the licence privileges.

*Note: Applicants who use contact lenses may not need to have their uncorrected visual acuity measured at each re-examination provided the history of their contact lens prescription is known.*

(d) Applicants with a large refractive error shall use contact lenses or high-index spectacle lenses.

*Note: If spectacles are used, high-index lenses are needed to minimize peripheral field distortion.*

(e) Applicants whose uncorrected distant visual acuity in either eye is worse than 6/60 should be required to provide a full ophthalmic report prior to initial Medical Assessment and every five years thereafter.

*Note: The purpose of the required ophthalmic examination is (1) to ascertain normal visual performance and (2) to identify any significant pathology.*

(f) Applicants who have undergone surgery affecting the refractive status of the eye shall be assessed as unfit unless they are free from those sequelae which are likely to interfere with the safe exercise of their licence and rating privileges.

(g) The applicant shall have the ability to read, while wearing the correcting lenses, if any, required by (b), the N5 chart or its equivalent at a distance selected by that applicant in the range of 30 to 50 cm and the ability to read the N14 chart or its equivalent at a distance of 100 cm. If this requirement is met only by the use of near correction, the applicant may be assessed as fit provided that this near correction is added to the spectacle correcting already prescribed in accordance with (b); if no such correction is prescribed, a pair of spectacles for near use shall be kept readily available during the exercise of the privileges of the licence. When near correction is required, the applicant shall demonstrate that one pair of spectacles is sufficient to meet both distant and near visual requirements.

*Note 1: N5 and N14 refer to the size of typeface used.*
Note 2: — An applicant who needs near correction to meet this requirement will require “look-over”, bifocal or perhaps multi-focal lenses in order to read radar screens, visual displays and written or printed materials and also to make use of distant vision, through the windows, without removing the lenses. Single-vision near correction (full lenses of one power only, appropriate for reading) may be acceptable for certain air traffic control duties. However it should be realized that single-vision near correction significantly reduces distant visual acuity.

Note 3: — Whenever there is a requirement to obtain or renew correcting lenses, an applicant is expected to advise the refractionist of reading distances for the air traffic control duties the applicant is likely to perform.

(h) When near correction is required in accordance with this paragraph, a second pair of near-correction spectacles shall be kept available for immediate use.

(i) The applicant shall be required to have normal fields of vision.

(j) The applicant shall be required to have normal binocular function.

Note: — Reduced stereopsis, abnormal convergence not interfering with near vision, and ocular misalignment where the fusional reserves are sufficient to prevent asthenopia and diplopia need not be disqualifying.

2.10.2.4.4 HEARING REQUIREMENTS

(a) The applicant, when tested on a pure-tone audiometer shall not have a hearing loss, in either ear separately, of more than 35 dB at any of the frequencies 500, 1 000 or 2 000 Hz, or more than 50 dB at 3 000 Hz.

Note 1: — An applicant with a hearing loss greater than the above may be declared fit provided that the applicant has normal hearing performance against a background noise that reproduces or simulates that experienced in a typical air traffic control working environment.

Note 2: — The frequency composition of the background noise is defined only to the extent that the frequency range 600 to 4 800 Hz (speech frequency range) is adequately represented.

Note 3: — In the speech material for discrimination testing, both aviation-related phrases and phonetically balanced words are used.

Note 4: — Alternatively, a practical hearing test conducted in an air traffic control environment representative of the one for which the applicant’s licence and ratings are valid may be used.
IS 2.2.1  **Issue, renewal and re-issue of licences, ratings, authorizations and certificates**

(a) Issue, renewal and re-issue of licences, ratings, authorizations and certificates will take place when the applicant meets the requirements of Part 2 for issue, renewal and re-issue for these licences, ratings authorizations and certificates.

(b) Issue, renewal and re-issue of licences, ratings, authorizations and certificates will be performed by the Guyana Civil Aviation Authority.

(c) Notwithstanding (b), renewal of ratings and category II/III pilot authorizations may be performed by the Examiner, when delegated by the Guyana Civil Aviation Authority.

(d) Notwithstanding (b), issue of a temporary Medical Assessment may be performed by the AMEX, when delegated by the Guyana Civil Aviation Authority.

(e) Application for the issue, renewal and re-issue of licences, ratings, authorizations or certificates by the Guyana Civil Aviation Authority shall be done by submitting to the Guyana Civil Aviation Authority a properly filled out form, which form can be obtained from the Guyana Civil Aviation Authority. This form must be submitted to the Guyana Civil Aviation Authority at least 14 days before the expiry date.

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IS 2.2.4.3  **APPENDIX A: PROCEDURES FOR CONVERSION OF A PPL**

(a) The holder of a private pilot licence issued by another Contracting State may directly apply for a conversion of his or her licence, without prior holding a validation as is required for PPL/IR or professional licences under 2.2.4.3 (b).

(b) The applicant shall, before application for a conversion, complete the requirements of 2.2.4.3 (a) and (d).

(c) Application for the issue of a conversion of a licence issued by another Contracting State must be done by submitting to the Guyana Civil Aviation Authority a properly filled out form, which form can be obtained from the Guyana Civil Aviation Authority.

(d) The application form for the issue of a conversion of a licence issued by another Contracting State must be submitted to the Guyana Civil Aviation Authority at least 14 days in advance of the date the conversion is desired.

(e) The valid licence from the other Contracting State and the record (e.g.) logbook must be presented to the Guyana Civil Aviation Authority.

(f) The applicant shall hold a Medical Assessment relevant to the licence applied for and this Medical Assessment will be issued by the Guyana Civil Aviation Authority of Guyana, when the applicant complies with the requirements of this Part.

(g) The Guyana Civil Aviation Authority whenever it issues a licence based on a licence issued by another Contracting State, remains responsible for the converted licence.

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IS 2.2.4.3  **APPENDIX B: PROCEDURES FOR CONVERSION OF A PPL/IR, CPL, CPL/IR, ATPL AND FLIGHT ENGINEER LICENCE**

(a) The applicant shall, before application for a conversion, complete the requirements of 2.2.4.3.

(b) Application for the conversion of a licence issued by another Contracting State shall be made by submitting a properly filled out form to the Guyana Civil Aviation Authority, which form can be obtained from the Guyana Civil Aviation Authority.
(c) The application form for the issue of a conversion of a licence issued by another Contracting State must be submitted to the Guyana Civil Aviation Authority at least 14 days in advance of the date the conversion is desired.

(d) The valid licence from the other Contracting State and the record (e.g. logbook) must be presented to the Guyana Civil Aviation Authority.

(e) The applicant shall hold a Medical Assessment relevant to the licence applied for and this Medical Assessment will be issued by the Guyana Civil Aviation Authority of Guyana, when the applicant complies with the requirements of this Part.

(f) The Guyana Civil Aviation Authority whenever it issues a licence based on a licence issued by another Contracting State, remains responsible for the converted licence.

**IS 2.2.4.3 APPENDIX C: PROCEDURES FOR VALIDATION AND CONVERSION OF FLIGHT CREW LICENCES BY RELIANCE UPON THE LICENSING SYSTEM OF ANOTHER CONTRACTING STATE.**

(a) The Guyana Civil Aviation Authority whenever it issues a licence based on a licence from another Contracting State, remains responsible for the validation certificate and the converted licence.

(b) The Guyana Civil Aviation Authority should, before making the agreement mentioned in 2.2.4.3 (a)(3) be convinced, that the other Contracting State issues licences in conformity with at least this Part 2.

(c) An inspector or experienced pilot from Guyana, or from another Contracting State delegated by the Guyana Civil Aviation Authority of Guyana, must visit the other Contracting State to be convinced that the licensing system in the other Contracting State is in conformity with at least this Part 2. A report describing the bases for the decision shall be made to the Guyana Civil Aviation Authority.

(d) An Air Law test must be arranged if the Air Law system of Guyana is different from the Air Law system of the other Contracting State.

(e) Renewal and re-issue of the validation certificate or the converted licences and ratings:
   1. when examiners are available in Guyana to perform proficiency checks for the renewal of rating(s) or skill tests for the re-issue of the licence or rating(s), these tests/checks will be performed by the authorized examiners of Guyana;
   2. when examiners are not available in Guyana to perform proficiency checks for the renewal of the rating(s) or skill test for the re-issue of the licence or rating(s), the availability of examiners for these tests/checks from the other Contracting State can be arranged in the agreement mentioned in 2.2.4.3 (a)(3).

(f) Application for the validation certificate and the conversion of a licence from another Contracting State shall be done by submitting to the Guyana Civil Aviation Authority a properly filled out form, which form can be obtained from the Guyana Civil Aviation Authority.

(g) The valid licence from the other Contracting State and the record (e.g. logbook) must be presented to the Guyana Civil Aviation Authority.

(h) The applicant shall hold a Medical Assessment relevant to the licence applied for and this Medical Assessment will be issued by the Guyana Civil Aviation Authority of Guyana, when the applicant complies with the requirements of this Part.
IS 2.2.5  RESERVED

IS 2.2.6  Appendix A: Prerequisites for a knowledge test
(a) The applicant shall, before attempting the knowledge test for a licence or rating:
   (1) have satisfactorily accomplished the required training;
   (2) have an endorsement in his or her logbook or training record, that has been signed by an
       authorised instructor, who certifies that the applicant is prepared for the knowledge test.

IS 2.2.6  Appendix B: Prerequisites for a skill test
(a) An applicant shall, before attempting the skill test for a licence or rating:
   (1) have passed the required knowledge test within the 24-calendar-month period preceding the
       month the applicant completes the skill test;
   (2) have satisfactorily accomplished the required training and obtained the experience
       prescribed by Part 2 for the licence or rating sought;
   (3) meet the prescribed age requirement of Part 2 for the issuance of the licence or rating
       sought; and
   (4) have an endorsement in his or her logbook or training record that has been signed by an
       authorized instructor, who certifies that the applicant is prepared for the required skill test.
(b) An applicant for an airline transport pilot licence may take the skill test for that licence with a
    knowledge test report that has been completed within a period of 7 years before the application,
    provided the applicant is employed as a flight crew member by a certificate holder under Part 9 at
    the time of the skill test.

IS 2.2.7  Language proficiency
(a) General
   (1) To meet the language proficiency requirements contained in 2.2.7, an applicant for a licence
       or a licence holder shall demonstrate, in a manner acceptable to the Guyana Civil Aviation
       Authority, compliance with the holistic descriptors in paragraph (b) below and with at least
       the Operational Level (Level 4) of the Language Proficiency Rating Scale as mentioned in
       paragraph c) below.

(b) Holistic descriptors: Proficient speakers shall:
   (1) communicate effectively in voice-only (telephone/radiotelephone) and in face-to-face
       situations;
   (2) communicate on common, concrete and work-related topics with accuracy and clarity;
   (3) use appropriate communicative strategies to exchange messages and to recognize and
       resolve misunderstandings (e.g. to check, confirm, or clarify information) in a general or
       work-related context;
   (4) handle successfully and with relative ease the linguistic challenges presented by a
       complication or unexpected turn of events that occurs within the context of a routine work
       situation or communicative task with which they are otherwise familiar; and
   (5) use a dialect or accent which is intelligible to the aeronautical community.
(c) Rating scale:

(1) Operational Level (Level 4):
   (i) Pronunciation: Pronunciation, stress, rhythm and intonation are influenced by the first
       language or regional variation but only sometimes interfere with understanding.
   (ii) Structure: Basic grammatical structures and sentence patterns are used creatively and
       are usually well controlled. Errors may occur, particularly in unusual or unexpected
       circumstances, but rarely interfere with meaning.
   (iii) Vocabulary: Vocabulary range and accuracy are usually sufficient to communicate
       effectively on common, concrete, and work related topics. Can often paraphrase
       successfully when lacking vocabulary in unusual or unexpected circumstances.
   (iv) Fluency: Produces stretches of language at an appropriate tempo. There may be
       occasional loss of fluency on transition from rehearsed or formulaic speech to
       spontaneous interaction, but this does not prevent effective communication. Can make
       limited use of discourse markers or connectors. Fillers are not distracting.
   (v) Comprehension: Comprehension is mostly accurate on common, concrete, and work
       related topics when the accent or variety used is sufficiently intelligible for an
       international community of users. When the speaker is confronted with a linguistic or
       situational complication or an unexpected turn of events, comprehension may be slower
       or require clarification strategies.
   (vi) Interactions: Responses are usually immediate, appropriate and informative. Initiates
       and maintains exchanges even when dealing with an unexpected turn of events. Deals
       adequately with apparent misunderstandings by checking, confirming or clarifying.

(2) Extended Level (Level 5)
   (i) Pronunciation: Pronunciation, stress, rhythm, and intonation, though influenced by the
       first language or regional variation, rarely interfere with ease of understanding.
   (ii) Structure: Basic grammatical structures and sentence patterns are consistently well
       controlled. Complex structures are attempted but with errors which sometimes interfere
       with meaning.
   (iii) Vocabulary: Vocabulary range and accuracy are sufficient to communicate effectively
       on common, concrete, and work related topics. Paraphrases consistently and
       successfully. Vocabulary is sometimes idiomatic.
   (iv) Fluency: Able to speak at length with relative ease on familiar topics, but may not vary
       speech flow as a stylistic device. Can make use of appropriate discourse markers or
       connectors.
   (v) Comprehension: Comprehension is accurate on common, concrete, and work related
       topics and mostly accurate when the speaker is confronted with a linguistic or
       situational complication or an unexpected turn of events. Is able to comprehend a
       range of speech varieties (dialect and/or accent) or registers.
   (vi) Interactions: Responses are immediate, appropriate, and informative. Manages the
       speaker/listener relationship effectively.
(3) Expert Level (Level 6)
   (i) Pronunciation: Pronunciation, stress, rhythm, and intonation, thought possibly
       influenced by the first language or regional variation, almost never interfere with ease of
       understanding.
   (ii) Structure: Both basic and complex grammatical structures and sentence patterns are
       consistently well controlled.
   (iii) Vocabulary: Vocabulary range and accuracy are sufficient to communicate effectively
       on a wide variety of familiar and unfamiliar topics. Vocabulary is idiomatic, nuanced,
       and sensitive to register.
   (iv) Fluency: Able to speak at length with a natural, effortless flow.Varies speech flow for
       stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and
       connectors spontaneously.
   (v) Comprehension: Comprehension is consistently accurate in nearly all contexts and
       includes comprehension of linguistic and cultural subtleties.
   (vi) Interactions: Interacts with ease in nearly all situations. Is sensitive to verbal and non-
       verbal cues, and responds to them appropriately.

**IS 2.2.8 Recording of flight time**

The details in the records of flights flown as pilot shall contain the following items:

(a) For the purpose of meeting the requirements of 2.2.6.1 and 2.3.1.6, each person shall enter the
   following information for each flight or lesson logged:

   (1) Personal details:
       (i) Name and address of the holder

   (2) For each flight:
       (i) Name of PIC
       (ii) Date of flight
       (iii) Place and time of departure and arrival
       (iv) Type of aircraft and registration

   (3) For each synthetic flight trainer session:
       (i) Type and qualification number of flight trainer
       (ii) Synthetic flight trainer instruction
       (iii) Date
       (iv) Total time of session

   (4) Pilot function:
       (i) Solo
       (ii) PIC
       (iii) Co-pilot
       (iv) Dual
       (v) Flight instructor

(b) Logging of flight time

   (1) Logging of solo flight time:
       (i) A student pilot may log as solo flight time only that flight time when the pilot is the sole
           occupant of the aircraft.
(2) Logging of PIC flight time:
   (i) The applicant or the holder of a pilot licence may log as PIC time all that flight time
during which that person is:
      (A) The sole manipulator of the controls of an aircraft for which the pilot is rated; and
      (B) Acting as PIC of an aircraft on which more than one pilot is required under the type
          certification of the aircraft or the regulations under which the flight is conducted.
   (ii) An authorized instructor may log as PIC time all of the flight time while acting as an
        authorized instructor.
   (iii) A student pilot may log as PIC time all solo flight time and flight time as student pilot-in-
        command provided that such time is countersigned by the instructor.

(3) Logging of co-pilot time:
   (i) A person may log co-pilot time only when occupying a pilot seat as co-pilot in an aircraft
      on which more than one pilot is required under the type certification of the aircraft or the
      regulations under which the flight is conducted.

(4) Logging of instrument flight time:
   (i) A person may log instrument flight time only for that flight when the person operates the
      aircraft solely by reference to instruments under actual or simulated instrument flight
      conditions.

(5) Logging instruction time:
   (i) A person may log instruction time when that person receives training from an
       authorized instructor in an aircraft or synthetic flight trainer.
      (ii) The instruction time shall be logged in a record (e.g. logbook) and shall be endorsed by
           the authorized instructor.

**IS 2.2.9 Format of the licence**

The following details shall appear on the licence:

I) GUYANA (in bold type);
II) Title of licence (in very bold type);
III) Serial number of the licence, in Arabic numerals, given by the Authority;
IV) Name of holder in full (in Roman alphabet also if script of national language is other than
    Roman;
IVA) Date of Birth;
V) Address of holder;
VI) Nationality of holder;
VII) Signature of holder;
VIII) Guyana Civil Aviation Authority and, where appropriate, conditions under which the licence is
      issued;
IX) Certification concerning validity and authorization for the holder to exercise privileges
    appropriate to the licence;
X) Signature of officer issuing the licence and the date of such issue;
XI) Seal or stamp of the Guyana Civil Aviation Authority;
XII) Ratings, e.g. category, class, type of aircraft, airframe, aerodrome control, etc.;
XIII) Remarks, i.e. special endorsements relating to limitations and endorsements for privileges,
      including endorsement of language proficiency;
XIV) Any other details desired by the Authority.
IS 2.3.2.4 **APPENDIX A: CLASS/TYPE RATING (SPA AND MPA) - KNOWLEDGE**

(a) The knowledge instruction and test for the type rating for multi-pilot - aeroplane shall include the following subjects:

1. Aeroplane structure and equipment, normal operation of systems and malfunctions
   - (i) Dimensions
   - (ii) Engine including auxiliary power unit
   - (iii) Fuel system
   - (iv) Pressurisation and air-conditioning
   - (v) Ice protection, windshield wipers and rain repellent
   - (vi) Hydraulic systems
   - (vii) Landing gear
   - (viii) Flight controls, lift devices
   - (ix) Electrical power supply
   - (x) Flight instruments, communication, radar and navigation equipment
   - (xi) Cockpit, cabin and cargo compartment
   - (xii) Emergency equipment

2. Limitations:
   - (i) General limitations
   - (ii) Engine limitations
   - (iii) System limitations
   - (iv) Minimum equipment list

3. Performance, flight planning and monitoring

4. Load, balance and servicing
   - (i) Load and balance
   - (ii) Servicing on the ground

5. Emergency procedures

6. Special requirements for extension of a type rating for instrument approaches down to a decision height of less than 200 ft (60m)
   - (i) Airborne and ground equipment: technical requirements, operational requirements, operational reliability, fail operational, fail-passive, equipment reliability, operating procedures, preparatory measures, operational downgrading, communications
   - (ii) Procedures and limitations: operational procedures, crew co-ordination

7. Special requirements for “glass cockpit” aeroplane with electronic flight instrument systems (e.g. EFIS, EICAS)

8. Flight Management systems (FMS)
IS 2.3.2.4  **APPENDIX B: FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK - CRM**

(a) The flight instruction, skill test and proficiency for CRM for the multi-pilot type rating shall include the following subjects:

1. The training programme:
   (i) An initial indoctrination/awareness segment;
   (ii) A method to provide recurrent practice and feedback; and
   (iii) A method of providing continuing reinforcement

2. Topics to be contained in an initial CRM training course:
   (i) Communications processes and decision behaviour;
   (ii) Internal and external influences on interpersonal communications;
   (iii) Barriers to communication;
   (iv) Listening skills;
   (v) Decision making skills
   (vi) Effective briefings;
   (vii) Developing open communications;
   (viii) Inquiry, advocacy and assertion training;
   (ix) Crew self-critique;
   (x) Conflict resolution;
   (xi) Team building and maintenance;
   (xii) Leadership and followership training;
   (xiii) Interpersonal relationships;
   (xiv) Workload management;
   (xv) Situational awareness
   (xvi) How to prepare, plan and monitor task completions;
   (xvii) Workload distribution;
   (xviii) Distraction avoidance;
   (xix) Individual factors; and
   (xx) Stress reduction.

IS 2.3.2.5  **CATEGORY II AND III AUTHORIZATION**

(a) The Authority will issue a Category II or Category III pilot authorisation by letter, as a part of an applicant’s instrument rating or airline transport pilot certificate.

(b) Upon original issue the authorisation will contain the following limitations—

1. For Category II operations, 1,600 feet RVR and a 150-foot decision height; and

2. For Category III operations, as specified in the authorisation document.

(c) To remove the limitations on a Category II or Category III pilot authorisation—

1. A Category II limitation holder may remove the limitation by showing that, since the beginning of the sixth preceding month, the holder has made three Category II ILS approaches with a 150-foot decision height to a landing under actual or simulated instrument conditions; or
(2) A Category III limitation holder may remove the limitation by showing experience as specified in the authorisation.

(d) An authorisation holder or an applicant for an authorisation may use a flight simulator or flight training device if it is approved by the Authority for such use, to meet the experience requirement of paragraph (e) of this subsection, or for the practical test required by Part 2 for a Category II or a Category III pilot authorisation, as applicable.

(e) Category II: practical test requirements.

(1) An applicant for the following authorisations shall pass a practical test:

(i) Issuance or renewal of a Category II pilot authorisation.

(ii) The addition of another type aircraft to a Category II pilot authorisation.

(2) To be eligible for the practical test for an authorisation under this subsection, an applicant shall—

(i) Meet the requirements of 2.3.2.5; and

(ii) If the applicant has not passed a practical test for this authorisation during the 12 calendar months preceding the month of the test—

(A) Meet the requirements of 8.4.1.10; and

(B) Have performed at least six ILS approaches during the 6 calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.

(3) An applicant shall accomplish the approaches specified in paragraph (e)(2)(ii)(B) of this subsection—

(i) Under actual or simulated instrument flight conditions;

(ii) To the minimum decision height for the ILS approach in the type aircraft in which the practical test is to be conducted, except that the approaches need not be conducted to the decision height authorised for Category II operations;

(iii) To the decision height authorised for Category II operations only if conducted in an approved flight simulator or an approved flight training device; and

(iv) In an aircraft of the same category and class, and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved flight simulator that—

(A) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought; and

(B) Is used in accordance with an approved course conducted by an ATO certified under part 3.
(f) **Category II: practical test procedures.** The practical test consists of an oral increment and a flight increment.

(1) Oral increment. In the oral increment of the practical test an applicant shall demonstrate knowledge of the following—

(i) Required landing distance;
(ii) Recognition of the decision height;
(iii) Missed approach procedures and techniques using computed or fixed attitude guidance displays;
(iv) Use and limitations of RVR;
(v) Use of visual clues, their availability or limitations, and altitude at which they are normally discernible at reduced RVR readings;
(vi) Procedures and techniques related to transition from nonvisual to visual flight during a final approach under reduced RVR;
(vii) Effects of vertical and horizontal windshear;
(viii) Characteristics and limitations of the ILS and runway lighting system;
(ix) Characteristics and limitations of the flight director system, auto approach coupler (including split axis type if equipped), auto throttle system (if equipped), and other required Category II equipment;
(x) Assigned duties of the SIC during Category II approaches, unless the aircraft for which authorisation is sought does not require an SIC; and
(xi) Instrument and equipment failure warning systems.

(2) Flight increment. The following requirements apply to the flight increment of the practical test—

(i) The flight increment shall be conducted in an aircraft of the same category, class, and type, as applicable, as the aircraft in which the authorisation is sought or in an approved flight simulator that—

(A) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought; and

(B) Is used in accordance with an approved course conducted by an ATO certified under part 3.

(ii) The flight increment shall consist of at least two ILS approaches to 100 feet AGL including at least one landing and one missed approach.

(iii) All approaches performed during the flight increment shall be made with the use of an approved flight control guidance system, except if an approved auto approach coupler is installed, at least one approach shall be hand flown using flight director commands.

(iv) If a multiengine aeroplane with the performance capability to execute a missed approach with one engine inoperative is used for the practical test, the flight increment shall include the performance of one missed approach with an engine, which shall be the most critical engine, if applicable, set at idle or zero thrust before reaching the middle marker.

(v) If an approved multiengine flight simulator or approved multiengine flight training device is used for the practical test, the applicant shall execute a missed approach with the most critical engine, if applicable, failed.
(vi) For an authorisation for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a SIC who holds a type rating in the aircraft in which the authorisation is sought.

(vii) An inspector or evaluator may conduct oral questioning at any time during a practical test.

(g) Category III: practical test requirements.

(1) The Authority will require that an applicant pass a practical test for—
   (i) Issuance or renewal of a Category III pilot authorisation.
   (ii) The addition of another type of aircraft to a Category III pilot authorisation.

(2) To be eligible for the practical test an applicant shall—
   (i) Meet the requirements of 2.3.2.5; and
   (ii) If the applicant has not passed a practical test for this authorisation during the 12 calendar months preceding the month of the test,
      (A) Meet the requirements of 8.4.1.10, 8.10.1.20 and 8.10.1.32; and
      (B) Have performed at least six ILS approaches during the 6 calendar months preceding the month of the test, of which at least three of the approaches shall have been conducted without the use of an approach coupler.

(3) An applicant shall conduct the approaches specified in paragraph (2)(ii)(B) of this subsection—
   (i) Under actual or simulated instrument flight conditions;
   (ii) To the alert height or decision height for the ILS approach in the type aircraft in which the practical test is to be conducted;
   (iii) Not necessarily to the decision height authorised for Category III operations;
   (iv) To the alert height or decision height, as applicable, authorised for Category III operations only if conducted in an approved flight simulator or approved flight training device; and
   (v) In an aircraft of the same category and class, and type, as applicable, as the aircraft in which the practical test is to be conducted or in an approved flight simulator that—
      (A) Represents an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorisation is sought; and
      (B) Is used in accordance with an approved course conducted by an ATO certified under Part 3.

(4) Knowledge requirements: An applicant shall demonstrate knowledge of the following:
   (i) Required landing distance.
   (ii) Determination and recognition of the alert height or decision height, as applicable, including use of a radar altimeter.
   (iii) Recognition of and proper reaction to significant failures encountered prior to and after reaching the alert height or decision height, as applicable.
   (iv) Missed approach procedures and techniques using computed or fixed attitude guidance displays and expected height loss as they relate to manual go-around or automatic go-around, and initiation altitude, as applicable.
   (v) Use and limitations of RVR, including determination of controlling RVR and required transmissometers.
(vi) Use, availability, or limitations of visual cues and the altitude at which they are normally discernible at reduced RVR readings including—
   (A) Unexpected deterioration of conditions to less than minimum RVR during approach, flare, and rollout;
   (B) Demonstration of expected visual references with weather at minimum conditions;
   (C) The expected sequence of visual cues during an approach in which visibility is at or above landing minima; and
   (D) Procedures and techniques for making a transition from instrument reference flight to visual flight during a final approach under reduced RVR.

(vii) Effects of vertical and horizontal windshear.

(viii) Characteristics and limitations of the ILS and runway lighting system.

(ix) Characteristics and limitations of the flight director system auto approach coupler (including split axis type if equipped), auto throttle system (if equipped), and other Category III equipment.

(x) Assigned duties of the SIC during Category III operations, unless the aircraft for which authorisation is sought does not require a SIC.

(xi) Recognition of the limits of acceptable aircraft position and flight path tracking during approach, flare, and, if applicable, rollout.

(xii) Recognition of, and reaction to, airborne or ground system faults or abnormalities, particularly after passing alert height or decision height, as applicable.

(5) Flight skill requirements—
   (i) An applicant may conduct the practical test in an aircraft of the same category and class, and type, as applicable, as the aircraft for which the authorisation is sought, or in an approved flight simulator that—
      (A) represents an aircraft of the same category and class, and type, as applicable, as the aircraft in which the authorisation is sought; and
      (B) is used in accordance with an approved course conducted by an ATO certified under Part 3.
   (ii) The practical test shall consist of at least two ILS approaches to 100 feet AGL, including one landing and one missed approach initiated from a very low altitude that may result in a touchdown during the go-around manoeuvre;
   (iii) The applicant shall perform all approaches during the practical test with the approved automatic landing system or an equivalent landing system approved by the Authority;
   (iv) If a multiengine aircraft with the performance capability to execute a missed approach with one engine inoperative is used for the practical test, the practical test shall include the performance of one missed approach with the most critical engine, if applicable, set at idle or zero thrust before reaching the middle or outer marker;
   (v) If an approved multiengine flight simulator or approved multiengine flight training device is used, the applicant shall execute a missed approach with an engine, which shall be the most critical engine, if applicable, failed;
   (vi) For an authorisation for an aircraft that requires a type rating, the applicant shall pass a practical test in co-ordination with a SIC who holds a type rating in the aircraft in which the authorisation is sought; and
Subject to the limitations of this paragraph, for Category IIIb operations predicated on the use of a fail-passive rollout control system, the applicant shall execute at least one manual rollout using visual reference or a combination of visual and instrument references. The applicant shall initiate this manoeuvre by a fail-passive disconnect of the rollout control system—

(A) After main gear touchdown;
(B) Prior to nose gear touchdown;
(C) In conditions representative of the most adverse lateral touchdown displacement allowing a safe landing on the runway; and
(D) In weather conditions anticipated in Category IIIb operations.

An inspector or evaluator may conduct oral questioning at any time during the practical test.

**IS 2.3.3.1  STUDENT PILOTS – MANOEUVRES AND PROCEDURES FOR PRE-SOLO FLIGHT TRAINING**

(a) A student pilot who is receiving training for solo flight shall receive and log flight training for the following manoeuvres and procedures, as applicable for each category and class rating as specified below:

*Note: When (SE) is indicated, the item is only for single engine aircraft; and when (ME) is indicated, the item is only for multi-engine aircraft.*

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**IS 2.3.3.1.1  STUDENT PILOTS – MANOEUVRES AND PROCEDURES FOR PRE-SOLO FLIGHT TRAINING—AEROPLANE CATEGORY**

(a) A student pilot who is receiving training for solo flight in an aeroplane shall receive and log flight training for the following manoeuvres and procedures:

1. Proper flight preparation procedures, including pre-flight planning and preparation, powerplant operation and aircraft systems
2. Taxiing, or surface operations, including runups
3. Take-offs and landings, including normal and crosswind
4. Straight and level flight and turns in both directions
5. Climbs and climbing turns
6. Airport traffic patterns including entry and departure procedures
7. Collision avoidance, windshear avoidance and wake turbulence avoidance
8. Descents, with and without turns, using high and low drag configurations
9. Flight at various airspeeds from cruise to slow flight
10. Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall and recovery from a full stall
11. Emergency procedures and equipment malfunctions
12. Ground reference manoeuvres
13. Approaches to a landing area with simulated engine malfunctions
14. Slips to a landing (SE)
15. Go-arounds
Manoeuvres and procedures for cross-country flight training in an aeroplane

1. Use of aeronautical charts for VFR navigation using pilotage and dead reckoning with the aid of a magnetic compass

2. Use of aircraft performance charts pertaining to cross-country flight

3. Procurement and analysis of aeronautical weather reports and forecasts, including recognition of critical weather situations and estimating visibility while in flight

4. Recognition, avoidance and operational restrictions of hazardous terrain features in the geographical area where the student pilot will conduct cross-country flight

5. Use of radios for VFR navigation and two-way communications

6. Climbs at best angle and best rate

7. Control and manoeuvring solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids and ATC directives.

IS 2.3.3.1.2  STUDENT PILOTS – MANOEUVRES AND PROCEDURES FOR PRE-SOLO FLIGHT TRAINING--HELI COPTER CATEGORY

A student pilot who is receiving training for solo flight in a helicopter shall receive and log flight training for the following manoeuvres and procedures:

1. Proper flight preparation procedures, including pre-flight planning and preparation, powerplant operation and aircraft systems

2. Taxiing, or surface operations, including run-up’s

3. Take-offs and landings, including normal and crosswind

4. Straight and level flight and turns in both directions

5. Climbs and climbing turns

6. Airport traffic patterns including entry and departure procedures

7. Collision avoidance, windshear avoidance and wake turbulence avoidance

8. Descents, with and without turns, using high and low drag configurations

9. Flight at various airspeeds

10. Emergency procedures and equipment malfunctions

11. Ground reference manoeuvres

12. Approaches to the landing area

13. Hovering and hovering turns

14. Go-arounds

15. Simulated emergency procedures, including autorotational descents with a power recovery and power recovery to hover

16. Rapid decelerations

17. Simulated one-engine-inoperative approaches and landings (ME)
(b) Manoeuvres and procedures for cross-country flight training in a helicopter:
(1) Use of aeronautical charts for VFR navigation using pilotage and dead reckoning with the aid of a magnetic compass
(2) Use of aircraft performance charts pertaining to cross-country flight
(3) Procurement and analysis of aeronautical weather reports and forecasts, including recognition of critical weather situations and estimating visibility while in flight
(4) Recognition, avoidance and operational restrictions of hazardous terrain features in the geographical area where the student pilot will conduct cross-country flight
(5) Use of radios for VFR navigation and two-way communications
(6) Climbs at best angle and best rate
(7) Control and manoeuvring solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids and ATC directives.

IS 2.3.3.1.3 STUDENT PILOTS – MANOEUVRES AND PROCEDURES FOR PRE-SOLO FLIGHT TRAINING–POWERED–LIFT CATEGORY

(a) A student pilot who is receiving training for solo flight in a powered-lift shall receive and log flight training for the following manoeuvres and procedures:
(1) Proper flight preparation procedures, including pre-flight planning and preparation, powerplant operation and aircraft systems
(2) Taxiing, or surface operations, including run-up’s
(3) Take-offs and landings, including normal and crosswind
(4) Straight and level flight and turns in both directions
(5) Climbs and climbing turns
(6) Airport traffic patterns including entry and departure procedures
(7) Collision avoidance, windshear avoidance and wake turbulence avoidance
(8) Descents, with and without turns, using high and low drag configurations
(9) Flight at various airspeeds from cruise to slow flight
(10) Stall entries from various flight attitudes and power combinations with recovery initiated at the first indication of a stall, and recovery from a full stall
(11) Emergency procedures and equipment malfunctions
(12) Ground reference manoeuvres
(13) Approaches to the landing area with simulated engine failure
(14) Hovering and hovering turns
(15) Go-arounds
(16) Approaches to the landing area
(17) Simulated one-engine-inoperative approaches and landings (ME)
(b) Manoeuvres and procedures for cross-country flight training in a powered-lift:

1) Use of aeronautical charts for VFR navigation using pilotage and dead reckoning with the aid of a magnetic compass

2) Use of aircraft performance charts pertaining to cross-country flight

3) Procurement and analysis of aeronautical weather reports and forecasts, including recognition of critical weather situations and estimating visibility while in flight

4) Recognition, avoidance and operational restrictions of hazardous terrain features in the geographical area where the student pilot will conduct cross-country flight

5) Use of radios for VFR navigation and two-way communications

6) Climbs at best angle and best rate

7) Control and manoeuvring solely by reference to flight instruments, including straight and level flight, turns, descents, climbs, use of radio aids and ATC directives.

IS 2.3.3.1.4 STUDENT PILOTS – MANOEUVRES AND PROCEDURES FOR PRE-SOLO FLIGHT TRAINING– AIRSHIP CATEGORY

(a) A student pilot who is receiving training for solo flight in an airship shall receive and log flight training for the following manoeuvres and procedures:

1) Proper flight preparation procedures, including pre-flight planning and preparation, powerplant operation and aircraft systems;

2) Taxiing, or surface operations, including runups;

3) Take-offs and landings, including normal and crosswind;

4) Straight and level flight and turns in both directions;

5) Climbs and climbing turns;

6) Aerodrome traffic patterns including entry and departure procedures;

7) Collision avoidance, windshear avoidance and wake turbulence avoidance;

8) Descents, with and without turn;

9) Flight at various airspeeds from cruise to slow flight;

10) Emergency procedures and equipment malfunctions;

11) Ground reference manoeuvres;

12) Rigging, ballasting, and controlling pressure in the ballonets, and superheating; and

13) Landings with positive and with negative static trim.

IS 2.3.3.1.5 STUDENT PILOTS – MANOEUVRES AND PROCEDURES FOR PRE-SOLO FLIGHT TRAINING– BALLOON CATEGORY

(a) A student pilot who is receiving training for solo flight in a balloon shall receive and log flight training for the following manoeuvres and procedures:

1) Layout and assembly procedures;

2) Proper flight preparation procedures, including pre-flight planning and preparation, and aircraft systems;
(3) Ascents and descents;
(4) Landing and recovery procedures;
(5) Emergency procedures and equipment malfunctions;
(6) Operation of hot air or gas source, ballast, valves, vents, and rip panels as appropriate;
(7) Use of deflation valves or rip panels for simulating an emergency;
(8) The effects of wind on climb and approach angles; and
(9) Obstruction detection and avoidance techniques.

**IS 2.3.3.1.6 STUDENT PILOTS – MANOEUVRES AND PROCEDURES FOR PRE-SOLO FLIGHT TRAINING—GLIDER CATEGORY**

(a) A student pilot who is receiving training for solo flight in a glider shall receive and log flight training for the following manoeuvres and procedures:

1. Proper flight preparation procedures, including pre-flight planning and preparation, aircraft systems, and if applicable, powerplant operations;
2. Taxiing or surface operations, including runups, if applicable;
3. Launches, including normal and crosswind;
4. Straight and level flight, and turns in both directions, if applicable;
5. Aerodrome traffic patterns, including entry procedures;
6. Collision avoidance, windshear avoidance, and wake turbulence avoidance;
7. Descents with and without turns using high and low drag configurations;
8. Flight at various airspeeds;
9. Emergency procedures and equipment malfunctions;
10. Ground reference manoeuvres;
11. Inspection of towline rigging and review of signals and release procedures, if applicable;
12. Aerotow, ground tow, or self-launch procedures;
13. Procedures for disassembly and assembly of the glider;
14. Stall entry, stall, and stall recovery;
15. Straight glides, turns, and spirals;
16. Landings, including normal and crosswind;
17. Slips to a landing;
18. Procedures and techniques for thermalling; and
19. Emergency operations, including towline break procedures.
IS 2.3.3.2 Private pilot licence—Knowledge instruction and test; flight instruction and skill test

IS 2.3.3.2.1 Appendix A: Private pilot licence (Aeroplane Category) – Knowledge

(a) The knowledge instruction and test for the private pilot licence – aeroplane shall include at least the following subjects:

(1) Air law
   (i) Relevant parts of ICAO Convention and Annexes 2, 7, 8, 11 and 14
   (ii) ICAO Document 4444: General provisions, Area control service, Approach control service, Aerodrome control service, Flight information and alerting service;
   (iii) National law

(2) Aircraft General Knowledge
   (i) Airframe: Airframe structure and loads
   (ii) Powerplant: engines general, engine cooling, engine lubrication, ignition systems, carburation, aero engine fuel, fuel systems, propellers, engine handling
   (iii) Systems: electrical system, vacuum system
   (iv) Instruments: Pitot/static system, Airspeed indicator, Altimeter, Vertical speed indicator, Gyroscopes, Turn indicator, Altitude indicator, Heading indicator, Magnetic compass, Engine instruments, Other instruments
   (v) Airworthiness

(3) Flight Performance and Planning
   (i) Mass and balance
   (ii) Performance: Take-off, Landing, In flight

(4) Human performance:
   (i) Basic physiology: Concepts, Effects of partial pressure, Vision, Hearing, Motion sickness, Flying and health, Toxic hazards
   (ii) Basic psychology: The information process, the central decision channel, stress, judgement and decision making

(5) Meteorology
   (i) The atmosphere, Pressure, density and temperature, Humidity and precipitation, Pressure and wind, Cloud information, Fog, mist and haze, Airmasses, Frontology, Ice accretion, Thunderstorms, Flight over mountainous areas, Climatology, Altimetry, The meteorological organisation, Weather analysis and forecasting, Weather information for flight planning, Meteorological broadcasts for aviation

(6) Navigation
   (i) Form of the earth, mapping, conformal orthomorphic projection (ICAO 1,500,000 chart), Direction, Aeroplane magnetism, Distances, Charts in practical navigation, Chart reference material/map reading, Principles of navigation, The navigation computer, Time, Flight planning, Practical navigation
   (ii) Radio navigation: Ground direction finding (D/F), automatic direction finding (ADF), including associated beacons (non directional beacons (NDBs) and use of the radio magnetic indicator (RMI)), VHF omnidirectional range/distance measuring equipment (VOR/DME), GPS, Ground radar, Secondary surveillance radar

(7) Operational Procedures
(i) Relevant parts of ICAO Annex 6, Part II, Annex 12, 13 and 16 (relevant parts), Contravention of aviation regulations

(8) Principles of Flight
   (i) The atmosphere, Airflow around a body, sub-sonic, Airflow about a two dimensional aerofoil, Three dimensional flow about an aerofoil, Distribution of the four forces, Flying controls, Trimming controls, Flaps and slats, The stall, Avoidance of spins, Stability, Load factor and manoeuvres, Stress loads on the ground

(9) Communications
   (i) Radio telephony and communications, Departure procedures, En-route procedures, Arrival and traffic pattern procedures,
   (ii) Communications failure, Distress and urgency procedures

IS 2.3.3.2.1 APPENDIX B: PRIVATE PILOT LICENCE (AEROPLANE CATEGORY) – FLIGHT INSTRUCTION AND SKILL TEST

(a) The flight instruction and skill test for the single-engine and multi-engine private pilot licence – aeroplane shall include at least the following areas of operation:

   Note 1: When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraph is only for multi-engine. When nothing is indicated the item or paragraph is for single-engine and multi-engine.

   Note 2: When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated the item is for land and seaplanes.

(1) Pre-flight preparation; including the applicant’s knowledge and performance of the following tasks--
   (i) Licences and documents
   (ii) Airworthiness requirements
   (iii) Weather information
   (iv) Cross-country flight planning
   (v) National airspace system
   (vi) Performance and limitations
   (vii) Operation of system
   (viii) Principles of flight
   (ix) Water and Seaplane Characteristics (S)
   (x) Seaplane bases, maritime rules and aids to marine navigation (S)
   (xi) Aeromedical factors
(2) Pre-flight procedures; including the applicant's knowledge and performance of the following tasks--
   (i) Pre-flight inspection
   (ii) Cockpit management
   (iii) Engine Starting
   (iv) Taxiing (L)
   (v) Taxiing and Sailing (S)
   (vi) Before take-off check

(3) Aerodrome and seaplane operations; including the applicant's knowledge and performance of the following tasks--
   (i) Radio communications and ATC light signals
   (ii) Traffic patterns
   (iii) Aerodrome/Seaplane Base, runway and taxiway signs, markings and lighting

(4) Take-offs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks--
   (i) Normal and crosswind take-off and climb
   (ii) Normal and crosswind approach and landing
   (iii) Soft-field take-off and climb (SE) (L)
   (iv) Soft-field approach and landing (SE) (L)
   (v) Short-field (Confined area (S)) take-off and maximum performance climb
   (vi) Short-field approach (Confined area (S)) and landing
   (vii) Glassy Water take-off and climb (S)
   (viii) Glassy water approach and landing (S)
   (ix) Rough water take-off and climb (S)
   (x) Rough water approach and landing (S)
   (xi) Forward slip to a landing (SE)
   (xii) Go-around /rejected landing

(5) Performance manoeuvre; including the applicant's knowledge and performance of the following tasks--
   (i) Steep turns
   (ii) Steep spirals

(6) Ground reference manoeuvres; including the applicant's knowledge and performance of the following tasks--
   (i) Rectangular course
   (ii) S-turns
   (iii) Turns around a point

(7) Navigation; including the applicant's knowledge and performance of the following tasks--
   (i) Pilotage and dead reckoning
   (ii) Navigation systems and radar services
   (iii) Diversion
   (iv) Lost procedures
(8) Slow flight and stalls; including the applicant’s knowledge and performance of the following tasks—
   (i) Maneuvering during slow flight
   (ii) Power-off stalls
   (iii) Power-on stalls
   (iv) Spin awareness

(9) Basic instrument maneuvers; including the applicant’s knowledge and performance of the following tasks—
   (i) Straight-and-level flight
   (ii) Constant airspeed climbs
   (iii) Constant airspeed descents
   (iv) Turns to headings
   (v) Recovery from unusual flight
   (vi) Radio Communications, navigation systems/facilities and radar services; including the applicant’s knowledge and performance of the following tasks—

(10) Emergency operations; including the applicant’s knowledge and performance of the following tasks—
   (i) Emergency approach and landing
   (ii) Emergency descent (ME)
   (iii) Engine failure during take-off before Vmc (simulated) (ME)
   (iv) Engine failure after lift-off (simulated) (ME)
   (v) Approach and landing with an inoperative engine (simulated) (ME)
   (vi) Systems and equipment malfunctions
   (vii) Emergency equipment and survival gear

(11) Multi-engine operations (ME); including the applicant’s knowledge and performance of the following tasks—
   (i) Maneuvering with one engine inoperative
   (ii) Vmc demonstration
   (iii) Engine failure during flight (by reference to instruments)
   (iv) Instrument approach – one engine inoperative (by reference to instruments)

(12) Night operation; including the applicant’s knowledge and performance of the following tasks—
   (i) Night preparation

(13) Post-flight procedures; including the applicant’s knowledge and performance of the following tasks—
   (i) After landing, parking and securing
   (ii) Anchoring (S)
   (iii) Docking and mooring (S)
   (iv) Ramping/Beaching (S)
IS 2.3.3.2.2  APPENDIX A: PRIVATE PILOT LICENCE (HELICOPTER CATEGORY) – KNOWLEDGE

(a) The knowledge instruction and test for the private pilot licence - helicopter shall include at least the following subjects:

(1)  AIR LAW
    (i) Relevant parts of ICAO Convention and Annexes 2, 7, 8, 11 and 14
    (ii) ICAO Document 4444: General provisions, Area control service, Approach control service, Aerodrome control service, Flight information and alerting service
    (iii) National law

(2)  AIRCRAFT GENERAL KNOWLEDGE
    (i) Airframe: Rotors; Airframe structure and loads
    (ii) Powerplant: Piston engine; Engines general, lubrication system, air cooling, ignition systems, engine fuel supply, engine performance, power augmentation devices, fuel, mixture, engine handling and manipulation, operational criteria,
    (iii) Systems: electrical system, hydraulic system
    (iv) Instruments: Pitot/static system, Airspeed indicator, Altimeter, Vertical speed indicator, Gyroscopes, Turn indicator, Altitude indicate, Heading indicator, Magnetic compass, Engine instruments, Other instruments
    (v) Airworthiness

(3)  FLIGHT PERFORMANCE AND PLANNING
    (i) Mass and balance
    (ii) Performance: Take-off, Landing, In flight

(4)  HUMAN PERFORMANCE:
    (i) Basic physiology: Concepts, Effects of partial pressure, Vision, Hearing, Motion sickness, Flying and health, Toxic hazards
    (ii) Basic psychology: The information process, the central decision channel, stress, judgement and decision making

(5)  METEOROLOGY
    (i) The atmosphere, Pressure, density and temperature, Humidity and precipitation, Pressure and wind, Cloud information, Fog, mist and haze, Airmasses, Frontology, Ice accretion, Thunderstorms, Flight over mountainous areas, Climatology, Altimetry, The meteorological organisation, Weather analysis and forecasting, Weather information for flight planning, Meteorological broadcasts for aviation

(6)  NAVIGATION
    (i) Form of the earth, Mapping, Conformal conic projection, Direction, Helicopter magnetism, Distances, Charts in practical navigation, Chart reference material/map reading, Principles of navigation, The navigation computer, Time, Flight planning, Practical navigation
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(7) Radio navigation: Ground directory finding (D/F), Automatic directory finding (ADF), including associated beacons (non directional beacons (NDBs)) and use of the radio magnetic indicator (RMI), VHF omnidirectional range/distance measuring equipment (VOR/DME), GPS, Ground radar, Secondary surveillance radar

(8) Operational Procedures
   (i) Relevant parts of ICAO Annex 6, Part III, Annex 12, 13 and 16 (relevant parts), Contravention of aviation regulations

(9) Principles of Flight
   (i) The atmosphere, Airflow around a body, Sub-sonic, Airflow about a two dimensional aerofoil, Three dimensional flow about an aerofoil, Rotor aerodynamics, Flying controls, Stability, Load factor and manoeuvres, Stress loads on the ground, Helicopter specific hazards

(10) Communications
    (i) Radio telephony and communications, Departure procedures, En-route procedures, Arrival and traffic pattern procedures,
    (ii) Communications failure, Distress and urgency procedures

IS 2.3.3.2.2 Appendix B: Private Pilot Licence (Helicopter) – Flight Instruction and Skill Test
(a) The flight instruction and skill test for the private pilot licence - helicopter shall include at least the following areas of operation:
(1) Pre-flight preparation; including the applicant’s knowledge and performance of the following tasks--
   (i) Licences and documents
   (ii) Weather information
   (iii) Cross-country flight planning
   (iv) National airspace system
   (v) Performance and limitations
   (vi) Operation of system
   (vii) Minimum equipment list
   (viii) Aeromedical factors
(2) Pre-flight procedures; including the applicant’s knowledge and performance of the following tasks--
   (i) Pre-flight inspection
   (ii) Cockpit management
   (iii) Engine Starting and rotor engagement
   (iv) Before take-off check
(3) Aerodrome and heliport operations; including the applicant’s knowledge and performance of the following tasks--
   (i) Radio communications and ATC light signals
   (ii) Traffic patterns
   (iii) Aerodrome and heliport markings and lighting

(4) Hovering manoeuvres; including the applicant’s knowledge and performance of the following tasks-
   (i) Vertical take-off and landing
   (ii) Slope operations
   (iii) Surface taxi
   (iv) Hover taxi
   (v) Air taxi

(5) Take-offs, landings and go-arounds; including the applicant’s knowledge and performance of the following tasks--
   (i) Normal and crosswind take-off and climb
   (ii) Normal and crosswind approach
   (iii) Maximum performance take-off and climb
   (iv) Steep approach
   (v) Rolling take-off
   (vi) Shallow approach and running/roll-on landing
   (vii) Go-around

(6) Performance manoeuvre; including the applicant’s knowledge and performance of the following tasks--
   (i) Rapid deceleration
   (ii) Straight in autorotation

(7) Navigation; including the applicant’s knowledge and performance of the following tasks--
   (i) Pilotage and dead reckoning
   (ii) Radio navigation and radar services
   (iii) Diversion
   (iv) Lost procedures

(8) Emergency operations; including the applicant’s knowledge and performance of the following tasks-
   (i) Power failure at a hover
   (ii) Power failure at altitude
   (iii) Systems and equipment malfunctions
   (iv) Settling-with-power
   (v) Low rotor RPM recovery
   (vi) Dynamic rollover
   (vii) Ground resonance
   (viii) Low G conditions
   (ix) Emergency equipment and survival gear
(9) Night operation; including the applicant's knowledge and performance of the following tasks--
   (i) Physiological aspects of night flying
   (ii) Lighting and equipment for night flying

(10) Post-flight procedures; including the applicant's knowledge and performance of the following tasks-
   (i) After landing and securing

IS 2.3.3.2.3 APPENDIX A: PRIVATE PILOT LICENCE (POWERED-LIFT CATEGORY) – KNOWLEDGE
To be constructed

IS 2.3.3.2.3 APPENDIX B: PRIVATE PILOT LICENCE (POWERED-LIFT CATEGORY) – FLIGHT INSTRUCTION AND SKILL TEST
To be constructed

IS 2.3.3.2.4 APPENDIX A: PRIVATE PILOT LICENCE (AIRSHIP CATEGORY) – KNOWLEDGE
To be constructed

IS 2.3.3.2.4 APPENDIX B: PRIVATE PILOT LICENCE (AIRSHIP CATEGORY) – FLIGHT INSTRUCTION AND SKILL TEST
(a) The flight instruction and skill test for the private pilot licence- airship category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:
   (1) Pre-flight preparation, including the applicant's knowledge and performance of the following tasks—
      (i) Certificates and documents;
      (ii) Weather information;
      (iii) Cross-country flight planning;
      (iv) National airspace system;
      (v) Performance and limitations
      (vi) Operation of systems;
      (vii) Aeromedical factors.
   
   (2) Pre-flight procedures, including the applicant's knowledge and performance of the following tasks—
      (i) Pre-flight inspection;
      (ii) Cockpit management;
      (iii) Engine starting;
      (iv) Unmasting and positioning for takeoff
      (v) Ground handling
      (vi) Before takeoff check.
(3) Aerodrome operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Radio communications and ATC light signals;
   (ii) Traffic patterns
   (iii) Airport and runway markings and lighting.

(4) Takeoffs, landings and go-arounds, including the applicant’s knowledge and performance of the following tasks:
   (i) Ground weigh-off;
   (ii) Up-ship takeoff;
   (iii) Wheel takeoff;
   (iv) Approach and landing;
   (v) Go-around.

(5) Performance manoeuvres, including the applicant’s knowledge and performance of the following tasks—
   (i) Straight-and-level flight
   (ii) Ascents and descents;
   (iii) Level turns;
   (iv) In-flight weigh-off
   (v) Manual pressure control;
   (vi) Static and dynamic trim.

(6) Ground reference manoeuvres, including the applicant’s knowledge and performance of the following tasks—
   (i) Rectangular course;
   (ii) Turns around a point.

(7) Navigation, including the applicant’s knowledge and performance of the following tasks—
   (i) Pilotage and dead reckoning;
   (ii) Navigation systems and radar services;
   (iii) Diversion;
   (iv) Lost procedures.

(8) Emergency operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Engine fire during flight;
   (ii) Envelope emergencies
   (iii) Free ballooning;
   (iv) Ditching and emergency landing;
   (v) Systems and equipment malfunctions.

(9) Post-flight procedures, including the applicant’s knowledge and performance of the following tasks—
   (i) Masting;
   (ii) Post-masting.
IS 2.3.3.2.5 **APPENDIX A: PRIVATE PILOT LICENCE (BALLOON CATEGORY) – KNOWLEDGE**

To be constructed

IS 2.3.3.2.5 **APPENDIX B: PRIVATE PILOT LICENCE (BALLOON CATEGORY) – FLIGHT INSTRUCTION AND SKILL TEST**

(a) The flight instruction and skill test for the private pilot licence – balloon category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

1. Pre-flight preparation, including the applicant’s knowledge and performance of the following tasks—
   (i) Certificates and documents;
   (ii) Weather information;
   (iii) Flight planning;
   (iv) National airspace system;
   (v) Performance and limitations;
   (vi) Operation of systems;
   (vii) Aeromedical factors.

2. Pre-flight procedures, including the applicant’s knowledge and performance of the following tasks—
   (i) Launch site selection;
   (ii) Crew briefing and preparation;
   (iii) Layout and assembly;
   (iv) Pre-flight inspection;
   (v) Inflation;
   (vi) Basket/gondola management;
   (vii) Pre-launch check.

3. Aerodrome operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Radio communications and ATC light signals;

4. Launches and landing, including the applicant’s knowledge and performance of the following tasks:
   (i) Normal launch;
   (ii) Launch over obstacle;
   (iii) Approach to landing;
   (iv) Normal landing;
   (v) High-wind landing.
(5) Performance manoeuvres, including the applicant’s knowledge and performance of the following tasks—
   (i) Ascents;
   (ii) Altitude control (level flight);
   (iii) Descents;
   (iv) Contour flying;
   (v) Obstacle clearance;
   (vi) Tethering;
   (vii) Winter flying;
   (viii) Mountain flying.

(6) Navigation, including the applicant’s knowledge and performance of the following tasks—
   (i) Navigation.

(7) Emergency operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Systems and equipment malfunctions;
   (ii) Emergency equipment and survival gear;
   (iii) Water landing;
   (iv) Thermal flight.

(8) Post-flight procedures, including the applicant’s knowledge and performance of the following tasks—
   (i) Recovery;
   (ii) Deflation and packing;
   (iii) Refueling.

IS 2.3.3.2.6 APPENDIX A: PRIVATE PILOT LICENCE (GLIDER CATEGORY) – KNOWLEDGE

To be constructed

IS 2.3.3.2.6 APPENDIX B: PRIVATE PILOT LICENCE (GLIDER CATEGORY) – FLIGHT INSTRUCTION AND SKILL TEST

(a) The flight instruction and skill test for the private pilot licence – glider category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:
   (1) Pre-flight preparation, including the applicant’s knowledge and performance of the following tasks—
      (i) Licences and documents;
      (ii) Weather information;
      (iii) Operation of systems;
      (iv) Performance and limitations;
      (v) Aeromedical factors.
(2) Pre-flight procedures, including the applicant's knowledge and performance of the following tasks—
   (i) Assembly;
   (ii) Ground handling;
   (iii) Pre-flight inspection;
   (iv) Cockpit management;
   (v) Visual signals.

(3) Aerodrome and gliderport operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Radio communications;
   (ii) Traffic patterns;
   (iii) Aerodrome, runway, and taxiway signs, markings, and lighting.

(4) Launches— aero tow, including the applicant's knowledge and performance of the following tasks:
   (i) Before takeoff checks;
   (ii) Normal and crosswind takeoff;
   (iii) Maintaining tow positions;
   (iv) Slack line;
   (v) Boxing the wake;
   (vi) Tow release;
   (vii) Abnormal occurrences.

(5) Launches— ground tow, including the applicant’s knowledge and performance of the following tasks—
   (i) Before takeoff check;
   (ii) Normal and crosswind takeoff;
   (iii) Abnormal occurrences.

(6) Launches— self-launch, including the applicant's knowledge and performance of the following tasks—
   (i) Engine starting;
   (ii) Taxiing;
   (iii) Before takeoff check;
   (iv) Normal and crosswind takeoff and climb;
   (v) Engine shutdown in flight;
   (vi) Abnormal occurrences.

(7) Landings, including the applicant's knowledge and performance of the following tasks—
   (i) Normal and cross wind landing;
   (ii) Slips to landing;
   (iii) Downwind landing.
(8) Performance airsreads, including the applicant's knowledge and performance of the following tasks—
   (i) Minimum sink airspeed;
   (ii) Speed-to-fly.

(9) Soaring techniques, including the applicant's knowledge and performance of the following tasks—
   (i) Thermal soaring;
   (ii) Ridge and slope soaring;
   (iii) Wave soaring.

(10) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—
    (i) Straight glides;
    (ii) Turns to headings;
    (iii) Steep turns.

(11) Navigation, including the applicant's knowledge and performance of the following tasks—
    (i) Flight preparation and planning;
    (ii) National airspace system.

(12) Slow flight and stalls, including the applicant's knowledge and performance of the following tasks—
    (i) Manoeuvring at minimum control airspeed;
    (ii) Stall recognition and recovery.

(13) Emergency operations, including the applicant's knowledge and performance of the following tasks—
    (i) Simulated off-airport landing;
    (ii) Emergency equipment and survival gear.

(14) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—
    (i) After-landing and securing.

IS 2.3.3.3 COMMERCIAL PILOT LICENCE – KNOWLEDGE INSTRUCTION AND TEST; FLIGHT INSTRUCTION AND SKILL TEST
The knowledge instruction and test for the commercial pilot licence – aeroplane shall include at least the following subjects:

1. Air law
   i. International Agreements and Organisations: The Convention of Chicago; Other International agreements: IATA agreement; Tokyo and Warsaw Convention; PIC authority and responsibility regarding safety and security; Operators and pilots liabilities towards persons and goods on the ground, in case of damage and injury caused by the operation of the aircraft, Commercial practices and associated rules, dry and wet lease;
   ii. Relevant parts of ICAO Annexes: 1, 2, 7, 8, 9, 11 (and doc 4444), 12, 13, 14, 15, 17;
   iii. Procedures for air navigation – aircraft operations Doc 8168;
   iv. National law

2. Aircraft general knowledge
   i. Airframe and systems, electrics, powerplant, emergency equipment
      A. Airframe and systems: Fuselage, Cockpit and cabin windows, Wings, Stabilising surfaces, Landing Gear, Flight Controls, Hydraulics, Air driven systems (piston engines only), Air driven systems (turbopropeller and jet aircraft), Non-pneumatic operated de-ice and anti-ice systems, Fuel system;
      B. Electrics: Direct Current (DC), Alternating Current (AC), Semiconductors, Basic knowledge of computers; Basic radio propagation theory;
      C. Powerplant: Piston Engine, Turbine Engine, Engine construction, Engine systems, Auxiliary Power Unit (APU)
      D. Emergency equipment: Doors and emergency exits, Smoke detection, Fire detection, Fire fighting equipment, Aircraft oxygen equipment, Emergency equipment
   ii. Instrumentation
      A. Flight instruments: Air data instruments, Gyroscopic instruments, Magnetic Compass, Radio Altimeter, Electronic Flight Instrument System (EFIS),
      B. Automatic flight control system: Flight director, Autopilot, Yaw damper/Stability augmentation system,
      C. Warning and recording equipment: Warnings general; Stall warning,
      D. Powerplant and system monitoring instruments: Pressure gauge, Temperature gauge, RPM indicator, Consumption gauge, Fuel gauge, Torque meter, Flight hour meter, Vibration motoring, Remote (signal) transmission system, Electronic Displays
(3) Flight performance and planning
   (i) Mass and balance: Centre of gravity, Mass and balance limits
   (ii) Loading: Terminology, Aircraft mass checks, Procedures for determining aeroplane mass and balance documentation; Effects of overloading;
   (iii) Centre of gravity: Basis of cg calculations (load and balance documentation), Calculation of cg; Securing of loading; Area load, running load, supporting
   (iv) Performance of single-engine aeroplanes – Performance class B: Definitions of terms and speeds; Take-off and landing performance, Climb and cruise performance
   (v) Performance of multi-engine aeroplanes: Definitions of terms and speeds; Importance of performance calculations; Elements of performance, Use of performance graphs and tabulated data
   (vi) Flight planning and flight monitoring:
      (A) Flight plan for cross country flights: Navigation plan, Fuel plan, Flight monitoring and in-flight replanning, Radio communication and navigation aids;
      (B) ICAO ATC flight plan: Types of flight plan, Completing the flight plan, Filling the flight plan, Closing the flight plan, Adherence to flight plan
      (C) Practical flight planning: Chart preparation; Navigation plans; Simple fuel plans, Radio planning practice
      (D) Practical completion of a flight plan (flight plan, flight log, nav log, ATC plan, etc.): Extraction of data

(4) Human performance
   (i) Human factors basic concepts: Human factors in aviation, Accident statistics, Flight safety concepts
   (ii) Basic aviation physiology: Basics of flight physiology, Man and environment: the sensory system; Health and Hygiene;
   (iii) Basic aviation psychology: Human information processing; Human error and reliability; Decision making; Avoiding and managing threats and errors : cockpit management; Personality; Human overload and underload, Advanced cockpit automation

(5) Meteorology
   (i) The atmosphere: Composition, extent, vertical division; Temperature; Atmospheric pressure; Atmospheric density; Altimetry;
   (ii) Wind: Definition and measurement; General circulation; Turbulence; Variation of wind with height; Local winds; Standing waves;
   (iii) Thermodynamics: Humidity;
   (iv) Clouds and Fog: Cloud formation and description; Fog, mist, haze
   (v) Precipitation
   (vi) Airmasses and fronts: Types of airmasses; Fronts;
   (vii) Pressure systems: Location of the principal pressure areas, Anticyclone, Non frontal depressions;
   (viii) Climatology: Typical weather situations in mid-latitudes; Local seasonal weather and wind
   (ix) Flight hazards: Icing, Turbulence; Windshear; Thunderstorms; Hazards in mountainous areas; Visibility reducing phenomena;
   (x) Meteorological information: Observation, Weather charts, Information for flight planning
(6) Navigation:
(i) General Navigation: Basics of navigation: The solar system; The earth, Time and time conversions; Directions, Distance
(ii) Magnetism and compasses: General Principles, Aircraft magnetism, Knowledge of the principles, standby and landing or main compasses and remote reading compasses
(iii) Charts: General properties of miscellaneous types of projections; The representation of meridians, parallels, great circles and rhumb lines; The use of current aeronautical charts
(iv) Dead reckoning navigation (DR): Basics of dead reckoning; Use of the navigational computer; The triangle of velocities; Determination of DR position; Measurement of DR elements; Resolution of current DR problems; Measurements of maximum range, radius of action and point-of-safe-return and point-of-equal-time
(v) In-flight navigation: Use of visual observations and application to in-flight navigation; Navigation in climb and descent; Navigation in cruising flight, use of fixes to revise navigation data; Flight log (including navigation records);
(vi) Radio Navigation: Radio aids: Ground D/F (including classification of bearings); ADF (including associated beacons and use of the radio magnetic indicator); VOR and Doppler-VOR (including the use of the radio magnetic indicator); DME (distance measuring equipment); Basic radar principles: SSR (secondary surveillance radar and transponder); Self-contained and external-referenced navigation systems: Satellite assisted navigation: GPS/GLONASS/DGPS

(7) Operational procedures
(i) ICAO Annex 6 Parts I, II and III (as applicable)
(ii) Special operational procedures and hazards: Minimum equipment list; Ground icing; Bird strike risk and avoidance; Noise abatement; Fire/smoke; Decompression of pressurised cabin; Windshear, microburst; Wake turbulence; Security; Emergency and precautionary landings; Fuel jettisoning; Transport of dangerous goods; Contaminated runways;

(8) Principles of flight:
(i) Basics, laws and definitions; The two-dimensional airflow about an aerofoil; The coefficients; The three-dimensional airflow about an aeroplane; The total drag; The ground effect; The relation between the lift coefficient and the speed for constant lift; The stall; Climax augmentation; Means to decrease the CL/CD ratio, increasing drag; The boundary layer;
(ii) Stability: Condition of equilibrium in stable horizontal flight; Methods of achieving balance; Longitudinal stability; Static directional stability; Static lateral stability; Dynamic lateral stability;
(iii) Control: General; Pitch control; Yaw control; Roll control; Interaction in different planes (yaw/roll); Means to reduce control forces; Mass balance; Trimming;
(iv) Limitations: Operating limitations; Manoeuvring envelope; Gust envelope;
(v) Propellers: Conversion of engine torque to thrust; Engine failure or engine stop; Design feature for power absorption; Moments and couples due to propeller operation;
(vi) Flight mechanics: Forces acting on an aeroplane; Asymmetric thrust; Emergency descent; Windshear;
(9) Radiotelephony:

(i) VFR Communications: Definitions; General operating procedures; Relevant weather information terms (VFR); Action required to be taken in case of communication failure; distress and urgency procedures; General principles of VHF propagation and allocation of frequencies;

(ii) Morse code.

IS 2.3.3.3.1 APPENDIX B: COMMERCIAL PILOT LICENCE: AEROPLANE CATEGORY - FLIGHT INSTRUCTION AND SKILL TEST

(a) The flight instruction and skill test for the single-engine and multi-engine commercial pilot licence - aeroplane shall include at least the following areas of operation:

Note 1: When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraph is only for multi-engine. When nothing is indicated the item or paragraph is for single-engine and multi-engine.

Note 2: When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated the item is for land and seaplanes.

(1) Pre-flight preparation; including the applicant's knowledge and performance of the following tasks--

(i) Licences and documents

(ii) Airworthiness requirements

(iii) Weather information

(iv) Cross-country flight planning

(v) National airspace system

(vi) Performance and limitations

(vii) Operation of system

(viii) Principles of flight (ME)

(ix) Water and Seaplane characteristics (S)

(x) Seaplane bases, maritime rules and aids to marine navigation (S)

(xi) Aeromedical factors

(2) Pre-flight procedures; including the applicant's knowledge and performance of the following tasks--

(i) Pre-flight inspection

(ii) Cockpit management

(iii) Engine Starting

(iv) Taxiing (L)

(v) Taxiing and sailing (S)

(vi) Before take-off check

(3) Aerodrome and seaplane base operations; including the applicant's knowledge and performance of the following tasks--

(i) Radio communications and ATC light signals

(ii) Traffic patterns

(iii) Aerodrome/Seaplane base, runway and taxiway signs, markings and lighting
4) Take-offs, landings and go-arounds; including the applicant’s knowledge and performance of the following tasks--
   (i) Normal and crosswind take-off and climb
   (ii) Normal and crosswind approach and landing
   (iii) Soft-field take-off and climb (SE)
   (iv) Soft-field approach and landing (SE)
   (v) Short-field (Confined area (S)) take-off and maximum performance climb
   (vi) Short-field (Confined area (S)) approach and landing
   (vii) Glassy water take-off and climb (S)
   (viii) Glassy water approach and landing (S)
   (ix) Rough water take-off and climb (S)
   (x) Rough water approach and landing (S)
   (xi) Power-off 180 degrees accuracy approach and landing (SE)
   (xii) Go-around /rejected landing

5) Performance manoeuvres; including the applicant’s knowledge and performance of the following tasks--
   (i) Steep turns
   (ii) Steep spiral (SE)

6) Ground reference manoeuvres; including the applicant’s knowledge and performance of the following tasks--
   (i) Eights on pylons (SE)

7) Navigation; including the applicant’s knowledge and performance of the following tasks--
   (i) Pilotage and dead reckoning
   (ii) Navigation systems and radar services
   (iii) Diversion
   (iv) Lost procedures

8) Slow flight and stalls; including the applicant’s knowledge and performance of the following tasks--
   (i) Manoeuvring during slow flight
   (ii) Power-off stalls
   (iii) Power-on stalls
   (iv) Spin awareness

9) Emergency operations; including the applicant’s knowledge and performance of the following tasks--
   (i) Emergency approach and landing
   (ii) Emergency descent (ME)
   (iii) Engine failure during take-off before Vmc (simulated) (ME)
   (iv) Engine failure after lift-off (simulated) (ME)
   (v) Approach and landing with an inoperative engine (simulated) (ME)
   (vi) Systems and equipment malfunctions
   (vii) Emergency equipment and survival gear
(10) High altitude operations; including the applicant’s knowledge and performance of the following tasks--
   (i) Supplemental oxygen
   (ii) Pressurization

(11) Multi-engine operations (ME); including the applicant’s knowledge and performance of the following tasks--
   (i) Manoeuvring with one engine inoperative
   (ii) Vmc demonstration
   (iii) Engine failure during flight (by reference to instruments)
   (iv) Instrument approach – one engine inoperative (by reference to instruments)

(12) Post-flight procedures; including the applicant’s knowledge and performance of the following tasks-
   (i) After landing, parking and securing
   (ii) Anchoring (S)
   (iii) Docking and mooring (S)
   (iv) Ramping/beaching (S)

IS 2.3.3.3.2  APPENDIX A: COMMERCIAL PILOT LICENCE: HELICOPTER CATEGORY - KNOWLEDGE

(a) The knowledge instruction and test for the commercial pilot licence – helicopter shall include at least the following subjects:

(1) Air law
   (i) International Agreements and Organisations: The Convention of Chicago; Other International agreements: IATA agreement, Tokyo and Warsaw Convention; PIC authority and responsibility regarding safety and security; Operators and pilots liabilities towards persons and goods on the ground; in case of damage and injury caused by the operation of the aircraft; Commercial practices and associated rules: dry and wet lease;
   (ii) Relevant parts of ICAO Annexes: 1, 2, 7, 8, 9, 11 (and doc 4444), 12, 13, 14, 15, 17;
   (iii) Procedures for air navigation – aircraft operations Doc 8168;
   (iv) National law;

(2) Aircraft general knowledge
   (i) Airframe and systems, electrics, powerplant; emergency equipment
      (A) Airframe and systems: Helicopter configurations; Controls and rotors; Cockpit and cabin; Landing Gear; Transmission systems; Rotorbrake; Inspection; Hydraulics; Air driven systems De-ice and anti-ice systems, Fuel system
      (B) Electrics: Direct Current (DC); Alternating Current (AC); Semiconductors; Basic knowledge of computers; Basic radio propagation theory;
      (C) Powerplant: Piston Engine; Turbine Engine; Engine construction; Engine systems, Auxiliary Power Unitir (APU);
      (D) Emergency equipment: Doors and emergency exits; Smoke detection; Fire detection; Fire fighting equipment; Aircraft oxygen equipment; Emergency equipment;
(ii) Instrumentation
   (A) Flight instruments: Air data instruments; Gyroscopic instruments; Magnetic Compass; Radio Altimeter; Electronic Flight Instrument System (EFIS); Flight Management System (FMS);
   (B) Automatic flight control system: Flight director, Autopilot; Flight envelope protection; Yaw damper/Stability augmentation system;
   (C) Warning and recording equipment: Warnings general; Altitude alert system; Ground proximity warning system (GPWS); Traffic collision avoidance system (TCAS), Overspeed warning; Flight data recorder; Cockpit voice recorder; Rotors and engine over/underspeed warning;
   (D) Powerplant and system monitoring instruments: Pressure gauge, Temperature gauge, RPM indicator, Consumption gauge; Fuel gauge; Torque meter; Flight hour meter; Remote (signal) transmission system; Electronic Displays; Chip detection;

(3) Flight performance and planning
   (i) Mass and balance: Centre of gravity, Mass and balance limits;
   (ii) Loading: Terminology; Aircraft mass checks; Procedures for determining helicopter mass and balance documentation; Effects of overloading;
   (iii) Centre of gravity: Basis of cg calculations (load and balance documentation); Calculation of cg; Securing of load; Area load, running load, supporting;
   (iv) Performance: Airworthiness Requirements; Definitions of terms; Take off – Cruise – Landing Performance;
   (v) Flight planning and flight monitoring:
      (A) Flight plan for cross country flights: Navigation plan; Fuel plan; Flight monitoring and in-flight replanning; Radio communication and navigation aids;
      (B) ICAO ATC flight plan: Types of flight plan; Completing the flight plan; Filling the flight plan; Closing the flight plan; Adherence to flight plan;
      (C) Practical flight planning: Chart preparation; Navigation plans; Simple fuel plans; Radio planning practice;
      (D) Practical completion of a flight plan (flight plan, flight log, nav log, ATC plan, etc.): Extraction of data;
      (E) Offshore or remote area operation: Additional flight planning aspects for offshore or remote area operation; Computerised flight planning;

(4) Human performance
   (i) Human factors basic concepts: Human factors in aviation; Accident statistics; Flight safety concepts;
   (ii) Basic aviation physiology: Basics of flight physiology; Man and environment: the sensory system; Health and Hygiene;
   (iii) Basic aviation psychology: Human information processing; Human error and reliability; Decision making; Avoiding and managing threats and errors: cockpit management; Personality; Human overload and underload, Advanced cockpit automation
(5) Meteorology
   (i) The atmosphere: Composition, extent, vertical division; Temperature; Atmospheric pressure; Atmospheric density; Altimetry;
   (ii) Wind: Definition and measurement; General circulation; Turbulence; Variation of wind with height; Local winds; Standing waves;
   (iii) Thermodynamics: Humidity; Change of state of aggregation; Adiabatic processes
   (iv) Clouds and Fog: Cloud formation and description; Fog, mist, haze
   (v) Precipitation
   (vi) Airmasses and fronts: Types of airmasses; Fronts;
   (vii) Pressure systems: Location of the principal pressure areas, Anticyclone, Non frontal depressions; Tropical revolving storms
   (viii) Climatology: Climatology zones; Tropical climatology; Typical weather situations in mid-latitudes; Local seasonal weather and wind
   (ix) Flight hazards: Icing, Turbulence; Windshear; Thunderstorms; Tornadoes; Low and high level inversions; Stratospheric conditions; Hazards in mountainous areas;
   (x) Meteorological information: Observation, Weather charts, Information for flight planning

(6) Navigation:
   (i) General Navigation: Basics of navigation: The solar system; The earth, Time and time conversions; Directions, Distance
   (ii) Magnetism and compasses: General Principles, Aircraft magnetism, Knowledge of the principles, standby and landing or main compasses and remote reading compasses
   (iii) Charts: General properties of miscellaneous types of projections; The representation of meridians, parallels, great circles and rhumb lines; The use of current aeronautical charts
   (iv) Dead reckoning navigation (DR): Basics of dead reckoning; Use of the navigational computer; The triangle of velocities; Determination of DR position; Measurement of DR elements; Resolution of current DR problems; Measurements of maximum range, radius of action and point-of-safe-return and point-of-equal-time
   (v) In-flight navigation: Use of visual observations and application to in-flight navigation; Navigation in climb and descent; Navigation in cruising flight, use of fixes to revise navigation data; Flight log (including navigation records); Purposes of FMS (flight management systems);
   (vi) Radio Navigation: Radio aids: Ground D/F (including classification of bearings); ADF (including associated beacons and use of the radio magnetic indicator); VOR and Doppler-VOR (including the use of the radio magnetic indicator); DME (distance measuring equipment);
   (vii) Basic radar principles: Pulse techniques and associated terms; Ground radar; SSR (secondary surveillance radar and transponder); Use of radar observations and application to in-flight navigation;
   (viii) Area navigation systems: Flight director and autopilot coupling;
   (ix) Self-contained and external-referenced navigation systems: Doppler; Loran-C; Decca navigation system; Satellite assisted navigation: GPS/GLONASS/DGPS
(7) Operational procedures
   (i) ICAO Annex 6 Parts I, II and III (as applicable);
   (ii) Special operational procedures and hazards: Minimum equipment list; Ground icing;
        Bird strike risk and avoidance; Noise abatement; Fire/smoke; Windshear, microburst;
        Wake turbulence; Security; Emergency and precautionary landings; Fuel jettisoning;
        Transport of dangerous goods; Contaminated runways; Rotor down wash; Operation influence by meteorological conditions;
   (iii) Emergency procedures;

(8) Principles of flight:
   (i) Subsonic Aerodynamics: Basic laws and definitions; Derivation of lift; Drag; Distribution of forces – balance of couples; Stability; Blade-stall; Transonic effects on blades; Limitations; Performance degradation;
   (ii) Helicopter aerodynamics: The helicopter and associated terminology; The forces diagram and associated terminology; Uniformity of rotor thrust along blade span; Helicopter controls; Rotor blade freedom of movement; Phase lag and advance angle; Vertical flight; Forces in balance; Transitional lift; Power requirements; Further aerodynamics of forward flight; Factors affecting cyclic stick limits; The flare – power flight; Settling with power (vortex ring); Blade sailing; Autorotation – vertical; Autorotation - forward flight; Stability; Control power; Power requirements – graphs;

(9) Radiotelephony:
   (i) VFR Communications: Definitions; General operating procedures; Relevant weather information terms (VFR); Action required to be taken in case of communication failure; distress and urgency procedures; General principles of VHF propagation and allocation of frequencies;
   (ii) Morse code.

IS 2.3.3.2  APPENDIX B: COMMERCIAL PILOT LICENCE : HELICOPTER CATEGORY - FLIGHT INSTRUCTION AND SKILL TEST

(a) The flight instruction and skill test for the commercial pilot licence – helicopter shall include at least the following areas of operation:

(1) Pre-flight preparation; including the applicant’s knowledge and performance of the following tasks--
   (i) Licences and documents
   (ii) Weather information
   (iii) Cross-country flight planning
   (iv) National airspace system
   (v) Performance and limitations
   (vi) Operation of system
   (vii) Minimum equipment list
   (viii) Aeromedical factors
   (ix) Physiological aspects of night flying
   (x) Lighting and equipment for night flying
(2) Pre-flight procedures; including the applicant's knowledge and performance of the following tasks--
   (i) Pre-flight inspection
   (ii) Cockpit management
   (iii) Engine Starting and rotor engagement
   (iv) Before take-off check

(3) Aerodrome and heliport operations; including the applicant's knowledge and performance of the following tasks--
   (i) Radio communications and ATC light signals
   (ii) Traffic patterns
   (iii) Aerodrome and heliport markings and lighting

(4) Hovering manoeuvres; including the applicant's knowledge and performance of the following tasks--
   (i) Vertical take-off and landing
   (ii) Slope operations
   (iii) Surface taxi
   (iv) Hover taxi
   (v) Air taxi

(5) Take-offs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks--
   (i) Normal and crosswind take-off and climb
   (ii) Normal and crosswind approach and landing
   (iii) Maximum performance take-off and climb
   (iv) Steep approach
   (v) Rolling take-off
   (vi) Shallow approach and running/roll-on landing
   (vii) Go-around

(6) Performance manoeuvre; including the applicant's knowledge and performance of the following tasks--
   (i) Rapid deceleration
   (ii) 180 Degrees autorotation

(7) Navigation; including the applicant's knowledge and performance of the following tasks--
   (i) Pilotage and dead reckoning
   (ii) Radio navigation and radar services
   (iii) Diversion
   (iv) Lost procedures

(8) Emergency operations; including the applicant's knowledge and performance of the following tasks--
   (i) Power failure at a hover
   (ii) Power failure at altitude
(iii) Systems and equipment malfunctions
(iv) Settling-with-power
(v) Low rotor RPM recovery
(vi) Dynamic rollover
(vii) Ground resonance
(viii) Low G conditions
(ix) Emergency equipment and survival gear

(9) Special operations; including the applicant's knowledge and performance of the following tasks—
(i) Confined area operation
(ii) Pinnacle/platform operations

(10) Post-flight procedures; including the applicant's knowledge and performance of the following tasks—
(i) After landing, parking and securing

IS 2.3.3.3 APPENDIX A: COMMERCIAL PILOT LICENCE: POWERED-LIFT CATEGORY - KNOWLEDGE
To be constructed

IS 2.3.3.3 APPENDIX B: COMMERCIAL PILOT LICENCE: POWERED-LIFT CATEGORY - FLIGHT INSTRUCTION AND SKILL TEST
To be constructed

IS 2.3.3.4 APPENDIX A: COMMERCIAL PILOT LICENCE: AIRSHIP CATEGORY - KNOWLEDGE
To be constructed
IS 2.3.3.4 **APPENDIX B: COMMERCIAL PILOT LICENCE: AIRSHIP CATEGORY - FLIGHT INSTRUCTION AND SKILL TEST**

(a) The flight instruction and skill test for the private pilot licence - airship category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

1. Pre-flight preparation, including the applicant's knowledge and performance of the following tasks—
   - (i) Certificates and documents;
   - (ii) Weather information;
   - (iii) Cross-country flight planning;
   - (iv) National airspace system;
   - (v) Performance and limitations
   - (vi) Operation of systems;
   - (vii) Aeromedical factors.

2. Pre-flight procedures, including the applicant's knowledge and performance of the following tasks—
   - (i) Pre-flight inspection;
   - (ii) Cockpit management;
   - (iii) Engine starting;
   - (iv) Unmasting and positioning for takeoff
   - (v) Ground handling
   - (vi) Before takeoff check.

3. Aerodrome operations, including the applicant's knowledge and performance of the following tasks—
   - (i) Radio communications and ATC light signals;
   - (ii) Traffic patterns
   - (iii) Airport and runway markings and lighting.

4. Takeoffs, landings and go-arounds, including the applicant's knowledge and performance of the following tasks:
   - (i) Ground weigh-off;
   - (ii) Up-ship takeoff;
   - (iii) Wheel takeoff;
   - (iv) Approach and landing;
   - (v) Go-around.

5. Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—
   - (i) Straight-and-level flight
   - (ii) Ascents and descents;
   - (iii) Level turns;
   - (iv) In-flight weigh-off
   - (v) Manual pressure control;
   - (vi) Static and dynamic trim.
(6) Ground reference manoeuvres, including the applicant’s knowledge and performance of the following tasks—
   (i) Rectangular course;
   (ii) Turns around a point.

(7) Navigation, including the applicant’s knowledge and performance of the following tasks—
   (i) Pilotage and dead reckoning;
   (ii) Navigation systems and radar services;
   (iii) Diversion;
   (iv) Lost procedures.

(8) Emergency operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Engine fire during flight;
   (ii) Envelope emergencies
   (iii) Free ballooning;
   (iv) Ditching and emergency landing;
   (v) Systems and equipment malfunctions.

(9) Post-flight procedures, including the applicant’s knowledge and performance of the following tasks—
   (i) Mastiing;
   (ii) Post-masting.

IS 2.3.3.3.5 APPENDIX A: COMMERCIAL PILOT LICENCE: BALLOON CATEGORY - KNOWLEDGE

To be constructed

IS 2.3.3.3.5 APPENDIX B: COMMERCIAL PILOT LICENCE: BALLOON CATEGORY - FLIGHT INSTRUCTION AND SKILL TEST

(a) The flight instruction and skill test for the private pilot licence – balloon category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:
   (1) Pre-flight preparation, including the applicant’s knowledge and performance of the following tasks—
      (i) Certificates and documents;
      (ii) Weather information;
      (iii) Flight planning;
      (iv) National airspace system;
      (v) Performance and limitations
      (vi) Operation of systems;
      (vii) Aeromedical factors.
(2) Pre-flight procedures, including the applicant's knowledge and performance of the following tasks—
   (i) Launch site selection;
   (ii) Crew briefing and preparation;
   (iii) Layout and assembly;
   (iv) Pre-flight inspection
   (v) Inflation;
   (vi) Basket/gondola management;
   (vii) Pre-launch check.

(3) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—
   (i) Radio communications and ATC light signals;

(4) Launches and landing, including the applicant's knowledge and performance of the following tasks:
   (i) Normal launch;
   (ii) Launch over obstacle;
   (iii) Approach to landing;
   (iv) Normal landing;
   (v) High-wind landing.

(5) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—
   (i) Ascents;
   (ii) Altitude control (level flight);
   (iii) Descents;
   (iv) Contour flying;
   (v) Obstacle clearance;
   (vi) Tethering;
   (vii) Winter flying;
   (viii) Mountain flying.

(6) Navigation, including the applicant's knowledge and performance of the following tasks—
   (i) Navigation.

(7) Emergency operations, including the applicant's knowledge and performance of the following tasks—
   (i) Systems and equipment malfunctions;
   (ii) Emergency equipment and survival gear;
   (iii) Water landing;
   (iv) Thermal flight.
(8) Post-flight procedures, including the applicant’s knowledge and performance of the following tasks—
(i) Recovery;
(ii) Deflation and packing;
(iii) Refueling.

IS 2.3.3.3.6 APPENDIX A: COMMERCIAL PILOT LICENCE: GLIDER CATEGORY - KNOWLEDGE

To be constructed

IS 2.3.3.3.6 APPENDIX B: COMMERCIAL PILOT LICENCE : GLIDER CATEGORY - FLIGHT INSTRUCTION AND SKILL TEST

(a) The flight instruction and skill test for the commercial pilot licence – glider category shall include at least the following areas of operation with CRM competencies applied and evident in all tasks:

(1) Pre-flight preparation, including the applicant’s knowledge and performance of the following tasks—
   (i) Licences and documents;
   (ii) Weather information;
   (iii) Operation of systems;
   (iv) Performance and limitations;
   (v) Aeromedical factors.

(2) Pre-flight procedures, including the applicant’s knowledge and performance of the following tasks—
   (i) Assembly;
   (ii) Ground handling;
   (iii) Pre-flight inspection;
   (iv) Cockpit management;
   (v) Visual signals.

(3) Aerodrome and gliderport operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Radio communications;
   (ii) Traffic patterns;
   (iii) Aerodrome, runway, and taxiway signs, markings, and lighting.

(4) Launches– aero tow, including the applicant’s knowledge and performance of the following tasks:
   (i) Before takeoff checks;
   (ii) Normal and crosswind takeoff;
   (iii) Maintaining tow positions;
   (iv) Slack line;
   (v) Boxing the wake;
   (vi) Tow release;
   (vii) Abnormal occurrences.
(5) Launches—ground tow, including the applicant’s knowledge and performance of the following tasks—
   (i) Before takeoff check;
   (ii) Normal and crosswind takeoff;
   (iii) Abnormal occurrences.

(6) Launches—self-launch, including the applicant’s knowledge and performance of the following tasks—
   (i) Engine starting;
   (ii) Taxiing;
   (iii) Before takeoff check;
   (iv) Normal and crosswind takeoff and climb;
   (v) Engine shutdown in flight;
   (vi) Abnormal occurrences.

(7) Landings, including the applicant’s knowledge and performance of the following tasks—
   (i) Normal and crosswind landing;
   (ii) Slips to landing;
   (iii) Downwind landing.

(8) Performance airspeeds, including the applicant’s knowledge and performance of the following tasks—
   (i) Minimum sink airspeed;
   (ii) Speed-to-fly.

(9) Soaring techniques, including the applicant’s knowledge and performance of the following tasks—
   (i) Thermal soaring;
   (ii) Ridge and slope soaring;
   (iii) Wave soaring.

(10) Performance manoeuvres, including the applicant’s knowledge and performance of the following tasks—
   (i) Straight glides;
   (ii) Turns to headings;
   (iii) Steep turns.

(11) Navigation, including the applicant’s knowledge and performance of the following tasks—
   (i) Flight preparation and planning;
   (ii) National airspace system.

(12) Slow flight and stalls, including the applicant’s knowledge and performance of the following tasks—
   (i) Manoeuvring at minimum control airspeed;
   (ii) Stall recognition and recovery.

(13) Emergency operations, including the applicant’s knowledge and performance of the following tasks—
(i) Simulated off-aerodrome landing;
(ii) Emergency equipment and survival gear.

(14) Post-flight procedures, including the applicant’s knowledge and performance of the following tasks—
(i) After-landing and securing.

IS 2.3.3.4 **APPENDIX A: REQUIREMENTS FOR THE ISSUE OF THE MULTI- CREW PILOT LICENCE (MPL)**

(a) **Training**

(1) In order to meet the requirements of the multi-crew pilot licence in the aeroplane category, the applicant shall have completed an approved course. The training shall be competency-based and conducted in a multi-crew operational environment.

(2) During the training, the applicant shall have acquired the knowledge, skills and attitudes required as the underpinning attributes for performing as a co-pilot of a turbine-powered air transport aeroplane certificated for operation with a minimum crew of at least two pilots.

(b) **Assessment Level.**

(1) The applicant for a MPL in the appropriate aeroplane category shall have satisfactorily demonstrated performance in all the nine competency units specified in (c) below, at the advanced level of competency as defined in Appendix (B) below.

(c) **Competency units.**

(1) The nine competency units that an applicant has to demonstrate in accordance with 2.3.3.4(g) are as follows:

- (i) apply threat and error management (TEM) principles;
- (ii) perform aeroplane ground operations;
- (iii) perform take-off;
- (iv) perform climb;
- (v) perform cruise;
- (vi) perform descent;
- (vii) perform approach;
- (viii) perform landing; and
- (ix) perform after landing and aeroplane post-flight operations.

**Note 1:** Competency units are broken down into their constituent elements, for which specific performance criteria have been defined.

**Note 2:** The application of threat and error management principles is a specific competency unit that is to be integrated with each of the other competency units for training and testing purposes.

(d) **Simulated Flight.**

(1) The flight simulation training devices used to gain the experience specified in this Part shall have been approved by the Authority.

(2) Flight simulation training devices shall be categorized as follows:

- (i) Type I. E-training and part tasking devices approved by the GCAA that have the following characteristics:
a. involve accessories beyond those normally associated with desktop computers, such as functional replicas of a throttle quadrant, a sidestick controller, or an FMS keypad; and
b. involve a psychomotor activity with appropriate application of force and timing of responses.

(ii) Type II
A flight simulation training device that represent a generic turbine powered aeroplane.

*Note:* This requirement can be met by a flight simulation training device equipped with a daylight visual system and otherwise meeting at a minimum the specifications equivalent to FAA FTD Level 5, or JAA FNPT II, MCC.

(iii) Type III
A flight simulation training device that represents a multi-engine turbine powered aeroplane certificated for a crew of two pilots with enhanced daylight visual system and equipped with an autopilot.

*Note:* This requirement can be met by a flight simulation training device equipped with a daylight visual system and otherwise meeting at a minimum the specifications for a level B simulator as defined in JAR STD 1A, as amended; and in FAA AC 120-40B, as amended, including Alternate Means of Compliance (AMOC), as permitted in AC 120-40B.

(iv) Type IV
Fully equivalent to a Level D Flight Simulator or to a Level C Flight Simulator with an enhanced daylight visual system.

*Note:* Specifications for Level C and Level D simulator are defined in JAR STD 1A, as amended; and in FAA AC 120-40B, as amended, including Alternate Means of Compliance (AMOC), as permitted in AC 120-40B.

### IS 2.3.3.4 Appendix B: Multi-Crew Pilot Licence (MPL) for Aeroplanes –

(a) Levels of Competency

1. *Core flying skills.* The level of competency at which the applicant shall have complied with the requirements for the private pilot licence specified in 2.3.3.2 including night flight requirements, and, in addition, have completed, smoothly and with accuracy, all procedures and manoeuvres related to upset training and flight with reference solely to instruments. From the outset, all training is conducted in an integrated multi-crew, competency based and threat and error management (TEM) environment. Initial training and instructional input levels are high as core skills are embedded in the ab initio application. Assessment at this level confirms that control of the aeroplane is maintained at all times in a manner such that the successful outcome of a procedure or manoeuvre is assured.

2. *Level 1 (Basic).* The level of competency at which assessment confirms that control of the aeroplane or situation is maintained at all times and in such a manner that if the successful outcome of a procedure or manoeuvre is in doubt, corrective action is taken. Performance in the generic cockpit environment does not yet consistently meet the Standards of knowledge, operational skills and level of achievement required in core competencies. Continual training
input is required to meet an acceptable initial operating standard. Specific performance improvement/personal development plans will be agreed and the details recorded. Applicants will be continuously assessed as to their suitability to progress to further training and assessment in successive phases.

(3) *Level 2 (Intermediate).* The level of competency at which assessment confirms that control of the aeroplane or situation is maintained at all times and in such manner that the successful outcome of a procedure or manoeuvre is assured. The training received at Level 2 shall be conducted under the instrument flight rules, but need not be specific to any one type of aeroplane. On completion of Level 2, the applicant shall demonstrate levels of knowledge and operational skills that are adequate in the environment and achieves the basic standard in the core capability. Training support may be required with a specific development plan to maintain or improve aircraft handling, behavioural performance in leadership or team management. Improvement and development to attain the Standard is the key performance objective. Any core competency assessed as less than satisfactory should include supporting evidence and a remedial plan.

(4) *Level 3 (Advanced).* The level of competency required to operate and interact as a co-pilot in a turbine-powered aeroplane certificated for operation with a minimum crew of at least two pilots, under visual and instrument conditions. Assessment confirms that control of the aeroplane or situation is maintained at all times in such a manner that the successful outcome of a procedure or manoeuvre is assured. The applicant shall consistently demonstrate the knowledge, skills and attitudes required for the safe operation of an applicable aeroplane type as specified in the performance criteria.

**IS 2.3.3.5 AIRLINE TRANSPORT PILOT LICENCE – KNOWLEDGE INSTRUCTION AND TEST; FLIGHT INSTRUCTION AND SKILL TEST**

**IS 2.3.3.5.1 APPENDIX A: AIRLINE TRANSPORT PILOT LICENCE AEROPLANE CATEGORY – KNOWLEDGE**

(a) The knowledge instruction and test for the airline transport pilot licence – aeroplane shall include at least the following subjects:

(1) Air law
   (i) International Agreements and Organisations: The Convention of Chicago; Other International agreements: IATA agreement, Tokyo and Warsaw Convention; PIC authority and responsibility regarding safety and security; Operators and pilots liabilities towards persons and goods on the ground; in case of damage and injury caused by the operation of the aircraft; Commercial practices and associated rules: dry and wet lease;
   (ii) Relevant parts of ICAO Annexes: 1, 2, 7, 8, 9, 11 (and doc 4444), 12, 13, 14, 15, 17;
   (iii) Procedures for air navigation – aircraft operations Doc 8168;
   (iv) National law;

(2) Aircraft general knowledge
   (i) Airframe and systems, electrics, powerplant; emergency equipment
      (A) Airframe and systems: Fuselage; Cockpit and cabin windows; Wings, Stabilising surfaces; Landing Gear; Flight Controls; Hydraulics; Air driven systems (piston
engines only); Air driven systems (turbopropeller and jet aircraft); Non-pneumatic operated de-ice and anti-ice systems; Fuel system;

(B) Electrics: Direct Current (DC); Alternating Current (AC); Semiconductors; Basic knowledge of computers; Basic radio propagation theory;

(C) Powerplant: Piston Engine; Turbine Engine; Engine construction; Engine systems, Auxiliary Power Unit (APU);

(D) Emergency equipment: Doors and emergency exits; Smoke detection; Fire detection; Fire fighting equipment; Aircraft oxygen equipment; Emergency equipment;

(ii) Instrumentation
(A) Flight instruments: Air data instruments; Gyroscopic instruments; Magnetic Compass; Radio Altimeter; Electronic Flight Instrument System (EFIS); Flight Management System (FMS);

(B) Automatic flight control system: Flight director, Autopilot; Flight envelope protection; Yaw damper/Stability augmentation system, Automatic pitch trim; Thrust computation, Auto-thrust;

(C) Warning and recording equipment: Warnings general; Altitude alert system; Ground proximity warning system (GPWS); Traffic collision avoidance system (TCAS), Overspeed warning; Stall warning, Flight data recorder; Cockpit voice recorder;

(D) Powerplant and system monitoring instruments: Pressure gauge, Temperature gauge, RPM indicator, Consumption gauge; Fuel gauge; Torque meter; Flight hour meter; Vibration motoring; Remote (signal) transmission system; Electronic Displays;

(3) Flight performance and planning
(i) Mass and balance: Centre of gravity, Mass and balance limits;

(ii) Loading: Terminology; Aircraft mass checks; Procedures for determining aeroplane mass and balance documentation; Effects of overloading;

(iii) Centre of gravity: Basis of cg calculations (load and balance documentation); Calculation of cg; Securing of loading; Area load; running load, supporting;

(iv) Performance of single-engine aeroplanes not certified under FAR/JAR 25 – Performance class B: Definitions of terms and speeds; Take-off and landing performance; Climb and cruise performance;

(v) Performance of multi-engine aeroplanes not certified under FAR/JAR 25 – Performance class B: Definitions of terms and speeds; Importance of performance calculations; Elements of performance, Use of performance graphs and tabulated data;

(vi) Performance of aeroplanes certified under FAR/JAR 25 – Performance class A: Take-off, Accelerate-stop distance, Initial Climb; Climb; Cruise; Descent and landing; Practical application of an airplane performance manual;

(vii) Flight planning and flight monitoring:
(A) Flight plan for cross country flights: Navigation plan; Fuel plan; Flight monitoring and in-flight replanning; Radio communication and navigation aids;

(B) ICAO ATC flight plan: Types of flight plan; Completing the flight plan; Filling the flight plan; Closing the flight plan; Adherence to flight plan;
(C) Practical flight planning: Chart preparation; Navigation plans; Simple fuel plans; Radio planning practice;
   - IFR ( Airways) flight planning: Meteorological considerations; Selection of routes to destination and alternates; General flight planning tasks;
(D) Jet aeroplanes flight planning: Additional flight planning aspects for jet aeroplanes (advanced flight planning); Computerised flight planning;
(E) Practical completion of a flight plan (flight plan, flight log, nav log, ATC plan, etc.): Extraction of data;

(4) Human performance
   (i) Human factors basic concepts: Human factors in aviation; Accident statistics; Flight safety concepts;
   (ii) Basic aviation physiology: Basics of flight physiology; Man and environment: the sensory system; Health and Hygiene;
   (iii) Basic aviation psychology: Human information processing; Human error and reliability; Decision making; Avoiding and managing threats and errors: cockpit management; Personality; Human overload and underload, Advanced cockpit automation

(5) Meteorology
   (i) The atmosphere: Composition, extent, vertical division; Temperature; Atmospheric pressure; Atmospheric density; International Standard Atmosphere (ISA); Altimetry;
   (ii) Wind: Definition and measurement; Primary cause of wind; General circulation; Turbulence; Variation of wind with height; Local winds; Jet streams; Standing waves;
   (iii) Thermodynamics: Humidity; Change of state of aggregation; Adiabatic processes
   (iv) Clouds and Fog: Cloud formation and description; Fog, mist, haze
   (v) Precipitation: Development; Types;
   (vi) Airmasses and fronts: Types of airmasses; Fronts;
   (vii) Pressure systems: Location of the principal pressure areas, Anticyclone, Non frontal depressions; Tropical revolving storms
   (viii) Climatolic: Climatology zones; Tropical climatology; Typical weather situations in mid-latitudes; Local seasonal weather and wind
   (ix) Flight hazards: Icing, Turbulence; Windshear; Thunderstorms; Tornadoes; Low and high level inversions; Stratospheric conditions; Hazards in mountainous areas; Visibility reducing phenomena;
   (x) Meteorological information: Observation, Weather charts, Information for flight planning

(6) Navigation:
   (i) General Navigation: Basics of navigation: The solar system; The earth, Time and time conversions; Directions, Distance
   (ii) Magnetism and compasses: General Principles, Aircraft magnetism, Knowledge of the principles, standby and landing or main compasses and remote reading compasses
(iii) Charts: General properties of miscellaneous types of projections; The representation of meridians, parallels, great circles and rhumb lines; The use of current aeronautical charts

(iv) Dead reckoning navigation (DR): Basics of dead reckoning; Use of the navigational computer; The triangle of velocities; Determination of DR position; Measurement of DR elements; Resolution of current DR problems; Measurements of maximum range, radius of action and point-of-safe-return and point-of-equal-time

(v) In-flight navigation: Use of visual observations and application to in-flight navigation; Navigation in climb and descent; Navigation in cruising flight, use of fixes to revise navigation data; Flight log (including navigation records); Purposes of FMS (flight management systems);

(vi) Inertial navigation systems (INS): Principles and practical application; Alignment procedures; Accuracy, reliability, errors and coverage, INS operation;

(vii) Radio Navigation: Radio aids: Ground D/F (including classification of bearings); ADF (including associated beacons and use of the radio magnetic indicator); VOR and Doppler-VOR (including the use of the radio magnetic indicator); DME (distance measuring equipment); ILS (instrument landing system); MLS (Microwave landing system);

(viii) Basic radar principles: Pulse techniques and associated terms; Ground radar; Airborne weather radar; SSR (secondary surveillance radar and transponder); Use of radar observations and application to in-flight navigation;

(ix) Area navigation systems: General philosophy; Typical flight deck equipment and operation; Instrument indications; Types of area navigation system inputs; VOR/DME area navigation (RNAV); Flight director and autopilot coupling;

(x) Self-contained and external-referenced navigation systems: Doppler; Loran-C; Decca navigation system; Satellite assisted navigation: GPS/GLONASS/DGPS

(7) Operational procedures

(i) ICAO Annex 6 Parts I, II and III (as applicable); Navigation requirements for long-range flights;

(ii) Special operational procedures and hazards: Minimum equipment list; Ground icing; Bird strike risk and avoidance; Noise abatement; Fire/smoke; Decompression of pressurised cabin; Windshear, microburst; Wake turbulence; Security; Emergency and precautionary landings; Fuel jettisoning; Transport of dangerous goods; Contaminated runways;

(8) Principles of flight:

(i) Basics, laws and definitions; The two-dimensional airflow about an aerofoil; The coefficients; The three-dimensional airflow about an aeroplane; The total drag; The ground effect; The relation between the lift coefficient and the speed for constant lift; The stall; Climax augmentation; Means to decrease the CL/CD ratio, increasing drag; The boundary layer; Special circumstances;

(ii) Transonic aerodynamics: The Mach number definition, Normal shockwaves; Means to avoid the effects of exceeding Mcrit

(iii) Supersonic aerodynamics: Oblique shockwaves

(iv) Stability: Condition of equilibrium in stable horizontal flight; Methods of achieving balance; Longitudinal stability; Static directional stability; Static lateral stability; Dynamic lateral stability;
(v) Control: General; Pitch control; Yaw control; Roll control; Interaction in different planes (yaw/roll); Means to reduce control forces; Mass balance; Trimming;

(vi) Limitations: Operating limitations; Maneuvring envelope; Gust envelope;

(vii) Propellers: Conversion of engine torque to thrust; Engine failure or engine stop; Design feature for power absorption; Moments and couples due to propeller operation;

(viii) Flight mechanics: Forces acting on an aeroplane; Asymmetric thrust; Emergency descent; Windshear;

(9) Radiotelephony:

(i) VFR Communications: Definitions; General operating procedures; Relevant weather information terms (VFR); Action required to be taken in case of communication failure; distress and urgency procedures; General principles of VHF propagation and allocation of frequencies;

(ii) IFR Communications: Definitions; General operating procedures; Action required to be taken in case of communication failure; Distress and urgency procedures; General principles of VHF propagation and allocation of frequencies;

(iii) Morse code.

IS 2.3.3.5.1 APPENDIX B: AIRLINE TRANSPORT PILOT LICENCE/TYPE RATING: AEROPLANE CATEGORY - FLIGHT INSTRUCTION AND SKILL TEST

(a) The flight instruction and skill test for the airline transport pilot licence - aeroplanes shall include CRM and at least the following areas of operation:

(1) Pre-flight preparation; including the applicant’s knowledge and performance of the following tasks--

   (i) Equipment examination

   (ii) Performance and limitations

(2) Pre-flight procedures; including the applicant’s knowledge and performance of the following tasks--

   (i) Pre-flight inspection

   (ii) Powerplant start

   (iii) Taxiing

   (iv) Before takeoff checks

(3) Take-offs and departure phase; including the applicant’s knowledge and performance of the following tasks--

   (i) Normal takeoffs with different flap settings, including expedited take-off

   (ii) Instrument takeoff;

   (iii) Powerplant failure during takeoff

   (iv) Rejected takeoff

   (v) Departure procedures

(4) In-flight manoeuvres; including the applicant’s knowledge and performance of the following tasks—
(i) Steep turns
(ii) Approach to stalls
(iii) Powerplant failure
(iv) Specific flight characteristics
(v) Recovery from unusual altitudes.

(5) Instrument procedures; including the applicant’s knowledge and performance of the following tasks-
   (i) Standard terminal arrival/flight management system procedures
   (ii) Holding procedures
   (iii) Precision instrument approaches
   (iv) Non-precision instrument approaches
   (v) Circling approach
   (vi) Missed approach

(6) Landings and approaches to landings; including the applicant’s knowledge and performance of the following tasks--
   (i) Normal and crosswind approaches and landings
   (ii) Landing from a precision approach
   (iii) Approach and landing with (simulated) powerplant failure
   (iv) Landing from a circling approach
   (v) Rejected landing
   (vi) Landing from a no-flap or a non-standard flap approach.

(7) Normal and abnormal procedures

(8) Emergency procedures and manoeuvres in event of failures and malfunctions of equipment (powerplant, systems and airframe).

(9) Post-flight procedures; including the applicant’s knowledge and performance of the following tasks-
   (i) After landing procedures
   (ii) Parking and securing
IS 2.3.3.5.2  **APPENDIX A: AIRLINE TRANSPORT PILOT LICENCE: HELICOPTER CATEGORY – KNOWLEDGE**

(a) The knowledge instruction and test for the airline transport pilot licence – helicopter shall include at least the following subjects:

(1) Air law
   (i) International Agreements and Organisations: The Convention of Chicago; Other International agreements: IATA agreement, Tokyo and Warsaw Convention; PIC authority and responsibility regarding safety and security; Operators and pilots liabilities towards persons and goods on the ground; in case of damage and injury caused by the operation of the aircraft; Commercial practices and associated rules: dry and wet lease;
   (ii) Relevant parts of ICAO Annexes: 1. 2. 7, 8, 9, 11 (and doc 4444), 12, 13, 14, 15, 17;
   (iii) Procedures for air navigation – aircraft operations Doc 8168;
   (iv) National law;

(2) Aircraft general knowledge
   (i) Airframe and systems, electrics, powerplant; emergency equipment
      (A) Airframe and systems: Helicopter configurations; Controls and rotors; Cockpit and cabin; Landing Gear; Transmission systems; Rotorbrake; Inspection; Hydraulics; Air driven systems, De-ice and anti-ice systems, Fuel system
      (B) Electrics: Direct Current (DC); Alternating Current (AC); Semiconductors; Basic knowledge of computers Basic radio propagation theory;
      (C) Powerplant: Piston Engine; Turbine Engine; Engine construction; Engine systems, Auxiliary Power Unit (APU);
      (D) Emergency equipment: Doors and emergency exits; Smoke detection; Fire detection; Fire fighting equipment; Aircraft oxygen equipment; Emergency equipment;
   (ii) Instrumentation
      (A) Flight instruments: Air data instruments; Gyroscopic instruments; Magnetic Compass; Radio Altimeter; Electronic Flight Instrument System (EFIS); Flight Management System (FMS);
      (B) Automatic flight control system: Flight director, Autopilot; Flight envelope protection; Yaw damper/Stability augmentation system;
      (C) Warning and recording equipment: Warnings general; Altitude alert system; Ground proximity warning system (GPWS); Traffic collision avoidance system (TCAS), Overspeed warning; Flight data recorder; Cockpit voice recorder; Rotors and engine over/underspeed warning;
      (D) Powerplant and system monitoring instruments: Pressure gauge, Temperature gauge, RPM indicator, Consumption gauge; Fuel gauge; Torque meter; Flight hour meter; Remote (signal) transmission system; Electronic Displays; Chip detection;
(3) Flight performance and planning
   (i) Mass and balance: Centre of gravity, Mass and balance limits;
   (ii) Loading: Terminology; Aircraft mass checks; Procedures for determining helicopter mass and balance documentation; Effects of overloading;
   (iii) Centre of gravity: Basis of cg calculations (load and balance documentation); Calculation of cg; Securing of load; Area load; running load, supporting;
   (iv) Performance: Airworthiness Requirements; Definitions of terms; Take off – Cruise – Landing Performance;
   (v) Flight planning and flight monitoring:
      (A) Flight plan for cross country flights: Navigation plan; Fuel plan; Flight monitoring and in-flight replanning; Radio communication and navigation aids;
      (B) ICAO ATC flight plan: Types of flight plan; Completing the flight plan; Filling the flight plan; Closing the flight plan; Adherence to flight plan;
      (C) Practical flight planning: Chart preparation; Navigation plans; Simple fuel plans; Radio planning practice;
      (D) IFR (airways) flight planning: Meteorological considerations; Selection of routes to destination and alternates; General flight planning tasks;
      Note: This subsection is only part of the instruction, test or check when an instrument rating is required.
      (E) Practical completion of a flight plan (flight plan, flight log, nav log, ATC plan, etc.): Extraction of data;
      (F) Offshore or remote area operation: Additional flight planning aspects for offshore or remote area operation; Computerised flight planning;

(4) Human performance
   (i) Human factors basic concepts: Human factors in aviation; Accident statistics; Flight safety concepts;
   (ii) Basic aviation physiology: Basics of flight physiology; Man and environment: the sensory system; Health and Hygiene;
   (iii) Basic aviation psychology: Human information processing; Human error and reliability; Decision making; Avoiding and managing threats and errors : cockpit management; Personality; Human overload and underload, Advanced cockpit automation

(5) Meteorology
   (i) The atmosphere: Composition, extent, vertical division; Temperature; Atmospheric pressure; Atmospheric density; Altimetry;
   (ii) Wind: Definition and measurement; General circulation; Turbulence; Variation of wind with height; Local winds; Jet streams; Standing waves;
   (iii) Thermodynamics: Humidity; Change of state of aggregation; Adiabetic processes
   (iv) Clouds and Fog: Cloud formation and description; Fog, mist, haze
   (v) Precipitation
   (vi) Airmasses and fronts: Types of airmasses; Fronts;
   (vii) Pressure systems: Location of the principal pressure areas, Anticyclone, Non frontal depressions; Tropical revolving storms
(viii) Climatology: Climatology zones; Tropical climatology; Typical weather situations in mid-latitudes; Local seasonal weather and wind

(ix) Flight hazards: Icing, Turbulence; Windshear; Thunderstorms; Tornadoes; Low and high level inversions; Stratospheric conditions; Hazards in mountainous areas;

(x) Meteorological information: Observation, Weather charts, Information for flight planning

(6) Navigation:

(i) General Navigation: Basics of navigation: The solar system; The earth, Time and time conversions; Directions, Distance

(ii) Magnetism and compasses: General Principles, Aircraft magnetism, Knowledge of the principles, standby and landing or main compasses and remote reading compasses

(iii) Charts: General properties of miscellaneous types of projections; The representation of meridians, parallels, great circles and rhumb lines; The use of current aeronautical charts

(iv) Dead reckoning navigation (DR): Basics of dead reckoning; Use of the navigational computer; The triangle of velocities; Determination of DR position; Measurement of DR elements; Resolution of current DR problems; Measurements of maximum range, radius of action and point-of-safe-return and point-of-equal-time

(v) In-flight navigation: Use of visual observations and application to in-flight navigation; Navigation in climb and descent; Navigation in cruising flight, use of fixes to revise navigation data; Flight log (including navigation records); Purposes of FMS (flight management systems);

(vi) Radio Navigation: Radio aids: Ground D/F (including classification of bearings); ADF (including associated beacons and use of the radio magnetic indicator); VOR and Doppler-VOR (including the use of the radio magnetic indicator); DME (distance measuring equipment); ILS (instrument landing system); MLS (Microwave landing system);

(vii) Basic radar principles: Pulse techniques and associated terms; Ground radar; Airborne weather radar; SSR (secondary surveillance radar and transponder); Use of radar observations and application to in-flight navigation;

(viii) Area navigation systems: General philosophy; Typical flight deck equipment and operation; Instrument indications; Types of area navigation system inputs; VOR/DME area navigation (RNAV); Flight director and autopilot coupling

(ix) Area navigation systems: General philosophy; Typical flight deck equipment and operation; Instrument indications; Types of area navigation system inputs; VOR/DME area navigation (RNAV); Flight director and autopilot coupling

Note: Typical flight deck equipment and operation; Instrument indications; and Types of area navigation system inputs are only part of the instruction, test or check when an instrument rating is required.

(x) Self-contained and external-referenced navigation systems: Doppler; Loran-C; Decca navigation system; Satellite assisted navigation: GPS/GLONASS/DGPS
(7) Operational procedures
   (i) ICAO Annex 6 Parts I, II and III (as applicable);
   (ii) Special operational procedures and hazards: Minimum equipment list; Ground icing; Bird strike risk and avoidance; Noise abatement; Fire/smoke; Windshear, microburst; Wake turbulence; Security; Emergency and precautionary landings; Fuel jettisoning; Transport of dangerous goods; Contaminated runways;

(8) Principles of flight:
   (i) Subsonic Aerodynamics: Basic laws and definitions; Derivation of lift; Drag; Distribution of forces – balance of couples; Stability; Blade-stall; Transonic effects on blades; Limitations; Performance degradation;
   (ii) Helicopter aerodynamics: The helicopter and associated terminology; The forces diagram and associated terminology; Uniformity of rotor thrust along blade span; Helicopter controls; Rotor blade freedom of movement; Phase lag and advance angle; Vertical flight; Forces in balance; Transitional lift; Power requirements; Further aerodynamics of forward flight; Factors affecting cyclic stick limits; The flare – power flight; Settling with power (vortex ring); Blade sailing; Autorotation – vertical; Autorotation - forward flight; Stability; Control power; Power requirements – graphs;

(9) Radiotelephony:
   (i) VFR Communications: Definitions; General operating procedures; Relevant weather information terms (VFR); Action required to be taken in case of communication failure; distress and urgency procedures; General principles of VHF propagation and allocation of frequencies;
   (ii) IFR Communications: Definitions; General operating procedures; Action required to be taken in case of communication failure; distress and urgency procedures; General principles of VHF propagation and allocation of frequencies;

   Note: This subsection is only part of the instruction, test or check when an instrument rating is required.

   (iii) Morse code.

IS 2.3.3.5.2 APPENDIX B: AIRLINE TRANSPORT PILOT LICENCE/TYPE RATING: HELICOPTER CATEGORY - FLIGHT INSTRUCTION AND SKILL TEST

(a) The flight instruction and skill test for the airline transport pilot licence for helicopters shall include CRM and at least the following areas of operation:

   (1) Pre-flight preparations and checks; including the applicant’s knowledge and performance of the following tasks--
   (i) Equipment examination
   (ii) Performance and limitations
(2) Pre-flight procedures; including the applicant’s knowledge and performance of the following tasks--
   (i) Pre-flight inspection
   (ii) Powerplant startt
   (iii) Taxiing
   (iv) Pre-takeoff checks

(3) Takeoff and departure phase; including the applicant’s knowledge and performance of the following tasks--
   (i) Normal and crosswind takeoff
   (ii) Instrument takeoff
   (iii) Powerplant failure during takeoff
   (iv) Rejected takeoff
   (v) Instrument departure

(4) In-flight manoeuvres; including the applicant’s knowledge and performance of the following tasks-
   (i) Steep turns
   (ii) Powerplant failure-multi-engine helicopter
   (iii) Powerplant failure-single-engine helicopter
   (iv) Recovery from unusual altitudes
   (v) Settling with power

(5) Instrument procedures; including the applicant’s knowledge and performance of the following tasks-
   (i) Instrument arrival
   (ii) Holding
   (iii) Precision instrument approaches
   (iv) Non-precision instrument approaches
   (v) Missed approach

(6) Landings and approaches to landings; including the applicant’s knowledge and performance of the following tasks--
   (i) Normal and crosswind approaches and landings
   (ii) Approach and landing with simulated powerplant failure-multiengine helicopter
   (iii) Rejected landing

(7) Normal and abnormal procedures; including the applicant’s knowledge and performance of the tasks.

(8) Emergency procedures and manoeuvres in the event of failures and malfunctions of equipment (powerplant, systems and airframe)
(9) Postflight procedures; including the applicant's knowledge and performance of the following tasks--
  (i) After landing procedures
  (ii) Parking and securing

IS 2.3.3.5.3 : AIRLINE TRANSPORT PILOT LICENCE: POWERED-LIFT CATEGORY CATEGORY

To be constructed

IS 2.3.3.6 APPENDIX A: INSTRUMENT RATING AEROPLANE, HELICOPTER AND POWERED-LIFT CATEGORIES - KNOWLEDGE

(a) The knowledge instruction and test for the instrument rating – aeroplane and helicopter shall include at least the following subjects:

(1) Air law
  (i) International Agreements and Organisations: The Convention of Chicago; Other International agreements: IATA agreement, Tokyo and Warsaw Convention; PIC authority and responsibility regarding safety and security, Operators and pilots liabilities towards persons and goods on the ground, in case of damage and injury caused by the operation of the aircraft, Commercial practices and associated rules: dry and wet lease
  (ii) Relevant parts of ICAO Annexes: 1, 2, 7, 8, 9, 11 (and doc 4444), 12, 13, 14, 15;
  (iii) Procedures for air navigation – aircraft operations Doc 8168;
  (iv) National law

(2) Aircraft general knowledge
  (i) Airframe and systems, electrics, powerplant, emergency equipment
     (A) Airframe and systems: Air driven systems (piston engines only), Air driven systems (turbopropeller and jet aircraft), Non-pneumatic operated de-ice and anti-ice systems, Fuel systems
     (B) Electrics: Direct Current (DC), Basic radio propagation theory
     (C) Flight instruments: Air data instruments, Gyroscopic instruments, Magnetic Compass, Radio Altimeter, Electronic Flight Instrument System (EFIS), Flight Management System (FMS)
     (D) Automatic flight control system: Flight director; Autopilot; Yaw damper/STability augmentation system;
     (E) Warning and recording equipment: Warnings general; Stall warning;
(3) Flight performance and planning
   (i) Flight planning and flight monitoring:
       (A) Flight plan for cross country flights: Navigation plan, Fuel plan, Flight monitoring and in-flight replanning, Radio communication and navigation aids;
       (B) ICAO ATC flight plan: Types of flight plan, Completing the flight plan, Filling the flight plan, Closing the flight plan, Adherence to flight plan
       (C) Practical flight planning: Chart preparation; Navigation plans; Simple fuel plans, Radio planning practice
       (D) IFR (airways) flight planning: Meteorological considerations, Selection of routes to destination and alternates, General flight planning tasks,
       (E) Practical completion of a flight plan (flight plan, flight log, nav log, ATC plan, etc.): Extraction of data

(4) Human performance
   (i) Human factors basic concepts: Human factors in aviation, Accident statistics, Flight safety concepts
   (ii) Basic aviation physiology: Basics of flight physiology, Man and environment: the sensory system; Health and Hygiene;
   (iii) Basic aviation psychology: Human information processing; Human error and reliability; Decision making; Avoiding and managing threats and errors: cockpit management; Personality; Human overload and underload, Advanced cockpit automation

(5) Meteorology
   (i) The atmosphere: Composition, extent, vertical division; Temperature; Atmospheric pressure; Atmospheric density; Altimetry;
   (ii) Wind: Definition and measurement; General circulation; Turbulence; Variation of wind with height; Local winds; Standing waves;
   (iii) Thermodynamics: Humidity; Change of state of aggregation; Adiabetic processes
   (iv) Clouds and Fog: Cloud formation and description; Fog, mist, haze
   (v) Precipitation: Development and types of precipitation;
   (vi) Airmasses and fronts: Types of airmasses; Fronts;
   (vii) Pressure systems: Location of the principal pressure areas, Anticyclone, Non frontal depressions;
   (viii) Climatology: Typical weather situations in mid-latitudes; Local seasonal weather and wind
   (ix) Flight hazards: Icing, Turbulence; Windshear; Thunderstorms; Low and high level inversions; Hazards in mountainous areas;
   (x) Meteorological information: Observation, Weather charts, Information for flight planning
(6) Navigation:
   (i) General Navigation:
   (ii) Charts: The use of current aeronautical charts
   (iii) Radio Navigation: Radio aids: Ground D/F (including classification of bearings); ADF (including associated beacons and use of the radio magnetic indicator); VOR and Doppler-VOR (including the use of the radio magnetic indicator); DME (distance measuring equipment); ILS (instrument landing system); MLS (Microwave landing system);
   (iv) Basic radar principles: Pulse techniques and associated terms; Ground radar; Airborne weather radar; SSR (secondary surveillance radar and transponder); Use of radar observations and application to in-flight navigation;
   (v) Area navigation systems: General philosophy; Typical flight deck equipment and operation; Instrument indications; Types of area navigation system inputs; VOR/DME area navigation (RNAV);
   (vi) Self-contained and external-referenced navigation systems: Satellite assisted navigation: GPS/GLONASS/DGPS

(7) Operational procedures
   (i) General
   (ii) Special operational procedures and hazards: General

(8) Radiotelephony:
   (i) IFR Communications: Definitions; General operating procedures; Action required to be taken in case of communication failure; distress and urgency procedures; General principles of VHF propagation and allocation of frequencies; morse code.

**IS 2.3.3.6**  **APPENDIX B: INSTRUMENT RATING: AEROPLANE, HELICOPTER AND POWERED-LIFT CATEGORIES - FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK**

(a) The flight instruction, skill test and proficiency check for the instrument rating – aeroplane, helicopter and powered-lift shall include at least the following areas of operation:

*Note: When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated the item or paragraph is for single-engine and multi-engine.*

(1) Pre-flight preparation; including the applicant’s knowledge and performance of the following tasks--
   (i) Weather information
   (ii) Cross-country flight planning

(2) Pre-flight procedures; including the applicant’s knowledge and performance of the following tasks--
   (i) Aircraft systems related to IFR operations
   (ii) Aircraft flight instruments and navigation equipment
   (iii) Instrument cockpit check
(3) Air traffic control clearances and procedures; including the applicant's knowledge and performance of the following tasks--
   (i) Air traffic control clearances
   (ii) Compliance with departure, en route and arrival procedures and clearances
   (iii) Holding procedures

(4) Flight by reference to instruments; including the applicant's knowledge and performance of the following tasks--
   (i) Straight-and-level flight
   (ii) Change of airspeed
   (iii) Constant airspeed climbs and descents
   (iv) Rate climbs and descents
   (v) Timed turns to magnetic compass headings
   (vi) Steep turns
   (vii) Recovery from unusual flight attitudes

(5) Navigation systems; including the applicant's knowledge and performance of the following tasks--
   (i) Intercepting and tracking navigational systems and DME Arcs

(6) Instrument approach procedures; including the applicant's knowledge and performance of the following tasks--
   (i) Non-precision instrument approach
   (ii) Precision ILS instrument approach
   (iii) Missed approach
   (iv) Circling approach
   (v) Landing from a straight-in or circling approach

(7) Emergency operations; including the applicant's knowledge and performance of the following tasks--
   (i) Loss of communications
   (ii) One engine inoperative during straight-and-level flight and turns (ME)
   (iii) One engine inoperative – instrument approach (ME)
   (iv) Loss of gyro attitude and/or heading indicators

(8) Post-flight procedures; including the applicant's knowledge and performance of the following tasks--
   (i) Checking instruments and equipment
IS 2.3.4.2  FLIGHT INSTRUCTOR - FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK.

Notes:
(1) When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated the item or paragraph is for single-engine and multi-engine.

(2) When (S) is indicated, the item is only for seaplanes, when (L) is indicated, the item is only for landplanes. When nothing is indicated the item is for land and seaplanes.

IS 2.3.4.2.1  FLIGHT INSTRUCTOR: AEROPLANE CATEGORY - FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK.

(a) The flight instruction, skill test and proficiency check for the flight instructor rating - aeroplane shall include at least the following areas of operation:

(1) Fundamentals of instruction; including the applicant’s knowledge and performance of the following tasks--
   (i) The learning process
   (ii) The teaching process
   (iii) Teaching methods
   (iv) Evaluation
   (v) Flight instructor characteristics and responsibilities
   (vi) Human factors
   (vii) Planning instructional activity

(2) Technical subject areas; including the applicant’s knowledge and performance of the following tasks--
   (i) Aeromedical factors
   (ii) Visual Scanning and collision avoidance
   (iii) Principles of flight
   (iv) Aircraft flight controls
   (v) Aircraft weight and balance
   (vi) Navigation and flight planning
   (vii) Night operations
   (viii) High altitude operations (A)
   (ix) Regulations and publications
   (x) Use of minimum equipment list
   (xi) National airspace system
   (xii) Navigation aids and radar services (A)
   (xiii) Logbook entries and licence endorsements
   (xiv) Water and seaplane characteristics (S)
   (xv) Seaplane bases, rules and aids to marine navigation (S)
(3) Pre-flight preparation; including the applicant's knowledge and performance of the following tasks--
   (i) Licences and documents
   (ii) Weather information
   (iii) Operation of systems (SE)
   (iv) Performance and limitations (SE)
   (v) Airworthiness requirements

(4) Pre-flight lesson on a manoeuvre to be performed in flight; including the applicant's knowledge and performance of the following task--
   (i) Manoeuvre lesson

(5) Pre-flight procedures; including the applicant's knowledge and performance of the following tasks--
   (i) Pre-flight inspection
   (ii) Cockpit management
   (iii) Engine starting (A)
   (iv) Engine starting and rotor engagement (H)
   (v) Taxiing (A)
   (vi) Sailing (S)
   (vii) Before take-off check

(6) Aerodrome and seaplane base operations; including the applicant's knowledge and performance of the following tasks--
   (i) Radio communications and ATC light signals
   (ii) Traffic patterns
   (iii) Aerodrome and runway markings and lighting

(7) Take-offs, landings and go-arounds; including the applicant's knowledge and performance of the following tasks--
   (i) Normal and crosswind take-off and climb
   (ii) Take-off and maximum performance climb
   (iii) Short field (Confined area (S)) take-off and maximum performance climb
   (iv) Soft field take-off and climb (SE)
   (v) Glossy water take-off and climb (S)
   (vi) Rough water take-off and climb (S)
   (vii) Normal and crosswind approach and landing
   (viii) Slip to a landing (SE)
   (ix) Go-around/rejected landing
   (x) Short field (Confined area (S)) approach and landing
   (xi) Glassy water approach and landing (S)
   (xii) Rough water approach and landing (S)
   (xiii) Soft field approach and landing (SE)
   (xiv) Power-off 180 degrees accuracy approach and landing
(8) Fundamentals of flight; including the applicant’s knowledge and performance of the following tasks—
(i) Straight-and-level flight
(ii) Level turns
(iii) Straight climbs and climbing turns
(iv) Straight descents and descending turns

(9) Performance manoeuvres; including the applicant’s knowledge and performance of the following tasks—
(i) Steep turns
(ii) Steep spirals (SE)

(10) Ground reference manoeuvres; including the applicant’s knowledge and performance of the following tasks—
(i) Rectangular course
(ii) S-turns across a road
(iii) Turns around a point

(11) Slow flight, stalls and spins; including the applicant’s knowledge and performance of the following tasks—
(i) Manoeuvring during slow flight
(ii) Power-on stalls (proficiency)
(iii) Power-off stalls (proficiency)
(iv) Crossed-control stalls (demonstration) (SE)
(v) Elevator trim stalls (demonstration) (SE)
(vi) Secondary stalls (demonstration) (SE)
(vii) Spins (SE)

(12) Basic instrument manoeuvres; including the applicant’s knowledge and performance of the following tasks—
(i) Straight-and-level flight
(ii) Constant airspeed climbs
(iii) Constant airspeed descents
(iv) Turns to headings
(v) Recovery from unusual flight attitudes

(13) Emergency operations (SE); including the applicant’s knowledge and performance of the following tasks—
(i) Emergency approach and landing (simulated)
(ii) Systems and equipment malfunctions
(iii) Emergency equipment and survival gear
(14) Emergency operations (ME); including the applicant’s knowledge and performance of the following tasks—
   (i) Systems and equipment malfunctions
   (ii) Engine failure during take-off before Vmc
   (iii) Engine failure after lift-off
   (iv) Approach and landing with an inoperative engine
   (v) Emergency descent
   (vi) Emergency equipment and survival gear

(15) Multi-engine operations (ME); including the applicant’s knowledge and performance of the following tasks—
   (i) Operation of systems
   (ii) Performance and limitations
   (iii) Flight principles – engine inoperative
   (iv) Manoeuvring with one engine inoperative
   (v) Vmc demonstration
   (vi) Demonstrating the effects of various airspeeds and configurations during engine inoperative performance

(16) Post-flight procedures; including the applicant’s knowledge and performance of the following tasks—
   (i) Post-flight procedures
   (ii) Anchoring
   (iii) Docking and mooring
   (iv) Beaching
   (v) Ramping

IS 2.3.4.2.2 FLIGHT INSTRUCTOR: HELICOPTER CATEGORY – FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK

   (a) The flight instruction, skill test and proficiency check for the flight instructor rating - helicopter shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category, and if applicable, class or type, of aircraft:

(1) Fundamentals of instruction; including the applicant’s knowledge and performance of the following tasks—
   (i) The learning process;
   (ii) The teaching process;
   (iii) Teaching methods;
   (iv) Evaluation;
   (v) Flight instructor characteristics and responsibilities;
   (vi) Human factors;
   (vii) Planning instructional activity.
(2) Technical subject areas; including the applicant's knowledge and performance of the following tasks--
(i) Aero medical factors;
(ii) Visual Scanning and collision avoidance;
(iii) Use of distractions during flight training;
(iv) Principles of flight;
(v) Helicopter flight controls;
(vi) Helicopter weight and balance;
(vii) Navigation and flight planning;
(viii) Night operations;
(ix) Regulations and publications;
(x) Use of minimum equipment list;
(xi) National airspace system;
(xii) Logbook entries and licence endorsements;

(3) Pre-flight preparation; including the applicant's knowledge and performance of the following tasks--
(i) Licences and documents;
(ii) Weather information;
(iii) Operation of systems;
(iv) Performance and limitations;
(v) Airworthiness requirements.

(4) Pre-flight lesson on a manoeuvre to be performed in flight; including the applicant's knowledge and performance of the following task--
(i) Manoeuvre lesson.

(5) Pre-flight procedures; including the applicant's knowledge and performance of the following tasks--
(i) Pre-flight inspection;
(ii) Cockpit management;
(iii) Engine starting and rotor engagement;
(iv) Before take-off check

(6) Aerodrome operations and Heliport operations; including the applicant's knowledge and performance of the following tasks--
(i) Radio communications and ATC light signals;
(ii) Traffic patterns;
(iii) Aerodrome and Heliport Markings and lighting

(7) Hovering Manoeuvres; including the applicant's knowledge and performance of the following tasks-
(i) Vertical take-off and landing;
(ii) Surface taxi;
(iii) Hover taxi;
(iv) Air taxi;
(v) Slope operation.
(8) Takeoffs, landings and go-arounds, including the applicant's knowledge and performance of the following tasks—
   (i) Normal and crosswind takeoff and climb;
   (ii) Maximum performance takeoff and climb
   (iii) Rolling takeoff;
   (iv) Normal and crosswind approach;
   (v) Steep approach;
   (vi) Shallow approach and running/roll-on landing;
   (viii) Go-around.

(9) Fundamentals of flight; including the applicant's knowledge and performance of the following tasks-
   (i) Straight-and-level flight;
   (ii) Level turns;
   (iii) Straight climbs and climbing turns;
   (iv) Straight descents and descending turns.

(10) Performance manoeuvres; including the applicant's knowledge and performance of the following tasks--
   (i) Rapid deceleration
   (ii) Straight-in autorotation
   (iii) 180 degrees autorotation

(11) Emergency operations; including the applicant's knowledge and performance of the following tasks-
   (i) Power failure at a hover;
   (ii) Power failure at altitude;
   (iii) Settling-with-power;
   (iv) Low rotor RPM recovery;
   (v) Antitorque system failure;
   (vi) Dynamic rollover;
   (vii) Ground resonance;
   (viii) Low “G” conditions;
   (ix) Systems and equipment malfunctions;
   (x) Emergency equipment and survival gear.

(12) Special operations; including the applicant's knowledge and performance of the following tasks--
   (i) Confined area operation;
   (ii) Pinnacle/platform operation.

(13) Post-flight procedures; including the applicant's knowledge and performance of the following tasks-
   (i) After-landing and securing.
IS 2.3.4.2.3  FLIGHT INSTRUCTOR: POWERED-LIFT CATEGORY – FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK

To be constructed

IS 2.3.4.2.4  FLIGHT INSTRUCTOR: AIRSHIP CATEGORY – FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK

(a) The flight instruction, skill test and proficiency check for the flight instructor rating - airship shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft:

(1) Fundamentals of instruction; including the applicant’s knowledge and performance of the following tasks—
   (i) The learning process;
   (ii) The teaching process;
   (iii) Teaching methods;
   (iv) Evaluation;
   (v) Flight instructor characteristics and responsibilities;
   (vi) Human factors;
   (vii) Planning instructional activity.

(2) Technical subject areas; including the applicant’s knowledge and performance of the following tasks—
   (i) Aeromedical factors;
   (ii) Visual Scanning and collision avoidance;
   (iii) Use of distractions during flight training;
   (iv) Principles of flight;
   (v) Airship weight-off, ballast, and trim;
   (vi) Night operations;
   (vii) Regulations and publications;
   (viii) National airspace system;
   (ix) Logbook entries and licence endorsement.

(3) Pre-flight preparation, including the applicant’s knowledge and performance of the following tasks—
   (i) Licences and documents;
   (ii) Weather information;
   (iii) Cross-country flight planning;
   (iv) Performance and limitations;
   (v) Operations of systems.

(4) Pre-flight lesson on a manoeuvre to be performed in flight, including the applicant’s and performance of the following tasks—
   (i) Manoeuvre lesson.
(5) Pre-flight procedures, including the applicant’s knowledge and performance of the following tasks—
   (i) Pre-flight inspection;
   (ii) Cockpit management;
   (iii) Engine starting;
   (iv) Unmasting and positioning for takeoff;
   (v) Ground handling;
   (vi) Before takeoff check.

(6) Aerodrome operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Radio communications;
   (ii) Traffic pattern operations;
   (iii) Aerodrome, runway and taxiway markings and lighting.

(7) Performance manoeuvres, including the applicant’s knowledge and performance of the following tasks—
   (i) Flight to, from, and at pressure height;
   (ii) In-flight weigh-off;
   (iii) Manual pressure control;
   (iv) Static and dynamic trim.

(8) Navigation, including the applicant’s knowledge and performance of the following tasks—
   (i) Pilotage and dead reckoning;
   (ii) Diversion;
   (iii) Lost procedures;
   (iv) Navigation systems and air traffic control radar services.

(9) Basic instrument manoeuvres, including the applicant’s knowledge and performance of the following tasks—
   (i) Straight-and level flight;
   (ii) Constant airspeed climbs;
   (iii) Constant airspeed descents;
   (iv) Turns to headings;
   (v) Recovery from unusual flight attitudes.

(10) Emergency operations, including the applicant’s knowledge and performance of the following tasks—
    (i) Aborted takeoff;
    (ii) Engine failure during takeoff;
    (iii) Engine failure during flight;
    (iv) Engine fire during flight;
    (v) Envelope emergencies;
    (vi) Free ballooning;
    (vii) Ditching and emergency landing;
    (viii) Systems and equipment malfunctions.
(11) Post-flight procedures, including the applicant's knowledge and performance of the following tasks—
   (i) Masting;
   (ii) Post-masting.

**IS 2.3.4.2.5 FLIGHT INSTRUCTOR: BALLOON CATEGORY – FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK**

*Note: When (BH) is indicated, the item is for hot air balloons only. When (BG) is indicated, the item is for gas balloons.*

(a) The flight instruction, skill test and proficiency check for the flight instructor licence with balloon instructor rating shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category and class of aircraft:

1. Fundamentals of instruction; including the applicant's knowledge and performance of the following tasks—
   (i) The learning process;
   (ii) The teaching process;
   (iii) Teaching methods;
   (iv) Evaluation;
   (v) Flight instructor characteristics and responsibilities;
   (vi) Human factors;
   (vii) Planning instructional activity.

2. Technical subject areas; including the applicant's knowledge and performance of the following tasks—
   (i) Aeromedical factors;
   (ii) Visual Scanning and collision avoidance;
   (iii) Use of distractions during flight training;
   (iv) Principles of flight;
   (v) Regulations and publications;
   (vi) National airspace system;
   (vii) Logbook entries and licence endorsement.

3. Pre-flight preparation, including the applicant's knowledge and performance of the following tasks—
   (i) Licences and documents;
   (ii) Weather information;
   (iii) Cross-country flight planning;
   (iv) Performance and limitations;
   (v) Operations of systems.

4. Pre-flight lesson on a manoeuvre to be performed in flight, including the applicant's knowledge and performance of the following tasks—
   (i) Manoeuvre lesson.
(5) Pre-flight procedures, including the applicant's knowledge and performance of the following tasks—
   (i) Launch site selection;
   (ii) Crew briefing and preparation;
   (iii) Layout and assembly;
   (iv) Pre-flight inspection;
   (v) Inflation;
   (vi) Basket/gondola management
   (vii) Pre-launch check.

(6) Aerodrome operations, including the applicant's knowledge and performance of the following tasks—
   (i) Radio communications;

(7) Launches and landings, including the applicant's knowledge and performance of the following tasks—
   (i) Normal launch;
   (ii) Launch over obstacle;
   (iii) Approach to landing;
   (iv) Steep approach to landing;
   (v) Normal landing;
   (vi) High-wind landing.

(8) Performance manoeuvres, including the applicant's knowledge and performance of the following tasks—
   (i) Ascents;
   (ii) Altitude control (level flight);
   (iii) Descents;
   (iv) Rapid ascent and descent;
   (v) Contour flying (BH);
   (vi) High altitude flight; (BG)
   (vii) Obstacle avoidance (BH);
   (viii) Tethering (BH);
   (ix) Mountain flying.

(9) Navigation, including the applicant's knowledge and performance of the following tasks—
   (i) Navigation.

(10) Emergency operations, including the applicant's knowledge and performance of the following tasks—
   (i) Systems and equipment malfunctions;
   (ii) Emergency equipment and survival gear;
   (iii) Water landing;
   (iv) Thermal flight.
(11) Post-flight procedures, including the applicant’s knowledge and performance of the following tasks—
   (i) Recovery;
   (ii) Deflation and pack-up;
   (iii) Refueling (BH).

**IS 2.3.4.2.6 FLIGHT INSTRUCTOR: GLIDER CATEGORY – FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK**

(a) The flight instruction, skill test and proficiency check for the flight instructor rating - glider shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category of aircraft:

   (1) Fundamentals of instruction; including the applicant’s knowledge and performance of the following tasks--
      (i) The learning process;
      (ii) The teaching process;
      (iii) Teaching methods;
      (iv) Evaluation;
      (v) Flight instructor characteristics and responsibilities;
      (vi) Human factors;
      (vii) Planning instructional activity.

   (2) Technical subject areas; including the applicant’s knowledge and performance of the following tasks--
      (i) Aeromedical factors;
      (ii) Visual Scanning and collision avoidance;
      (iii) Use of distractions during flight training;
      (iv) Principles of flight;
      (v) Elevators, ailerons, and rudder;
      (vi) Trim, lift and drag devices;
      (vii) Glider weight and balance;
      (viii) Navigation and flight planning;
      (ix) Regulations and publications;
      (x) National airspace system;
      (xi) Logbook entries and licence endorsements.

   (3) Pre-flight preparation; including the applicant’s knowledge and performance of the following tasks--
      (i) Licences and documents;
      (ii) Weather information;
      (iii) Operation of systems;
      (iv) Performance and limitations.
(4) Pre-flight lesson on a manoeuvre to be performed in flight; including the applicant's knowledge and performance of the following task—
   (i) Manoeuvre lesson.

(5) Pre-flight procedures; including the applicant's knowledge and performance of the following tasks—
   (i) Assembly;
   (ii) Ground handling;
   (iii) Pre-flight inspection;
   (iv) Cockpit management;
   (v) Visual signals.

(6) Aerodrome operations and gliderport operations; including the applicant's knowledge and performance of the following tasks—
   (i) Radio communications;
   (ii) Traffic patterns;
   (iii) Aerodrome, runway, and taxiway signs, markings and lighting.

(7) Launches— aero tow, including the applicant's knowledge and performance of the following tasks:
   (i) Before takeoff checks;
   (ii) Normal and crosswind takeoff;
   (iii) Maintaining tow positions;
   (iv) Slack line;
   (v) Boxing the wake;
   (vi) Tow release;
   (vii) Abnormal occurrences.

(8) Launches— ground tow (auto or winch), including the applicant's knowledge and performance of the following tasks—
   (i) Before takeoff check;
   (ii) Normal and crosswind takeoff;
   (iii) Abnormal occurrences.

(9) Launches— self-launch, including the applicant's knowledge and performance of the following tasks—
   (i) Engine starting;
   (ii) Taxiing;
   (iii) Before takeoff check;
   (iv) Normal and crosswind takeoff and climb;
   (v) Engine shutdown in flight;
   (vi) Abnormal occurrences.
(10) Landings, including the applicant’s knowledge and performance of the following tasks—
   (i) Normal and cross wind landing;
   (ii) Slips to landing;
   (iii) Downwind landing.

(11) Fundamentals of flight, including the applicant’s knowledge and performance of the following tasks—
   (i) Straight glides;
   (ii) Turns to headings.

(12) Performance airspeeds, including the applicant’s knowledge and performance of the following tasks—
   (i) Minimum sink airspeed;
   (ii) Speed-to-fly.

(13) Soaring techniques, including the applicant’s knowledge and performance of the following tasks—
   (i) Thermal soaring;
   (ii) Ridge and slope soaring;
   (iii) Wave soaring.

(14) Performance manoeuvres, including the applicant’s knowledge and performance of the following tasks—
   (i) Steep turns
   (ii) Recovery from a spiral dive.

(15) Slow flight and stalls, including the applicant’s knowledge and performance of the following tasks—
   (i) Manoeuvring at minimum control airspeed;
   (ii) Stall recognition and recovery;
   (iii) Spins.

(16) Emergency operations, including the applicant’s knowledge and performance of the following tasks—
   (i) Simulated off-aerodrome landing;
   (ii) Emergency equipment and survival gear.

(17) Post-flight procedures, including the applicant’s knowledge and performance of the following tasks—
   (i) After-landing and securing.
IS 2.3.4.2.7 Flight instructor for instrument ratings: Aeroplane, helicopter and powered-lift categories
– Flight instruction, skill test and proficiency check

(a) The flight instruction, skill test and proficiency checks for the flight instructor for instrument ratings
– aeroplane, helicopter and powered-lift shall include at least the following areas of operation:

Notes:

(1) When (SE) is indicated the item or paragraph is only for single-engine, when (ME) is indicated the item or paragraphs is only for multi-engine. When nothing is indicated the item and paragraph are for single-engine and multi-engine.

(2) When (A) is indicated the item or paragraph is only for Aeroplane. When (H) is indicated the item or paragraph is only for Helicopter. When (PL) is indicated the item or paragraph is only for Powered-lift. When nothing is indicated the item and the paragraph are for all three categories.

(1) Fundamentals of instructing; including the applicant’s knowledge and performance of the following tasks--
   (i) The learning process
   (ii) Human behaviour and effective communication
   (iii) The teaching process
   (iv) Teaching methods
   (v) Critique and evaluation
   (vi) Flight instructor characteristics and responsibilities
   (vii) Planning instructional activity

(2) Technical subject areas; including the applicant’s knowledge and performance of the following tasks--
   (i) Aircraft flight instruments and navigation equipment
   (ii) Aeromedical factors
   (iii) Regulations and publications related to IFR operations
   (iv) Logbook entries related to instrument instruction

(3) Pre-flight preparation; including the applicant’s knowledge and performance of the following tasks--
   (i) Weather information
   (ii) Cross-country flight planning
   (iii) Instrument cockpit check

(4) Pre-flight lesson on a manoeuvre to be performed in flight; including the applicant’s knowledge and performance of the following task--
   (i) Manoeuvre lesson

(5) Air traffic control clearances and procedures; including the applicant’s knowledge and performance of the following tasks--
   (i) Air traffic control clearances
   (ii) Compliance with departure, en-route and arrival procedures and clearances
(6) Flight by reference to instruments; including the applicant’s knowledge and performance of the following tasks--
   (i) Straight-and-level flight
   (ii) Turns
   (iii) Change of airspeed in straight-and-level and turning flight
   (iv) Constant airspeed climbs and descents
   (v) Constant rate climbs and descents
   (vi) Timed turns to magnetic compass headings
   (vii) Steep turns
   (viii) Recovery from unusual flight altitudes

(7) Navigation systems; including the applicant’s knowledge and performance of the following tasks--
   (i) Intercepting and tracking navigational systems and DME Arcs
   (ii) Holding procedures

(8) Instrument approach procedures; including the applicant’s knowledge and performance of the following tasks--
   (i) Non-precision instrument approach
   (ii) Precision instrument approach
   (iii) Missed approach
   (iv) Circling approach (A, PL)
   (v) Landing from a straight-in approach

(9) Emergency operations; including the applicant’s knowledge and performance of the following tasks--
   (i) Loss of communications
   (ii) Loss of gyro attitude and heading indicators
   (iii) Engine failure during straight-and-level flight and turns
   (iv) Instrument approach – one engine inoperative

(10) Post-flight procedures; including the applicant’s knowledge and performance of the following task--
   (i) Checking instruments and equipment
IS 2.3.4.2.8 Instructor rating for additional type ratings – Flight instruction, skill test and proficiency check

(a) The flight instruction, skill test and proficiency checks for instructors for additional type ratings - aeroplane and helicopter shall include at least the following areas of operation:

*Note: When (A) is indicated the item or paragraph is only for Aeroplane. When (H) is indicated the item or paragraph is only for Helicopter. When nothing is indicated the item and the paragraph are for A and H.*

1. Technical subject areas
   (i) The content of the technical subject areas shall cover the areas as applicable to the aircraft class or type.
   (ii) Flight simulator; including the applicant’s knowledge and performance of the following tasks--
   (A) Use of checklist, setting of radios/navigation aids
   (B) Starting engines
   (C) Take-off checks
   (D) Instrument take-off, transition to instruments after lift off
   (E) Engine failure during take-off between V1 and V2 (Aeroplane)
   (F) Aborted take-off prior to reaching V1 (A)
   (G) High mach buffeting, specific flight characteristics (if necessary) (A)
   (H) Take-off with engine failure prior to TDP or DPATO or shortly after TDP or DPATO (Helicopter)
   (I) Steep turns
   (J) Recovery from approach to stall/take-off, clean landing configuration (Aeroplane)
   (K) Instrument approach to required minimum decision height or minimum descent height/altitude, manual one engine simulated inoperative during approach and landing or go-around (Aeroplane)
   (L) Instrument approach to required minimum decision height or minimum descent height/altitude, autopilot one engine simulated inoperative during approach and landing or go-around (Helicopter)
   (M) Rejected landing and go-around
   (N) Crosswind landing

(iii) Category II and II operations, if applicable; including the applicant’s knowledge and performance of the following tasks--
   (A) Precision approaches, automatic with auto-throttle and flight director go-around caused by aircraft or ground equipment deficiencies
   (B) Go-around caused by weather conditions
   (C) Go-around at DH caused by offset position from centreline
   (D) One of the CAT II/CAT III approaches must lead to a landing
(iv) Aircraft; including the applicant’s knowledge and performance of the following tasks--
   (A) Familiarisation with controls during outside checks
   (B) Use of checklist, setting of radios and navigation aids, starting engines
   (C) Taxiing
   (D) Take-off
   (E) Engine failure during take-off short after V2, after reaching climb out attitude (Aeroplane)
   (F) Engine failure during take-off short after TDP or DPATO after reaching climb out attitude (Helicopter)
   (G) Other emergency procedures (if necessary)
   (H) Instrument approaches to required minimum decision height, manual one engine out during approach and landing or go-around
   (I) One engine simulated inoperative go-around from required minimum decision height
   (J) One engine (critical) simulated inoperative landing

IS 2.3.4.2.9  FLIGHT INSTRUCTOR LIMITATIONS AND QUALIFICATIONS

(a) Each holder of a flight instructor rating shall observe the following limitations and qualifications.
   (1) Hours of training. In any 24-consecutive-hour period, a flight instructor may not conduct more than 8 hours of flight training.
   (2) Required licence and ratings. A flight instructor may not conduct flight training in any aircraft for which the flight instructor does not hold a pilot license and flight instructor rating with the applicable category and if applicable class or type rating.
   (3) For instrument flight training or for training for a type rating not limited to VFR, an appropriate instrument rating on his or her flight instructor rating and pilot license.
   (4) Limitations on endorsements. A flight instructor may not endorse a—
      (i) Student pilot’s license or logbook for solo flight privileges, unless that flight instructor has—
         (A) Given that student the flight training required for solo flight privileges required by this subpart;
         (B) Determined that the student is prepared to conduct the flight safely under known circumstances, subject to any limitations listed in the student’s logbook that the instructor considers necessary for the safety of the flight;
         (C) Given that student pilot training in the make and model of aircraft or a similar make and model of aircraft in which the solo flight is to be flown; and
         (D) Endorsed the student pilot’s logbook for the specific make and model aircraft to be flown.
(ii) Student pilot’s license and logbook for a solo cross-country flight, unless that flight instructor has determined that—
   (A) The student’s flight preparation, planning, equipment, and proposed procedures are adequate for the proposed flight under the existing conditions and within any limitations listed in the logbook that the instructor considers necessary for the safety of the flight; and
   (B) The student has the appropriate solo cross-country endorsement for the make and model of aircraft to be flown.

(iii) Student pilot’s license and logbook for solo flight in a Class B airspace area or at an airport within Class B airspace unless that flight instructor has—
   (A) Given that student ground and flight training in that Class B airspace or at that airport; and
   (B) Determined that the student is proficient to operate the aircraft safely.

(iv) Logbook of a pilot for an instrument proficiency check, unless that instructor has tested that pilot in accordance with the requirements of IS: 2.3.3.6.

(5) Training in a multiengine aeroplane or a helicopter. A flight instructor may not give training required for the issuance of a license or rating in a multiengine aeroplane or a helicopter, unless that flight instructor has at least 5 flight hours of PIC time in the specific make and model of multiengine aeroplane or helicopter, as appropriate.

(6) Qualifications of the flight instructor for training first-time flight instructor applicants.
   (i) No flight instructor may provide instruction to another pilot who has never held a flight instructor license unless that flight instructor—
       (A) Holds an appropriate and current flight instructor license/rating, has held that license for at least 24 months, and has given at least 40 hours of ground training; or
       (B) Holds an appropriate and current flight instructor license/rating, and has given at least 100 hours of ground training in a course which has been approved by the Authority.
       (C) For training in preparation for an aeroplane or helicopter rating, has given at least 200 hours of flight training as a flight instructor; and
       (D) For training in preparation for a glider rating, has given at least 80 hours of flight training as a flight instructor.

(7) Prohibition against self endorsements. A flight instructor may not make any self-endorsement for a license, rating, flight review, authorisation, operating privilege, skill test, or knowledge test that is required by Part 2.

(8) Category II and Category III instructions: A flight instructor may not give training in Category II or Category III operations unless the flight instructor has been trained and tested in Category II or Category III operations as applicable.

*Note: Class B airspace as defined in Annex 11: 2.6.1 is an airspace in which IFR and VFR flights are permitted, all flights are provided with air traffic control service and are separated from each other.*
IS 2.3.5 ** EXAMINERS**

(a) The ground training for examiners shall at least include:

1. Examiner duties, functions and responsibilities
2. Applicable regulations and procedures;
3. Appropriate methods, procedures and techniques for conducting the required tests and checks;
4. Proper evaluation of student performance including the detection of:
   (i) Improper and insufficient training, and
   (ii) Personal characteristics of an applicant that could adversely affect safety;
5. Appropriate corrective action in the case of unsatisfactory tests and checks; and
6. Approved methods, procedures and limitations for performing the required normal, abnormal and emergency procedures in the aircraft.

(b) The flight training shall include:

1. Training and practice in conducting flight evaluation (from the left and right pilot seats for pilot examiners) in the required normal, abnormal and emergency procedures to ensure competence to conduct the flight tests and checks;
2. The potential results of improper, untimely or non-execution of safety measures during an evaluation; and
3. The safety measures (to be taken from either pilot seat for pilot check examiners) for emergency situations that are likely to develop during an evaluation.

(c) The flight training for examiners (simulator) shall include:

1. Training and practice in conducting flight checks in the required normal, abnormal and emergency procedures to ensure competence to conduct the evaluations tests and checks required by this Part (this training and practice shall be accomplished in a flight simulator, a flight procedures trainer or flight training device.
2. Training in the operation of flight simulators, flight procedures trainers, or flight training devices, or in all three, to ensure competence to conduct the evaluations required by this Part.

IS 2.4.4 ** FLIGHT ENGINEERS - FLIGHT INSTRUCTION, SKILL TEST AND PROFICIENCY CHECK**

(a) The flight instruction, skill test and proficiency check for the flight engineers licence and type rating shall include at least the following areas of operation with CRM competencies applied and evident in all tasks appropriate to the category/type of aircraft:

1. Pre-flight preparation; including the applicant's knowledge and performance of the following tasks--
   (i) Equipment examination-systems knowledge
   (ii) Aircraft handbooks, manuals, minimum equipment list (MEL), configuration deviation list (CDL) and operations specifications
   (iii) Performance and limitations
(2) Pre-flight procedures; including the applicant’s knowledge and performance of the following tasks--
   (i) Pre-flight inspection and cockpit setup
   (ii) Pre-flight inspection-exterior

(3) Ground operations; including the applicant’s knowledge and performance of the following tasks--
   (i) Powerplant start
   (ii) Taxi and pre-takeoff checks

(4) Normal procedures; including the applicant’s knowledge and performance of the following tasks--
   (i) Take-off
   (ii) In-flight
   (iii) During approach and landing
   (iv) Engine systems monitoring

(5) Abnormal and emergency procedures; including the applicant’s knowledge and performance of the following tasks--
   (i) Take-off
   (ii) In-flight
   (iii) During approach and landing
   (iv) Engine systems monitoring

(6) Postflight procedures
   (i) After landing
   (ii) Parking and securing

**IS 2.6.2.7. AIRCRAFT MAINTENANCE ENGINEER LICENCE: SKILL TEST**

Each applicant for a Aviation Maintenance Engineer licence or rating shall pass an oral and practical test appropriate to the rating(s) sought. The tests cover the applicants skill in performing the practical projects on the subjects covered by the written test for that rating. The applicant will be provided with appropriate facilities, tools, materials and airworthiness data

(a) The skill test for the AME Licence shall test the applicant’s knowledge and performance in at least the following areas of operation:
   (1) Basic electricity
   (2) Lines and fittings
   (3) Materials and processes
   (4) Ground operations and servicing
   (5) Cleaning and corrosion control
   (6) Mathematics
   (7) Maintenance forms and records
   (8) Maintenance publications
   (9) Physics
   (10) Mechanic privileges and limitations
IS 2.6.2.7. (A)  SKILL REQUIREMENTS FOR THE AME AIRFRAME RATING

(a) The skill test for the airframe rating shall test the applicant's knowledge and performance in at least the following areas of operation:

1. assembly and rigging
2. airframe inspection
3. aircraft landing gear systems
4. hydraulic and pneumatic systems
5. cabin atmosphere control systems
6. aircraft instrument systems
7. communication and navigation systems
6. fuel systems
7. aircraft electrical systems
8. position and warning systems
9. ice and rain control systems
10. fire protection systems
11. Job/task documentation and control practices.

IS 2.6.2.7.(B).  SKILL REQUIREMENTS FOR THE AME POWERPLANT RATING.

(a) The skill test for the powerplant rating shall test the applicant's knowledge and performance in at least the following areas of operation:

1. powerplant electrical systems
2. lubrication systems
3. ignition and starting systems
4. fuel metering
5. engine fuel systems
6. induction and engine airflow systems
7. engine cooling systems
8. engine exhaust and reverser systems
9. propellers
10. auxiliary power units
11. Job/task documentation and control practices.
IS 2.6.2.7.(c) **Skill Requirements for the AME Avionics Rating.**

(a) The skill test for the avionics rating shall test the applicant’s knowledge and performance in the basic workshop and maintenance practices in at least the following areas of operation:

1. Avionics – electrical
2. Avionics – instrument
3. Avionics – autoflight
4. Avionics – radio
5. Repair, maintenance and function testing of aircraft systems/components – avionics
6. Job/task documentation and control practices.

IS 2.8.3 **Flight Operations Officer: Skill Test Requirements**

(a) The skill test for the flight operations officer licence shall test the applicant’s knowledge and performance in at least the following areas of operation:

1. Flight planning/dispatch release, including the applicant’s knowledge and performance of the following—
   (i) Regulatory requirements;
   (ii) Meteorology
   (iii) Weather observations, analysis, and forecasts
   (iv) Weather related hazards;
   (v) Aircraft systems, performance, and limitations;
   (vi) Navigation and aircraft navigation systems;
   (vii) Practical dispatch applications;
   (viii) Manuals, handbooks and other written guidance.

2. Pre-flight, takeoff, and departure, including the applicants’ knowledge and performance of the following—
   (i) Air traffic control procedures;
   (ii) Aerodrome, crew, and company procedures.

3. In-flight procedures, including the applicants’ knowledge and performance of the following—
   (i) Routing, re-routing, and flight plan filing;
   (ii) En route communication procedures and requirements.

4. Arrival, approach, and landing procedures, including the applicants’ knowledge and performance of the following—
   (i) Air traffic control and air navigation procedures.

5. Post flight procedures, including the applicants’ knowledge and performance of the following—
   (i) Communication procedures and requirements;
   (ii) Trip records.
(6) Abnormal and emergency procedures, including the applicants’ knowledge and performance of the following—
(i) Abnormal and emergency procedures.

IS 2.10.1.3 APPENDIX A – BASIC TRAINING IN AVIATION MEDICINE FOR AMEXs

(a) Basic training for AMEXs in aviation medicine shall include at least the following:

1. Basic training in aviation medicine
2. Physics of atmosphere and space
3. Basic aeronautical knowledge
4. Aviation Physiology
5. Ophthalmology
6. Otorinolaryngology
7. Cardiology and general medicine
8. Neurology
9. Psychiatry in aviation medicine
10. Psychology
11. Dentistry
12. Accidents, Escape and Survival
13. Legislation, rules and regulations
14. Air evacuation
15. Medicine and flying

IS 2.10.1.3 APPENDIX B – ADVANCED TRAINING IN AVIATION MEDICINE FOR AMEXs

(a) Advanced training in aviation medicine for AMEXs shall include the following:

1. Pilot working environment
2. Aerospace physiology
3. Ophthalmology
4. Otorinolaryngology
5. Cardiology and general medicine
6. Neurology/Psychiatry
7. Human factors in aviation
8. Tropical medicine
9. Hygiene
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PART 3 – AVIATION TRAINING ORGANISATIONS

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3.1 GENERAL

3.1.1 General

3.1.1.1 APPLICABILITY
Part 3 prescribes the requirements governing the certification of Aviation Training Organizations.

3.1.1.2 DEFINITIONS
(a) For the purpose of Part 3, the definitions in the Law, in Part 1 and 2 and the following definitions shall apply:

(1) **Accountable manager.** The manager who has corporate authority for ensuring that all training commitments can be financed and carried out to the standard required by the Authority and any additional requirements defined by the ATO. The accountable manager may delegate in writing to another person within the organization, the day to day management but not the overall approval management responsibility.

(2) **Procedures manual.** A manual containing procedures, instructions and guidance for use by personnel of the Aviation Training Organization in the execution of their duties in meeting the requirements of the certificate.

(3) **Quality manager.** The manager, acceptable to the Authority, responsible for the management of the Quality system, monitoring function and requesting corrective actions.

(4) **Training manual.** A manual containing the training goals, objectives, standards syllabi, and curriculum for each phase of the approved training course.

(5) **Training specifications.** A document issued to an Aviation Training Organization certificate holder by the Authority that specifies training program requirements and authorizes the conduct of training, checking, and testing with any limitations thereof.

3.1.1.3 ABBREVIATIONS
(a) The following abbreviations are used in Part 3:

(1) A - Aeroplane
(2) AME - Aviation Maintenance Engineer
(3) ATCO – Air Traffic Controller
(4) ATO – Aviation Training Organization
(5) ATPL – Airline Transport Pilot Licence
(6) CFI – Chief Flight Instructor
(7) CGI – Chief Ground Instructor
(8) CPL – Commercial Pilot Licence
(9) CRM – Crew Resource Management
(10) FE – Flight Engineer
(11) H – Helicopter
June 1st 2007

(12) IFR – Instrument Flight Rules
(13) ICAO – International Civil Aviation Organization
(14) MMEL – Master Minimum Equipment List
(15) PIC – Pilot-in-Command
(16) PPL – Private Pilot Licence
(17) RT – Radiotelephony
(18) VFR – Visual Flight Rules

3.1.2 Certification and Location requirements

3.1.2.1 General

(a) No person may operate an Aviation Training Organization (ATO) without, or in violation of, an ATO certificate and training specifications issued under this Part.

(b) No person may conduct training, testing and/or checking in synthetic flight trainers without, or in violation of, the certificate and training specifications required under this Part.

(c) The Authority will issue to an Aviation Training Organization that meets the requirements of this Part an ATO certificate and training specifications for providing courses for flight crew licences and ratings and for courses for personnel other than flight crew members, as approved by the Authority.

3.1.2.2 Application for Issuance or Amendment of an ATO Certificate

(a) An applicant for an ATO certificate and training specifications shall apply at least 120 calendar days before the beginning of any proposed training.

(b) An applicant for an ATO certificate shall submit an application:

(1) in a form and manner prescribed by the Authority and

(2) containing any information the Authority requires the applicant to submit including at least the information shown in IS 3.1.2.2 Appendix A.

Implementing Standard: See IS: 3.1.2.2 Appendix A for certificate information needed by the Authority

(c) The ATO shall establish procedures acceptable to the Authority to ensure compliance with all relevant requirements of this Part. The procedures shall include a quality system which contain the elements described in IS: 3.1.2.2 Appendix B, and follows the guidance in IS: 3.1.2.2 Appendix C.

(d) An applicant for a certificate shall ensure that the facilities and equipment described in its application are:

(1) available for inspection and evaluation prior to approval; and

(2) in place and operational at the location of the ATO prior to issuance of a certificate under this Part.

(e) The Authority will issue to an applicant who meets the requirements of this Part and is approved by the Authority:
(1) An ATO certificate containing:
   (i) the name, location of the ATO;
   (ii) the date of issue and period of validity;
   (iii) the authorized locations of operations; and
   (iv) training courses for the following categories, as applicable: flight crew training, training for personnel other than flight crew and other training as approved by the Authority;

(2) Training Specifications containing:
   (i) authorization for the ATO;
   (ii) the type of training authorized, including approved courses;
   (iii) the rating, category, class and type of aircraft, or parts thereof, that may be used for training, testing and checking;
   (iv) for each synthetic flight trainer that may be used for training, testing and checking, the make, model and series of aircraft being simulated, the qualification level assigned and the identification number assigned by the Authority;
   (v) any aircraft, or parts thereof, approved for training, as appropriate;
   (vi) authorized deviations or waivers from this Part;
   (vii) the staff required to perform under this Part; and
   (viii) any other items the Authority may require or allow.

(f) The Authority may deny a certificate if the Authority finds that the applicant does not comply with the approval requirements of this Part.

(g) The Authority may amend an ATO certificate and/or the training specifications:
   (1) on the Authority’s own initiative, under the applicable [Guyana] legislation; or
   (2) upon timely application by the certificate holder.

(h) An ATO located outside Guyana may apply for a Guyana ATO certificate, to provide training leading to a license issued by Guyana, provided the requirements of this Part are met.

3.1.2.3 VALIDITY OF THE CERTIFICATE AND RENEWAL
Subject to satisfactory compliance with the requirements of this Part, the initial certificate will be valid for 1 year and the validity of a renewed certificate is 3 years.

3.1.2.4 INSPECTION
   (a) The Authority may, at any time, inspect an ATO holder on the ATO holder’s premises to determine the ATO’s compliance with this Part.
   (b) Inspections will normally be conducted at least annually, unless the certificate holder continues to meet the requirements under which it was originally certificated. At the discretion of the Authority the inspection is extended to 24 months.
   (c) After an inspection is made, the certificate holder will be notified, in writing, of any deficiencies found during the inspection.
(d) Inspection will also be performed on the applicant for, or the holder of an ATO certificate held outside Guyana. This inspection may be delegated to the Authority of the State where the ATO is located, provided an arrangement exists.

Implementing Standards: IS 3.1.2.4 Appendix A for detailed inspection requirements.

3.1.2.5 RENEWAL OF THE CERTIFICATE
(a) An ATO may apply for renewal of its certificate within 30 days preceding the month its ATO certificate expires, provided the ATO meets the requirements prescribed in this Part.
(b) After the application the ATO will be inspected to ensure that it meets the requirements prescribed in this Part.

Implementing Standards: IS 3.1.2.5 for detailed renewal requirements

3.1.2.6 SUSPENSION OR REVOCATION
The Authority may suspend or revoke an issued ATO certificate, if it is established that a certificate holder has not met, or no longer meets the requirements of Part 3

3.1.2.7 FACILITIES, EQUIPMENT AND MATERIAL
(a) The facilities and working environment shall be appropriate for the task to be performed.
(b) The ATO shall have the necessary technical data, equipment, training devices and material to conduct the courses for which it is approved.
(c) A certificate holder may not make a substantial change in facilities, equipment or material that have been approved for a particular training program, unless that change is approved by the Authority in advance.
(d) Each certificate holder shall maintain the records required by this Part in facilities adequate for that purpose.

3.1.2.8 LOCATION
An applicant for, or holder of, a certificate issued under this Part shall establish and maintain a principal business office that is physically located at the address shown on its certificate.
3.1.2.9 **SATELLITE ATOs**

(a) The holder of an ATO certificate may conduct training in accordance with a training program approved by the Authority at a satellite ATO if:

1. the facilities, equipment, personnel and course content of the satellite ATO meet the applicable requirements;
2. the instructors at the satellite ATO are under the direct supervision of management personnel of the principal ATO; and
3. the certificate holder’s training specifications reflect the name and address of the satellite ATO and the approved courses offered at the satellite ATO.

(b) The Authority will issue training specifications which prescribe the operations required and authorized at each satellite ATO.

3.1.2.10 **CHANGES REQUIRING NOTICE TO THE AUTHORITY**

(a) Each ATO shall notify the Authority within 30 days of any of the following changes:

1. the Accountable Manager;
2. the Quality Manager;
3. the instructional staff; and
4. the housing, training facilities and equipment, procedures, training programs and work scope that could affect the approval.

(b) The Authority may prescribe the conditions under which the ATO may operate during such changes unless the Authority determines that the approval should be suspended.
3.2 TRAINING FOR FLIGHT CREW LICENCES AND RATINGS

3.2.1 FLIGHT CREW TRAINING COURSES

The Authority may approve, as provided in the training specifications, the following courses of instruction to an applicant for, or a holder of an ATO certificate, provided the applicant meets the requirements of Part 2 and 3:

(a) Private pilot licence course
(b) Commercial pilot licence course
(c) Instrument rating course
(d) Commercial pilot licence/Instrument rating-multi-engine/CRM integrated course
(e) Airline transport pilot licence course
(f) Flight engineer licence course
(g) Flight navigator licence course
(h) Class rating course
(i) Type rating course
(j) Crew resource management course
(k) Flight instructor course
(l) Instructor course for additional type or class ratings
(m) Instructor course for synthetic flight training
(n) Refresher courses

Note: See ICAO Document 7192, Part B-5, Volume 1 and 2 for Integrated Commercial Pilot Course

Note: Course contents are not specified in detail in order to allow courses to be tailored to specific training needs of students and to be updated promptly.
3.2.2 Personnel

(a) The ATO shall satisfy the Authority that there shall be on the staff:

1. an Accountable Manager;
2. a Quality Manager;
3. a Head of Training;
4. a Chief Flight Instructor, as applicable;
5. a Chief Ground Instructor, as applicable; and
6. an adequate number of ground and flight instructors relevant to the courses provided.

(b) Each instructor to be used for flight training must hold an instructor rating or authorization in accordance with 2.3.3.10 or 2.4.5, relevant to the instruction given.

(c) The ATO shall ensure that all instructional personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities. The training program established by the training organization shall include training in knowledge and skills related to human performance.

Note: Guidance material to design training programs to develop knowledge and skills in human performance can be found in the ICAO Human Factors Training Manual (Doc 9583).

Implementing Standard: See IS 3.2.2 Appendix A – H for detailed requirements for staff of the ATO.

3.2.3 Record keeping

(a) A certificate holder shall maintain and retain the following records for a period of one year after the completion of training:

1. details of ground, flying and simulated flight training given to individual students;
2. detailed and regular progress reports from instructors including assessments, and regular progress flight tests and ground examinations;
3. personal trainee information, e.g. names, course, certificates held, expiry dates of medical certificates, ratings, etc.; and
4. record of each instructor that indicates qualifications and compliance with this Part and Part 2.

(b) The format of the student training records shall be specified in the Training Manual

(c) The ATO shall submit training records and reports as required by the Authority.
3.2.4 Training program and approval

(a) The applicant for, or the holder of an ATO certificate shall apply to the Authority for training program approval.

(b) The applicant for, or the holder of an ATO certificate shall develop a training program for each type of course offered. This program shall include

1. a breakdown of flying and theoretical knowledge instruction in either a week-by-week or phase presentation, a list of standard exercises and a curriculum summary. In particular, synthetic flight training and theoretical knowledge instruction shall be phased in such a manner as to ensure that students shall be able to apply to flying exercises the knowledge gained on the ground;
2. minimum aircraft and flight training equipment requirements for each proposed program;
3. minimum instructor qualifications for each proposed program; and
4. a program for initial training and continuing training of each instructor employed to instruct in a proposed program.

(c) The content and sequence of the training program shall be acceptable to the Authority.

3.2.5 Training aircraft

(a) An adequate fleet of training aircraft appropriate to the courses of training shall be provided for the training for flight crew licences and ratings. Each aircraft shall be fitted with duplicated primary flight controls for use by the instructor and the student. Swing-over flight controls shall not be acceptable.

1. The fleet shall include, as appropriate to the courses of training, aeroplane(s) suitable for demonstrating stalling and spin avoidance.
2. ATO fleet helicopter(s) shall include, as appropriate to the courses of training, helicopter(s) suitable for auto-rotation demonstration.
3. ATO fleet aircraft shall be suitably equipped to simulate instrument meteorological conditions and suitably equipped for the instrument flight training and testing.

3.2.6 Synthetic flight trainers

(a) An applicant for, or holder of an ATO certificate, providing synthetic flight training, shall satisfy the Authority that suitably equipped synthetic flight trainers are provided having regard to the number of students and organization of courses.

(b) An applicant for, or holder of, an ATO certificate shall show that each synthetic flight trainer used for training, testing and checking will be or is specifically qualified and approved by the Authority for:

1. each manoeuvre and procedure for the make, model and series of aircraft, set of aircraft, or aircraft type simulated, as applicable; and
2. each training program or training course in which the synthetic flight trainer is used, if that program or course is used to satisfy any requirement of these regulations.
3.2.7 Aerodromes and Sites
Each applicant for, and holder of, an ATO certificate shall show that it has continuous use of each airport and sites (for helicopter training) at which training flights originate, and that the airport has an adequate runway and the necessary equipment.

Implementing Standard: See 3.2.7 for specific runway and equipment requirements and requirements for sites.

3.2.8 Training facilities
(a) An applicant for, and holder of an ATO certificate shall have facilities, as determined by the Authority, appropriate for the maximum number of students expected to be taught at any time, as follows:

(1) Flight operations facilities:
   (i) an operations room;
   (ii) a flight planning room
   (iii) adequate briefing rooms
   (iv) offices for the instructors

(2) Knowledge instruction facilities
   (i) classroom accommodation,
   (ii) suitable demonstration equipment;
   (iii) a RT training and testing facility
   (iv) a library
   (v) offices for instructors

(b) A certificate holder may not make a substantial change in facilities, equipment or material that have been approved for a particular training program, unless that change is approved by the Authority in advance.

3.2.9 Training Manual and Procedures Manual
(a) Each applicant for, or holder of an ATO certificate shall prepare and maintain a Training Manual and a Procedures Manual containing information and instructions to enable staff to perform their duties and to give guidance to students on how to comply with course requirements, as listed in IS 3.2.9 Appendix A: Training Manual and IS 3.2.9 Appendix B: Procedures Manual.

(b) The Training Manual and Procedures Manual may be combined.

(c) The ATO shall ensure that the Training Manual and the Procedures Manual is amended as necessary to keep the information contained therein up to date.

(d) Copies of all amendments to the Training Manual and the Procedures Manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.

Implementing Standards: See IS 3.2.9 Appendix A and B for detailed requirements for the Training Manual and the Procedures Manual and format for each manual.
3.3 TRAINING FOR LICENCES AND RATINGS FOR AIRCRAFT MAINTENANCE ENGINEERS, AIR TRAFFIC CONTROLLERS, FLIGHT OPERATION OFFICERS AND AERONAUTICAL STATION OPERATORS

3.3.1 Applicability
Certification under this Subpart is not required for training that is approved under the provisions of Part 9.

3.3.2 Training course for licences and ratings for Aircraft Maintenance Engineers, Air Traffic Controllers, Flight Operation Officers and Aeronautical Station Operators.
The Authority may approve the following courses of instruction to an applicant for, or a holder of an ATO certificate, provided the applicant meets the requirements of Part 2 and 3:
   (a) Aircraft maintenance engineer licence course
   (b) Airframe rating, powerplant rating, avionics rating course
   (c) Air traffic controller licence course
   (d) Courses for ratings for Air traffic controller licences
   (e) Flight operations officer course
   (f) Aeronautical station operator course

   Note: Course contents are not specified in detail because it allows courses to be tailored to specific training needs of students and to be updated in a quicker way.

3.3.3 Personnel Requirements
   (a) The ATO shall satisfy the Authority that an adequate number of qualified, competent staff are employed as follows:
      (1) An Accountable Manager;
      (2) A Quality Control Manager;
      (3) A Head of Training; and
      (4) An adequate number of instructors relevant to the courses provided, qualified in accordance with the requirements of Part 2.

   (b) The ATO shall ensure that all instructional personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities. The training program established by the training organization shall include training in knowledge and skills related to human performance.

   Note: Guidance material to design training programs to develop knowledge and skills in human performance can be found in the ICAO Human Factors Training Manual (Doc 9583).
3.3.4 Record keeping

(a) A certificate holder shall maintain and retain the following records in secure storage facilities for a period of one year after the completion of training:

(1) details of training given to individual students;
(2) detailed and regular progress reports from instructors including assessments, and regular progress tests and examinations;
(3) personal trainee information, e.g. names, course, certificates held, expiry dates of medical certificates, if applicable, ratings, etc.; and
(4) record of each instructor that indicates training history, experience and qualifications; and compliance with this Part and Part 2.

(b) The ATO shall submit training records and reports as required by the Authority.

3.3.5 Training program and approval

(a) Each applicant for, or holder of an ATO certificate shall apply to the Authority for training program approval.

(b) Each applicant shall ensure that each training program submitted to the Authority for approval meets the applicable requirements.

(c) Each applicant for training program approval shall indicate in the application:

(1) which courses are part of the program; and
(2) which requirements of Part 2 will be satisfied by the training program.

(d) After a certificate holder begins operations under an approved training program, the Authority may require the certificate holder to make revisions to the training program, if the Authority finds that the certificate holder is not meeting the provisions of its approved training program.

3.3.6 Training facilities, equipment and material for AME courses

(a) An applicant for, and holder of, an ATO certificate shall have facilities, as determined by the GCAA appropriate for the maximum number of students expected to be taught at any time, as follows:

(1) An enclosed classroom.
(2) Suitable office accommodation for instructors.
(3) Suitable facilities arranged to ensure proper separation from the working space, for parts, tools, materials and similar articles.
(4) Suitable area for application of finishing materials, including paint spraying.
(5) Suitable areas equipped with washtank and degreasing equipment with air pressure or other adequate cleaning equipment.
(6) Suitable facilities for running engines.

(7) Suitable area with adequate equipment, including benches, tables, and test equipment, to disassemble, service and inspect:
   (i) Ignition systems, electrical equipment and appliances;
   (ii) Carburettors and fuel systems; and
   (iii) Hydraulic and vacuum systems for aircraft, aircraft engines, and their appliances.

(8) Suitable space with adequate equipment, including tables, benches, stands and jacks for disassembling, inspecting and rigging aircraft.

(9) Suitable space with adequate equipment for disassembling, inspecting, assembling, troubleshooting and timing engines.

(10) A library containing all technical material appropriate to the scope and level of training undertaken.

(b) An applicant for, or holder of an ATO certificate with approved AME courses shall have and maintain the following instructional equipment as is appropriate to the rating sought:

   (1) various kinds of airframe structures, airframe systems and components, powerplants and powerplant system and components (including propellers) of a quantity and type suitable to complete the practical projects required by its approved training program;

   (2) at least one aircraft of a type acceptable to the GCAA;

(c) An applicant for, or holder of an ATO certificate with an AME rating shall have airframes, powerplants, propellers, appliances and components thereof, to be used for instruction and from which students will gain practical working experience and shall ensure that the airframes, powerplants, propellers, appliances and components thereof be sufficiently diversified as to show the different methods of construction, assembly, inspection and operation when installed in an aircraft for use.

(d) An applicant for an ATO certificate with an AME rating, or an applicant seeking an additional AME rating, shall have at least the facilities, equipment and materials appropriate to the rating sought.

(e) An applicant for, or holder of, an ATO certificate with an AME rating shall maintain, on the premises and under the full control of the ATO, an adequate supply of material, special tools and shop equipment used in constructing and maintaining aircraft as is appropriate to the approved training program of the ATO, in order to assure that each student will be properly instructed.

(f) A certificate holder may not make a substantial change in facilities, equipment or material that have been approved for a particular training program, unless that change is approved by the GCAA in advance.
3.3.7 Training facilities, equipment and material for Air Traffic controller, Flight Operations Officer and Aeronautical Station Operator courses
- reserved -

3.3.8 Training Manual and Procedures Manual

(a) Each applicant for, or holder of an ATO certificate shall prepare and maintain a Training Manual and a Procedures Manual containing information and instructions to enable staff to perform their duties and to give guidance to students on how to comply with course requirements. The manual may be issued in separate parts and shall contain at least the following information:

(1) a general description of the scope of training authorised under the ATO’s terms of approval;
(2) the content of the training programmes offered including the courseware and equipment to be used;
(3) a description of the ATO’s quality assurance system in accordance with this PART;
(4) a description of the ATO’s facilities;
(5) the name, duties and qualification of the person designated as responsible for compliance with the requirements of this Part;
(6) a description of the duties and qualification of the personnel designated as responsible for planning, performing and supervising the training to be conducted;
(7) a description of the procedures used to established and maintain the competence of instructional personnel as required by this Part; and
(8) a description of the method used for the completion and retention of the training records;

(b) The ATO shall ensure that the Training Manual and the Procedures Manual is amended as necessary to keep the information contained therein up to date.

(c) Copies of all amendments to the Training Manual and the Procedures Manual shall be furnished promptly to all organizations or persons to whom the manual has been issued.

3.4 AME Training Courses

3.4.1 Applicability

(a) This Subpart prescribes the requirements for—

(1) Issuing ATO certificates and ratings;
(2) Conducting licensing courses and associated ratings for AMEs; and
(3) Instructing the general operating rules for the holders of AME licenses and ratings.
3.4.2 AME TRAINING COURSES

(a) The Authority may approve the following courses of instruction to an applicant for, or holder of an ATO certificate, provided the applicant meets the requirements of 3.1.2.2

(1) AME—
   (i) Airframe rating;
   (ii) Powerplant rating;
   (iii) Airframe and Powerplant rating; and
   (iv) Avionics rating.

3.4.3 GENERAL CURRICULUM REQUIREMENTS

(a) Each ATO shall have an approved curriculum that is designed to qualify its students to perform the duties of an AME for a particular rating or ratings.

(b) The curriculum shall offer at least the following number of hours of instruction shown, and the instruction unit hour shall be not less than 50 minutes in length.

   (1) Airframe – 1,150 hours (400 general plus 750 airframe).
   (2) Powerplant – 1,150 hours (400 general and 750 powerplant).
   (3) Combined airframe and powerplant – 1,900 hours (400 general plus 750 airframe and 750 powerplant).
   (4) Avionics - 1,150 hours (400 hours of General Subjects, and 750 hours of Avionics Subjects)

(c) The curriculum shall cover the subjects and items prescribed in IS: 3.4.3, AME Airframe and/or Powerplant and/or Avionics Ratings

(d) Each ATO shall teach each subject to at least the indicated level of proficiency defined in IS: 3.4.3, AME Airframe and/or Powerplant and/or Avionics Ratings.

(e) The certificate holder shall maintain a curriculum that shows—

   (1) The required practical projects to be completed;
   (2) For each subject, the proportions of theory and other instruction to be given; and
   (3) A list of the minimum required tests to be given.

(f) Each ATO may issue Certificates of Competency to persons successfully completing speciality courses provided that all requirements are met and the licenses of competency specifies the aircraft make and model to which the license applies.

Implementing Standard: See IS: 3.4.3, AME Airframe and/or Powerplant and/or Avionics Ratings for applicable AME course curriculum subjects and items.
3.4.4 **AME TRAINING PROGRAM PROVIDERS**

(a) The holder of a training organisation may apply to the Authority for approval for an AME training program.

(b) An AOC holder, an AMO, or an ATO may apply to the Authority for approval for an AME training program that meets the requirements of this Subpart.

Implementing Standard: See IS: 3.4.3 for AME training program curriculum requirements.

3.4.5 **INSTRUCTOR REQUIREMENTS**

(a) Each ATO shall provide the number of instructors holding appropriate licenses and ratings, issued under Part 2, Section 2.6 that the Authority determines is necessary to provide adequate instruction and supervision of the students, including at least one such instructor for each 25 students in each class held in a shop where students are performing actual tasks appropriate to the curriculum.

(b) An ATO may provide specialised instructors, who are not licensed in accordance with Part 2, to teach mathematics, physics, basic electricity, basic hydraulics, drawing, and similar subjects.

(c) Each ATO shall maintain a list of the names and qualifications of such specialised instructors, and upon request, provide a copy of the list, with a summary of the qualifications of each specialised instructor to the Authority.
3.4.6 **ATTENDANCE AND CREDIT FOR PRIOR INSTRUCTION OR EXPERIENCE**

(a) An ATO may credit a student with instruction or previous experience as follows:

1. Instruction satisfactorily completed at—
   (i) An accredited university, college, or junior college;
   (ii) An accredited vocational, technical, trade or high school;
   (iii) A military technical school; or
   (iv) An ATO.

2. Previous aviation maintenance experience comparable to required curriculum subjects—
   (i) By determining the amount of credit to be allowed by documents verifying previous experience; and
   (ii) By giving the student a test equal to the one given to students who complete the comparable required curriculum subject at the ATO.

3. Credit to be allowed for previous instruction —
   (i) By an entrance test equal to one given to the students who complete a comparable required curriculum subject at the crediting ATO;
   (ii) By an evaluation of an authenticated transcript from the student's former school; or
   (iii) In the case of an applicant from a military school, only on the basis of an entrance test.

4. A certificate holder may credit a student seeking an additional rating with previous satisfactory completion of the general portion of an ATO’s curriculum.

(b) Each ATO shall show hours of absence allowed and how it will make missed material available to the student.
IS 3.1.2.2  APPENDIX A – APPLICATION FOR ISSUANCE OR AMENDMENT OF AN ATO CERTIFICATE

Each applicant for an ATO certificate and training specification shall provide the Authority with the following information:

(a) a statement showing that the minimum qualification requirements for each management position are met;
(b) a description of the minimum qualifications and ratings for each instructor;
(c) a statement acknowledging that the applicant may notify the Authority within 10 working days of any change made in the assignment of persons in the required management or instructors positions;
(d) the proposed training specifications requested by the applicant;
(e) a description of the training equipment that the applicant proposes to use e.g. the aircraft, the synthetic flight trainers including any special equipment used for each phase of training;
(f) a listing of the airports or sites at which training flights originate and a description of the applicant’s training facilities, equipment and qualifications of personnel to be use; and
(g) a training program, including manuals, curricula, outlines, courseware, procedures and documentation to support the items required in 3.2.3, 3.2.4, 3.3.4 and 3.3.5.

IS 3.1.2.2  APPENDIX B - QUALITY SYSTEM

(a) In a quality system of an ATO for training for licences and ratings the following five elements shall be clear identifiable:

(1) determination of the organization’s training policy and training and flight safety standards;
(2) determination and establishment of assignment of responsibility, resources, organization and operational processes, which will make allowance for policy and training and flight safety standards;
(3) follow up system to ensure that policy, training and flight safety standards are complied with;
(4) registration and documentation of deviations from policy, training and flight safety standards together with necessary analysis, evaluations and correction of such deviations; and
(5) evaluation of experiences and trends concerning policy, training and flight safety standards.

IS 3.1.2.2  APPENDIX C - GUIDANCE MATERIAL FOR A QUALITY SYSTEM

(a) Introduction

(1) A basis for quality should be established by every ATO and problem-solving techniques to run processes should be applied. Knowledge in how to measure, establish and ultimately achieve quality in training and education is considered to be essential.

(2) The purpose of this Guidance material is to provide information and guidance to the ATO on how to establish a Quality System that enables compliance with 3.1.2.2 (c).

(3) In order to show compliance with 3.1.2.2 (c) an ATO should establish its Quality System in accordance with the instructions and information contained in the succeeding paragraphs.

(b) The Quality system of the ATO

(1) Terminology

(i) Quality. The totality of features and characteristics of a product or service that bear on its ability to satisfy stated or implied needs.
(ii) Quality Assurance. All those planned and systematic actions necessary to provide adequate confidence that all training activities satisfy given requirements, including the ones specified by the ATO in relevant manuals.

(iii) Quality Manual. The document containing the relevant information pertaining to the ATO's quality system and quality assurance program.

(iv) Quality audit. A systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives.

(2) Quality Policy and Strategy

(i) It is of vital importance that the ATO describes how the organization formulates, deploys, reviews its policy and strategy and turns it into plans and actions. A formal written Quality Policy Statement should be established that is a commitment by the Head of Training, as to what the Quality System is intended to achieve. The Quality Policy should reflect the achievement and continued compliance with relevant parts of Part 2 and 3 together with any additional standards specified by the ATO.

(ii) The Accountable Manager will have overall responsibility for the Quality System including the frequency, format and structure of the internal management evaluation activities.

(3) Purpose of a Quality System

The implementation and employment of a Quality System will enable the ATO to monitor compliance with relevant parts of Part 2 and 3, the Procedures Manual and the Training Manual, and any other standards as established by the ATO, or the Authority to ensure safe and efficient training.

(4) Quality Manager

(i) The primary role of the Quality Manager is to verify, by monitoring activities in the field of training, that the standards required by the Authority, and any additional requirements as established by the ATO are being carried out properly under the supervision of the Head of Training, Chief Flight Instructor and Chief Ground Instructor.

(ii) The Quality Manager should be responsible for ensuring that the Quality Assurance Program is properly implemented, maintained and continuously reviewed and improved. The Quality Manager should:
- have direct access to the Head of Training;
- have access to all parts of the ATO’s organization.

(iii) In the case of small or very small ATOs, the posts of the Head of Training and the Quality manager may be combined. However, in this event, quality audits should be conducted by independent personnel.

(5) Quality System

(i) The Quality System of the ATO should ensure compliance with and adequacy of training activities conducted.

(ii) The ATO should specify the basic structure of the Quality System applicable to all training activities conducted.

(iii) The Quality System should be structured according to the size of the ATO and the complexity of the training to be monitored.
(6) Scope
A quality System should address the following:
(i) Leadership
(ii) Policy and Strategy
(iii) Processes
(iv) The provisions of Part 2 and 3
(v) Additional standards and training procedures as stated by the ATO
(vi) The organizational structure of the ATO
(vii) Responsibility for the development, establishment and management of the Quality System
(viii) (viii) Documentation, including manuals, reports and records
(ix) Quality Assurance Program
(x) The required financial, material and human resources
(xi) Training requirements
(xii) Customer satisfaction

(7) Feedback System
The quality system should include a feedback system to ensure that corrective actions are both identified and promptly addressed. The feedback system should also specify who is required to rectify discrepancies and non-compliance in each particular case, and the procedure to be followed if corrective action is not completed within an appropriate timescale.

(8) Documentation
Relevant documentation includes the relevant part(s) of the Training and Procedures Manual, which may be included in a separate Quality Manual.
(i) In addition relevant document should also include the following:
   (A) Quality Policy
   (B) Terminology
   (C) Specified training standards
   (D) A description of the organization
   (E) The allocation of duties and responsibilities
   (F) Training procedures to ensure regulatory compliance

(ii) The Quality Assurance Program, reflecting:
   (A) Schedule of the monitoring process
   (B) Audit procedures
   (C) Reporting procedures
   (D) Follow-up and corrective action procedures
   (E) Recording System
   (F) The training syllabus
   (G) Document control
(9) Quality Assurance Program
The Quality Assurance Program should include all planned and systematic actions necessary to provide confidence that all training are conducted in accordance with all applicable requirements, standards and procedures.

(10) Quality Inspection
(i) The primary purpose of a quality inspection is to observe a particular event/action/document etc., in order to verify whether established training procedures and requirements are followed during the accomplishment of that event and whether the required standard is achieved.
(ii) Typical subject areas for quality inspections are:
   (A) Actual flight and ground training
   (B) Maintenance
   (C) Technical Standards
   (D) Training Standards

(11) Audit
(i) An audit is a systematic, and independent comparison of the way in which a training is being conducted against the way in which the published training procedures say it should be conducted.
(ii) Audits should include at least the following quality procedures and processes:
   (A) An explanation of the scope of the audit
   (B) Planning and preparation
   (C) Gathering and recording evidence
   (D) Analysis of the evidence
(iii) The various techniques that make up an effective audit are:
   (A) Interviews or discussions with personnel
   (B) A review of published documents
   (C) The examination of an adequate sample of records
   (D) The witnessing of the activities which make up the training
   (E) The preservation of documents and the recording of observations

(12) Auditors
(i) The ATO should decide, depending on the complexity of the training, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team should have relevant training and/or operational experience.
(ii) The responsibilities of the auditors should be clearly defined in the relevant documentation.

(13) Auditor’s Independence
(i) Auditors should not have any day-to-day involvement in the area of the operation or maintenance activity which is to be audited. An ATO may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities by the use of part-time auditors.
(ii) An ATO whose structure and size does not justify the establishment of full-time auditors, may undertake the audit function by the use of part-time personnel from within its own organization or from an external source under the terms of an agreement acceptable to the Authority.
(iii) In all cases the ATO should develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist is familiar with the type of training conducted by the ATO.

(iv) The Quality Assurance Program of the ATO should identify the persons within the company who have the experience, responsibility and Authority to:
   (A) Perform quality inspections and audits as part of ongoing Quality Assurance
   (B) Identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings
   (C) Initiate or recommend solutions to concerns or findings through designated reporting channels
   (D) Verify the implementation of solutions within specific timescales
   (E) Report directly to the Quality Manager

(14) Audit Scope
ATOs are required to monitor compliance with the Training and Procedures Manuals they have designed to ensure safe and efficient training. In doing so they should as a minimum, and where appropriate, monitor:
   (i) Organization
   (ii) Plans and objectives
   (iii) Training Procedures
   (iv) Flight Safety
   (v) Manuals, Logs and Records
   (vi) Flight and Duty Time limitations
   (vii) Rest requirements and scheduling
   (viii) Aircraft Maintenance/Operations interface
   (ix) Maintenance programs and continued airworthiness
   (x) Maintenance accomplishment

(15) Audit Scheduling
   (i) A Quality Assurance Program should include a defined audit schedule and a periodic review cycle. The schedule should be flexible, and allow unscheduled audits when trends are identified. Follow-up audits should be scheduled when necessary to verify that corrective action was carried out and that it was effective.
   (ii) An ATO should establish a schedule of audits to be completed during a specific calendar period. All aspects of the training should be reviewed within a period of 12 months in accordance with the program unless an extension to the audit period is accepted as explained below.
   (iii) An ATO may increase the frequency of their audits at their discretion but should not decrease the frequency without the acceptance of the Authority. It is considered unlikely that a period of greater than 24 months would be acceptable for any audit topic.
   (iv) When an ATO defines the audit schedule, significant changes to the management, organization, training, or technologies should be considered, as well as changes to the regulatory requirements.
Monitoring and corrective action

(i) The aim of monitoring within the Quality System is primarily to investigate and judge its effectiveness and thereby to ensure that defined policy, training standards are continuously complied with. Monitoring activity is based upon quality inspections, audits, corrective action and follow-up. The ATO should establish and publish a quality procedure to monitor regulatory compliance on a continuing basis. This monitoring activity should be aimed at eliminating the causes of unsatisfactory performance.

(ii) Any non-compliance identified should be communicated to the manager responsible for taking corrective action or, if appropriate, the Accountable Manager. Such non-compliance should be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of appropriate corrective action.

(iii) The Quality Assurance Program should include procedures to ensure that corrective actions are developed in response to findings. These quality procedures should monitor such actions to verify their effectiveness and that they have been completed. Organizational responsibility and accountability for the implementation of corrective action resides with the department cited in the report identifying the finding. The Accountable Manager will have the ultimate responsibility for ensuring, through the Quality Manager(s), that corrective action has re-established compliance with the standard required by the [Authority] and any additional requirements established by the ATO.

Corrective action

(i) Subsequent to the quality inspection/audit, the ATO should establish:

(A) The seriousness of any findings and any need for immediate corrective action

(B) The origin of the finding

(C) What corrective actions are required to ensure that the non-compliance does not recur

(D) A schedule for corrective action

(E) The identification of individuals or departments responsible for implementing corrective action

(F) Allocation of resources by the Accountable Manager, where appropriate

(ii) The Quality Manager should:

(A) Verify that corrective action is taken by the manager responsible in response to any finding of non-compliance

(B) Verify that corrective action includes the elements outlined in paragraph (16) above

(C) Monitor the implementation and completion of corrective action

(D) Provide management with an independent assessment of corrective action, implementation and completion

(E) Evaluate the effectiveness of corrective action through the follow-up process
(18) Management Evaluation
   (i) A management evaluation is a comprehensive, systematic documented review by the management of the quality system, training policies, and procedures, and should consider:
       The results of quality inspections, audits and any other indicators; as well as the overall effectiveness of the management organization in achieving stated objectives. A management evaluation should identify and correct trends, and prevent, where possible, future non-conformities. Conclusions and recommendations made as a result of an evaluation should be submitted in writing to the responsible manager for action. The responsible manager should be an individual who has the Authority to resolve issues and take action. The Accountable Manager should decide upon the frequency, format, and structure of internal management evaluation activities.

(19) Recording
   (i) Accurate, complete and readily accessible records documenting the result of the Quality Assurance Program should be maintained by the ATO. Records are essential data to enable an ATO to analyse and determine the root causes of non-conformity, so that areas of non-compliance can be identified and subsequently addressed.
   (ii) The following records should be retained for a period of 5 years:
       (A) Audit schedules
       (B) Quality inspection and audit reports
       (C) Responses to findings
       (D) Corrective action reports
       (E) Follow-up and closure reports
       (F) Management evaluation reports

(20) Quality Assurance Responsibility for Satellite ATOs
   (i) An ATO may decide to sub-contract out in accordance with 3.1.2.10, certain activities to external organizations subject to the approval of the [Authority].
   (ii) The ultimate responsibility for the training provided by the satellite ATO always remains with the ATO. A written agreement should exist between the ATO and the satellite ATO clearly defining the safety related services and quality to be provided. The satellite ATO's safety related activities relevant to the agreement should be included in the ATO's Quality Assurance Program.
   (iii) The ATO should ensure that the satellite ATO has the necessary authorisation/approval when required, and commands the resources and competence to undertake the task. If the ATO requires the satellite ATO to conduct activity which exceeds the satellite ATO’s authorisation/approval, the ATO is responsible for ensuring that the satellite ATO’s quality assurance takes account of such additional requirements.
(21) Quality System Training

(i) Correct and thorough training is essential to optimise quality in every organization. In order to achieve significant outcomes of such training the ATO should ensure that all staff understand the objectives as laid down in the Quality Manual.

(ii) Those responsible for managing the Quality System should receive training covering:

A) An introduction to the concept of Quality System
B) Quality management
C) Concept of Quality Assurance
D) Quality manuals
E) Audit techniques
F) Reporting and recording
G) The way in which the Quality System will function in the ATO

(iii) Time should be provided to train every individual involved in quality management and for briefing the remainder of the employees. The allocation of time and resources should be governed by the size and complexity of the operation concerned.

(22) Sources of Training

Quality management courses are available from the various National or International Standards Institutions, and an ATO should consider whether to offer such courses to those likely to be involved in the management of Quality Systems. Organizations with sufficient appropriately qualified staff should consider whether to carry out in-house training.

(23) Quality Systems for small/very small Organizations

(i) The requirement to establish and document a Quality System, and to employ a Quality Manager applies to all ATOs.

(ii) Complex quality systems could be inappropriate for small or very small ATOs and the clerical effort required to draw up manuals and quality procedures for a complex system may stretch their resources. It is therefore accepted that such ATOs should tailor their quality systems to suit the size and complexity of their training and allocate resources accordingly.

(iii) For small and very small ATOs it may be appropriate to develop a Quality Assurance Program that employs a checklist. The checklist should have a supporting schedule that requires completion of all checklist items within a specified timescale, together with a statement acknowledging completion of a periodic review by top management. An occasional independent overview of the checklist content and achievement of the Quality Assurance should be undertaken.

(iv) The small ATO may decide to use internal or external auditors or a combination of the two. In these circumstances it would be acceptable for external specialists and or qualified organizations to perform the quality audits on behalf of the Quality Manager.

(v) If the independent quality audit function is being conducted by external auditors, the audit schedule should be shown in the relevant documentation.

(vi) Whatever arrangements are made, the main ATO retains the ultimate responsibility for the quality system and especially the completion and follow-up of corrective actions.
This certificate is issued to:

Whose business address is:

Number:

Upon finding that its organization complies in all respects with GARs Part 3 relating to the establishment of an Aviation Training Organization and is empowered to operate an approved (enter words of Aviation Training Organization) for the following courses:

This certificate, unless suspended or revoked, shall continue in effect until (enter date 12 months after first issue, 36 months after second and further issues).

Date of issue:________________________
Signature:___________________________
IS 3.1.2.4 APPENDIX A: INSPECTION

(a) The inspection shall focus on:

1. staff: adequacy of number and qualifications;
2. instructors: validity of licences and ratings; logbooks;
3. training aircraft: registration; associated documents; maintenance records;
4. synthetic flight trainers: qualification and approval;
5. facilities: adequacy to the courses being conducted and the number of students;
6. documentation: documents related to the courses; updating system; training and operations manuals;
7. training records and checking forms;
8. flight instruction including pre-flight briefing, actual flight debriefing for ATOs for flight crew training;
9. instruction program for personnel other than flight crew;
10. quality system.

IS 3.1.2.5 RENEWAL

The holder of an ATO approval must apply for a renewal in sufficient time before the expiry date of the approval certificate in order to continue training without interruption because of the expiry date of the approval certificate. Renewal of approval is based on criteria and a report in IS 3.1.2.4.

IS 3.2.2 APPENDIX A: HEAD OF TRAINING

The Head of Training shall have overall responsibility for ensuring satisfactory integration of flying training, synthetic flight training and theoretical knowledge instruction and for supervising the progress of individual students. The Head of Training shall have had extensive experience in training as a flight instructor for professional pilot licences and possess a sound managerial capability.

IS 3.2.2 APPENDIX B: CHIEF FLIGHT INSTRUCTOR (CFI)

(a) The CFI shall be responsible for the supervision of flight and synthetic flight instructors and for the standardisation of all flight instruction and synthetic flight instruction.

(b) The CFI shall:

1. hold the highest professional pilot licence related to the flying training courses conducted;
2. hold the rating(s) related to the flying training courses conducted;
3. hold a flight instructor rating for at least one of the types of aircraft used on the course; and
4. have completed 1,000 hours pilot-in-command flight time of which a minimum of 500 hours shall be on flying instructional duties related to the flying courses conducted, of which 200 hours may be instrument ground time.
IS 3.2.2 Appendix C: Instructors for Training for Licences and Ratings
Flight instructors, shall hold:
   (a) A professional pilot licence and rating(s) in accordance with Part 2 related to the flying training courses they are appointed to conduct; and
   (b) an instructor rating or authorization in accordance with Part 2, relevant to the part of the course being conducted e.g. flight instructor, flight instrument rating instructor, instructor for additional class or type rating(s), instructor for synthetic flight training, as appropriate.

IS 3.2.2 Appendix D: Instructors for Additional Class or Type Ratings
Instructors for additional class or type ratings training shall hold:
   (a) the licence and the rating(s) in accordance with Part 2 related to the class or type rating training courses they are appointed to conduct; and
   (b) an instructor rating in accordance with Part 2, relevant to the part of the course being conducted.

IS 3.2.2 Appendix E: Instructors for Synthetic Flight Training
Instructors for synthetic flight training shall hold the authorization in accordance with Part 2 related to the synthetic flight training courses they are appointed to conduct.

IS 3.2.2 Appendix F: Instructors for Flight Engineer Licences and/or Ratings
Instructors for flight engineer licences and rating training shall hold:
   (a) the licence and the rating(s) in accordance with Part 2 related to the flight engineer licence and/or rating training courses they are appointed to conduct; and
   (b) an instructor rating in accordance with Part 2, relevant to the part of the course being conducted.

IS 3.2.2 Appendix G: Chief Ground Instructor (CGI)
   (c) The CGI shall be responsible for the supervision of all ground instructors and for the standardisation of all theoretical knowledge instruction.
   (d) The CGI shall have a practical background in aviation and have undergone a course of training in instructional techniques or have had extensive previous experience in giving theoretical knowledge instruction.

IS 3.2.2 Appendix H: Ground Instructors
Ground instructors in licence and ratings knowledge subjects shall have appropriate experience in aviation and shall, before appointment, give proof of their competency by giving a test lecture based on material they have developed for the subjects they are to teach.
IS 3.2.4 Flight Crew Training Courses
(a) Each applicant for, and holder of, an approved flight crew training course shall include training on the knowledge and flight training subjects that are based on the requirements of Part 2 and are:
   (1) needed to safely exercise the privileges of the licence, rating or authorization for which the course is established; and
   (2) conducted to develop competency, proficiency, resourcefulness, self-confidence and self-reliance in each student.
(b) Each applicant for, and holder of, an approved flight crew training course shall include:
   (1) the knowledge and flight training that is appropriate to the aircraft rating and flight crew licence level for which the course applies; and
   (2) an adequate number of total knowledge and flight training hours appropriate to the aircraft rating and flight crew licence level for which the course applies.
(c) Each person, to graduate from an approved pilot training course shall satisfactorily accomplish the progress checks and skill tests, consisting of the areas of operation that are appropriate to the operating privileges or authorization that graduation from the course will permit.

IS 3.2.7 Aerodromes and Sites
(a) The base aerodrome, and any alternative base aerodrome, at which flying training is being conducted shall have at least the following facilities:
   (1) at least one runway or take-off area that allows training aircraft to make a normal take-off or landing at the maximum take-off or maximum landing mass authorized, and touch down autorotation as appropriate:
      (i) under calm wind (not more than four knots) conditions and temperatures equal to the mean high temperature for the hottest month of the year in the operating area;
      (ii) clearing all obstacles in the take-off flight path by at least 50 feet;
      (iii) with the powerplant operation and the landing gear (if applicable) recommended by the manufacturer; and
      (iv) with a smooth transition from lift-off to the best rate of climb speed without exceptional piloting skills or techniques;
   (2) have a wind direction indicator that is visible at ground level from the ends of each runway;
   (3) have adequate runway electrical lighting if used for night training; and
   (4) have a traffic direction indicator when:
      (i) the airport does not have an operating control tower; and
      (ii) traffic and wind advisories are not available.
(b) Sites shall be available for:
   (1) confined area operation training;
   (2) simulated engine off autorotation;
   (3) sloping ground operation.
IS 3.2.9 APPENDIX A: TRAINING MANUAL
The Training Manual for use at an ATO conducting approved training courses shall include the following:

(a) Chapter 1: The Training Plan:
   (1) The aim of the course: A statement of what the student is expected to do as a result of the training, the level of performance, and the training constraints to be observed.
   (2) Pre-entry requirements: Minimum age, educational requirements (including language), medical requirements.
   (3) Credits for previous experience: To be obtained from the Authority before training begins.
   (4) Training Curricula: The flying curriculum (single-engine), the flying curriculum (multi-engine), the synthetic flight training curriculum and the theoretical knowledge training curriculum.
   (5) The time scale and scale in weeks, for each curriculum: Arrangements of the course and the integration of curricula time.
   (6) Training program: The general arrangements of daily and weekly programs for flying, ground and synthetic flight training. Bad weather constraints. Program constraints in terms of maximum student training times, (flying, theoretical knowledge, synthetic) e.g. per day/week/month. Restrictions in respect of duty periods for students. Duration of dual and solo flights at various stages. Maximum flying hours in any day/night. Maximum number of training flights in any day/night. Minimum rest period between duty period.
   (8) Safety training: Individual responsibilities. Essential exercises. Emergency drills (frequency). Dual checks (frequency at various stages). Requirement before first solo day/night/navigation etc.

(b) Chapter 2: Briefing and Air Exercises
   (1) Air Exercise: A detailed statement of the content specification of all the air exercises to be taught, arranged in the sequence to be flown with main and sub-titles.
   (2) Air exercise reference list: An abbreviated list of the above exercises giving only main and sub-titles for quick reference, and preferably in flip-card form to facilitate daily use by instructors.
   (3) Course structure – Phase of training: A statement of how the course will be divided into phases, indication of how the above air exercises will be divided between the phases and how they will be arranged to ensure that they are completed in the most suitable learning sequence and that essential (emergency) exercises are repeated at the correct frequency. Also, the curriculum hours
for each phase and for groups of exercises within each phase shall be stated and when progress
tests are to be conducted, etc.

(4) Course structure integration of curricula: The manner in which theoretical knowledge, synthetic flight
training and flying training will be integrated so that as the flying training exercises are carried out
students will be able to apply the knowledge gained from the associated theoretical knowledge
instruction and synthetic flight training.

(5) Student progress: The requirement for student progress and include a brief but specific statement of
what a student is expected to be able to do and the standard of proficiency he or she must achieve
before progressing from one phase of air exercise training to the next. Include minimum experience
requirements in terms of hours, satisfactory exercise completion, etc. As necessary before
significant exercises, e.g. night flying.

(6) Instructional methods: The ATO requirements, particularly in respect of pre- and post-flying briefing,
adherence to curricula and training specifications, authorisation of solo flights, etc.

(7) Progress tests: The instructions given to examining staff in respect of the conduct and document of
all progress tests.

(8) Glossary of terms: Definition of significant terms as necessary.

(9) Appendices: Progress test report forms. Skill test report forms. ATO certificates of experience,
competence, etc. as required.

c) Chapter 3: Synthetic flight training: Structure generally as for Chapter 2.

d) Chapter 4: Knowledge instruction: Structure generally as for Chapter 2 with a training specification and
objectives for each subject. Individual lesson plans to include mention of the specific training aids available
for use.

**IS 3.2.9 APPENDIX B: PROCEDURES MANUAL**

The Procedures Manual for use at an ATO conducting approved training courses shall include the following:

(a) Chapter 1: General:

2. Administration (function and management).
3. Responsibilities (all management and administrative staff).
4. Student discipline and disciplinary action.
5. Approval/authorization of flights.
6. Preparation of flying program (restriction of numbers of aircraft in poor weather).
7. Command of aircraft.
9. Carriage of passengers.
10. Aircraft documentation.
11. Retention of documents.
12. Flight crew qualification records (licences and ratings).
13. Revalidation (licences, ratings and medical certificates).
14. Flying duty period and flight time limitations (flying instructors).
15. Flying duty period and flight time limitations (students).
16. Rest periods (flying instructors).
17. Rest periods (students).
(19) Flight planning (general).
(20) Safety (general: equipment, radio listening watch, hazards, accidents and incidents (including reports), safety pilots, etc.

(b) Chapter 2: Technical
(1) Aircraft descriptive notes.
(2) Aircraft handling (including checklists, limitations, aircraft maintenance and technical logs, in accordance with relevant requirements, etc.)
(3) Emergency procedures.
(4) Radio and radio navigation aids.
(5) Allowable deficiencies (based on MMEL, if available).

(c) Chapter 3: Route
(1) Performance (legislation, take-off, route, landing, etc.).
(2) Flight planning (fuel, oil, minimum safe altitude, navigation equipment, etc.)
(3) Loading (loadsheets, mass, balance, limitations).
(4) Weather minima (flying instructors)
(5) Weather minima (students: at various stages of training).
(6) Training routes/areas

(d) Chapter 4: Staff training
(1) Appointments of persons responsible for standards/competence of flying staff.
(2) Initial training.
(3) Refresher training.
(4) Standardization training.
(5) Proficiency checks
(6) Upgrading training.
(7) ATO staff standards evaluation.
IS 3.4.3    AMT AIRFRAME AND/OR POWERPLANT AND/OR AVIONICS RATINGS

Curriculum Requirements

This Implementing Standard defines terms used in Section A, B, C and D of this part, and describes the levels of proficiency at which items under each subject in each curriculum must be taught, as outlined in Sections A, B, C and D.

(a) Definitions. As used in Sections A, B, C and D:
   (1) "Inspect" means to examine by sight and touch.
   (2) "Check" means to verify proper operation.
   (3) "Troubleshoot" means to analyse and identify malfunctions.
   (4) "Service" means to perform functions that assure continued operation.
   (5) "Repair" means to correct a defective condition. Repair of an airframe or powerplant system includes component replacement and adjustment, but not component repair.
   (6) "Overhaul" means to disassemble, inspect, repair as necessary, and check.

(b) Teaching levels.
   (1) Level 1 requires:
      (i) Knowledge of general principles, but no practical application.
      (ii) No development of manipulative skill.
      (iii) Instruction by lecture, demonstration, and discussion.
   (2) Level 2 requires:
      (i) Knowledge of general principles, and limited practical application.
      (ii) Development of sufficient manipulative skill to perform basic operations.
      (iii) Instruction by lecture, demonstration, discussion, and limited practical application.
   (3) Level 3 requires:
      (i) Knowledge of general principles, and performance of a high degree of practical application.
      (ii) Development of sufficient manipulative skills to simulate return to service.
      (iii) Instruction by lecture, demonstration, discussion, and a high degree of practical application.

(c) Teaching materials and equipment.
   (1) The curriculum may be presented utilising currently accepted educational materials and equipment, including, but not limited to: calculators, computers, and audio-visual equipment.
Section A – General Curriculum Subjects

This section lists the subjects required for at least 400 hours of general curriculum subjects. The number in parentheses before each item listed under each subject heading indicates the level of proficiency at which that item shall be taught.

Teaching Level

A. BASIC ELECTRICITY 30 HOURS
(2) 1. Calculate and measure capacitance and inductance.
(2) 2. Calculate and measure electrical power.
(3) 3. Measure voltage, current, resistance, and continuity.
(3) 4. Determine the relationship of voltage, current, and resistance in electrical circuits.
(3) 5. Read and interpret aircraft electrical circuit diagrams, including solid state devices and logic functions.
(3) 6. Inspect and service batteries.

B. AIRCRAFT DRAWINGS 40 HOURS
(2) 7. Use aircraft drawings, symbols, and system schematics.
(3) 8. Draw sketches of repairs and alterations.
(3) 9. Use blueprint information.
(3) 10. Use graphs and charts.

C. MASS AND BALANCE 30 HOURS
(2) 11. Weigh aircraft.
(3) 12. Perform complete weight and balance check and record data.

D. FLUID LINES AND FITTINGS 15 HOURS
(3) 13. Fabricate and install rigid and flexible fluid lines and fittings.

E. MATERIALS AND PROCESSES 50 HOURS
(1) 14. Identify and select appropriate non-destructive testing methods.
(2) 15. Perform dye penetrant, eddy current, ultrasonic, and magnetic particle inspections.
(1) 16. Perform basic heat-treating processes.
(3) 17. Identify and select aircraft hardware and materials.
(3) 18. Inspect and check welds.
(3) 19. Perform precision measurements.

F. GROUND OPERATION AND SERVICING 30 HOURS
(2) 20. Start, ground operate, move, service, and secure aircraft and identify typical ground operation hazards.
(2) 21. Identify and select fuels.

G. CLEANING AND CORROSION CONTROL 30 HOURS
(3) 22. Identify and select cleaning materials.
(3) 23. Inspect, identify, remove, and treat aircraft corrosion and perform aircraft cleaning.
Teaching level

H. MATHEMATICS  75 HOURS
(3)  24. Extract roots and raise numbers to a given power.
(3)  25. Determine areas and volumes of various geometric shapes.
(3)  26. Solve ratio, proportion, and percentage problems.
(3)  27. Perform algebraic operations involving addition, subtraction, multiplication, and division of positive and negative numbers.

I. MAINTENANCE FORMS AND RECORDS  40 HOURS
(3)  28. Write descriptions of work performed including aircraft discrepancies and corrective actions using typical aircraft maintenance records.
(3)  29. Complete required maintenance forms, records, and inspection reports.

J. BASIC PHYSICS  40 HOURS
(2)  30. Use and understand the principles of simple machines; sound, fluid, and heat dynamics; basic aerodynamics; aircraft structures; and theory of flight.

K. MAINTENANCE PUBLICATIONS 50 HOURS
(3)  31. Demonstrate ability to read, comprehend, and apply information contained in CAA and manufacturers' aircraft maintenance specifications, data sheets, manuals, publications, and related Guyana Aviation Requirements (GARs) Airworthiness Directives, and Advisory Circulars.
(3)  32. Read technical data.

L. MECHANIC PRIVILEGES AND LIMITATIONS  20 HOURS
(3)  33. Exercise mechanic privileges within the limitations prescribed by Part 2 of the GARs.
Section B - Airframe Curriculum Subjects

This section lists the subjects required in at least 750 hours of each airframe curriculum, in addition to at least 400 hours in general curriculum subjects. The number in parentheses before each item listed under each subject heading indicates the level of proficiency at which that item must be taught.

I. AIRFRAME STRUCTURES

Teaching level

A. WOOD STRUCTURES 15 HOURS
(1) 1. Service and repair wood structures.
(1) 2. Identify wood defects.
(1) 3. Inspect wood structures.

B. AIRCRAFT COVERING 15 HOURS
(1) 4. Select and apply fabric and fibreglass covering materials.
(1) 5. Inspect, test, and repair fabric and fibreglass.

C. AIRCRAFT FINISHES 30 HOURS
(1) 6. Apply trim, letters, and touch-up paint.
(2) 7. Identify and select aircraft finishing materials.
(2) 8. Apply finishing materials.
(2) 9. Inspect finishes and identify defects.

D. SHEET METAL AND NONMETALLIC STRUCTURES 60 HOURS
(2) 10. Select, install, and remove special fasteners for metallic, bonded, and composite structures.
(2) 11. Inspect bonded structures.
(2) 12. Inspect, test and repair fibreglass, plastics, honeycomb, composite, and laminated primary and secondary structures.
(2) 13. Inspect, check, service, and repair windows, doors, and interior furnishings.
(3) 15. Install conventional rivets.
(3) 16. Form, layout, and bend sheet metal.

E. WELDING 70 HOURS
(1) 17. Weld magnesium and titanium.
(1) 18. Solder stainless steel.
(1) 19. Fabricate tubular structures.
(2) 20. Solder, braze, gas weld, and arc weld steel.
(1) 21. Weld aluminium and stainless steel.
F. ASSEMBLY AND RIGGING 50 HOURS
(1) 22. Rig rotary wing aircraft.
(2) 23. Rig fixed wing aircraft.
(2) 24. Check alignment of structures.
(3) 25. Assemble aircraft components, including flight control surfaces.
(3) 27. Jack aircraft.

G. AIRFRAME INSPECTION 40 HOURS
(3) 28. Perform airframe conformity and airworthiness inspections.

II. AIRFRAME SYSTEMS AND COMPONENTS

A. AIRCRAFT LANDING GEAR SYSTEMS 30 HOURS
(3) 29. Inspect, check, service, and repair landing gear, retraction systems, shock struts, brakes, wheels, tires, and steering systems.

B. HYDRAULIC AND PNEUMATIC POWER SYSTEMS 20 HOURS
(2) 30. Repair hydraulic and pneumatic power systems components.
(3) 31. Identify and select hydraulic fluids.
(3) 32. Inspect, check, service, troubleshoot, and repair hydraulic and pneumatic power systems.

C. CABIN ATMOSPHERE CONTROL SYSTEMS 60 HOURS
(1) 33. Inspect, check, troubleshoot, service, and repair heating, cooling, air conditioning, pressurization systems, and air cycle machines.
(1) 34. Inspect, check, troubleshoot, service, and repair heating, cooling, air conditioning, and pressurization systems.
(2) 35. Inspect, check, troubleshoot, service and repair oxygen systems.

D. AIRCRAFT INSTRUMENT SYSTEMS 20 HOURS
(1) 36. Inspect, check, service, troubleshoot, and repair electronic flight instrument systems and both mechanical and electrical heading, speed, altitude, temperature, pressure, and position indicating systems to include the use of built-in test equipment.
(2) 37. Install instruments and perform a static pressure system leak test.

E. COMMUNICATION AND NAVIGATION SYSTEMS 30 HOURS
(1) 38. Inspect, check, and troubleshoot autopilot, servos, and approach coupling systems.
(1) 39. Inspect, check, and service aircraft electronic communication and navigation systems, including VHF passenger address interphones and static discharge devices, aircraft VOR, ILS, LORAN/GPS, Radar beacon transponders, flight management computers, and GPWS.
(2) 40. Inspect and repair antenna and electronic equipment installations.
F. AIRCRAFT FUEL SYSTEMS       70 HOURS
(1) 41. Check and service fuel dump systems.
(1) 42. Perform fuel management transfer, and De-fuelling.
(1) 43. Inspect, check, and repair pressure-fuelling systems.
(2) 44. Repair aircraft fuel system components.
(2) 45. Inspect and repair fluid quantity indicating systems.
(2) 46. Troubleshoot, service, and repair fluid pressure and temperature warning systems.
(3) 47. Inspect, check, service, troubleshoot, and repair aircraft fuel systems.

G. AIRCRAFT ELECTRICAL SYSTEMS         50 HOURS
(2) 48. Repair and inspect aircraft electrical system components; crimp and splice wiring to manufactures’ specifications, and repair pins and sockets of aircraft connectors.
(3) 49. Install, check, and service airframe electrical wiring, controls, switches, indicators, and protective devices.
(3) 50.a. Inspect, check, troubleshoot, service, and repair alternating and direct current electrical systems.
(1) 50.b. Inspect, check, and troubleshoot constant speed and integrated speed drive generators.

H. POSITION AND WARNING SYSTEMS       50 HOURS
(2) 51. Inspect, check, and service speed and configuration warning systems, electrical brake controls, and antiskid systems.
(3) 52. Inspect, check, troubleshoot and service landing gear position indicating and warning systems.

I. ICE AND RAIN CONTROL SYSTEMS       40 HOURS
(2) 53. Inspect, check, troubleshoot, service, and repair airframe ice and rain control systems.

J. FIRE PROTECTION SYSTEMS          70 HOURS
(1) 54. Inspect, check, and service smoke and carbon monoxide detection systems.
(3) 55. Inspect, check, service, troubleshoot, and repair aircraft fire detection and extinguishing systems.
Section C - Powerplant Curriculum Subjects

This section lists the subjects required in at least 750 hours of each powerplant curriculum, in addition to at least 400 hours in general curriculum subjects.

The number in parentheses before each item listed under each subject heading indicates the level of proficiency at which that item must be taught.

I. POWERPLANT THEORY AND MAINTENANCE

Teaching level

A. RECIPROCATING ENGINES  80 HOURS
(1)  1. Inspect and repair a radial engine.
(2)  2. Overhaul reciprocating engine.
(3)  3. Inspect, check, service, and repair reciprocating engines and engine installations.
(3)  4. Install, troubleshoot, and remove reciprocating engines.

B. TURBINE ENGINES  80 HOURS
(2)  5. Overhaul turbine engine.
(3)  6. Inspect, check, service, and repair turbine engines and turbine engine installations.
(3)  7. Install, troubleshoot, and remove turbine engines.

C. ENGINE INSPECTION  80 HOURS
(3)  8. Perform powerplant conformity and airworthiness inspections.

II. POWERPLANT SYSTEMS AND COMPONENTS

Teaching level

A. ENGINE INSTRUMENT SYSTEMS  50 HOURS
(2)  9. Troubleshoot, service, and repair electrical and mechanical fluid rate-of-flow indicating systems.
(3)  10. Inspect, check, service, troubleshoot, and repair electrical and mechanical engine temperature, pressure, and rpm indicating systems.

B. ENGINE FIRE PROTECTION SYSTEMS  40 HOURS
(3)  11. Inspect, check, service, troubleshoot, and repair engine fire detection and extinguishing systems.
C. ENGINE ELECTRICAL SYSTEMS 30 HOURS
(2) 12. Repair engine electrical system components.
(3) 13. Install, check, and service engine electrical wiring, controls, switches, indicators, and protective devices.

D. LUBRICATION SYSTEMS 30 HOURS
(2) 14. Identify and select lubricants.
(2) 15. Repair engine lubrication system components.
(3) 16. Inspect, check, service, troubleshoot, and repair engine lubrication systems.

E. IGNITION AND STARTING SYSTEMS 50 HOURS
(2) 17. Overhaul magneto and ignition harness.
(2) 18. Inspect, service, troubleshoot, and repair reciprocating and turbine engine ignition systems and components.
(3) 19.a. Inspect, service, troubleshoot, and repair turbine engine electrical starting systems.
(1) 19.b. Inspect, service, and troubleshoot turbine engine pneumatic starting systems.

F. FUEL METERING SYSTEMS 60 HOURS
(1) 20. Troubleshoot and adjust turbine engine fuel metering systems and electronic engine fuel controls.
(2) 21. Overhaul carburettor.
(2) 22. Repair engine fuel metering system components.
(3) 23. Inspect, check, service, troubleshoot, and repair reciprocating and turbine engine fuel metering systems.

G. ENGINE FUEL SYSTEMS 30 HOURS
(2) 24. Repair engine fuel system components.
(3) 25. Inspect, check, service, troubleshoot, and repair engine fuel systems.

H. INDUCTION AND ENGINE AIRFLOW SYSTEMS 40 HOURS
(2) 26. Inspect, check, troubleshoot, service, and repair engine ice and rain control systems.
(1) 27. Inspect, check, service, troubleshoot and repair heat exchangers, superchargers, and turbine engine airflow and temperature control systems.
(3) 28. Inspect, check, service, and repair carburettor air intake and induction manifolds.

I. ENGINE COOLING SYSTEMS 30 HOURS
(2) 29. Repair engine cooling system components.
(3) 30. Inspect, check, troubleshoot, service, and repair engine-cooling systems.

J. ENGINE EXHAUST AND REVERSER SYSTEMS 40 HOURS
Teaching level
(2) 31. Repair engine exhaust system components.
(3) 32.a. Inspect, check, troubleshoot, service, and repair engine exhaust systems.
(1) 32.b. Troubleshoot and repair engine thrust reverser systems and related components.
K. PROPELLERS 60 HOURS
(1) 33. Inspect, check, service, and repair propeller synchronizing and ice control systems.
(2) 34. Identify and select propeller lubricants.
(1) 35. Balance propellers.
(2) 36. Repair propeller control system components.
(3) 37. Inspect, check, service, and repair fixed pitch, constant speed, and feathering propellers, and propeller governing systems.
(3) 38. Install, troubleshoot, and remove propellers.
(3) 39. Repair aluminium alloy propeller blades.

L. UNDUCTED FANS 40 HOURS
(1) 40. Inspect and troubleshoot unducted fan systems and components.

M. AUXILIARY POWER UNITS 40 HOURS
(1) 41. Inspect, check, service, and troubleshoot turbine driven auxiliary power units.

FAA Advisory Circular 147
Section D - Avionics Curriculum Subjects

This section lists the subjects required in at least 750 hours of each avionics curriculum, in addition to at least 400 hours in general curriculum subjects. The number in parentheses before each item listed under each subject heading indicates the level of proficiency at which that item must be taught.

I. AVIONICS THEORY AND MAINTENANCE COURSE

A. AIRCRAFT INSTRUMENTS 20 HOURS
   (3) 1. Aircraft instruments test and repair electrical flight instruments.
   (3) 2. Inspect altitude indicating and reporting equipment.
   (3) 3. Test aircraft systems utilizing built-in test equipment.

B. COMMUNICATION AND NAVIGATION 20 HOURS
   (3) 4. Test aircraft antenna systems.
   (3) 5. Install systems and components.
   (3) 6. Test, inspect, and repair autopilot systems.

C. AIRCRAFT ELECTRICAL SYSTEMS 20 HOURS
   (3) 4. Inspect, test and repair electrical cables.
   (3) 5. Inspect and repair electrical generating system components.

D. AIRCRAFT DIGITAL COMPUTER SYSTEMS 20 HOURS
   Teaching Level
   (3) 4. Test and repair digital systems and components.
   (3) 5. Test and troubleshoot computer systems.

II. AVIONICS SYSTEMS AND COMPONENTS COURSE

A. AIRCRAFT INSTRUMENT SYSTEMS 150 HOURS
   (1) 1. Inspect, check, service, troubleshoot, and repair electronic flight instrument systems and both mechanical and electrical heading, speed, altitude, temperature, pressure, and position indicating systems to include the use of built-in test equipment.
(3) 2. Install instruments and perform a static pressure system leak test.

B. COMMUNICATION AND NAVIGATION SYSTEMS   150 HOURS
(2)  3. Inspect, check, and troubleshoot autopilot, servos and approach coupling systems.
(3)  4. Inspect, check, and service aircraft electronic communication and navigation systems, including VHF passenger address interphones, audio control devices and static discharge devices, aircraft VOR, ILS, LORAN, GPS, Radar beacon transponders, flight management computers, and GPWS. Inspect, test, troubleshoot and repair INS, IRS and other forms of inertial navigation devices and systems.
(2)  5. Inspect and repair antenna and electronic equipment installations.

C. AIRCRAFT ELECTRICAL SYSTEMS   150 HOURS
(3)  6. Repair and inspect aircraft electrical system components, cable routing and security; crimp and splice wiring to manufacturers' specifications; and repair pins and sockets of aircraft connectors.
(3)  7. Install, check, test, and service airframe electrical wiring, controls, switches, indicators, and protective devices.
(3)  8. Inspect, check, troubleshoot, service, and repair alternating and direct current electrical systems and components.
(1)  9. Inspect, check, and troubleshoot constant speed and integrated speed drive generators.
(3) 10. Install, check, and service engine electrical wiring controls, switches, indicators, and protective devices.

D. AIRCRAFT DIGITAL COMPUTER SYSTEMS   220 HOURS
(2) 11. Install, inspect, test and repair digital systems and equipment, indicating, and switching systems and components. Install, test, inspect, repair onboard-integrated EFIS systems, entertainment systems and components, and logic and control components.
GUYANA

CIVIL AVIATION REGULATIONS

PART 4 - AIRCRAFT REGISTRATION AND MARKING
PART 4 – AIRCRAFT REGISTRATION AND MARKING

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4.1 GENERAL

4.1.1.1 APPLICABILITY
Part 4 prescribes the requirements for registration and marking of Civil Aircraft under the provisions of the Guyana Civil Aviation (Air Navigation) Regulations.

4.1.1.2 DEFINITIONS
(a) For the purpose of Part 4, the following definitions shall apply:
   (1) Fireproof material. A material capable of withstanding heat as well as or better than steel when the dimensions in both cases are appropriate for the specific purpose.
   (2) Glider. A non-power-driven heavier-than-air aircraft, deriving its lift in flight chiefly from aerodynamic reactions on surfaces which remain fixed under given conditions of flight.
   (3) Heavier-than-air aircraft. Any aircraft deriving its lift in flight chiefly from aerodynamic forces.
   (4) Lighter-than-air aircraft. Any aircraft supported chiefly by its buoyancy in the air.
   (5) State of Registry. The State on whose register the aircraft is entered.

4.1.1.3 ACRONYMS
(a) The following acronyms are used in Part 4:
   (1) ADIZ - Air Defence Identification Zone
   (2) DEWIZ - Distant Early Warning Identification Zone
4.2 REGISTRATION REQUIREMENTS

4.2.1.1 GENERAL

No person may operate a civil aircraft that is eligible for registration under the laws of Guyana] unless it has been registered by its owner under the provisions of the laws of Guyana] and the Authority has issued a Certificate of Aircraft Registration for that aircraft which shall be carried aboard that aircraft for all operations.

4.2.1.2 REGISTRATION ELIGIBILITY

(a) An aircraft is eligible for registration if it is—
   (1) Owned by a natural citizen, an individual citizen of a foreign State who is lawfully admitted for permanent residence in Guyana], a corporation lawfully organized and doing business under the laws of Guyana], or a government entity of Guyana]; and
   (2) Not registered under the laws of any foreign country.

4.2.1.3 APPLICATION

(a) A person who wishes to register an aircraft in Guyana] must submit an application for aircraft registration to the Director of the Registry in a form and manner acceptable to the Authority. Each application shall—
   (1) Certify as to citizenship as defined under 4.2.1.2;
   (2) Show evidence identifying ownership; and
   (3) Be signed in ink.

(b) The fee provided for by law will be submitted with the application for aircraft registration to the Director of the Registry.

(c) Upon an applicant meeting all requirements for registration, a Certificate of Aircraft Registration will be issued by the Director of the Registry.
4.3 NATIONALITY AND REGISTRATION MARKS

4.3.1.1 APPLICABILITY

4.3.1.2 GENERAL

(a) No person may operate a civil aircraft registered in Guyana] unless it displays nationality and registration marks in accordance with the requirements of this section. The letter or letters used to identify the nationality of Guyana] shall conform to the requirements outlined in ICAO Annex 7. This is to be followed by a series of numbers or letters assigned by the Director of the Registry.

(b) Unless otherwise authorized by the Authority, no person may place on any aircraft a design, mark, or symbol that modifies or confuses the nationality and registration marks. The marks shall not be confused with the International Five Letter Code of Signals or Distress Codes.

(c) Permanent marking of aircraft nationality and registration shall—
   (1) Be painted on the aircraft or affixed by other means insuring a similar degree of permanence;
   (2) Have no ornamentation;
   (3) Contrast in colour with the background; and
   (4) Be legible.

4.3.1.3 DISPLAY OF MARKS: GENERAL

(a) Each owner shall display on that aircraft marks consisting of the Roman capital letter denoting nationality of Guyana] followed by the registration number of the aircraft in Arabic numerals. Each suffix letter used in the marks displayed must also be a Roman capital letter.

(b) If, because of the aircraft configuration, it is not possible to mark the aircraft in accordance with this Part, the owner may apply to the Authority for a different procedure.

4.3.1.4 SIZE OF MARKS

(a) Each operator of an aircraft shall display marks on the aircraft meeting the size requirements of this section.

(b) Height. The character marks shall be of equal height and on—
   (1) Fixed-wing aircraft must be at least 30 centimeters high;
   (2) Rotorcraft must be at least 30 centimeters high; and
   (3) Lighter-than-air and powered-lift aircraft at least 50 centimeters high.

(c) Width. Characters must be two-thirds as wide as they are high, except the number "1", which must be one-sixth as wide as it is high, and the letters "M" and "W" which may be as wide as they are high.

(d) Thickness. Characters shall be formed by solid lines one-sixth as thick as the character is high.

(e) Spacing. The space between each character may not be less than one-fourth of the character width.

(f) Uniformity. The marks required by this Part for fixed-wing aircraft must have the same height, width, thickness, and spacing on both sides of the aircraft.

(g) Each operator of an aircraft penetrating an ADIZ or DEWIZ shall display on that aircraft temporary or permanent nationality and registration marks at least 30 centimeters high.
4.3.1.5 **DEVIATIONS FOR SIZE AND LOCATION OF MARKS**

(a) If either one of the surfaces authorized for displaying required marks is large enough for display of marks meeting the size requirements of this section and the other is not, the operator shall place full-size marks on the larger surface.

(b) If neither surface is large enough for full-size marks, the Authority may approve marks as large as practicable for display on the larger of the two surfaces.

4.3.1.6 **LOCATION OF MARKS ON FIXED-WING AIRCRAFT**

(a) The operator of a fixed-wing aircraft shall display the required marks on either the vertical tail surfaces or the sides of the fuselage.

(b) The marks required by paragraph (a) of this section shall be displayed as follows:

1. If displayed on the vertical tail surfaces, horizontally on both surfaces, horizontally on both surfaces of a single vertical tail or on the outer surfaces of a multi-vertical tail.

2. If displayed on the fuselage surfaces, horizontally on both sides of the fuselage between the trailing edge of the wing and the leading edge of the horizontal stabilizer.

3. If engine pods or other appurtenances are located in the area described in paragraph (b)(2) and are an integral part of the aircraft, the operator may place the marks on those pods or appurtenances.

4.3.1.7 **LOCATION OF MARKS ON ROTORCRAFT**

Each operator of a rotorcraft shall display marks horizontally on both surfaces of the cabin, fuselage, boom, or tail, such that the rotorcraft can be readily identified.

4.3.1.8 **LOCATION OF MARKS ON LIGHTER-THAN-AIR AIRCRAFT**

(a) **Airships.** The operator shall place marks on an airship to appear on—

1. The hull, located lengthwise on each side of the hull and on its upper surface on the line of symmetry; or

2. The horizontal and vertical stabilizers surfaces—

   (i) For the horizontal stabilizer, located on the right half of the upper surface and on the left half of the lower surface, with the tops of the letters and numbers toward the leading edge; and

   (ii) For the vertical stabilizer, located on each side of the bottom half stabilizer, with the letters and numbers placed horizontally.

(b) **Spherical balloons (other than unmanned free balloons).** The operator shall apply marks to appear in two places diametrically opposite each other and located near the maximum horizontal circumference of the balloon.

(c) **Non-spherical balloons (other than unmanned free balloons).** The operator shall apply marks to appear on each side, located near the maximum cross-section of the balloon immediately above either the rigging band or the points of attachment of the basket suspension cables.

(d) **Lighter-than-air aircraft (other than unmanned free balloons).** The operator shall apply side marks to be visible both from the sides and from the ground.
(e) *Unmanned free balloons.* The operator shall apply marks to appear on the identification plate.

### 4.3.1.9 Sale of Aircraft: Removal of Marks

When an aircraft that is registered in Guyana is sold, the holder of the Certificate of Aircraft Registration shall remove, before its delivery to the purchaser, all nationality and registration marks of Guyana, unless the purchaser is a citizen or other legal entity as prescribed in 4.2.1.2(a)(1).

### 4.3.1.10 Identification Plate Required

(a) The operator shall affix to each aircraft registered under the laws of Guyana an identification plate—

1. Containing the aircraft type, model, serial number, marks of nationality, and license;
2. Made of fireproof metal or other fireproof material of suitable physical properties;
3. Secured to the aircraft in a prominent position, near the main entrance, or, in the case of a free balloon, affixed conspicuously to the exterior of the payload.
## PART 5 AIRWORTHINESS

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5.1 GENERAL

5.1.1 APPLICABILITY

(a) This regulation prescribes the requirements for—

1. Certification of aircraft and aeronautical components;
2. Issuance of Airworthiness Certificates and other certifications for aeronautical products;
3. Continued airworthiness of aircraft and aeronautical components;
4. Rebuilding, modifications and repairs of aircraft and aeronautical components;
5. Maintenance and preventive maintenance of aircraft and aeronautical components;
6. Aircraft inspection requirements; and
7. Air operator aircraft maintenance and inspection requirements.

5.1.2 DEFINITIONS

(a) For the purpose of Part 5, the following definitions shall apply—

5. Overhaul. The restoration of an aircraft/aeronautical product using methods, techniques, and practices acceptable to the Authority, including disassembly, cleaning, and inspection as permitted, repair as necessary, and reassembly; and tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the State of Design, holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance approval under Parts Manufacturing Authorisation (PMA) or Technical Standard Order (TSO).
6. Rebuild. The restoration of an aircraft/aeronautical product by using methods, techniques, and practices acceptable to the Authority, when it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits. This work will be performed by only the manufacturer or an organisation approved by the manufacturer, and authorised by the State of Registry.
7. Required inspection items. Maintenance items and/or alterations that must be inspected by a person other than the one performing the work, and include at least those that could result in a failure, malfunction, or defect endangering the safe operation of the aircraft, if not properly performed or if improper parts or materials are used.
8. State of Design. The Contracting State which approved the original type certificate and any subsequent supplemental type certificates for an aircraft, or which approved the design of an aeronautical product or appliance.
9. State of Manufacture. The Contracting State, under whose authority an aircraft was assembled, approved for compliance with the type certificate and all extant supplemental type certificates, test flown and approved for operation. The state of manufacture may or may not also be the state of design.
10. State of Registry. The Contracting State on whose register the aircraft is entered.
5.1.3 **ACRONYMS**

(b) The following acronyms are used in Part 5:

1. **AOC** – Air Operator Certificate (Civil Aviation Law)
2. **AMO** – Approved Maintenance Organisation (Part 1)
3. **MEL** – Minimum Equipment List (Part 1)
4. **PIC** – Pilot in command (Part 1)
5. **TSO** – Technical Standard Order
6. **PMA** – Parts Maintenance Approval
5.2 AIRCRAFT AND COMPONENT ORIGINAL CERTIFICATION

5.2.1 APPLICABILITY

(a) This Subpart describes the procedures and designation of applicable rules for original certification of aircraft and related aeronautical products.

(b) The Guyana Civil Aviation Authority does not grant type certificates but accept type certificates issued by the United States of America Federal Aviation Administration (US FAA), United Kingdom Civil Aviation Authority (UK CAA), European Joint Aviation Authority (JAA), European Aviation Safety Agency (EASA) or Department of Transport Canada (DOT) in accordance with their respective detailed and comprehensive airworthiness codes.

(c) Acceptance of type certificates issued by other Civil Aviation Authorities will be considered on a case by case basis.

(d) The Authority will hold this Subpart reserved until such time as it has received an application for Type Certificates, Production Certificates or other related approvals.

(e) Any applicant for a production certificate for any aircraft or aeronautical product thereof for manufacture in Guyana shall comply with the type certificate as required by the State of Design for approval.

(f) At such time as the application for production is presented the Authority will make available suitable regulations or provisions for the issuance of an airworthiness certificate, or airworthiness document as appropriate for the product concerned.
5.3 SUPPLEMENTAL TYPE CERTIFICATES

5.3.1 APPLICABILITY
This Subpart prescribes procedural requirements for the issue of supplemental type certificates.

5.3.2 ISSUANCE AND ACCEPTANCE OF A SUPPLEMENTAL TYPE CERTIFICATE
Any person who alters a product by introducing a major change in type design, not great enough to require a new application for a type certificate, shall apply for a Supplemental Type Certificate (STC) to the regulatory agency of the State of Design that approved the type certificate for that product, or to the State of Registry of the aircraft. The applicant shall apply in accordance with the procedures prescribed by that State for acceptance of and STC.
5.4 AIRWORTHINESS CERTIFICATES

5.4.1 APPLICABILITY
This Subpart prescribes procedures required for the issue of airworthiness certificates.

5.4.2 ELIGIBILITY
(a) Any registered owner of Guyana registered aircraft, or agent of the owner, may apply for an airworthiness certificate for that aircraft.
(b) Each applicant for an airworthiness certificate shall apply in a form and manner acceptable to the Authority.

5.4.3 CLASSIFICATIONS OF AIRWORTHINESS CERTIFICATES
(a) Standard Airworthiness Certificates will be issued for aircraft in the specific category and model designated by the State of Design in the type certificate.
(b) The Authority may issue a Special Airworthiness Certificate in the form of a restricted certificate or special flight permit.

5.4.4 AMENDMENT OF AIRWORTHINESS CERTIFICATE
(a) The Authority may amend or modify an Airworthiness Certificate:
   (1) Upon application from an operator.
   (2) On its own initiative.

5.4.5 TRANSFER OF AIRWORTHINESS CERTIFICATE
(a) An owner shall transfer an Airworthiness Certificate—
   (1) To the lessee upon lease of an aircraft within or outside Guyana.
   (2) To the buyer upon sale of the aircraft.

5.4.6 EFFECTIVE DATES OF AIRWORTHINESS CERTIFICATE
(a) Airworthiness Certificates are effective as follows unless sooner surrendered, suspended or revoked, or a special termination date is otherwise established by the Authority—
   (1) A special flight permit is valid for the period of time specified in the permit.
   (2) A Certificate of Airworthiness shall be renewed annually.
(b) When an aircraft imported for registration in Guyana has a Certificate of Airworthiness issued by another Contracting State, Guyana may, as an alternative to issuance of its own Certificate of Airworthiness, establish validity by suitable authorisation to be carried with the former Certificate of Airworthiness accepting it as the equivalent of a Certificate of Airworthiness issued by Guyana. The validity of the authorisation shall not extend beyond the period of validity of the Certificate of Airworthiness or one year, whichever is less.
5.3.7 **AIRCRAFT IDENTIFICATION**
Each applicant for an airworthiness certificate shall show that the aircraft is properly registered and marked, including identification plates.

5.4.8 **ISSUE OF STANDARD AIRWORTHINESS CERTIFICATES**
The Authority will issue a Standard Airworthiness certificate if—
1. The applicant presents evidence to the Authority that the aircraft conforms to a type design approved under a type certificate, or a supplemental type certificate and to the applicable Airworthiness Directives of the State of Manufacture;
2. The aircraft has been inspected in accordance with the performance rules of this regulation for inspections and found airworthy by persons authorised by the Authority to make such determinations within the last 30 calendar days; and
3. The Authority finds after an inspection that the aircraft conforms to type design and is in condition for safe operation.

5.4.9 **AIRWORTHINESS DIRECTIVES**
(a) Upon registration of an aircraft in Guyana, the Authority will notify the State of Design of the aircraft of the registration in Guyana, and request that the Authority receives any and all airworthiness directives addressing that aircraft, airframe, aircraft engine, propeller, appliance, or component part.
(b) Whenever the State of Design considers that a condition in an aircraft, airframe, aircraft engine, propeller, appliance, or component part is unsafe as shown by the issuance of an airworthiness directive by that State, the owner or operator of a Guyana Registered Aircraft shall comply with the requirements of such directives apply to Guyana registered civil aircraft of the type identified in that airworthiness directive.
(c) The Authority may identify manufacturer’s service bulletins and other sources of data, or develop and prescribe inspections, procedures and limitations, for mandatory compliance pertaining to affected aircraft in Guyana.
(d) No person may operate any Guyana registered civil aircraft to which the measures of this subsection apply, except in accordance with the applicable directives.

5.4.10 **COMMERCIAL AIR TRANSPORT**
The Authority will consider an airworthiness certificate valid for commercial air transport only when accompanied by an evaluation form issued by the Authority which identifies the specific types of commercial air transport authorised.
5.4.11 ISSUE OF SPECIAL AIRWORTHINESS CERTIFICATES

(a) The Authority may issue a Special Airworthiness Certificate to the aircraft that does not qualify for a Standard Certificate.

(b) Aircraft holding Special Airworthiness Certificates shall be subject to operating limitations within Guyana and may not make international flights. The Authority shall issue specific operating limitations for each Special Airworthiness Certificate.

(c) The Authority may issue Special Flight Permits to an aircraft that is capable of safe flight, but unable to meet applicable airworthiness requirements, for the purpose of—

(1) Flying to a base where repairs, modifications, maintenance, or inspections are to be performed, or to a point of storage;

(2) Testing after repairs, modifications, or maintenance have been performed;

(3) Delivering or exporting the aircraft;

(4) Evacuating aircraft from areas of impending danger; and

(5) Operating at weight in excess of the aircraft's maximum Certified Takeoff Weight for flight beyond normal range over water or land areas where adequate landing facilities or appropriate fuel is not available. The excess weight is limited to additional fuel, fuel-carrying facilities, and navigation equipment necessary for the flight.

(d) The Authority may issue a special flight permit with continuing authorisation issued to an aircraft that may not meet applicable airworthiness requirements but are capable of safe flight, for the purpose of flying aircraft to a base where maintenance or alterations are to be performed. The permit issued under this paragraph is an authorisation, including conditions and limitations for flight, which is set forth in the AOC Holder's specific operating provisions. This permit under this paragraph may be issued to an AOC Holder certificated under Part 9.

(e) In the case of Special Flight Permits, the Authority shall require a properly executed maintenance endorsement in the aircraft permanent record by a person or organisation, authorised in accordance to Part 5, stating that the subject aircraft has been inspected and found to be safe for the intended flight.

(f) The operator shall obtain all required overflight authorisations from countries to be overflown on flights outside Guyana.
5.5 CONTINUED AIRWORTHINESS OF AIRCRAFT AND COMPONENTS

5.5.1 APPLICABILITY

This Subpart prescribes rules governing the continued airworthiness of civil aircraft registered in Guyana whether operating inside or outside the borders of Guyana.

5.5.2 RESPONSIBILITY

The owner of an aircraft or, in the case of a leased aircraft, the lessee, shall be responsible for maintaining the aircraft in an airworthy condition by ensuring that—

1. All maintenance, overhaul, modifications and repairs which affect airworthiness are performed as prescribed by the Authority;
2. Maintenance personnel make appropriate entries in the aircraft maintenance records certifying that the aircraft is airworthy;
3. The approval for return to service (maintenance release) is completed to the effect that the maintenance work performed has been completed satisfactorily and in accordance with the prescribed methods; and
4. In the event there are open discrepancies, the maintenance release includes a list of the uncorrected maintenance items and these items are made a part of the aircraft permanent record.

5.5.3 GENERAL

(a) No person may perform maintenance, preventive maintenance, or modifications on an aircraft other than as prescribed in this regulation.

(b) No person may operate an aircraft for which a manufacturer’s maintenance manual or instructions for continued airworthiness has been issued that contains an airworthiness limitation section unless the mandatory replacement times, inspection intervals, and related procedures specified in that section or alternative inspection intervals and related procedures set forth in the specific operating provisions approved under part 9, or in accordance with the inspection program approved under Part 8 have been complied with.

(c) No person may operate an aeronautical product to which an Airworthiness Directive applies, issued either by the State of Design or State of Manufacture and adopted for Guyana-registered aircraft by the Authority, or by the State of Registry for aircraft operated within Guyana, except in accordance with the requirements of that Airworthiness Directive.

(d) When the Authority determines that an airframe or aeronautical product has exhibited an unsafe condition and that condition is likely to exist or to develop in other products of the same type design, the Authority may issue an Airworthiness Directive prescribing inspections and the conditions and limitations, if any, under which those products may continue to be operating.
5.5.4 Reporting of Failures, Malfunctions, and Defects (Mandatory Occurrence Report)

(a) Owners or operators of aircraft over 5,700 kg maximum take-off weight shall report to the Authority any failures, malfunctions, or defects that result in at least the following—

1. Fires during flight and whether the related fire-warning system properly operated;
2. Fires during flight not protected by a related fire-warning system;
3. False fire warning during flight;
4. An engine exhaust system that causes damage during flight to the engine, adjacent structure, equipment, or components;
5. An aircraft component that causes accumulation or circulation of smoke, vapour, or toxic or noxious fumes in the crew compartment or passenger cabin during flight;
6. Engine shutdown during flight because of flameout;
7. Engine shutdown during flight when external damage to the engine or aircraft structure occurs;
8. Engine shutdown during flight due to foreign object ingestion or icing;
9. Shutdown during flight of more than one engine;
10. A propeller feathering system or ability of the system to control overspeed during flight;
11. A fuel or fuel-dumping system that affects fuel flow or causes hazardous leakage during flight;
12. An unintended landing gear extension or retraction, or opening or closing of landing gear doors during flight;
13. Brake system components that result in loss of brake actuating force when the aircraft is in motion on the ground;
14. Aircraft structure that requires major repair;
15. Cracks, permanent deformation, or corrosion of aircraft structure, if more than the maximum acceptable to the manufacturer or the Authority;
16. Aircraft components or systems malfunctions that result in taking emergency actions during flight (except action to shut down an engine);
17. Each interruption to a flight, unscheduled change of aircraft en route, or unscheduled stop or diversion from a route, caused by known or suspected technical difficulties or malfunctions;
18. Any abnormal vibration or buffeting caused by a structural or system malfunction, defect, or failure;
19. A failure or malfunction of more than one attitude, airspeed, or altitude instrument during a given operation of the aircraft.
20. The number of engines removed prematurely because of malfunction, failure or defect, listed by make and model and the aircraft type in which it was installed; or
21. The number of propeller featherings in flight, listed by type of propeller and engine and aircraft on which it was installed.
(b) Each report required by this Subsection shall—

(1) Be made within 3 days (72 hours) after determining that the failure, malfunction, or defect required to be reported has occurred; and

(2) Include as much of the following information as is available and applicable—

(i) Aircraft serial number;

(ii) When the failure, malfunction, or defect is associated with an article approved under a TSO authorisation, the article serial number and model designation, as appropriate;

(iii) When the failure, malfunction or defect is associated with an engine or propeller, the engine or propeller serial number, as appropriate;

(iv) Product model;

(v) Identification of the part, component, or system involved, including the part number; and

(vi) Nature of the failure, malfunction, or defect.

(c) The Authority, if the State of Registry of the aircraft, will submit all such reports upon receipt to the State of Design.

(d) The Authority, if not the State of Registry of the aircraft, will submit all such reports upon receipt to the State of Registry.
5.6 AIRCRAFT MAINTENANCE AND INSPECTION

5.6.1 APPLICABILITY

This Subpart prescribes rules governing the maintenance and inspection of any aircraft having a Guyana Airworthiness Certificate or associated aeronautical products.

5.6.2 PERSONS AUTHORISED TO PERFORM MAINTENANCE, PREVENTIVE MAINTENANCE, AND MODIFICATIONS

(a) The persons authorised to perform maintenance subject to this Subpart include—

(1) A pilot licensed by the Authority;
(2) A person performing maintenance under the supervision of a Licenced Aircraft Maintenance Engineer;
(3) A aviation maintenance technician;
(4) An AOC holder, approved to perform maintenance under an equivalent system; and
(5) An AMO.

(b) This Subpart outlines the privileges and limitations of these entities with respect to the extent and type of work they may perform regarding—

(1) Maintenance,
(2) Preventive Maintenance,
(3) Modification,
(4) Inspection, and
(5) Approvals for return to service.

5.6.3 PERSONS AUTHORISED TO PERFORM MAINTENANCE

(a) No person may perform any task defined as maintenance on an aircraft or aeronautical products, except as provided in the following—

(1) A pilot licensed by the Authority may perform preventive maintenance on any aircraft owned or operated by that pilot so long as the aircraft is not listed for use by an AOC holder.
(2) A person working under the supervision of a Licenced Aircraft Maintenance Engineer, may perform the maintenance, preventive maintenance, and modifications that the supervisory aviation maintenance technician is authorised to perform—
   (i) If the supervisor personally observes the work being done to the extent necessary to ensure that it is being done properly, and
   (ii) If the supervisor is readily available, in person, for consultation.
(3) A licensed Licenced Aircraft Maintenance Engineer may perform or supervise the maintenance or modification of an aircraft or aeronautical product for which he or she is rated subject to the limitation of Part 2, Section 2.4.4 of these regulations.
(4) An AMO may perform aircraft maintenance within the limits specified by the Authority.
(5) The AOC holder may perform aircraft maintenance as specified by the Authority.
(6) A manufacturer holding an AMO may—
   (i) Rebuild or alter any aeronautical product manufactured by that manufacturer under a type or production certificate;
(ii) Rebuild or alter any aeronautical product manufactured by that manufacturer under a TSO Authorisation, a Parts Manufacturer Approval by the State of Design, or Product and Process Specification issued by the State of Design; and
(iii) Perform any inspection required by Part 8 on aircraft it manufacturers, while currently operating under a production certificate or under a currently approved production inspection system for such aircraft.

5.6.4 AUTHORISED PERSONNEL TO APPROVE FOR RETURN TO SERVICE
(a) No person or entity, other than the Authority, may approve an aircraft, airframe, aircraft engine, propeller, appliance, or component part for return to service after it has undergone maintenance, preventive maintenance, rebuilding, or modification, except as provided in the following:
   (1) A pilot licensed by the Authority may return his or her aircraft to service after performing authorised preventive maintenance.
   (2) A licensed Licenced Aircraft Maintenance Engineer may approve aircraft and aeronautical products for return to service after he or she has performed, supervised, or inspected its maintenance subject to the limitation of Part 2, Section 2.4.4 of these regulations.
   (3) An AMO may approve aircraft and aeronautical products for return to service as provided in the specifications approved by the Authority.
   (4) An AOC holder may approve aircraft and aeronautical products for return to service as specified by the Authority.

5.6.5 PERSONS AUTHORISED TO PERFORM INSPECTIONS
(a) No person, other than the Authority, may perform the inspections required by 8.2.1.7 for aircraft and aeronautical products prior to or after it has undergone maintenance, preventive maintenance, rebuilding, or modification, except as provided in the following:
   (1) An Licenced Aircraft Maintenance Engineer may conduct the required inspections of aircraft and aeronautical products for which he or she is rated and current.
   (2) An AMO may perform the required inspections of aircraft and aeronautical products as provided in the specifications approved by the Authority.
   (3) An AOC holder may perform the required inspections of aircraft and aeronautical products in accordance with specifications issued by the Authority.

5.6.6 PERFORMANCE RULES: MAINTENANCE
(a) Each person performing maintenance, preventive maintenance, or modification on an aeronautical product shall use the methods, techniques, and practices prescribed in—
   (1) The current manufacturer's maintenance manual or instructions for Continued Airworthiness prepared by its manufacturer; and
   (2) Additional methods, techniques and practices required by the Authority; or methods, techniques and practices designated by the Authority where the manufacturer's documents were not available.
(b) Each person shall use the tools, equipment, and test apparatus necessary to assure completion of the work in accordance with accepted industry practices. If the manufacturer involved recommends special equipment or test apparatus, the person performing maintenance shall use that equipment or apparatus or its equivalent acceptable to the Authority.
(c) Each person performing maintenance, preventive maintenance, or modification on an aeronautical product shall do that work in such a manner, and use materials of such a quality, that the condition of the aeronautical product worked on will be at least equal to its original or properly altered condition with
regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness.

(d) The methods, techniques, and practices contained in an AOC holder’s maintenance control manual and continuous maintenance program, as approved by the Authority, will constitute an acceptable means of compliance with the requirements of this subsection.

5.6.7 PERFORMANCE RULES: INSPECTIONS

(a) General. Each person performing an inspection required by the Authority shall—

(1) Perform the inspection so as to determine whether the aircraft, or portion(s) thereof under inspection, meets all applicable airworthiness requirements; and

(2) If there is an inspection program required or accepted for the specific aircraft being inspected, perform the inspection in accordance with the instructions and procedures set forth in the inspection program.

(b) Rotorcraft. Each person performing an inspection required on a rotorcraft shall inspect the following systems in accordance with the maintenance manual or Instructions for Continued Airworthiness of the manufacturer concerned—

(1) The drive shafts or similar systems,
(2) The main rotor transmission gear box for obvious defects,
(3) The main rotor and centre section (or the equivalent area), and
(4) The auxiliary rotor on helicopters.

(c) Annual and 100-hour inspections.

(1) Each person performing an annual or 100-hour inspection shall use a checklist while performing the inspection. The checklist may be of the person’s own design, one provided by the manufacturer of the equipment being inspected, or one obtained from another source. This checklist shall include the scope and detail of the items prescribed by the Authority.

Implementing Standard: See IS: 5.6.1.7 for components to be included in an annual or 100-hour inspection.

(2) Each person approving a reciprocating-engine-powered aircraft for return to service after an annual or 100-hour inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the current manufacturer’s recommendations of—

(i) Power output (static and idle rpm);
(ii) Magneto;
(iii) Fuel and oil pressure; and
(iv) Cylinder and oil temperature.

(3) Each person approving a turbine-engine-powered aircraft for return to service after an annual or 100-hour inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the current manufacturer’s recommendations.

5.6.8 PERFORMANCE RULES: AIRWORTHINESS LIMITATIONS

Each person performing an inspection or other maintenance specified in an airworthiness limitations section of a current manufacturer’s maintenance manual, or Instructions for Continued Airworthiness, shall perform the inspection or other maintenance in accordance with that section, or in accordance with specifications approved by the Authority.
5.7 MAINTENANCE RECORDS AND ENTRIES

5.7.1 CONTENT, FORM, AND DISPOSITION OF MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND MODIFICATION RECORDS

(a) Each person who maintains, performs preventive maintenance, rebuilds, or modifies an aircraft or aeronautical product shall, when the work is performed satisfactorily, make an entry in the maintenance record of that equipment as follows—
   (1) A description (or reference to data acceptable to the Authority) of work performed;
   (2) Completion date of the work performed;
   (3) Name, signature, certificate number, and kind of license held by the person approving the work.

Note: The signature constitutes the approval for return to service only for the work performed.

(b) The person performing the work shall enter records of major repairs and major modifications, and dispose of that form in the manner prescribed by the Authority.

Implementing Standard: See IS: 5.7.1 for the maintenance form requirements and a sample major repair and modification form.

(c) A person working under supervision of an Licenced Aircraft Maintenance Engineer may not perform any inspection required in Part 8 or any inspection performed after a major repair or modification.

5.7.2 RECORDS OF OVERHAUL AND REBUILDING

(a) No person may describe in any required maintenance entry or form, an aeronautical product as being overhauled unless—
   (1) It has been disassembled, cleaned, inspected as permitted, repaired as necessary, and reassembled using methods, techniques, and practices acceptable to the Authority; and
   (2) It has been tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance manufacturing approval.

(b) No person may describe in any required maintenance entry or form an aircraft or other aeronautical product as being rebuilt unless it has been disassembled, cleaned, inspected as permitted, repaired as necessary, reassembled, and tested to the same tolerances and limits as a new item, using either new parts or used parts that conform to new part tolerances and limits.

Note: Part 5.7.2(a) reflects the required maintenance entry for rebuilt. As identified in Part 5.6.1.3(a)(6) only a manufacturer holding an AMO can rebuild an aeronautical product.

5.7.3 APPROVAL FOR RETURN TO SERVICE AFTER MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, OR MODIFICATION

(a) No person may approve for return to service any aeronautical product that has undergone maintenance, preventive maintenance, rebuilding, or modification unless—
   (1) The appropriate maintenance record entry has been made;
   (2) The repair or modification form authorised by or furnished by the Authority has been executed in a manner prescribed by the Authority;
(3) If a repair or modification results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data are appropriately revised and set forth as prescribed.

Implementing Standard: See IS: 5.7.1 for the repair or modification form requirements.

### 5.7.4 Major Modification and Major Repair

(a) All modifications and repairs to an aeronautical product shall comply with airworthiness requirements acceptable to the Authority.

(b) The operator shall establish procedures to ensure that the substantiating data which supports compliance with the airworthiness requirements are retained for the purpose of inspection by the Authority.

(c) All major modification or major repair to an aeronautical product shall be completed in accordance with technical data approved or accepted by the Authority. Technical data acceptable to the Authority are:

1. The aircraft, component or equipment manufacturer’s data;
2. Data or design documents issued by the approved signatories and within the scope of a design organisation approved by the Authority.
3. Modification design data prepared by a person other than the manufacturer of the aircraft, component or equipment, including modification approved by a supplemental type certificate or similar document shall be submitted to the Authority for approval of its application to each individual aircraft.

(d) A major modification or repair to an aeronautical product shall be performed by:

1. An approved maintenance organisation with the required capability approved by the Authority;
2. An air operator in accordance with his operations specifications issued by the Authority.

(e) An operator shall, promptly upon its completion, prepare a report of each major modification or major repair of an aeronautical product operated by him.

(f) An operator shall submit a copy of each report of a major modification or major repair to the Authority, and shall keep a copy of each report for his records.

(g) Where a major modification or a major repair results in a change in the aircraft operating limitations or flight data, the aircraft flight manual shall be appropriately revised and submitted to the Authority for approval.

### 5.7.5 Content, Form, and Disposition of Records for Inspections

(a) Maintenance record entries. The person approving or disapproving the return to service of an aeronautical product after any inspection performed in accordance with Part 8, shall make an entry in the maintenance record of that equipment containing the following information—

1. Type of inspection and a brief description of the extent of the inspection;
2. Date of the inspection and aircraft total time in service;
3. Signature, the license number, and kind of license held by the person approving or disapproving for return to service the aeronautical product;
4. If the aircraft is found to be airworthy and approved for return to service, the following or a similarly worded statement—"I certify that this aircraft has been inspected in accordance with (insert type) inspection and was determined to be in airworthy condition;"
(5) If the aircraft is not approved for return to service because of needed maintenance, non-compliance with the applicable specifications, airworthiness directives, or other approved data, the following or a similarly worded statement—\textit{I certify that this aircraft has been inspected in accordance with (insert type) inspection and a list of discrepancies and unairworthy items dated (date) has been provided for the aircraft owner or operator; and}

(6) If an inspection is conducted under an inspection program provided for in Part 8, the person performing the inspection shall make an entry identifying the inspection program accomplished, and containing a statement that the inspection was performed in accordance with the inspections and procedures for that particular program.

(b) Reserved©

Listing of discrepancies. The person performing any inspection required in Part 8 who find that the aircraft is not airworthy or does not meet the applicable type certificate data sheet, airworthiness directives or other approved data upon which its airworthiness depends, shall give the owner/operator a signed and dated list of those discrepancies.
5.8 DAMAGE TO AIRCRAFT

(a) When an aircraft has sustained damage, the Authority shall judge whether the damage is of a nature such that the aircraft is no longer airworthy as defined by the appropriate airworthiness requirements.

(b) If the damage is sustained or ascertained when the aircraft is on the territory of other Contracting State, the authorities of the other Contracting State shall be entitled to prevent the aircraft from resuming its flight on the condition that they advise the State of registry immediately, communicating to it all details necessary to facilitate the judgement referred to in the introductory Standard of 6.2.

(c) When the State of Registry considers that the damage sustained is of a nature such as the aircraft is no longer airworthy, it shall prohibit the aircraft from resuming flight until it is restored to an airworthy condition; the State of Registry may, however, in exceptional circumstances, prescribe particular limiting conditions to permit the aircraft to fly without fare-paying passengers to an aerodrome at which it can be restored to an airworthy condition, and the Contracting State that has originally, in accordance with 6.2.1., prevented the aircraft from resuming flights, shall permit such flight.

(d) When the State of Registry considers that the damage sustained is of a nature such that the aircraft is still airworthy; the aircraft shall be allowed to resume its flight.
5.9 WEIGHT CONTROL OF AIRCRAFT

5.9.1 GENERAL

Pursuant to Regulation 22 of the Guyana Civil Aviation (Air Navigation) Regulations, this subsection prescribes the requirements for weighing of aircraft registered in Guyana, including helicopters, the determination of the corresponding Centre-of-Gravity position and the provision of information from which the loading for flight (Basic Weight Schedules) can be correctly determined.

5.9.2 DEFINITIONS

(a) **Basic Weight.** Basic Weight is the weight of the aircraft and all its basic equipment and that of the declared quantity of unusable fuel and unusable oil. In the case of turbine-engined aircraft and aircraft of 5700kg Maximum Total Weight Authorised (MTWA) or less, it may also include the weight of usable oil.

(b) **Basic Equipment.** Basic Equipment is the unconsumable fluids, and equipment which is common to all roles for which the operator intends to use the aircraft.

(c) **Variable Load.** Variable Load is the weight of the crew and of items such as the crew's baggage, removal units and other equipment the carriage of which depends upon the role for which the operator intends to use the aircraft for the particular flight.

(d) **Aircraft Prepared for Service (APS), or Operating Weight.** The sum of the Basic Weight and the total Variable Load required for the particular role in which the operator intends to use the aircraft.

(e) **Disposable Load.** Disposable Load is the weight of all persons and items of load including fuel and other consumable fluids, carried in the aircraft other than the Basic Equipment and Variable Load.

**Note:** To obtain the total loaded weight it is necessary to add to the Basic Weight, and the weights of the Variable and Disposable Load items to be carried for the particular role in which the aircraft is to be used.

5.9.3 WEIGHING REQUIREMENTS

(a) All aircraft shall be weighed in Guyana prior to the initial issue of a Guyana Airworthiness Certificate. Exemption for weighing may be granted for aircraft which were weighed overseas prior to their importation and for which any subsequent changes in weight have been computed and recorded, provided all the necessary weight and balance data for the aircraft are furnished to the Authority and such data are found to be accurate and adequate.

(b) Aircraft exceeding 5700 kg shall be re-weighed within two (2) years after the date of manufacture and thereafter at intervals not exceeding four (4) years, and at such other times as the Authority may require. Other aircraft shall be weighed at such times as the Authority may require. Aircraft weighing shall be conducted in accordance with procedures acceptable to the Authority.

(c) When an aircraft is weighed, the condition of the aircraft (i.e. the equipment, the position of movable items and other items of load such as fluids in tanks) shall be recorded. The equipment installed at the time of weighing should not differ from that in the declared Basic Equipment list associated with the Basic Weight Schedule, otherwise, in determining the Basic Weight and the corresponding centre-of-gravity position, corrections will have to be made for items that have been weighed but which are Basic Equipment items, and for Basic Equipment items not installed in the aircraft during the weighing.
(d) Weighing results and related calculations shall be recorded in a weighing report which shall be retained by the operator. When the aircraft is again weighed the previous weighing records must be retained with the aircraft records.

(e) The operator shall maintain records of all known weight and centre-of-gravity changes which occur after the aircraft has been weighed and such records shall be retained by the operator.

5. 9.4 BASIC WEIGHT SCHEDULE

(a) A Basic Weight Schedule shall be provided for each aircraft. Each Schedule shall be identified by the aircraft type and model number, the nationality and registration marks and the aircraft serial number. The date of issue and the reference number of the Schedule shall be given and the Schedule shall be signed by a person suitably qualified and acceptable to the Authority. A statement shall be included stating that the Schedule supersedes all earlier issues.

(b) The Schedule shall present the derivation of the Basic Weight and the centre of gravity from most recent weighing report or Basic weight schedule or other acceptable information. The Schedule shall indicate the landing gear positions (retracted or extended) to which the derived centre of gravity position is related. The Schedule shall also include the current Basic Equipment list showing the weight and lever arm of each item or make reference to the document in which such a list is included.

(c) The date and reference number of the most recent weighing report, Basic weight Schedule or other acceptable information, upon which the Schedule is based, shall be given.

(d) The Basic Weight Schedule may be in the form given in Appendix 2 to this Chapter. Variations in presentation are permitted, but must be acceptable to the Authority. In the case of helicopters, it may be necessary to present lever arms and moments about more than one axis, depending on the centre of gravity limits specified in the Flight Manual.

(e) The datum which is defined in the Basic Weight Schedule may be different from the datum defined in the Certificate of Airworthiness or Flight Manual to which the centre of gravity limits relate. When a different datum is used it shall be adequately defined, its precise relationship to the datum in the Certificate of Airworthiness or Flight Manual shall be given, and any lever arms and moments which appear in any part of the Schedule shall be consistent with the datum so declared.

(f) The Schedule shall be retained by the operator and where the Schedule has been revised the previous issue must be retained with the aircraft records.

(g) Operators shall revise the Basic Weight Schedule when the weight and centre of gravity are known to have undergone changes in excess of a maximum figure, which has been agreed by the Authority as applicable to a particular aircraft type.

Note: The following changes in basic weight or centre of gravity position are considered significant and must be reported to the Authority:

(a) Aeroplanes whose empty weight has changed by more than 0.5% of the maximum total weight authorised or whose basic centre of gravity position has changed by more than 0.5% of the mean aerodynamic chord.

(b) Helicopters whose empty weight has changed by more than 1% of the maximum total weight authorised or whose basic centre of gravity position has changed by more than 0.5 inch or 10% of the maximum permissible centre of gravity range whichever is the lesser.
5.9.5 **Weight and Balance Report**

(a) A weight and Balance Report shall be produced for each Guyana aircraft. A copy of each report shall be supplied to the Authority.

(b) The Weight and Balance Report is intended to record the essential loading data to enable the particular aircraft to be correctly loaded and to include sufficient information for an operator to produce written loading instructions in accordance with the requirements of Regulation 22 of the Guyana Civil Aviation (Air Navigation) Regulations.

(c) The Weight and Balance Report shall include the following items:

1. **Reference.** Reference number and date of issue.
2. **Type.** Type and model number of the aircraft and its nationality and registration mark.
3. **Basic weight.** The Basic Weight and centre of gravity of the aircraft as derived from the Basic Weight Schedule shall be presented. A copy of the Basic Weight Schedule, including the Basic Equipment list, and any referenced weighing report, shall be attached to the Report.
4. **Datum definition.** A diagram or a description of the datum (e.g. in relation to the fuselage frame numbering system or other identifiable points) shall be included.
5. **Variable load.** Information on the weight and lever arms appropriate to Variable Load items may be detailed for as many roles as the operator wishes and for every role the total weight and moment change shall be given. Weights of crew members may be assumed at not less than the weight shown in the approved Aircraft Flight Manual weight and centre-of-gravity specimen.
6. **Loading information.** This shall include all relevant information so that, knowing the disposable load which is intended to be carried, the weight and the position of the centre of gravity of the aircraft can be calculated. At least the following shall be given:
   1. The lever arm of the centre of gravity of an occupant of each seat.
   2. The lever arm of each compartment or area in the aircraft where disposable load, such as luggage or freight, may be placed.
   3. Any significant change in the centre of gravity of the aircraft (change in moment) which will result from a change in configuration, such as the retraction of the landing gear.
   4. The lever arm of the centre of gravity of fuel and oil in each tank including the variation of the lever arm with the quantity loaded if this variation is significant.
   5. The maximum total usable capacities of the fuel and oil tanks and the weight of fuel and oil when the tanks are filled to their capacities assuming typical densities of these fluids.
   6. A statement shall be given in the Schedule to the effect that pursuant to the Guyana Civil Aviation (Air Navigation) Regulations the commander shall satisfy himself/herself before take-off that the load is of such weight, and is so distributed and secured that it may safely be carried on the intended flight.
   7. A statement that the report supersedes all earlier issues.

(d) The weights, distances, moments and quantities may be given in any units provided that these are used consistently and agree with the markings and placards on the aircraft.

(e) A copy of the report shall be included in the Flight Manual of all aircraft not exceeding 5700 kg MTWA. If a Flight Manual is not applicable, the Report shall be displayed or retained in the aircraft in a suitably identified stowage.

(f) Operators shall revise the Weight and Balance Report/Schedule when there is a change to any of the items in paragraph 5.9.5. (c). The Report/Schedule may be in the form given in the Implementing Standards 5.9.5 “Weight Control of Aircraft”. Variations in presentation are permitted, but must be acceptable to the Authority.
5.10 EXTENDED-RANGE TWIN-ENGINE OPERATIONS (ETOPS) MAINTENANCE REQUIREMENTS

5.10.1 MAINTENANCE TRAINING

(a) The operator shall have a Training Programme that focuses on the special nature of ETOPS. This programme shall be included in the normal maintenance training for the operator’s maintenance personnel. The goal of this programme is to ensure that all personnel involved in ETOPS are provided with the necessary training so that the ETOPS maintenance tasks are properly accomplished and to emphasise the special nature of ETOPS maintenance requirements. Human factors principle shall be included in the Training Programme.

(b) The Training Programme shall be conducted by competent and appropriately qualified person(s) and or training organisation, meet the maintenance requirements for ETOPS, and acceptable to the Authority.

(c) ETOPS qualified maintenance personnel are those that have completed the operators extended range Training Programme and have satisfactorily performed extended range tasks under supervision, within the framework of the operator’s approved procedures for Personnel Authorisation.

5.10.2 ETOPS PARTS CONTROL

The operator shall develop a parts control programme with support from the manufacturer, that ensures the proper parts and configuration are maintained for ETOPS. The programme includes verification that parts placed on an ETOPS aircraft during parts borrowing or pooling arrangements, as well as those parts used after repair or overhaul, maintain the necessary ETOPS configuration for that aircraft.

5.10.3 MAINTENANCE PROGRAMME AND PROCEDURES

(a) The operator shall ensure that the Maintenance Programme for its ETOPS fleet contains the standards, guidance and direction necessary to support the intended operations. Maintenance personnel and other personnel involved shall be made aware of the special nature of ETOPS and have the knowledge, skills and ability to accomplish the requirements of the programme.

(b) The Maintenance Programme for the aircraft being considered for ETOPS is the continuous airworthiness maintenance schedule currently approved for the operator. The operator shall review the schedule to ensure that it provides an adequate basis for development of ETOPS maintenance requirements. The programme shall incorporate human factors principles.

(c) The operator shall have in place procedures to preclude identical action being applied to multiple similar elements in any ETOPS significant system (e.g. fuel control change on both engines). If this is not possible, the identical actions shall be done by different maintenance personnel/teams.

(d) The operator shall include in the maintenance procedures the following:

1. ETOPS related tasks shall be identified on the operator's routine work forms and related instructions.

2. ETOPS related procedures, such as involvement of centralised maintenance control, shall be clearly defined in the operator’s Maintenance Programme.

3. An ETOPS service check shall be developed to verify that the status of the aircraft and certain critical items are acceptable. This check shall be accomplished and signed off by an ETOPS qualified authorised person immediately prior to an ETOPS flight.
(4) Log books shall be reviewed and documented, as appropriate, to ensure proper MEL procedures, deferred items, maintenance checks and system verification procedures have been properly performed.

(e) When the maintenance is contracted to a maintenance organisation, the operator shall ensure that the maintenance organisation is approved to carry out ETOPS maintenance and complies with the ETOPS requirements and procedures. The operator shall establish control procedures to ensure that:

(1) The maintenance personnel of the contracted maintenance organisation are qualified for ETOPS.
(2) All flight dispatch procedures and additional maintenance requirements as identified in the operator’s Maintenance Control Manual are complied with.

5.10.4 ETOPS MANUAL

(a) The operator shall develop a manual for use by personnel involved in ETOPS. This manual need not include, but shall at least reference, the Maintenance Programme and other requirements described in this chapter of the Guyana Aviation Requirements and clearly indicate where they are located in the operator’s manual system.

(b) All ETOPS requirements, including supportive programmes, procedures, duties, and responsibilities, shall be identified and be subject to revision control. This manual shall be submitted to the Authority for approval before the implementation of ETOPS by the operator.

5.10.5 OIL CONSUMPTION PROGRAMME

The operator shall have in place an oil consumption programme. The programme shall reflect the manufacturer’s recommendations and be sensitive to oil consumption trends. It shall consider the amount of oil added at the departing ETOPS stations with reference to the running average consumption; i.e. the monitoring must be continuous up to, and including, oil added at the ETOPS departure station. If oil analysis is meaningful to this make and model, it shall be included in the programme. The APU oil consumption shall also be part of the oil consumption programme.

5.10.6 ENGINE CONDITION MONITORING

(a) The operator shall have an engine condition monitoring programme that describes the parameters to be monitored, method of data collection and corrective action process. The programme shall also incorporate the manufacturer’s instructions and industry practice. This monitoring shall be used to detect deterioration at an early stage to allow for corrective action before safe operation is affected. The programme shall ensure that engine limit margins are maintained such that a prolonged single-engine diversion may be conducted without exceeding approved engine limits (i.e., rotor speeds, exhaust gas temperature) at all approved power levels and expected environmental conditions.
GUYANA AVIATION REQUIREMENTS
Part 5 – Airworthiness

(b) The monitoring programme shall include assessment of in-flight shut-down (IFSD) rate of the operator’s ETOPS fleet. The assessment shall include, as a minimum, engine hours flown in the period, in flight shut-down rate for all causes and engine removal rate, both on a 12 month moving average basis. When the IFSD rate exceeds 0.05/1000 engine hours for 120 minutes diversion time or exceeds 0.03/1000 engine hours for 180 minutes diversion time, the operator must notify the Authority as soon as possible.

(c) The assessment of the operator’s ETOPS fleet propulsion system reliability and IFSD rate shall be made available to the Authority on a monthly basis.

(d) When any adverse sustained trend is noted, the operator shall in consultation with the Authority, conduct an immediate evaluation to ascertain the causes. The evaluation may result in corrective action or operational restrictions being applied.

5.10.7 VERIFICATION PROGRAMME AFTER MAINTENANCE

The operator shall develop a verification programme or establish procedures to ensure corrective action following an engine shut-down, primary system failure or adverse trends, any prescribed events which require a verification flight or other action. The operator shall establish the means to assure the accomplishment of the verification programme or the corrective action procedures. A clear description of who must initiate verification actions and the section or group responsible for the determination of what action is necessary shall be identified in the programme. Primary systems or conditions requiring verification actions shall be described in the operator’s ETOPS manual.

5.10.8 RELIABILITY PROGRAMME

(a) An ETOPS reliability programme shall be developed by the operator or the operator’s existing reliability programme supplemented. This programme shall be designed with early identification and prevention of ETOPS related problems as the primary goal. The programme shall be event-orientated and incorporate reporting procedures for significant events detrimental to ETOPS flights. This information shall be readily available for use by the Authority to help establish that the reliability level is adequate, and to assess the operators competence and capability to safely continue ETOPS. The Authority shall be notified within 72 hours of events reportable through this programme.

(b) In addition to the items required to be reported as per Guyana Civil Aviation Authority (GCAA) Advisory Circular AC No. 8, the following items shall be included:

(1) In-flight shut-downs.
(2) Un-commanded power changes or surges.
(3) Inability to control the engine or obtain desired power.
(4) Unscheduled removal of engines.
(5) Problems with systems critical to ETOPS.
(6) Any other events detrimental to ETOPS.

(c) The report shall identify the following:

(1) Aircraft Registration.
(2) Engine identification (position, make and serial number).
(3) Total time, cycles and time since last shop visit.
(4) For systems, time since overhaul or last inspection of the defective unit.
(5) Phase of flight.
(6) Corrective action.

5.10.9 APU IN-FLIGHT START CAPABILITIES

(a) If any work is performed on the Auxiliary Power Unit (APU) that may affect the starting and operation of the APU, an in-flight start shall be performed on the next flight. The result of the in-flight start shall be annotated in the Technical Log of the aircraft.

(b) To ensure that the APU maintains its in-flight start capabilities, the operator shall have a programme to schedule an APU in-flight start once every three months for each aircraft of its ETOPS fleet. The result of the in-flight start shall be annotated in the Technical Log of the aircraft.
5.11 FLIGHT RECORDING SYSTEM - MAINTENANCE REQUIREMENTS

5.11.1 MAINTENANCE TRAINING

(a) The Training Programme shall include Flight Recording System’s maintenance training for the operator’s maintenance personnel. The goal of this programme is to ensure that all personnel involved in the maintenance of Flight Recording Systems are provided with the necessary training so that the maintenance tasks are properly accomplished. Human factors principle shall be included in the Training Programme.

(b) The Training Programme shall be conducted by competent and appropriately qualified person(s) and or training organisation, meet the maintenance requirements for such systems, and acceptable to the Authority.

5.11.2 INSPECTION OF FLIGHT RECORDING SYSTEMS

(a) Prior to the first flight of the day, the built-in test features on the flight deck for the CVR, FDR and Flight Data Acquisition Unit, when installed, should be monitored.

(b) Annual inspections should be carried out as follows:

1. The readout of the recorded data from the FDR and CVR should ensure that the recorder operates correctly for the nominal duration of the recording.
2. An annual examination of the recorded signal on the CVR should be carried out by re-play of the CVR recording. While installed in the aircraft, the CVR should record test signals from each aircraft source and from relevant external sources to ensure that all required signals meet intelligibility standards.
3. Where practicable, during the annual examination, a sample of in-flight recordings of the CVR should be examined for evidence that the intelligibility of the signal is acceptable.
4. The analysis of the FDR should evaluate the quality of the recorded data to determine if the bit error rate is within acceptable limits and to determine the nature and distribution of the errors.
5. A complete flight from the FDR should be examined in engineering units to evaluate the validity of all recorded parameters. Particular attention should be given to parameters from sensors dedicated to the FDR. Parameters taken from the aircraft’s electrical bus system need not be checked if their serviceability can be detected by other aircraft systems.
6. The readout facility should have the necessary software to accurately convert the recorded values to engineering units and to determine the status of discrete signals.

(c) Flight Recorder Systems should be considered unserviceable if there is a significant period of poor quality data, unintelligible signals, or if one or more of the mandatory parameters is not recorded correctly.

(d) A report of the annual inspection shall be made available to the Authority for monitoring purposes.
(e) Calibration of the FDR systems:

(1) The FDR system should be re-calibrated at least every five years to determine any discrepancies in the engineering conversion routines for the mandatory parameters, and to ensure that parameters are being recorded within the calibration tolerances.

(2) When sensors that are dedicated to the FDR system provide the parameters of altitude and airspeed, there should be a re-calibration performed as recommended by the sensor manufacture, or at least every two years.
IS: 5.1.2 MAJOR MODIFICATIONS (DEFINITION)

(a) **Airframe Major Modifications.** Major modifications include modifications to the listed aircraft parts, or the listed types of modifications (when not included in the applicable aircraft specifications) -

1. Wings.
2. Tail surfaces.
3. Fuselage.
4. Engine mounts.
5. Control system.
7. Hull or floats
8. Elements of an airframe including spars, ribs, fittings, shock absorbers, bracing, cowlings, fairings, and balance weights.
9. Hydraulic and electrical actuating system of components.
10. Rotor blades.
11. Changes to the empty weight or empty balance which result in an increase in the maximum Certified weight or centre of gravity limits of the aircraft.
12. Changes to the basic design of the fuel, oil, cooling, heating, cabin pressurisation, electrical, hydraulic, de-icing, or exhaust systems.
13. Changes to the wing or to fixed or movable control surfaces which affect flutter and vibration characteristics.

(b) **Powerplant Major Modifications.** Major powerplant modifications, even when not listed in the applicable engine specifications, include—

1. Conversion of an aircraft engine from one approved model to another, involving any changes in compression ratio, propeller reduction gear, impeller gear ratios or the substitution of major engine parts which requires extensive rework and testing of the engine.
2. Changes to the engine by replacing aircraft engine structural parts with parts not supplied by the original manufacturer or parts not specifically approved by the Authority.
3. Installation of an accessory which is not approved for the engine.
4. Removal of accessories that are listed as required equipment on the aircraft or engine specification.
5. Installation of structural parts other than the type of parts approved for the installation.
6. Conversions of any sort for the purpose of using fuel of a rating or grace other than that listed in the engine specifications.

(c) **Propeller Major Modifications.** Major propeller modifications, when not authorised in the applicable propeller specifications, include—

1. Changes in blade design.
2. Changes in hub design.
3. Changes in the governor or control design.
4. Installation of a propeller governor or feathering system.
5. Installation of propeller de-icing system.
6. Installation of parts not approved for the propeller.
(d) **Appliance Major Modifications.** Modifications of the basic design not made in accordance with recommendations of the appliance manufacturer or in accordance with applicable Airworthiness Directive are appliance major modifications. In addition, changes in the basic design of radio communication and navigation equipment approved under type certification or other authorisation that have an effect on frequency stability, noise level, sensitivity, selectivity, distortion, spurious radiation, AVC characteristics, or ability to meet environmental test conditions and other changes that have an effect on the performance of the equipment are also major modifications.

**IS: 5.1.2 (a) (4) MAJOR REPAIRS (DEFINITION)**

(a) **Airframe Major Repairs.** Repairs to the following parts of an airframe and repairs of the following types, involving the strengthening, reinforcing, splicing, and manufacturing of primary structural members of their replacement, when replacement is by fabrication such as riveting or welding, are airframe major repairs.

1. Box beams.
2. Monocoque or semimonocoque wings or control surfaces.
3. Wing stringers or chord members.
4. Spars.
5. Spar flanges.
6. Members of truss-type beams.
7. Thin sheet webs of beams.
8. Keel and chine members of boat hulls or floats.
9. Corrugated sheet compression members which act as flange material of wings or tail surfaces.
10. Wing main ribs and compression members.
11. Wing or tail surface brace struts.
13. Fuselage longerons.
14. Members of the side truss, horizontal truss, or bulkheads.
15. Main seat support braces and brackets.
16. Landing gear brace struts.
17. Axles.
18. Wheels.
19. Parts of the control system such as control columns, pedals, shafts, brackets, or horns.
20. Repairs involving the substitution of material.
21. The repair of damaged areas in metal or plywood stressed covering exceeding six inches in any direction.
22. The repair of portions of skin sheets by making additional seams.
23. The splicing of skin sheets.
24. The repair of three or more adjacent wing or control surface ribs or the leading edge of wings and control surfaces, between such adjacent ribs.
25. Repair of fabric covering involving an area greater than that required to repair two adjacent ribs.
26. Replacement of fabric on fabric covered parts such as wings, fuselages, stabilisers, and control surfaces.
27. Repairing, including rebottoming, of removable or integral fuel tanks and oil tanks.
(b) **Powerplant Major Repairs.** Repairs of the following parts of an engine and repairs of the following types, are powerplant major repairs—

1. Separation or disassembly of a crankcase or crankshaft of a reciprocating engine equipped with an integral supercharger.
2. Separation or disassembly of a crankcase or crankshaft of a reciprocating engine equipped with other than spur-type propeller reduction gearing.
3. Special repairs to structural engine parts by welding, plating, metalising, or other methods.

(c) **Propeller Major Repairs.** Repairs of the following types to a propeller are propeller major repairs—

1. Any repairs to or straightening of steel blades.
2. Repairing or machining of steel hubs.
4. Retipping of wood propellers.
5. Replacement of outer laminations on fixed pitch wood propellers.
6. Repairing elongated bolt holes in the hub of fixed pitch wood propellers.
7. Inlay work on wood blades.
8. Repairs to composition blades.
10. Replacement of plastic covering.
11. Repair of propeller governors.
13. Repairs to deep dents, cuts, scars, nicks, etc., and straightening of aluminium blades.
14. The repair or replacement of internal elements of blades.

(d) **Appliance Major Repairs.** Repairs of the following types to appliances are appliance major repairs—

1. Calibration and repair of instruments.
2. Calibration of avionics or computer equipment.
3. Rewinding the field coil of an electrical accessory.
4. Complete disassembly of complex hydraulic power valves.
5. Overhaul of pressure type carburettors, and pressure type fuel, oil, and hydraulic pumps.

**IS: 5.1.2(a) (5) PREVENTIVE MAINTENANCE (DEFINITION)**

(a) **Preventive Maintenance.** Preventive maintenance is limited to the following work, provided it does not involve complex assembly operations.

1. Removal, installation and repair of landing gear tires.
2. Replacing elastic shock absorber cords on landing gear.
3. Servicing landing gear shock struts by adding oil, air, or both.
4. Servicing landing gear wheel bearings, such as cleaning and greasing.
5. Replacing defective safety wiring or cotter keys.
6. Lubrication not requiring disassembly other than removal of non-structural items such as cover plates, cowlings, and fairings.
7. Making simple fabric patches not requiring rib stitching or the removal of structural parts or control surfaces.
8. Replenishing hydraulic fluid in the hydraulic reservoir.
9. Refinishing decorative coating of fuselage, wings, tail group surfaces (excluding balanced control surfaces), fairings, cowling, landing gear, cabin, or cockpit interior when removal or disassembly of any primary structure or operating system is not required.
(10) Applying preservative or protective material to components where no disassembly of any primary structure or operating system is involved and where such coating is not prohibited or is not contrary to good practices.

(11) Repairing upholstery and decorative furnishings of the cabin or cockpit when the repairing does not require disassembly of any primary structure or operating system or interfere with an operating system or affect primary structure of the aircraft.

(12) Making small simple repairs to fairings, non-structural cover plates, cowlings, and small patches and reinforcements not changing the contour so as to interfere with proper airflow.

(13) Replacing side windows where that work does not interfere with the structure of any operating system such as controls, electrical equipment, etc.

(14) Replacing safety belts.

(15) Replacing seats or seat parts with replacement parts approved for the aircraft, not involving disassembly of any primary structure or operating system.

(16) Troubleshooting and repairing broken circuits in landing light wiring circuits.

(17) Replacing bulbs, reflectors, and lenses of position and landing lights.

(18) Replacing wheels and skis where no weight and balance computation is involved.

(19) Replacing any cowling not requiring removal of the propeller or disconnection of flight controls.

(20) Replacing or cleaning spark plugs and setting of spark plug gap clearance.

(21) Replacing any hose connection except hydraulic connections.

(22) Replacing prefabricated fuel lines.

(23) Cleaning fuel and oil strainers.

(24) Replacing and servicing batteries.

(25) Replacement or adjustment of non-structural fasteners incidental to operations.

(26) The installation of anti-misfueling devices to reduce the diameter of fuel tank filler openings provided the specific device has been made a part of the aircraft type certificate data by the aircraft manufacturer, the manufacturer has provided appropriately approved instructions acceptable to the Authority for the installation of the specific device, and installation does not involve the disassembly of the existing filler opening.

IS: 5.6.7 PERFORMANCE RULES: 100-HOUR INSPECTIONS

(a) Each person performing an annual or 100-hour inspection shall, before that inspection, thoroughly clean the aircraft and aircraft engine and remove or open all necessary inspection plates, access doors, fairings, and cowlings.

(b) Each person performing an annual or 100-hour inspection shall inspect, where applicable, the following components—

(1) Fuselage and hull group—
   (i) Fabric and skin - for deterioration, distortion, other evidence of failure, and defective or insecure attachment of fittings.
   (ii) Systems and components - for improper installation, apparent defects, and unsatisfactory operation.
   (iii) The cabin and cockpit group.
   (iv) Generally - for uncleanness and loose equipment that might foul the controls.
   (v) Seats and safety belts - for poor condition and apparent defects.
   (vi) Windows and windshields - for deterioration and breakage.
   (vii) Instruments - for poor condition, mounting, marking, and (where practicable) for improper operation.
   (viii) Flight and engine controls - for improper installation and improper operation.
   (ix) Batteries - for improper installation and improper charge.
(x) All systems - for improper installation, poor general condition, apparent and obvious defects, and insecurity of attachment.

(2) Engine and nacelle group—
(i) Engine section - for visual evidence of excessive oil, fuel, or hydraulic leaks, and sources of such leaks.
(ii) Studs and nuts - for improper torquing and obvious defects.
(iii) Internal engine - for cylinder compression and for metal particles or foreign matter on screens and sump drain plugs. If there is weak cylinder compression, for improper internal condition and improper internal tolerances.
(iv) Engine mount - for cracks, looseness of mounting, and looseness of engine to mount.
(v) Flexible vibration dampeners - for poor condition and deterioration.
(vi) Engine controls - for defects, improper travel, and improper safetying.
(vii) Lines, hoses, and clamps - for leaks, improper condition, and looseness.
(viii) Exhaust stacks - for cracks, defects, and improper attachment.
(ix) Accessories - for apparent defects in security of mounting.
(x) All systems - for improper installation, poor general condition, defects, and insecure attachment.
(xi) Cowling - for cracks and defects.

(3) Landing gear group—
(i) All units - for poor condition and insecurity of attachment.
(ii) Shock absorbing devices - for improper oleo fluid level.
(iii) Linkage, trusses, and members - for undue or excessive wear, fatigue, and distortion.
(iv) Retracting and locking mechanism - for improper operation.
(v) Hydraulic lines - for leakage.
(vi) Electrical system - for chafing and improper operation of switches.
(vii) Wheels - for cracks, defects, and condition of bearings.
(viii) Tires - for wear and cuts.
(ix) Brakes - for improper adjustment.
(x) Floats and skis - for insecure attachment and obvious or apparent defects.

(4) Wing and centre section assembly for—
(i) Poor general condition,
(ii) Fabric or skin deterioration,
(iii) Distortion,
(iv) Evidence of failure, and
(v) Insecurity of attachment.

(5) Complete empennage assembly for—
(i) Poor general condition,
(ii) Fabric or skin deterioration,
(iii) Distortion,
(iv) Evidence of failure,
(v) Insecure attachment,
(vi) Improper component installation, and
(vii) Improper component operation.

(6) Propeller group—
(i) Propeller assembly - for cracks, nicks, binds, and oil leakage,
(ii) Bolts - for improper torquing and lack of safety,
(iii) Anti-icing devices - for improper operations and obvious defects, and
(iv) Control mechanisms - for improper operation, insecure mounting, and restricted travel.
GUYANA AVIATION REQUIREMENTS
Implementing Standards - Part 5 – Airworthiness

(7) Avionics/instrument group—
(i) Avionics/instruments equipment - for improper installation and insecure mounting.
(ii) Wiring and conduits - for improper routing, insecure mounting, and obvious defects.
(iii) Bonding and shielding - for improper installation and poor condition.
(iv) Antenna including trailing antenna - for poor condition, insecure mounting, and improper operation.

(8) Electronic/electrical group—
(i) Wiring and conduits - for improper routing, insecure mounting, and obvious defects.
(ii) Bonding and shielding - for improper installation and poor condition.

(9) Each installed miscellaneous item that is not otherwise covered by this listing and/or has instructions for continued airworthiness - for improper installation and improper operation.

IS: 5.7.1 RECORDING OF MAJOR MODIFICATIONS AND MAJOR REPAIRS

(a) Each person performing a major modification or major repair shall—
(1) Execute the appropriate form prescribed by the Authority at least in duplicate;
(2) Give a signed copy of that form to the aircraft owner/operator; and
(3) Forward a copy of that form to the Authority, in accordance with Authority instructions, within 48 hours after the aeronautical product is approved for return to service.

(b) In place of the requirements of paragraph (a), major repairs made in accordance with a manual or specifications acceptable to the Authority, an AMO may—
(1) Use the customer's work order upon which the repair is recorded;
(2) Give the aircraft owner a signed copy of the work order and retain a duplicate copy for at least two years from the date of approval for return to service of the aeronautical product;
(3) Give the aircraft owner a maintenance release signed by an authorised representative of the AMO and incorporating the following information—
   (i) Identity of the aeronautical product;
   (ii) If an aircraft, the make, model, serial number, nationality and registration marks, and location of the repaired area;
   (iii) If an aeronautical product, give the manufacturer's name, name of the part, model, and serial numbers (if any); and
(4) Include the following or a similarly worded statement—

**THE AERONAUTICAL PRODUCT IDENTIFIED ABOVE WAS REPAIRED, OVERHAULED AND INSPECTED IN ACCORDANCE WITH CURRENTLY EFFECTIVE, APPLICABLE INSTRUCTIONS OF THE STATE OF DESIGN, THE GUYANA CIVIL AVIATION (AIR NAVIGATION) REGULATIONS, AND GUYANA AVIATION REQUIREMENTS, AND IS APPROVED FOR RETURN TO SERVICE.**

**PERTINENT DETAILS OF THE MODIFICATION/REPAIR ARE ON FILE AT THIS APPROVED MAINTENANCE ORGANISATION.**

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(c) The following sample form may be used to record major alterations and repairs.

### MAJOR REPAIR AND MODIFICATION

(AIRFRAME, POWERPLANT, PROPELLER, OR APPLIANCE)

**Form No. AW 337**

**INSTRUCTIONS:** Print or type all entries. See GARs Part 5, 5.7.1.1 and IS: 5.7.1.1 for instructions and disposition of this form.

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<tr>
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<td></td>
</tr>
<tr>
<td>☐ APPROVED MAINTENANCE ORGANISATION</td>
<td>☐ MANUFACTURER</td>
</tr>
</tbody>
</table>

D. I HEREBY CERTIFY THAT THE REPAIR AND/OR MODIFICATION MADE TO THE UNIT(S) IDENTIFIED IN ITEM 4 ABOVE AND DESCRIBED ON THE VERSO OR ATTACHMENTS HERETO HAVE BEEN MADE IN ACCORDANCE WITH THE REQUIREMENTS OF PART 5 OF THE GUYANA AVIATION REQUIREMENTS AND THAT THE INFORMATION FURNISHED HEREIN IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

<table>
<thead>
<tr>
<th>DATE</th>
<th>SIGNATURE OF AUTHORISED INDIVIDUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>7. APPROVAL FOR RETURN TO SERVICE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PURSUANT TO THE AUTHORITY GIVEN PERSONS SPECIFIED BELOW, THE UNIT(S) IDENTIFIED IN ITEM 4 WAS INSPECTED IN THE MANNER PRESCRIBED BY THE DIRECTOR GENERAL OF THE GUYANA CIVIL AVIATION AUTHORITY AND IS ☐ APPROVED ☐ REJECTED</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>APPROVED OR REJECTED BY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GCAA INSPECTOR</td>
<td>APPROVED MAINTENANCE ORGANISATION</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DATE OF APPROVAL OR REJECTION</th>
<th>CERTIFICATE OR DESIGNATION NUMBER</th>
<th>SIGNATURE OR AUTHORISED INDIVIDUAL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### NOTICE

Mass and balance or operating limitation changes shall be entered in the appropriate aircraft record. A modification must be compatible with all previous modifications to assure continued conformity with the applicable airworthiness requirements.

8. **Description of Work Accomplished**

If more space is required, attach additional sheets. Identify each page with aircraft nationality and registration mark and date work completed.
IS: 5.9.5 WEIGHT CONTROL OF AIRCRAFT - EXAMPLE OF A WEIGHT AND BALANCE REPORT AND SCHEDULE

(a) SPECIMEN WEIGHT AND BALANCE REPORT

**General Data**

- **Reference Number**: AAA/BBB/123
- **Date of Issue**: 1st January, 20XX
- **Produced By**: Pure Aviation Limited
- **Aircraft Type and Model**: Boxplane B24F
- **Nationality and Registration Marks**: 8R-GUY
- **Constructor**: Bigbox Aircraft Industries Limited
- **Constructor’s Serial Number**: B24F 009
- **Maximum Total Weight Authorised**: 3320 kg
- **Centre-of Gravity Limits**: Refer to Flight Manual Ref. No. FM/BAIL/B24F/20XX

**Part A – Basic Weight**

The basic weight of the aircraft as derived in the Basic Weight Schedule BAIL/BWS/001/07 dated 01 June, 20XX is 3320 kg.

The centre-of-gravity of the aircraft in the same condition at this weight and with the landing gear extended is 127 inch aft of the datum.

The total moment about the datum in this condition in kg-in/100 is 3175.

**Note:**

(i) The Datum is at Fuselage Station “0” situated 114 inches forward of the wing leading edge. This is the Datum defined in the aircraft approved Flight Manual. All lever arms are distances in inches aft of the Datum.

(ii) The basic weight includes the weight of 11kg unusable fuel and 2.2 kg unusable oil.
Part B – Variable Load

The weight, lever arm and moment of items of Variable Load are shown in the table below. The Variable Load depends upon the equipment carried for the particular role.

<table>
<thead>
<tr>
<th>ITEM</th>
<th>WEIGHT Kilogram (Kg)</th>
<th>LEVER ARM INCHES (in)</th>
<th>MOMENT Kg/in/100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilot (one)</td>
<td>-</td>
<td>108</td>
<td>-</td>
</tr>
<tr>
<td>De-icing Fluid 1 ½ Gallon</td>
<td>5.5</td>
<td>140</td>
<td>8</td>
</tr>
<tr>
<td>Life Jackets (seven)</td>
<td>6.4</td>
<td>135</td>
<td>9</td>
</tr>
<tr>
<td>Row 1 Passenger Seats (two)</td>
<td>27.2</td>
<td>173</td>
<td>47</td>
</tr>
<tr>
<td>Row 2 Passenger Seats (two)</td>
<td>27.2</td>
<td>215</td>
<td>58</td>
</tr>
<tr>
<td>Row 3 Passenger Seats (two)</td>
<td>27.2</td>
<td>248</td>
<td>68</td>
</tr>
<tr>
<td>Table</td>
<td>3.6</td>
<td>256</td>
<td>9</td>
</tr>
<tr>
<td>One Stretcher and Attachments (in place of seats Rows 2 &amp; 3)</td>
<td>20.5</td>
<td>223</td>
<td>46</td>
</tr>
<tr>
<td>Medical Stores</td>
<td>6.8</td>
<td>250</td>
<td>17</td>
</tr>
</tbody>
</table>

Part C – Loading Information (Disposable Load)

The total moment change when the landing gear is retracted is 8.2 kg-in/100. The appropriate lever arms are as shown in the table below:

<table>
<thead>
<tr>
<th>ITEM</th>
<th>WEIGHT Kilogram (Kg)</th>
<th>LEVER ARM INCHES (in)</th>
<th>CAPACITY Imp. Gallon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel in Tanks 1and 2</td>
<td>620</td>
<td>145</td>
<td>190</td>
</tr>
<tr>
<td>Engine Oil</td>
<td>23</td>
<td>70</td>
<td>5.6</td>
</tr>
<tr>
<td>Forward Baggage</td>
<td></td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>Rear Baggage</td>
<td></td>
<td>261</td>
<td></td>
</tr>
<tr>
<td>Passengers in Row 1 Seats</td>
<td></td>
<td>171</td>
<td></td>
</tr>
<tr>
<td>Passengers in Row 2 Seats</td>
<td></td>
<td>213</td>
<td></td>
</tr>
<tr>
<td>Passengers in Row 3 Seats</td>
<td></td>
<td>246</td>
<td></td>
</tr>
<tr>
<td>Patient in Stretcher</td>
<td></td>
<td>223</td>
<td></td>
</tr>
</tbody>
</table>

Fuel Density is calculated at 3.26 kg/gal and Oil Density is calculated at 4.1 kg/gal.
In accordance with the Guyana Civil Aviation (Air Navigation) Regulations, it is a requirement that the pilot satisfies himself before take-off that the load is of such a weight, and is so distributed and secured, that it may safely be carried on the intended flight.

**Note:** To obtain the total loaded weight of the aircraft, add to the basic weight the weights of the Variable and Disposable Load items to be carried for the particular role.

This Report was prepared on _______ (DATE)_______ and supersedes all previous issues.

---

**General Data**

- **Reference Number** - BAIL/BWS/001/07
- **Date of Issue** - 01 June, 20XX
- **Aircraft Type and Model** - Boxplane B24F
- **Nationality and Registration Marks** - 8R-GUY
- **Constructor's Serial Number** - B24F 009

**Computation of Basic Weight and Centre-of-Gravity Position**

The Basic Weight and Centre-of Gravity position is computed as shown in the tables below.

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>WEIGHT (Kg)</th>
<th>LEVER ARM (in)</th>
<th>MOMENT Kg/in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft weight as per Weighing Report No. BAIL/WR/001/07 dated 01 January, 20XX</td>
<td>2475</td>
<td>126</td>
<td>311850</td>
</tr>
<tr>
<td>Total of Items weighed but not part of Basic Equipment (List to be given)</td>
<td>-25</td>
<td>-</td>
<td>-650</td>
</tr>
<tr>
<td>Total of Basic Equipment Items not weighed (List to be given)</td>
<td>+50</td>
<td>-</td>
<td>+5000</td>
</tr>
<tr>
<td>Basic Weight</td>
<td>2500</td>
<td>127</td>
<td>317500</td>
</tr>
</tbody>
</table>
## GUYANA AVIATION REQUIREMENTS
### Implementing Standards - Part 5 – Airworthiness

Or

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>WEIGHT Kilogram (Kg)</th>
<th>LEVER ARM INCHES (in)</th>
<th>MOMENT Kg/in</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft basic weight as per Basic Weight Schedule BAIL/BWS/001/07 dated 01 June, 20XX</td>
<td>2475</td>
<td>126</td>
<td>311850</td>
</tr>
<tr>
<td>Total of Basic Equipment Items removed (List to be given)</td>
<td>-25</td>
<td>-</td>
<td>-650</td>
</tr>
<tr>
<td>Total of Basic Equipment Items added (List to be given)</td>
<td>+50</td>
<td>-</td>
<td>+5000</td>
</tr>
<tr>
<td>New Basic Weight</td>
<td>2500</td>
<td>127</td>
<td>317500</td>
</tr>
</tbody>
</table>

**Note:** The Datum is at Fuselage Station "0" situated 114 inches forward of the wing leading edge. This is the Datum defined in the aircraft approved Flight Manual. All lever arms are distances in inches aft of the Datum.

Current Basic Equipment List (may be given on separate sheets and attached to Schedule).

<table>
<thead>
<tr>
<th>ITEM</th>
<th>WEIGHT Kilogram (Kg)</th>
<th>LEVER ARM INCHES (in)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two SpinWheel Propeller Type PRO-SW3Y444</td>
<td>57.6 Each</td>
<td>76</td>
</tr>
<tr>
<td>TWO Engine Driven 100 Ampere Alternator Type ALT-222</td>
<td>12.2 Each</td>
<td>117</td>
</tr>
<tr>
<td>One 13 Ampere/Hour (AH) Ni-Cad Battery Type NC-24</td>
<td>14</td>
<td>153</td>
</tr>
<tr>
<td>Etcetera</td>
<td>Etcetera</td>
<td>Etcetera</td>
</tr>
</tbody>
</table>

This Schedule was prepared on ______(DATE)_______ and supersedes all previous issues.

________________________  __________________________  __________________________
Name and Designation     Signature                    On Behalf Of
# PART 6 – APPROVED MAINTENANCE ORGANIZATION

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<td>Maintenance Organization</td>
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</tr>
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<td>Ratings of the AMO</td>
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<td>Housing and Facility Requirements</td>
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<tr>
<td></td>
<td>Equipment, Tools, and Material</td>
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<td></td>
<td>Personnel Requirement</td>
</tr>
<tr>
<td></td>
<td>Records of Certifying Staff</td>
</tr>
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<td></td>
<td>Maintenance Organization Procedures Manual</td>
</tr>
<tr>
<td></td>
<td>Maintenance Procedures and Independent Quality Assurance System</td>
</tr>
<tr>
<td></td>
<td>Airworthiness Data</td>
</tr>
<tr>
<td></td>
<td>Reporting of Unairworthy Conditions</td>
</tr>
</tbody>
</table>

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June 1st 2007
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6.1 GENERAL

6.1.1 APPLICABILITY

Part 6 prescribes the requirements for issuing approvals to organisations for the maintenance preventive maintenance, and modifications of aircraft and aeronautical products and prescribes the general operating rules for an Approved Maintenance Organisation (AMO). The approval, when granted, shall apply to the whole organisation and shall be headed by the accountable manager.

6.1.2 DEFINITIONS

(a) For the purpose of Part 6, the following definitions shall apply—

(1) **Accountable manager (Maintenance).** The manager who has corporate authority for ensuring that all maintenance, preventive maintenance, and modification required by the aircraft owner/operator can be financed and carried out to the standard required by the Authority. The accountable manager may delegate to another person in the organisation, in writing, to become the accountable manager, when authorised by the Authority.

Note: The “accountable manager” is not specifically defined under ICAO, but the concept is partially discussed in ICAO Doc. 9642, Section IV, Chapter 2, as being either the CEO or a high-level corporate official who has financial responsibility for carrying out the maintenance functions for the entire organisation. This person is not specifically defined under the current FAR’s, but would generally equate to either the owner of the AMO or the corporate official who signs the initial application for the AMO certification. The definition of accountable manager used in this Part is adapted from JAR 145.5 for ease of reference. JAR 145.5 IEM gives examples of the accountable manager as the CEO, president, managing director, director general, general manager, etc.

(2) **Approval for return to service.** A certification by an approved maintenance organisation representative that the maintenance, preventive maintenance, or modification performed on an aircraft, airframe, aircraft engine, propeller, appliance, or component part thereof was accomplished using the methods, techniques, and practices, prescribed in the current manufacturer’s maintenance manual or instructions for continued airworthiness prepared by its manufacturer, or by using other methods, techniques, and practices acceptable to the Authority.

(3) **Approved data.** Technical information approved by the Authority.

(4) **Article.** Any item, including but not limited to, an aircraft, airframe, aircraft engine, propeller, appliance, accessory, assembly, subassembly, system, subsystem, component, unit, product, or part.

(5) **Calibration.** A set of operations, performed in accordance with a definite documented procedure, that compares the measurement performed by a measurement device or working standard for the purpose of detecting and reporting or eliminating by adjustment errors in the measurement device, working standard, or aeronautical product tested.

(6) **Certificated Approved Maintenance Organisation.** Means approved by the Authority.

(7) **Composite.** Structural materials made of substances, including, but not limited to, wood, metal, ceramic, plastic, fiber-reinforced materials, graphite, boron, or epoxy, with built-in strengthening agents that may by in the form of filaments, foils, powders, or flakes, of a different material.

(8) **Computer system.** Any electronic or automated system capable of receiving, storing, and processing external data, and transmitting and presenting such data in a usable form for the accomplishment of a specific function.

(9) **Facility.** A physical plant, including land, buildings, and equipment, which provide the means for the performance of maintenance, preventive maintenance, or modifications of any article.

(10) **Housing.** Buildings, hangers, and other structures to accommodate the necessary equipment and materials of a maintenance organisation that—
(i) Provide working space for the performance of maintenance, preventive maintenance, or modifications for which the maintenance organisation is certificated and rated; and

(ii) Provide structures for the proper protection of aircraft, airframes, aircraft engines, propellers, appliances, components, parts, and subassemblies thereof during disassembly, cleaning, inspection, repair, modification, assembly, and testing; and

(iii) Provide for the proper storage, segregation, and protection of materials, parts, and supplies.

(11) **Maintenance release.** An approved maintenance organisation document signed by an authorised approved maintenance organisation representative that states that the article worked on is approved for return to service for the maintenance, preventive maintenance, or modification performed.

(12) **Measurement Device.** A calibrated calibrator, standard, equipment and test equipment that is intended to be used to test, measure, or calibrate other measurement devices. It is not to be used to test, measure, or calibrate an aeronautical product.

(13) **Primary Standard.** A standard defined and maintained by a State Authority and used to calibrate secondary standards.

(14) **Reference Standard.** A standard that is used to maintain working standards.

(15) **Secondary Standards.** A standard maintained by comparison with a primary standard.

(16) **Signature.** An individual's unique identification used as a means of authenticating a maintenance record entry or maintenance record. A signature may be hand-written, electronic, or any other form acceptable to the Authority.

(17) **Specialised maintenance.** Any maintenance not normally performed by an AMO (e.g., tire retreating, plating, etc.)

(18) **Specific operating provisions.** The Specific Operating Provisions describe the ratings (Class and/or Limited) in detail and will contain or reference material and process specifications used in performing repair work, along with any limitations applied to the maintenance organisation. The accountable manager and the Authority sign this document.

(19) **Standard.** An object, artifact, tool, test equipment, system, or experiment that stores, embodies, or otherwise provides a physical quantity, which serves as the basis for measurement of the quantity. It also includes a document describing the operations and process that must be performed in order for a particular end to be achieved.

(20) **Tools, Equipment and Test Equipment.** Used by an AMO for the performance of maintenance or calibration on an aircraft or aeronautical product. See also working standard.

(21) **Traceability.** A characteristic of a calibration, analogous to a pedigree. A traceable calibration is achieved when each Measurement Device and Working Standard, in a hierarchy stretching back to the National Standard, was itself properly calibrated, and the results properly documented. The documentation provides the information needed to show that all calibrations in the chain of calibrations were properly performed.

(22) **Transfer Standard.** Any standard that is used to compare a measurement process, system, or device at one location or level with another measurement process, system or device at another location or level.

(23) **Working Standard.** A calibrated standard that is used in the performance of maintenance and/or calibrations in any work area for the purpose of forming the basis for product acceptance or for making a finding of airworthiness (approval for return to service) to an aircraft or aeronautical product. A working standard may be maintained by comparison with primary standards, secondary standards, reference standards or transfer standards, as appropriate. A working standard is not to be used to test, measure, or calibrate other working standards or measurement devices.
6.1.3 ACRONYMS
(a) The following acronyms are used in Part 6.
   (1) AMO – Approved Maintenance Organisation (Part 1)
   (2) PMA – Parts Manufacturing Authorisation
   (3) TSO – Technical Standard Order

6.1.4 CERTIFICATE AND SPECIFIC OPERATING PROVISIONS
(a) The AMO certificate will consist of two documents—
   (1) A one page certificate signed by the Authority, and
   (2) A multi-page specific operating provisions signed by the Accountable Manager and the Authority
       containing the terms, conditions, and authorisations.
(b) No person may operate as a certificated approved maintenance organisation without, or in violation of, an
    approved maintenance organisation certificate issued under this Part.
(c) A certificated approved maintenance organisation may perform maintenance, preventive maintenance, or
    modifications on an aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof only
    for which it is rating and within the limitations placed in its specific operating limitations.
(d) The AMO certificate will contain—
    (1) The certificate number specifically assigned to the AMO;
    (2) The name and location (main place of business) of the AMO;
    (3) The date of issue and period of validity;
    (4) The ratings issued to the AMO; and
    (5) Authority signature.

Implementing Standard: See IS: 6.1.4(D) for a sample AMO certificate.

(e) The AMO Specific Operating Provisions will contain—
    (1) The certificate number specifically assigned to the AMO;
    (2) The class or limited ratings issued in detail, including special approvals and limitations issued;
    (3) The date issued or revised
    (4) Accountable manager and Authority signatures.

(f) The certificate issued to each certificated maintenance organisation must be available in the premises for
    inspection by the public and the Authority.

6.1.5 ADVERTISING
(a) No approved maintenance organisation may advertise as a certificated approved maintenance
    organisation until an approved maintenance organisation certificate has been issued to that facility.
(b) No certificated approved maintenance organisation may make any statement, either in writing or orally,
    about itself that is false or is designed to mislead any person.
(c) Whenever the advertising of an approved maintenance organisation indicates that it is certificated, the
    advertisement must clearly state the approved maintenance organisation’s certificate number.
6.1.6 DEVIATION AUTHORITY

(a) The Authority may, upon consideration of the circumstances of a particular maintenance organisation, issue a deviation providing relief from specified sections of this Part, provided that the Authority finds that the circumstances presented warrant the deviation and that a level of safety will be maintained equal to that provided by the rule from which the deviation is sought. This deviation authority will be issued as a Letter of Deviation Authority.

(b) A Letter of Deviation Authority may be terminated or amended at any time by the Authority.

(c) A request for deviation authority must be made in a form and manner acceptable to the Authority and submitted to the Authority at least 60 days before the date the deviation from specified sections in this part is necessary for the intended maintenance, preventive maintenance, or modification. A request for deviation authority must contain complete statement of the circumstances and justifications for the deviation requested, and show that a level of safety will be maintained equal to that provided by the rule from which the deviation is sought.

(d) Each certificated maintenance organisation that receives a Letter of Deviation Authority must have a means of notifying the appropriate management, certifying staff, and personnel of the deviation, including the extent of the deviation and when the deviation is terminated or amended.
6.2 CERTIFICATION

6.2.1 APPLICATION FOR AN AMO CERTIFICATE

(a) The Authority will require an applicant for an AMO certificate to submit the following—
   (1) An application on a form and manner prescribed by the Authority;
   (2) Its maintenance procedures manual in duplicate;
   (3) A list of the maintenance functions to be performed for it, under contract, by another AMO;

Note: ICAO Doc. 9642, Part 4, 2.9 states that it is accepted practice to permit AMOs to subcontract work to non-approved maintenance organisations if the contracting AMO is (1 approved for the work to be subcontracted and has the ability to assess the competency of the subcontractor, (2 retains the responsibility for the quality control and release of subcontracted activities, and (3 there exist procedures to control subcontracted activities together with terms of reference for the personnel responsible for their management. However, for these model regulations, subcontracting is limited to only approved AMOs.

(4) A list of all AMO certificates and ratings pertinent to those certificates issued by any contracting State other than Guyana; and

Note: The requirement for listing AMO certificates, above, supports the application by Guyana of the following Articles of the Chicago Convention: Article 33 - Recognition of Certificates and Licenses; Article 37(d) - Adoption of International Standards and Procedures; Article 39(b) - Endorsement of Certificates and Licenses; and Article 40 - Validity of Endorsed Certificates and Licenses.

(5) Any additional information the Authority requires the applicant to submit.

Implementing Standard: See IS: 6.2.1 for sample of an application identified in sub paragraph (a)(1).

Note: "On a form" and "in a manner" mean that a form issued by the Authority should be completed by the accountable manager, or the manager’s nominee designated in accordance with 6.2.1(a). The required number of copies of the AMO procedure manual normally means "two," except in a particular case when additional copies may be required.

(b) An application for the amendment of an existing AMO certificate shall be made on a form and in a manner prescribed by the Authority. If applicable, the AMO shall submit the required amendment to the maintenance procedure manual to the Authority for approval.

6.2.2 ISSUANCE OF AN AMO CERTIFICATE

(a) An applicant may be issued an AMO certificate if, after investigation, the Authority finds that the applicant—
   (1) Meets the applicable regulations and standards for the holder of an AMO; and
   (2) Is properly and adequately equipped for the performance of maintenance of aircraft or aeronautical product for which it seeks approval

Note: If, under national law, any charges are to be prescribed by the Authority for the AMO application process, that requirement should be set forth in this section.
6.2.3 DURATION AND RENEWAL OF CERTIFICATE

(a) A certificate or rating issued to an approved maintenance organisation located in Guyana is effective from the date of issue until the approved maintenance organisation surrenders it or the Authority suspends or revokes it.

(b) A certificate or rating issued to an approved maintenance organisation located outside the Guyana is effective from the date of issue until—

(1) The last day of the 24th month after the date on which it was issued,

(2) The approved maintenance organisation surrenders the certificate, or

(3) The Authority suspends or revokes the certificate.

(c) The holder of a certificate that expires or is surrendered, suspended, or revoked by the Authority must return the certificate and specific operating provisions to the Authority.

(d) A certificated approved maintenance organisation located outside Guyana that applies for a renewal of its approved maintenance organisation certificate for aircraft registered in Guyana must:

(1) Submit its request for renewal no later than 90 days before the approved maintenance organisation’s current certificate expires. If a request for renewal is not made within this period, the approved maintenance organisation must follow the application procedure prescribed by the Authority.

(2) Send its request for renewal to the Authority that has jurisdiction over the approved maintenance organisation.

6.2.4 CONTINUED VALIDITY OF APPROVAL

(a) Unless the approval has previously been surrendered, superseded, suspended, revoked or expired by virtue of exceeding any expiration date that may be specified in the approval certificate, the continued validity of approval is dependent upon—

(1) The AMO remaining in compliance with this Part;

(2) The Authority being granted access to the organisation’s facilities to determine continued compliance with this regulation; and

(3) The payment of any charges prescribed by the Authority.

(b) The holder of an AMO certificate that expires or is surrendered, suspended, or revoked, shall return it to the Authority.

6.2.5 CHANGES TO THE AMO AND CERTIFICATE AMENDMENTS

(a) To enable the Authority to determine continued compliance with this Part, the AMO shall provide written notification to the Authority either prior to, or within a time period determined by the Authority to be as soon as practicable after, any of the following changes—

(1) The name of the organisation;

(2) The location of the organisation;

(3) The housing, facilities, equipment, tools, material, procedures, work scope and certifying staff that could affect the AMO rating or ratings;

(4) The ratings held by the AMO, whether granted by the Authority or held through an AMO certification issued by another contracting State;

Note: See subsection 6.2.1(a).

(5) Additional locations of the organisation;

(6) The accountable manager; or
(7) The list of management personnel identified as described in the maintenance procedure manual.

(b) The Authority will amend the AMO certificate if the AMO notifies the Authority of a change in—
   (1) Location or housing and facilities;
   (2) Additional locations of the organisation;
   (3) Rating, including deletions;
   (4) Name of the organisation with same ownership; or
   (5) Ownership.

(c) The Authority may amend the AMO certificate if the AMO notifies the Authority of a change in—
   (1) The accountable manager; or
   (2) The list of management personnel identified as described in the maintenance procedure manual.

(d) When the Authority issues an amendment to an AMO certificate because of new ownership of the AMO, the Authority will assign a new certificate number to the amended AMO certificate.

(e) The Authority may—
   (1) Prescribe, in writing, the conditions under which the AMO may continue to operate during any period of implementation of the changes noted in subparagraph (a); and
   (2) Hold the AMO certificate in abeyance if the Authority determines that approval of the AMO certificate should be delayed; the Authority will notify the AMO certificate holder, in writing, of the reasons for any such delay.

(f) If changes are made by the AMO to the items listed in subparagraph (a) without notification to the Authority and amendment of the AMO certificate by the Authority, the AMO certificate may be suspended by the Authority.

6.2.6 RATINGS OF THE AMO

(a) The following ratings are issued under this Subpart:
   (1) Airframe ratings. An aircraft rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications on an aircraft, including work on the powerplant(s) of that aircraft up to, but not including, overhaul as that term defined in 5.1.2(a)(5) under the following classes:
      (i) Class 1: Aircraft (other than rotorcraft and aircraft composed primarily of composite material) of 5,700 kg maximum certificated takeoff weight or less.
      (ii) Class 2: Aircraft (other than rotorcraft and aircraft composed primarily of composite material) over 5,700 kg maximum certificated takeoff weight and up to, and including, 34,200 kg maximum certificated takeoff weight.
      (III) Class 3: Aircraft, (other than rotorcraft and aircraft composed primarily composite material) over 34,200 kg maximum certificated takeoff weight.
      (IV) Class 4: Rotorcraft (other than rotorcraft composed primarily of composite material) of 2,736 kg maximum certificated takeoff weight or less.
      (V) Class 5: Rotorcraft (other than rotorcraft composed primarily of composite material) over 2,736 kg maximum certificated takeoff weight.
      (VI) Class 6: Aircraft composed primarily of composite material, of 5,700 kg maximum certificated takeoff weight or less.
      (VII) Class 7: Aircraft composed primarily of composite material, over 5,700 kg maximum certificated takeoff weight.
(2) Powerplant ratings. A powerplant rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of powerplants under the following classes:

(i) Class 1: Reciprocating engines.
(ii) Class 2: Turbopropeller and turboshaft engines.
(iii) Class 3: Turbojet and turbofan engines.

(3) Propeller ratings. A propeller rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of propellers under the following classes:

(I) Class 1: Fixed-pitch and ground-adjustable propellers.
(II) Class 2: Variable-pitch propellers.

(4) Avionics ratings. An avionics rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of avionics equipment under the following ratings:

(I) Class 1: Communication equipment: Any radio transmitting equipment or receiving equipment, or both, used in aircraft to send or receive communications, regardless of carrier frequency or type of modulation used; including auxiliary and related aircraft interphone systems, amplifier systems, electrical or electronic intercrew signalling devices, and similar equipment; but not including equipment used for navigation of the aircraft or as an aid to navigation, equipment for measuring altitude or terrain clearance, other measuring equipment operated on radio or radar principles, or mechanical, electrical, gyroscopic, or electronic instruments that are a part of communications avionics equipment.

(II) Class 2: Navigational equipment: Any avionics system used in aircraft for en-route or approach navigation, except equipment operated on radar or pulsed radio frequency principles, but not including equipment for measuring altitude or terrain clearance or other distance equipment operated on pulsed radio frequency principles.

(III) Class 3: Pulsed equipment: Any aircraft electronic system operated on pulsed radio frequency principles.

(5) Computer systems ratings. A computer systems rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of digital computer systems and components thereof, that have the function of receiving external data, processing such data, and transmitting and presenting the processed data under the following classes:

(I) Class 1: Aircraft computer systems.
(II) Class 2: Powerplant computer systems.
(III) Class 3: Avionics computer systems.

(6) Instrument ratings. An instrument rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of instruments under the following classes:

(I) Class 1: Mechanical: Any diaphragm, bourdon tube, aneroid, optical, or mechanically driven centrifugal instrument that is used on aircraft or to operate aircraft, including tachometers, airspeed indicators, pressure gauges, drift sights, magnetic compasses, altimeters, or similar mechanical instruments.

(II) Class 2: Electrical: Any self-synchronous and electrical indicating instruments and systems, including remote indicating instruments, cylinder head temperature gauges, or similar electrical instruments.
(III) Class 3: Gyroscopic: Any instrument or system using gyroscopic principles and motivated by air pressure or electrical energy, including automatic pilot control units, turn and bank indicators, directional gyros, and their parts, and flux gate and gyrosyn compasses.

(IV) Class 4: Electronic: Any instruments whose operation depends on electron tubes, transistors, or similar devices including capacitance type quantity gauges, system amplifiers, and engine analysers.

7 Accessory ratings. An accessory rating on an approved maintenance organisation certificate permits that approved maintenance organisation to perform maintenance, preventive maintenance, or modifications of accessory equipment under the following classes:

(I) Class 1: Mechanical. The accessories that depend on friction, hydraulics, mechanical linkage, or pneumatic pressure for operation.

(II) Class 2: Electrical. The accessories that depend on electrical energy.

(iii) Class 3: Electronic. The accessories that depend on the use of an electron tube transistors, lasers, fiber optics, solid-state, integrated circuits, vacuum tubes, or similar electronic controls.

(iv) Class 4: Auxiliary power units (APU’s) that may be installed on aircraft as self-contained units to supplement the aircraft’s engines as a source of hydraulic, pneumatic, or electrical power.

Implementing Standard: See IS: 6.2.6 for a detailed explanation of each rating.

6.2.7 AMO LIMITED RATINGS

(a) Whenever the Authority finds it appropriate, it may issue a limited rating to an AMO that maintains or alters only a particular type of airframe, powerplant, propeller, radio, instrument, or accessory, or parts thereof, or performs only specialised maintenance requiring equipment and skills not ordinarily found in an AMO. Such a rating may be limited to a specific model aircraft, engine, or constituent part, or to any number of parts made by a particular manufacturer.

(b) Limited ratings are issued for—

(1) Aircraft;
(2) Airframe;
(3) Powerplants;
(4) Propellers;
(5) Avionics equipment;
(6) Computer systems;
(7) Instruments;
(8) Accessories; and
(9) Any other purpose for which the Authority finds the applicant’s request appropriate.

(c) Specialised service ratings. A specialised service rating may be issued to a maintenance organisation to perform specific maintenance or processes. The specific operating provisions of the approved maintenance organisation must identify the specification used in performing that specialised service. The specification may be--

(1) A civil or military specification that is currently used by industry and approved by the Authority; or
(2) A specification developed by the approved maintenance organisation and approved by the Authority.
6.3  HOUSING, FACILITIES, EQUIPMENT, & MATERIALS

6.3.1  GENERAL

A certificated approved maintenance organisation must provide personnel, facilities, equipment, and materials in quantity and quality that meet the standards required for the issuance of the certificate and ratings that the approved maintenance organisation holds.

6.3.2  HOUSING AND FACILITY REQUIREMENTS

(a)  Housing and facilities shall be provided appropriate for all planned work ensuring, in particular, protection from weather.

(b)  All work environments shall be appropriate for the task carried out and shall not impair the effectiveness of personnel.

(c)  Office accommodation shall be appropriate for the management of planned work including, in particular, the management of quality, planning, and technical records.

(d)  Specialised workshops and bays shall be segregated, as appropriate; to insure that environmental and work area contamination is unlikely to occur.

(e)  Storage facilities shall be provided for parts, equipment, tools and material.

(f)  Storage conditions shall be provided security for serviceable parts, segregation of serviceable from unserviceable parts, and prevent deterioration of and damage to stored items.

 Implementing Standard: See IS: 6.3.2 for detailed requirements pertaining to housing and facilities.

6.3.3  EQUIPMENT, TOOLS, AND MATERIAL

(a)  The AMO shall have available the necessary equipment, tools, and material to perform the approved scope of work and these items shall be under full control of the AMO. The availability of equipment and tools means permanent availability except in the case of any tool or equipment that is so rarely needed that its permanent availability is not necessary.

(b)  The Authority may exempt an AMO from possessing specific tools and equipment for maintenance or repair of an aircraft or aeronautical product specified in the AMO's approval, if these items can be acquired temporarily, by prior arrangement, and be under full control of the AMO when needed to perform required maintenance or repairs.

 Note: The Authority need not amend the approval to delete the aircraft or aeronautical product on the basis that it is a temporary situation and there is a formal agreement from the AMO to re-acquire tools, equipment, etc. before performing any maintenance or repair.

(c)  The AMO shall control all applicable tools, equipment, and test equipment used for product acceptance and/or for making a finding of airworthiness.

(d)  The AMO shall ensure that all applicable tools, equipment, and test equipment used for product acceptance and/or for making a finding of airworthiness are calibrated to ensure correct calibration to a standard acceptable to the Authority and traceable to the State National Standards.

(e)  The AMO shall keep all records of calibrations and the standards used for calibration.

 Implementing Standard: See IS: 6.3.3 for detailed requirements pertaining to tools, equipment, and test equipment.
6.4 ADMINISTRATION

6.4.1 PERSONNEL AND TRAINING REQUIREMENTS

(a) A management person or group of persons acceptable to the Authority, whose responsibilities include ensuring that the AMO is in compliance with these regulations, shall be nominated.

(b) The person or persons nominated as manager shall represent the maintenance management structure of the AMO, and be responsible for all functions specified in Part 6.

(c) Nominated managers shall be directly responsible to an accountable manager who shall be acceptable to the Authority.

(d) The AMO shall employ sufficient personnel to plan, perform, supervise and inspect and release the work in accordance with the approval.

(e) The competence of personnel involved in maintenance shall be established in accordance with a procedure and to a standard acceptable to the Authority.

(f) The person signing maintenance release or an approval for return to service shall be qualified in accordance with Part 2, 2.4.4 or 2.4.6 as appropriate to the work performed and is acceptable to the Authority.

(g) The maintenance personnel and the certifying staff shall meet the qualification requirements and receive initial and continuation training to their assigned tasks and responsibilities in accordance with a program acceptable to the Authority. The training program established by the AMO shall include training in knowledge and skills related to human performance, including co-ordination with other maintenance personnel and flight crew.

Implementing Standard: See IS: 6.4.1 for detailed personnel requirements.

6.4.2 REST AND DUTY LIMITATIONS FOR PERSONS PERFORMING MAINTENANCE FUNCTIONS IN AN AMO

(a) No person may assign, nor shall any person perform maintenance functions for aircraft, unless that person has had a minimum rest period of 8 hours prior to the beginning of duty.

(b) No person may schedule a person performing maintenance functions for aircraft for more than 12 consecutive hours of duty.

(c) In situations involving unscheduled aircraft unserviceability, persons performing maintenance functions for aircraft may be continued on duty for—
   (1) Up to 16 consecutive hours; or
   (2) 20 hours in 24 consecutive hours.

(d) Following unscheduled duty periods, the person performing maintenance functions for aircraft shall have a mandatory rest period of 10 hours.

(e) The AMO shall relieve the person performing maintenance functions from all duties for 24 consecutive hours during any 7 consecutive day period.
6.4.3 RECORD OF CERTIFYING STAFF

(a) The AMO shall maintain a roster of all certifying staff, which includes details of the scope of their authorisation.

(b) Certifying staff shall be notified in writing of the scope of their authorisation.

*Implementing Standard: See IS: 6.4.3 for detailed requirements pertaining to records of certifying staff.*
6.5 AMO OPERATING RULES

6.5.1 APPROVED MAINTENANCE ORGANISATION PROCEDURES MANUAL

Note: The purpose of the Approved Maintenance Organisation Procedures Manual is to set forth the procedures, the means, and methods of the AMO. Compliance with its contents will assure compliance with the Part 6 requirements, which is a pre-requisite to obtaining and retaining an AMO certificate.

(a) An AMO Maintenance Procedure Manual and any subsequent amendments thereto shall be approved by the Authority prior to use.

(b) The AMO Maintenance Procedures Manual shall specify the scope of work required of the AMO in order to satisfy the relevant requirements needed for an approval of an aircraft or aeronautical product for return to service.

(c) The procedures manual and any other manual it identifies must:

1. Include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety;
2. Be in a form that is easy to revise and contains a system which allows personnel to determine current revision status;
3. Have the date of the last revision printed on each page containing the revision;
4. Not be contrary to any applicable Guyana regulation or the AMO's specific operating provisions; and
5. Include a reference to appropriate civil aviation regulations.

(d) The AMO shall provide an Approved Maintenance Procedures Manual for use by the organisation, containing the following information—

1. A statement signed by the accountable manager confirming that the maintenance organisation Procedures Manual and any associated manuals define the AMO's compliance with this regulation and will be complied with at all times;
2. A procedure to establish and maintain a current list of the titles and names of the management personnel accepted by the Authority. The list of personnel may be separate from the Procedures Manual but must be kept current and available for review by the Authority when requested;
3. A list which describes the duties and responsibility of the management personnel and which matters on which they may deal directly with the Authority on behalf of the AMO;
4. An organisation chart showing associated chains of responsibility of the management personnel.
5. A procedure to establish and maintain a current roster of certifying personnel;

Note: The list of certifying personnel may be separate from the procedures manual but must be kept current and available for review by the Authority when requested.

6. A description of the procedures used to establish the competence of maintenance personnel;
7. A general description of manpower resources;

Note: Subparagraphs (1) to (7) constitutes the management part of the maintenance organisation Procedures Manual and therefore could be produced as one document and made available to person(s) who should be reasonably familiar with its contents.

8. A description of the method used for the completion and retention of the maintenance records;
9. A description of the procedure for preparing the maintenance release and the circumstances under which the release is to be signed;
(10) A description, when applicable, of additional procedures for complying with an AOC holder’s maintenance procedures and requirements;

(11) A description of the procedures for complying with the service information reporting requirement contained in 6.5.9;

(12) A description of the procedure for receiving, amending and distributing within the maintenance organisation all necessary airworthiness data from the type certificate holder or the type design organisation;

(13) A general description of the facilities located at each address specified in the AMO’s approval certificate;

(14) A general description of the AMO’s scope of work relevant to the extent of approval;

(15) The notification procedure for AMO to use when requesting the approval of changes to the organisation of the AMO from the Authority;

(16) The amendment procedure for the AMO procedures manual, including the submission to the Authority;

(17) The AMO’s procedures, acceptable to the Authority, to ensure good maintenance practices and compliance with all relevant requirements in this subsection;

(18) The AMO’s procedures to establish and maintain an independent quality system to monitor compliance with the adequacy of the procedures to ensure good quality maintenance practices and airworthy aircraft and aeronautical products. Compliance monitoring must include a feedback system to the person or group of persons specified in 6.4.1, and ultimately to the accountable manager to ensure, as necessary, corrective action. Such a system shall be acceptable to the Authority;

((19) The AMO procedures for self-evaluations, including methods and frequency of such evaluations, and procedures for reporting results to the accountable manager for review and action;

(20) A list of operators, if appropriate, to which the AMO provides an aircraft maintenance service;

(21) A list of organisations performing maintenance on behalf of the AMO; and

(22) A list of the AMO’s line maintenance locations and procedures, if applicable.

Implementing Standard: See IS: 6.5.1 for detailed requirements concerning the Procedures Manual and a sample Maintenance Procedures Manual format.

6.5.2 MAINTENANCE PROCEDURES AND INDEPENDENT QUALITY ASSURANCE SYSTEM

(a) The AMO shall establish procedures acceptable to the Authority to insure good maintenance practices and compliance with all relevant requirements in these regulations such that aircraft and aeronautical products may be properly released to service.

(b) The AMO shall establish an independent quality assurance system, acceptable to the Authority, to monitor compliance with and adequacy of the procedures and by providing a system of inspection to ensure that all maintenance is properly performed.

Note: The quality assurance system may be an independent system under the control of the quality manager that evaluates the maintenance procedures and the correctness of the Equivalent Safety Case process.

(c) The quality assurance system shall include a procedure to initially qualify and periodically perform audits on persons performing work on behalf of the AMO.
(d) Compliance monitoring shall include a feedback system to the designated management person or group of persons directly responsible for the quality system and ultimately to the accountable manager to ensure, as necessary, corrective action.

(e) The maintenance procedures shall cover all aspects of maintenance activity and describe standards to which the AMO intends to work. The aircraft/aircraft component design AMO standards and aircraft operator standards must be taken into account.

(f) The maintenance procedures should address the provisions and limitations of Part 6.

(g) The maintenance procedures shall cover all aspects of maintenance activity and describe standards to which the AMO intends to work. The aircraft/aircraft component design AMO standards and aircraft operator standards must be taken into account.

(h) The AMO's quality system shall indicate when audits are due, when completed, and establish a system of audit reports, which can be seen by visiting Authority staff on request. The audit system shall clearly establish a means by which audit reports containing observations about non-compliance or poor standards are communicated to the accountable manager.

Implementing Standard: See IS: 6.5.2 for detailed requirements pertaining to the quality system, including a sample of inspection items taken from FAA Advisory Circular 145-3, SECTION V.

6.5.3 CAPABILITY LIST

(a) Each certificated approved maintenance organisation must prepare and retain a current capability list approved by the Authority. The approved maintenance organisation may not perform maintenance, preventive maintenance, or modifications on an article until the article has been listed on the capability list in accordance with this Part and 6.5.1(d)(19).

(b) The capability list must identify each article by make and model, part number, or other nomenclature designated by the article’s manufacturer.

(c) An article may be listed on the capability list only if the article is within the scope of the ratings and classes of the approved maintenance organisation's certificate, and only after the approved maintenance organisation has performed a self-evaluation in accordance with 6.5.1(d)(19). The approved maintenance organisation must perform the self-evaluation described in this paragraph to determine that the maintenance organisation has all of the facilities, equipment, material, technical data, processes, housing, and trained personnel in place to perform the work on the article as required by this part. If the approved maintenance organisation makes that determination, it may list the article on the capability list.

(d) The document of the evaluation described in paragraph (c) of this section must be signed by the accountable manager and must be retained on file by the approved maintenance organisation.

(e) Upon listing an additional article on its capability list, the maintenance organisation must send a copy of the list to the Authority having jurisdiction over the approved maintenance organisation.

(f) The capability list(s) must be available in the premises for inspection by the public and the Authority.

(g) The self-evaluations must be available in the premises for inspection by the Authority.

(h) The AMO shall retain the capability list(s) and self-evaluation(s) for two years from the date accepted by the accountable manager.
6.5.4 PRIVILEGES OF THE APPROVED MAINTENANCE ORGANISATION

(a) The AMO shall carry out the following tasks as permitted by and in accordance with the AMO maintenance procedures manual—

(1) Maintain any aircraft or aeronautical product for which it is rated at the location identified in the approval certificate;
(2) Maintain any aircraft for which it is rated at any location subject to the need for such maintenance arising from unserviceability of the aircraft;
(3) Describe the activities in support of a specific AOC holder where that AOC has requested the services of the AMO at locations other than the location identified on the AMO certificate and the AMO has been rated to maintain the aircraft of that specific AOC holder at the requested location in the AMO operating provisions approved by the Authority; and
(4) Issue an approval for return to service or a maintenance release in respect of subparagraphs (a) (1), (2), and (3) of this subsection upon completion of maintenance in accordance with limitations applicable to the AMO.

(b) An AMO may not contract out the maintenance, preventative maintenance, modification or alteration of a complete type-certificated product, and it may not provide only approval for return to service of a product following contract maintenance.

(c) The AMO may maintain or alter any article for which it is rated at a place other than the AMO, if—

(1) The function would be performed in the same manner as when performed at the AMO and in accordance with this Subpart;
(2) All necessary personnel, equipment, material, and technical and/or approved standards are available at the place where the work is to be done; and
(3) The maintenance procedure manual of the station sets forth approved procedures governing work to be performed at a place other than the AMO.

6.5.5 LIMITATIONS ON THE AMO

The AMO shall maintain an aircraft or aeronautical product for which it is approved only when all necessary housing, facilities, equipment, tools, material, approved technical data and certifying staff are available.

6.5.6 CERTIFICATE OF RELEASE TO SERVICE

(a) A certificate of release to service shall be issued by appropriately authorised certifying staff when satisfied that all required maintenance of the aircraft or aeronautical product has been properly carried out by the AMO in accordance with the maintenance procedure manual.

Note: An aeronautical product which has been maintained off the aircraft requires the issue of a certificate of release to service for such maintenance and another certificate of release to service in regard to being installed properly on the aircraft, when such action occurs.

(b) A certificate of release to service shall contain—

(1) Basic details of the maintenance carried out;
(2) The date such maintenance was completed; and
(3) The identity, including the authorisation reference, of the AMO and certifying staff issuing the certificate.
Implementing Standard: See IS: 6.5.6 for detailed requirements concerning a certificate of release to service, along with a sample form taken from FAA Form 8130-3.

6.5.7 MAINTENANCE RECORDS

(a) The AMO shall record, in a form acceptable to the Authority, all details for maintenance work performed.

(b) The AMO shall provide a copy of each certificate of release to service to the aircraft operator, together with a copy of any specific airworthiness data used for repairs/modifications performed.

(c) The AMO shall retain a copy of all detailed maintenance records and any associated airworthiness data for two years from the date the aircraft or aeronautical product to which the work relates was released from the AMO.

*Note: FAR and JAR require retaining maintenance records for two years.*

(d) Each person who maintains, performs preventive maintenance, rebuilds, or modifies an aircraft/aeronautical product shall make an entry in the maintenance record of that equipment:

1. A description and reference to data acceptable to the Authority of work performed.
2. The date of completion of the work performed.
3. The name of the person performing the work if other than the person specified in this subsection.
4. If the work performed on the aircraft/aeronautical product has been performed satisfactorily, the signature, certificate number, and kind of certificate held by the person approving the work.
5. The authorised signature, the AMO certificate number, and kind of certificate held by the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part, or portions thereof;
6. The signature constitutes the approval for return to service only for the work performed.
7. In addition to the entry required by this paragraph, major repairs and major modifications shall be entered on a form, and the form disposed of by the person performing the work, in the manner prescribed by the Authority.

(e) No person shall describe in any required maintenance entry or form an aircraft or aeronautical component as being overhauled unless:

1. Using methods, techniques, and practices acceptable to the Authority, it has been disassembled, cleaned, inspected as permitted, repaired as necessary, and reassembled; and
2. It has been tested in accordance with approved standards and technical data, or in accordance with current standards and technical data acceptable to the Authority, which have been developed and documented by the holder of the type certificate, supplemental type certificate, or a material, part, process, or appliance approval under a TSO.

*Note: For definitions of overhaul see 5.1.2(a) (5).*

(f) No person may describe in any required maintenance entry or form, an aircraft or other aeronautical product as being rebuilt unless it has been—

1. Disassembled, cleaned, inspected as permitted;
2. Repaired as necessary; and
3. Reassembled and tested to the same tolerances and limits as a new item, using either new parts or used parts that either conforms to new part tolerances and limits, or to approve oversized or undersized dimensions.

*Note: For definitions of rebuild see 5.1.2(a)(6).*
(g) No person may approve for return to service any aircraft or aeronautical product that has undergone maintenance, preventive maintenance, rebuilding, or modification unless:

(1) The appropriate maintenance record entry has been made;
(2) The repair or modification form authorised by or furnished by the Authority has been executed in a manner prescribed by the Authority;

(h) If a repair or modification results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data shall be appropriately revised and set forth as prescribed by the Authority.

(i) Maintenance record entries for inspections. The person approving or disapproving for return to service an aircraft/aeronautical product, after any inspection performed in accordance with this regulation, shall make an entry in the maintenance record of that equipment containing the following information:

(1) The type of inspection and a brief description of the extent of the inspection;
(2) The date of the inspection and aircraft total time in service; and
(3) The authorised signature, the AMO certificate number, and kind of certificate held by the person approving or disapproving for return to service the aircraft, airframe, aircraft engine, propeller, appliance, component part, or portions thereof;
(4) If the aircraft is found to be airworthy and approved for return to service, the following or a similarly worded statement—
   I certify that this aircraft has been inspected in accordance with (insert type) inspection and was determined to be in airworthy condition;
(5) If the aircraft is not approved for return to service because of needed maintenance, non-compliance with the applicable specifications, airworthiness directives, or other approved data, the following or a similarly worded statement—
   I certify that this aircraft has been inspected in accordance with (insert type) inspection and a list of discrepancies and unairworthy items dated (date) has been provided for the aircraft owner or operator; and
(6) If an inspection is conducted under an inspection program provided for in this regulation, the entry shall identify the inspection program accomplished, and contains a statement that the inspection was performed in accordance with the inspections and procedures for that particular program.

(j) Listing of discrepancies. If the person performing any inspection required by this regulation finds that the aircraft is not airworthy or does not meet the applicable type certificate data sheet, airworthiness directives, or other approved data upon which its airworthiness depends, that person shall give the owner or lessee a signed and dated list of those discrepancies.

6.5.8 AIRWORTHINESS DATA

(a) The AMO shall be in receipt of all airworthiness data appropriate to support the work performed from the Authority, the aircraft/aeronautical product design organisation, and any other approved design organisation in the State of Manufacture or State of Design, as appropriate.

Note: The Authority may classify data from another authority or organisation as mandatory and may require the AMO to hold such data.

(b) Where the AMO modifies airworthiness data specified in paragraph (a) to a format or presentation more useful for its maintenance activities, the AMO shall submit to the Authority an amendment to the maintenance procedure manual for any such proposed modifications for acceptance.

(c) All airworthiness data used by the AMO shall be kept current and made available to all personnel who require access to that data to perform their duties.
Implementing Standard: See IS: 6.5.8 for detailed requirements concerning airworthiness data.

6.5.9 Reporting of Unairworthy Conditions
(a) The AMO shall report to the Authority and the aircraft design organisation of the State of Design any identified condition that could present a serious hazard to the aircraft.
(b) Reports shall be made on a form and in a manner prescribed by the Authority and contain all pertinent information about the condition known to the AMO.
(c) Where the AMO is contracted by an AOC holder to carry out maintenance, that AMO shall report to the AOC holder any condition affecting the aircraft or aeronautical product.
(d) Reports shall be made as soon as practicable, but in any case within three days of the AMO identifying the condition to which the report relates.

6.5.10 CAA Inspections
Each certificated approved maintenance organisation must allow the Authority to inspect that approved maintenance organisation and any of its contract maintenance facilities at any time to determine compliance with this part. Arrangements for maintenance, preventive maintenance, or modifications by a contractor must include provisions for inspections of the contractor by the Authority.

6.5.11 Performance Standards
(a) Each certificated approved maintenance organisation that performs any maintenance, preventive maintenance, modifications for an air operator certificated under Part 9 having an approved maintenance program under Part 9.4.12 and approved continuous maintenance program under Part 9.4.13 shall perform that work in accordance with the air operator's manuals.
(b) Except as provided in paragraph (a), each certificated approved maintenance organisation shall perform its maintenance and modification operations in accordance with the applicable standards in Part 5. It shall maintain, in current condition, all manufacturer's service manuals, instructions, and service bulletins that relate to the articles that it maintains or modifies.
(c) In addition, each certificated approved maintenance organisation with an avionics rating shall comply with those sections in Part 5 that apply to electronic systems, and shall use materials that conform to approved specifications for equipment appropriate to its rating. It shall use test apparatus, shop equipment, performance standards, test methods, modifications, and calibrations that conform to the manufacturer's specifications or instructions, approved specification, and if not otherwise specified, to accept good practices of the aircraft avionics industry.
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IS: 6.1.4 (d) MAINTENANCE ORGANISATION CERTIFICATE
Following is a sample AMO certificate.

Guyana

APPROVED MAINTENANCE ORGANISATION CERTIFICATE

Number

This certificate is issued to

Whose business address is

Upon finding that its organisation complies in all respects with the requirements of the Civil Aviation Regulations Part 6, relating to the establishment of an Approved Maintenance Organisation and is empowered to operate an Approved Maintenance Organisation.

With the following ratings:

This certificate shall continue in effect unless cancelled, suspended, or revoked

By Direction of the Authority

Date Issued

This certificate is not transferable
IS: 6.2.1 APPLICATION FOR AN AMO CERTIFICATE
The following application may be used for an AMO certificate.

<table>
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<td>1. Approved Maintenance Organisation Name, Number, Location and Address</td>
<td>2. Reasons for Submission</td>
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<tr>
<td>a. Official Name of Approved Maintenance Organisation:</td>
<td>Number:</td>
</tr>
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<td></td>
<td>Original Application for Certificate and Rating</td>
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<td></td>
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<td>Change in Ownership</td>
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<td>Other (Specify)</td>
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<td>b. Location where business is conducted:</td>
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<tr>
<td>c. Official Mailing Address of Approved Maintenance Organisation (Number, Street, City, State, &amp; Zip)</td>
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<td>d. Doing Business As:</td>
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<td>3. Ratings Applied for:</td>
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<td>Airframe</td>
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<td>Class 4</td>
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<tr>
<td>4. List of Maintenance Functions contracted to an outside Maintenance Organisation:</td>
<td></td>
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<tr>
<td>5. Applicants Certification</td>
<td></td>
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<tr>
<td>*Name of Owner (Include name(s) of individual Owner, all partners, or corporation name given the state, province, or country and date of incorporation)</td>
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<tr>
<td>I hereby certify that I have been authorised by the approved maintenance organisation identified in Item 1 above to make this application and that statements attached hereto are true and correct to the best of my knowledge.</td>
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<tr>
<td>Date:</td>
<td>Authorised Signature:</td>
</tr>
<tr>
<td>For CAA Use Only</td>
<td>Record of Action</td>
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<tr>
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6. Remarks (Identify by item number. Include deficiencies found ratings denied)

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<tbody>
<tr>
<td>A. Station was found to comply with requirements of Part 6.</td>
<td></td>
</tr>
<tr>
<td>B. Station was found to comply with requirements of Part 6, except for deficiencies listed in Item 6.</td>
<td></td>
</tr>
<tr>
<td>C. Recommend Certificate with rating applied for on application be issued.</td>
<td></td>
</tr>
<tr>
<td>D. Recommend Certificate with rating applied for on application (EXCEPT those listed in Item 6) be issued.</td>
<td></td>
</tr>
</tbody>
</table>

9. CAA Office | Signature(s) of Inspector(s) | Printed Names of Inspectors |

10. Supervising or Assigned Inspector

<table>
<thead>
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<th>ACTION TAKEN</th>
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<tr>
<td></td>
<td>Inspector’s Signature</td>
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</table>

<table>
<thead>
<tr>
<th>Certificate Number</th>
<th>Date</th>
<th>Inspector’s Printed Name</th>
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IS: 6.2.6 RATINGS OF THE AMO

Except for job functions that are contracted out, each certificated approved maintenance organisation must provide equipment and material so that the job functions listed in this IS, as appropriate to the class or limited rating held or applied for, can be performed as required. The job functions are as follows:

For an aircraft rating:

Classes 1, 2, 3, 4, and 5:

(i) Metal skin and structural components:
   (A) Repair and replace steel tubes and fittings using the proper welding techniques, when appropriate.
   (B) Apply anticorrosion treatment to the interior and exterior of parts.
   (C) Perform simple machine operations.
   (D) Fabricate steel fittings.
   (E) Repair and replace metal skin.
   (F) Repair and replace alloy members and components.
   (G) Assemble and align components using jigs or fixtures.
   (H) Make up forming blocks or dies.
   (I) Repair or replace ribs.

(ii) Wood Structure:
   (A) Splice wood spars.
   (B) Repair ribs and spars.
   (C) Align interior of wings.
   (D) Repair or replace plywood skin.
   (E) Apply treatment against wood decay.

(iii) Fabric covering:
   (A) Repair fabric surfaces.

(iv) Aircraft control systems:
   (A) Repair and replace control cables.
   (B) Rig complete control system.
   (C) Replace and repair all control system components.
   (D) Remove and install control system units and components.

(v) Aircraft systems:
   (A) Replace and repair landing gear hinge-point components and attachments.
   (B) Maintain elastic shock absorber units.
   (C) Conduct landing gear retraction cycle tests.
   (D) Maintain electrical position indicating and wiring systems.
   (E) Repair and fabricate fuel, pneumatic, hydraulic, and oil lines.
   (F) Diagnose electrical and electronic malfunctions.
   (G) Repair and replace electrical wiring and electronic data transmission lines.
   (H) Install electrical and electronic equipment.
   (I) Perform bench check of electrical and electronic components. (This check is not to be confused with the more complex functional test after repair or overhaul.)

(vi) Assembly operations:
   (A) Assemble aircraft components or parts, such as landing gear, wings, and controls.
   (B) Rig and align aircraft components, including the complete aircraft and control system.
   (C) Install powerplants.
(D) Install instruments and accessories.
(E) Assemble and install cowlings, fairings, and panels.
(F) Maintain and install windshields and windows.
(G) Jack or hoist complete aircraft.
(H) Balance flight control surfaces.

(vii) Non-destructive inspection and testing using dye penetrants and magnetic, ultrasonic, radiographic, fluorescent, or holographic inspection techniques.

(viii) Inspection of metal structures:
(A) Inspect metal structures, using appropriate inspection equipment to perform the inspections required on an aircraft.

(2) Classes 6 and 7:
(i) In addition to having the capability to perform the appropriate functions set forth for class 1, 2, 3, 4, or 5 aircraft ratings, an approved maintenance organisation holding a class 6 or 7 aircraft rating for composite aircraft must have the following equipment:
(A) Autoclave capable of providing positive pressure and temperature consistent with materials used.
(B) Air circulating oven with vacuum capability.
(C) Storage equipment, such as freezer, refrigerator, and temperature-control cabinets or other definitive storage areas.
(D) Honeycomb core cutters.
(E) Non-destructive inspection equipment such as x-ray, ultrasonic, or other types of acoustic test equipment as recommended by the manufacturer.
(F) Cutting tools, such as diamond or carbide saws or router bits, suitable for cutting and trimming composite structures.
(G) Scales adequate to ensure proper proportioning by weight of epoxy adhesive and resins.
(H) Mechanical pressure equipment such as vacuum bagging or sand bags, as appropriate.
(I) Thermocouple probes necessary to monitor cure temperatures.
(J) Hardness testing equipment using heat guns that are thermostatically controlled for curing repairs.
(ii) Appropriate inspection equipment to perform inspection of composite structures as recommended by the manufacturer and as required for inspection of an aircraft under this section.

(3) List of maintenance functions that may be contracted out:
(i) For all classes of airframe ratings:
(A) Metal plating or anodizing.
(B) Complex machine operation involving the use of planners, shapers, milling machines, etc.
(C) Abrasive air blasting and chemical cleaning operations.
(D) Heat treatment.
(E) Magnetic inspection.
(F) Repair or rebuilt metal tanks
(G) Fabricate alloy members and components such as tubes, channels, cowlings, fittings, attach angles, etc.
(H) Fabricate wood spars.
(I) Overhaul and repair hydraulic-pneumatic shock absorber units.
(J) Overhaul and repair brake system components.
(K) Overhaul and repair hydraulic system components
(L) Conduct aircraft weight and balance operation (this function will be conducted in a draft free area).

(M) Fluorescent inspection of alloy components.

(N) Recovering and refinishing of components and entire aircraft.

(e) Powerplant rating:

(1) Class 1:

   (i) Maintain and alter powerplants, including replacement of parts:
       (A) Perform chemical and mechanical cleaning.
       (B) Perform disassembly operations.
       (C) Replace bushings, bearings, pins, and inserts.
       (D) Perform heating operations that may involve the use of recommended techniques that require controlled heating facilities.
       (E) Perform chilling or shrinking operations.
       (F) Remove and replace studs.
       (G) Inscribe or affix identification information.
       (H) Paint powerplants and components.
       (I) Apply anticorrosion treatment for parts.

   (ii) Inspect all parts, using appropriate inspection aids:
       (J) Determine precise clearances and tolerances of all parts.
       (K) Inspect alignment of connecting rods, crankshafts, and impeller shafts.

   (iii) Accomplish routine machine work:
       (L) Ream inserts, bushings, bearings, and other similar components.
       (M) Reface valves.

   (iv) Accomplish assembly operations:
       (N) Perform valve and ignition-timing operations.
       (O) Fabricate and test ignition harnesses.
       (P) Fabricate and test rigid and flexible fluid lines.
       (Q) Prepare engines for long or short term storage.
       (R) Hoist engines by mechanical means.

(2) Classes 2 and 3:

   (i) In addition to having the capability to perform the appropriate functions as required for class 1 powerplant rating, a maintenance organisation holding a class 2 or a class 3 powerplant rating must have the following equipment:
       (A) Testing equipment.
       (B) Surface treatment antigallant equipment.

   (ii) Functional and equipment requirements recommended by the manufacturer; and

   (iii) Appropriate inspection equipment.

(3) List of maintenance functions that may be contracted out:

   (i) Class 1 and 2 Powerplant (Reciprocating).
   (ii) Replacement of valve guides and seats.
   (iii) Plating operations (copper, silver, cadmium, etc.).
   (iv) Replacement and repair of powerplant alloy sheet metal and steel components such as air baffles, etc.
   (v) Magnetic, fluorescent and other acceptable inspection aids.
   (vi) Balancing of parts, including crankshafts, impeller shafts, etc.
   (vii) Precision grinding, honing and lapping operations (including crankshaft, cylinder barrels, etc.)
(viii) Precision drilling, tapping, boring, milling, and cutting operations.
(ix) Functional check powerplant accessories (this check is not to be confused with the more complex performance test of overhaul).
(x) Install engines in aircraft.
(xi) Align and adjust engine controls.

(f) Propeller Rating

(1) Class 1:
   (i) Remove and install propellers
   (ii) Maintain and alter propellers, including installation and replacement of parts:
      (A) Replace bladed tipping.
      (B) Refinish wood propellers
      (C) Make wood inlays.
      (D) Refinish plastic blades.
      (E) Straighten bent blades within repairable tolerances.
      (F) Modify blade diameter and profile.
      (G) Polish and buff.
      (H) Perform painting operations.
   (iii) Inspect components using appropriate inspection aids:
      (I) Inspect propellers for conformity with manufacturer’s drawings and specifications.
      (J) Inspect hubs and blades for failures and defects using all visual aids, including the etching of parts.
      (K) Inspect hubs for wear of splines or keyways or any other defect.
   (iv) Balance propellers:
      (L) Test for proper track on aircraft.
      (M) Test for horizontal and vertical unbalance using precision equipment.

(2) Class 2
   (i) Remove and install aircraft propellers, which may include installation and replacement of parts.
      (A) Perform all functions listed under Class 1 propellers when applicable to the make and model propeller in this class.
      (B) Properly lubricate moving parts.
      (C) Assemble complete propeller and subassemblies using special tools when required.
   (ii) Inspect components using appropriate inspection aids for those functions listed for class 1 propellers under paragraph (c)(1)(ii) of this Implementing Standard when applicable to the make and model of the propeller being worked on.
   (iii) Repair or replace components or parts:
      (D) Replace blades, hubs, or any of their components.
      (E) Repair or replace anti-icing devices.
      (F) Remove nicks or scratches from metal blades.
      (G) Repair or replace electrical propeller components.
   (iv) Balance propellers, including those functions listed for class 1 propellers under paragraph (c)(1)(iv) of this Implementing Standard when applicable to the make and model of the propeller being worked on.
   (v) Test propeller pitch-changing mechanism:
      (H) Test hydraulically operated propellers and components.
      (I) Test electrically operated propellers and components.

(3) List of maintenance functions that may be contracted out:
(i) Class 1 Propeller:
   (A) Inspect hubs and blades for failures and defects, using magnetic or fluorescent inspection devices.

(ii) Class 2 Propeller:
   (A) Test of constant speed devices.

(g) Avionics rating:
(1) Class 1, 2, and 3:
   (A) Perform physical inspection of avionics systems and components by visual and mechanical inspection.
   (B) Perform electrical inspection of avionics systems and components by means of appropriate electrical and/or electronic test equipment.
   (C) Check aircraft wiring, antennas, connectors, relays, and other associated avionics components to detect installation faults.
   (D) Check engine ignition systems and aircraft accessories to determine sources of electrical interference.
   (E) Check aircraft power supplies for adequacy and proper functioning.
   (F) Remove, repair, and replace aircraft antennas.
   (G) Measure transmission line attenuation.
   (H) Measure avionics component values such as inductance, capacitance, and resistance.
   (I) Determine waveforms and phase in avionics equipment when applicable.
   (J) Determine proper aircraft avionics antenna, lead-in, and transmission-line characteristics and determine proper locations for type of avionics equipment to which the antenna is connected.
   (K) Determine the operational condition of avionics equipment installed in aircraft by using appropriate portable test apparatus.
   (L) Test all types of transistors: solid-state, integrated circuits; or similar devices in equipment appropriate to the class rating.
   (M) Test avionics indicators.

(2) Class 1:
   (i) In addition to having the capability to perform the job functions listed in paragraph (d)(1):
      (A) Test and repair headsets, speakers, and microphones.
      (B) Measure radio transmitter power output.
      (C) Measure modulation values, noise, and distortion in communication equipment.

(3) Class 2:
   (i) In addition to having the capability to perform the job functions listed in paragraph (d)(1):
      (A) Test and repair headsets.
      (B) Test speakers
      (C) Measure loop antenna sensitivity by appropriate methods.
      (D) Calibrate to approved performance standards any radio navigational equipment, en route and approach aids, or similar equipment, as appropriate to this rating.

(4) Class 3:
   (i) In addition to having the capability to perform the job functions listed in paragraph (d)(1):
      (A) Measure transmitter power output.

(5) List of maintenance functions that may be contracted out.
   (i) Class 2 Avionics:
      (A) Repair of speakers.
(ii) Class 3 Avionics:
   (A) Metal plating of transmission lines, wave guides, and similar equipment in accordance with appropriate specifications.

(iii) For all Class of Avionics ratings:
   (A) Test avionics indicators.
   (B) Overhaul, test, and check dynamotors, inverters, and other radio electrical apparatus.
   (C) Paint and refinish equipment containers
   (D) Accomplish appropriate methods of marking calibrations, or other information on avionics control panels and other components, as required.
   (E) Make and reproduce drawings, wiring diagrams, and other similar material required to record alteration and/or modifications to avionics (photographs may be used in lieu of drawings when they will serve as an equivalent or better means of recording).
   (F) Fabricate tuning shaft assemblies, brackets, cable assemblies, and other similar components used in avionics or aircraft avionics installations.
   (G) Install complete avionics systems in aircraft and prepare weight and balance reports (that phase of avionics installation requiring modifications to the aircraft structure must be performed, supervised, and inspected by appropriately qualified and authorised person).

(h) Computer systems rating:
   (1) Class 1, 2, and 3:
      (A) Maintain computer systems in accordance with manufacturer’s specifications, test requirements, and recommendations.
      (B) Remove, maintain, and replace computer systems in aircraft.
      (C) Inspect, test, and calibrate computer system equipment, including software.

(i) Instrument rating:
   (1) Class 1:
      (i) Diagnose instrument malfunctions on the following instruments:
         (A) Rate-of-climb indicators.
         (B) Altimeters.
         (C) Airspeed indicators.
         (D) Vacuum Indicators.
         (E) Oil pressure gauges.
         (F) Hydraulic pressure gauges.
         (G) De-icing pressure gauges.
         (H) Pitot-static tube.
         (I) Direct indicating compasses.
         (J) Accelerometer.
         (K) Direct indicating tachometers.
         (L) Direct reading fuel quantity gauges.
      (ii) Inspect, test, and calibrate the instruments listed under paragraph (f)(1)(i) of this IS on and off the aircraft, as appropriate.

   (2) Class 2:
      (i) Diagnose instrument malfunctions of the following instruments:
         (A) Tachometers.
         (B) Synchroscope.
         (C) Electric temperature indicators.
(D) Electric resistance-type indicators.
(E) Moving magnet-type indicators.
(F) Warning units (oil and fuel).
(G) Selsyn systems and indicators.
(H) Self-synchronous systems and indicators.
(I) Remote indicating compasses.
(J) Quantity indicators.
(K) Avionics indicators.
(L) Ammeters.
(M) Voltmeters.
(N) Frequency meters.

(ii) Inspect, test, and calibrate instruments listed under paragraph (f)(2)(i) of this IS on and off the aircraft, as appropriate.

(3) Class 3:
   (i) Diagnose instrument malfunctions of the following instruments:
       (A) Turn and bank indicators.
       (B) Directional gyros.
       (C) Horizon gyros.
       (D) Auto pilot control units and components.
   (ii) Inspect, test, and calibrate instruments listed under paragraph (f)(3)(i) of this IS on and off the aircraft, as appropriate.

(4) Class 4:
   (i) Diagnose instrument malfunctions of the following instruments.
       (A) Capacitance-type quantity gauge.
       (B) Laser gyros.
       (C) Other electronic instruments.
   (ii) Inspect, test, and calibrate instruments listed under paragraph (f)(4)(i) of this IS on and off the aircraft, as appropriate.

(5) Accessory rating:
   (1) Class 1, 2, 3, and 4:
       (i) Perform the following functions in accordance with the manufacturers specifications and recommendations:
           (A) Diagnose accessory malfunctions.
           (B) Maintain and alter accessories, including installing and replacing parts.
           (C) Inspect, test, and calibrate accessories on and off the aircraft as appropriate.

IS: 6.3.2 **HOUSING AND FACILITY REQUIREMENTS**

(a) For ongoing maintenance of aircraft, aircraft hangars shall be available and large enough to accommodate aircraft during maintenance activities.

(b) Where the hangar is not owned by the AMO, it is recommended to:
   (1) Establish proof of authorisation to use hangar;
   (2) Demonstrate sufficiency of hangar space to carry out planned base maintenance by preparing a projected aircraft hangar visit plan relative to the maintenance program;
   (3) Update the aircraft hangar visit plan on a regular basis;
   (4) Ensure, for aircraft component maintenance, aircraft component workshops are large enough to accommodate the components on planned maintenance;
(5) Ensure aircraft hangar and aircraft component workshop structures prevent the ingress of rain, hail, ice, snow, wind and dust, etc.;

(6) Ensure workshop floors are sealed to minimise dust generation; and

(7) Demonstrate access to hangar accommodation for usage during inclement weather for minor scheduled work and/or lengthy defect rectification.

(c) Aircraft maintenance staff shall be provided with an area where they may study maintenance instructions and complete maintenance records in a proper manner.

Note: It is acceptable to combine any or all of the above requirements into one office subject to the staff having sufficient room to carry out assigned tasks.

(d) Hangars used to house aircraft together with office accommodation shall be such as to insure a clean, effective and conformable working environment.

(1) Temperatures should be maintained at a comfortable level.

(2) Dust and any other airborne contamination should be kept to a minimum and not permitted to reach a level in the work task area where visible aircraft/component surface contamination is evident.

(3) Lighting should be such as to insure each inspection and maintenance task can be carried out.

(4) Noise levels should not be permitted to rise to the point of distracting personnel from carrying out inspection tasks. Where it is impractical to control the noise source, such personnel should be provided with the necessary personal equipment to stop excessive noise causing distraction during inspection tasks.

(e) Where a particular maintenance task requires the application of specific environmental conditions different to the foregoing, then such conditions shall be observed. (Specific conditions are identified in the approved maintenance instructions.)

(f) Where the working environment for line maintenance deteriorates to an unacceptable level with respect to temperature, moisture, hail, ice, snow, wind, light, dust/other airborne contamination; the particular maintenance or inspection tasks shall be suspended until satisfactory conditions are re-established.

(g) For both base and line maintenance where dust or other airborne contamination results in visible surface contamination, all susceptible systems shall be sealed until acceptable conditions are re-established.

(h) Storage facilities for serviceable aircraft components shall be clean, well ventilated and maintained at an even dry temperature to minimise the effects of condensation.

(i) Manufacturer and standards recommendations shall be followed for specific aircraft components.

(j) Storage racks shall provide sufficient support for large aircraft components such that the component is not distorted.

(k) All aircraft components, wherever practicable, shall remain packaged in protective material to minimise damage and corrosion during storage.

**IS: 6.3.3 EQUIPMENT, TOOLS, AND MATERIAL**

(a) All applicable tools, equipment, and test equipment used for product acceptance and/or for making a finding of airworthiness shall be traceable to the Guyana National Standards.

(b) Except as provided in paragraph (a), in the case of foreign manufactured tools, equipment, and test equipment, the standard provided by the county of manufacture may be used if approved by the Authority.

(c) Where the manufacturer specifies a particular tool, equipment, or test equipment then that tool, equipment, or test equipment shall be used unless the manufacturer has identified the use of an equivalent.

(d) Except as provided in paragraph (c), tools, equipment, or test equipment other than that recommended by the manufacturer will be acceptable based on at least the following:

(1) The AMO shall have a procedure in the Maintenance Procedure Manual if it intends to use equivalent tools, equipment, or test equipment other than that recommended by the manufacturer.
(2) The AMO shall have a program to include:
   (i) A description of the procedures used to establish the competence of personnel that make the
determination of equivalency to tools, equipment, or test equipment.
   (ii) Conducting and documenting the comparison made between the specification of the tool,
equipment or test equipment recommended by the manufacturer and the equivalent tool,
equipment, or test equipment proposed.
   (iii) Ensuring that the limitations, parameters, and reliability of the proposed tool, equipment, or test
equipment are equivalent to the manufacturer's recommended tools, equipment, or test
equipment.
   (iv) Ensuring that the equivalent tool, equipment, or test equipment is capable of performing the
appropriate maintenance function, all normal tests, or calibrations, and checking all parameters
of the aircraft or aeronautical product undergoing maintenance or calibration.

(3) The AMO shall have full control of the equivalent tool, equipment, or test equipment (i.e. ownership,
lease, etc.)

(e) An AMO approved for base maintenance shall have sufficient aircraft access equipment and inspection
platforms/docking such that the aircraft may be properly inspected.

(f) The AMO shall have a procedure to inspect/service and, where appropriate, calibrate tools, equipment,
and test equipment on a regular basis and indicate to users that an item is within any inspection or service
or calibration time limit.

(g) The AMO shall have a procedure if it uses a standard (primary, secondary or transfer standards) for
performing calibration, that standard cannot be used to perform maintenance.

(h) A clear system of labelling all tooling, equipment and test equipment shall be used to give information on
when the next inspection or service or calibration is due, and if the item is unserviceable for any other
reason where it may not be obvious.

(i) A clear system of labelling all tooling, equipment, and test equipment shall be used to give information on
when such tooling, equipment, and test equipment is not used for product acceptance and/or for making a
finding of airworthiness.

(j) A register shall be maintained for all calibrated tools, equipment and test equipment together with a
record of calibrations and standards used.

(k) Inspection, service, or calibration on a regular basis shall be in accordance with the equipment
manufacturers' instructions except where the AMO can show by results that a different time period is
appropriate in a particular case and is acceptable to the Authority.

IS: 6.4.1 Personnel Requirements

(a) The AMO functions shall be subdivided under individual managers or combined in any number of ways,
dependent upon the size of the AMO.

(b) The AMO shall have, dependent upon the extent of approval, the following:
   (1) A base maintenance manager,
   (2) A line maintenance manager,
   (3) A workshop manager and a quality manager, all of whom should report to the accountable manager.

Note: In small AMOs, one or more of the above positions may be combined subject to approval by the Authority.

(c) The Accountable Manager shall be responsible for ensuring that all necessary resources are available to
accomplish maintenance required to support the AMO's approval.

(d) The Base Maintenance Manager shall be responsible for:
   (1) Ensuring that all maintenance required to be carried out in the hangar, plus any defect rectification
carried out during base maintenance, is carried out to specified design and quality standards; and
   (2) Any corrective action resulting from quality compliance monitoring.
(e) The Line Maintenance Manager shall be responsible for:

(1) Ensuring that all maintenance required to be carried out on the line, including line defect rectification, is performed to the required standards; and

(2) Any corrective action resulting from quality compliance monitoring.

(f) The Workshop Manager shall be responsible for:

(1) Ensuring that all work on aircraft components is performed to required standards; and

(2) Any corrective action resulting from quality compliance monitoring.

(g) The Quality Manager shall be responsible for:

(1) Monitoring the AMO’s compliance with Part 6; and

(2) Requesting remedial action as necessary by the base maintenance manager/line maintenance manager/workshop manager or the accountable manager, as appropriate.

(h) The AMO may adopt any title for managerial positions, but shall identify to the Authority the titles and persons chosen to carry out these functions.

(i) Where an AMO chooses to appoint managers for all or any combination of the identified functions because of the size of the undertaking, these managers shall report ultimately through either the Base Maintenance Manager or Line Maintenance Manager or Workshop Manager or Quality Manager, as appropriate, to the accountable manager.

(j) The managers specified in this subsection shall be identified and their credentials submitted to the Authority. To be accepted, such managers shall have relevant knowledge and satisfactory experience related to aircraft/aircraft component maintenance as appropriate in accordance with these regulations.

Note: Certifying staff may report to any of the managers specified depending upon which type of control the AMO uses (for example-licensed engineers, independent inspection/dual function supervisors, etc.) so long as the quality compliance monitoring staff remain independent.

(k) The AMO shall have a production man-hours plan showing that it has sufficient man-hours for the intended work.

(l) If an AMO is approved for base maintenance, the plan shall relate to the aircraft hangar visit plan.

(m) Man-hour plans shall regularly be updated.

Note: Work performed on any aircraft registered outside Guyana should be taken into account where it impacts upon the production man-hours plan.

(n) Quality monitoring compliance function man-hours shall be sufficient to meet the requirement of 6.5.2(b).

(o) Planners, mechanics, supervisors and certifying staff shall be assessed for competence by “on the job” evaluation or by examination relevant to their particular role within the AMO before unsupervised work is permitted.

(p) To assist in the assessment of competence, job descriptions are recommended for each position. The assessment shall establish that:

(1) Planners are able to interpret maintenance requirements into maintenance tasks, and have an appreciation that they have no authority to deviate from the aircraft maintenance program.

(2) Mechanics are able to carry out maintenance tasks to any standard specified in the maintenance instructions and will notify supervisors of mistakes requiring rectification to re-establish required maintenance standards.

(3) Supervisors are able to ensure that all required maintenance tasks are carried out and where not done or where it is evident that a particular maintenance task cannot be carried out to the maintenance instructions, then such problems will be reported to and agreed by the quality organisation.

(4) Certifying staff are able to determine when the aircraft or aircraft component is and is not ready to release to service.
(q) In the case of planners, supervisors, and certifying staff, knowledge of AMO procedures relevant to their particular role shall be demonstrated.

(r) Training of certifying staff shall be performed by the AMO or by an institute selected by the AMO. In either case, the AMO shall establish the curriculum and standards for training, as well as pre-qualification standards for the personnel intended for training. Pre-qualification standards are intended to insure that the trainee has a reasonable chance of successfully completing any course.

(s) Examinations shall be set at the end of each training course.

(t) Initial training shall cover:
   (1) Basic engineering theory relevant to the airframe structure and systems fitted to the class of aircraft the AMO intends to maintain;
   (2) Specific information on the actual aircraft type on which the person is intended to become a certifying person including the impact of repairs and system/structural defects; and
   (3) Company procedures relevant to the certifying staff's tasks.

(u) Continuation training should cover changes in AMO procedures and changes in the standard of aircraft and/or aeronautical products maintained.

(v) The training program shall include details of the number of personnel who will receive initial training to qualify as certifying staff over specified time periods.

(w) The training program established for maintenance personnel and certifying staff by the AMO shall include training in knowledge and skills related to human performance including co-ordination with other maintenance personnel and flight crew.

**IS: 6.4.3 RECORDS OF CERTIFYING STAFF**

(a) The following minimum information shall be kept on record in respect of each certifying person:
   (1) Name;
   (2) Date of birth;
   (3) Basic training;
   (4) Type training;
   (5) Continuation training;
   (6) Experience;
   (7) Qualifications relevant to the approval;
   (8) Scope of the authorisation;
   (9) Date of first issue of the authorisation;
   (10) Expiration date of the authorisation (if appropriate);
   (11) Identification number of the authorisation.

(b) Records of certifying staff shall be controlled, but not necessarily run by the AMO’s quality department.

(c) The number of persons authorised to access the system shall be limited to minimise the possibility of records being altered in an unauthorised manner and to limit confidential records from becoming accessible to unauthorised persons.

(d) A certifying person shall be given reasonable access on request to his or her records.

(e) The Authority is authorised to and may investigate the records system for initial and continued approval, or when the Authority has cause to doubt the competence of a particular certifying person.

(f) The AMO shall keep the record of a certifying person for at least two years after that person has ceased employment with the AMO or upon withdrawal of his or her authorisation. Upon request, the certifying staff shall be furnished with a copy of their record on leaving the AMO.
(g) The authorisation document shall be in a style that makes its scope clear to certifying staff and any authorised person that may be required to examine the document. Where codes are used to define scope, an interpretation document shall be readily available.

(h) Certifying staff are not required to carry the authorisation document at all times but shall produce it within a reasonable time of a request from an authorised person.

Note: Authorised persons, apart from the AMO’s quality department or maintenance supervisors/managers, include the Authority.

**IS: 6.5.1 MAINTENANCE ORGANISATION PROCEDURES MANUAL**

(a) AMO personnel shall be familiar with those parts of the manuals that are relevant to the maintenance work they perform.

(b) The AMO shall specify in the Procedures Manual who should amend the manual, particularly in the case where the manual consists of several parts.

(c) The Quality Manager shall be responsible for—

   1. Monitoring the amendment of the Procedures Manual, including associated procedures manuals
   2. Submitting proposed amendments to the Authority, unless the Authority has agreed, via a procedure stated in the amendment section of the Procedures Manual, that some defined class of amendments may be incorporated without approval by the Authority.

(d) The Procedures Manual shall address four main areas—

   1. The management Procedures Manual covering the parts previously specified;
   2. The maintenance procedures covering all aspects of how aircraft components may be accepted from outside sources and how aircraft will be maintained to the required standard;
   3. The quality system procedures, including the methods of qualifying mechanics, inspection, certifying staff and quality audit personnel; and
   4. Contracted AOC holder procedures and paperwork.

**Sample Maintenance Procedures Manual Format**

The manual may be put together in any subject order so long as all applicable subjects are covered.

**Part 1 - Management**

1.1 Corporate commitment by the accountable manager
1.2 Management personnel
1.3 Duties and responsibilities of the management personnel
1.4 Management Organisation Chart
1.5 List of certifying staff. *Note: A separate document may be referenced*
1.6 Manpower resources
1.7 General description of the facilities at each address intended to be approved
1.8 Organisations intended scope of work
1.9 Notification procedure to the Authority regarding changes to the organisation’s activities/approval/location/personnel
1.10 Manual amendment procedures

**Part 2 - Maintenance Procedures**

2.1 Supplier evaluation procedure
2.2 Acceptance/inspection of aircraft components and material from outside contractors.
2.3 Storage, tagging and release of aircraft components and material to aircraft maintenance
2.4 Acceptance of tools and equipment
2.5 Calibration of tools and equipment
2.6 Use of tooling and equipment by staff (including alternate tools)
2.7 Cleanliness standards of maintenance facilities
2.8 Maintenance instructions and relationship to aircraft/aircraft component manufacturers’ instructions including updating and availability to staff
2.9 Repair procedure
2.10 Aircraft maintenance program compliance
2.11 Airworthiness Directives procedure
2.12 Optional modification procedure
2.13 Maintenance documentation in use and completion of same
2.14 Technical record control
2.15 Rectification of defects arising during base maintenance
2.16 Release to service procedure
2.17 Records for the air carrier operator
2.18 Reporting of defects to the Authority/Operator/Manufacturer
2.19 Return of defective aircraft components to store
2.20 Defective components to outside contractors
2.21 Control of computer maintenance record systems
2.22 Reference to specific maintenance procedures such as:
   - Engine running procedures,
   - Aircraft pressure run procedures,
   - Aircraft towing procedures,
   - Aircraft taxiing procedures.

Part L2 - Additional Line Maintenance Procedures
L2.1 Line maintenance control of aircraft components, tools, equipment, etc.
L2.2 Line maintenance procedures related to servicing/fuelling/de-icing, etc.
L2.3 Line maintenance control of defects and repetitive defects
L2.4 Line procedure for completion of technical log
L2.5 Line procedure for pooled parts and loan parts
L2.6 Line procedure for return of defective parts removed from aircraft

Part 3 - Quality System Procedures
3.1 Quality audit of organisation procedures
3.2 Quality audit of aircraft
3.3 Quality audit remedial action procedure
3.4 Certifying staff qualification and training procedures
3.5 Certifying staff records
3.6 Quality audit personnel
3.7 Qualifying inspectors
3.8 Qualifying mechanics
3.9 Exemption process control
3.10 Concession control for deviation from organisations’ procedures
3.11 Qualification procedure for specialised activities such as non-destructive testing, welding, etc.
3.12 Control of manufacturers’ working teams

Part 4 - Documentation
4.1 Contracted air operators
4.2 Air operator procedures and paperwork
4.3 Air operator record completion
Part 5 - Appendices
5.1 Sample of documents
5.2 List of subcontractors
5.3 List of line maintenance locations

IS: 6.5.2 MAINTENANCE PROCEDURES AND INDEPENDENT QUALITY ASSURANCE SYSTEM
Following are sample inspection items.
MAINTENANCE SYSTEM AND CERTIFYING STAFF

MAINTENANCE PROCEDURES

GENERAL

The chief certifying staff manager is responsible to the accountable manager for full compliance with all procedures outlined in this system as appropriate to any item being inspected, repaired, overhauled or altered by the maintenance organisation. The airworthiness of those items and compliance with record requirements of the operators of those items and of the maintenance organisation depends upon conformity to the procedures of this system.

CERTIFYING STAFF

Certifying staff are required to be thoroughly familiar with all inspection methods, techniques and equipment used in their area of responsibility to determine the quality of airworthiness of an article undergoing maintenance, repair or alterations. All personnel must also maintain proficiency in the use of the various types of inspection aids to be used for inspection of the particular items undergoing inspection. Available to all certifying staff are current specifications involving inspection tolerances, limits, and procedures as set forth by manufacturer of the product undergoing inspection and other forms of inspection information such as CAA airworthiness directives, manufacturer's bulletins, etc. A file of maintenance manuals, engineering letters, service letters, CAA regulations, etc., are maintained in the inspection office.

Certifying staff assigned to maintenance organisation operations is required to familiarise themselves with CAA regulations applicable to such operations with particular emphasis on the following:

Part 4 – Aircraft Registration and Marking

Part 5 - Airworthiness Implementing Standard

Part 6 – Approved Maintenance Organisation

Part 7 – Instruments and equipment Implementing Standards

Part 8 – Operations Implementing Standards

Part 9 – Air Operator Certificate and Administration Implementing Standard

SUPERVISORS, CERTIFYING STAFF, AND MECHANICS

All supervisors, certifying staff, and mechanics are required to be thoroughly familiar with the requirements of this manual, CAA regulations, airworthiness directives and advisory circulars, manufacturer's service letters and bulletins and engineering orders. The basic maintenance system requires mechanics to sign their last name or initials for work performed by the prior to submitting the item to certifying staff for final acceptance. Certifying staff will indicate their acceptance of work performed with the application of the certifying staff acceptance stamp next to the item on the work forms. See appropriate section of this manual for sample forms and instructions for their use.
MAINTENANCE CONTINUITY

Reference: Part 6, 6.4.1, IS: 6.4.1. This section should show by title, who performs the maintenance continuity, the forms to be used, and disposition of the records. The maintenance continuity should encompass incoming materials, preliminary hidden damage and final inspection where applicable. It should include items as they progress through various stages of repair, overhaul or modification, including other inspections, test and calibrations (Rockwell Hardness Test, Magnaflux, Ultrasonic X-ray, etc.), adjusting or calibrating VOR, DME or ILS equipment. It should establish a system for passing along the continuity of inspection and other maintenance from one shift or person to another. It should reference manufacturer’s inspection standards for the maintenance of the particular items.

CONTINUITY OF MAINTENANCE RESPONSIBILITY

Through a “Line of Succession” list maintained by the chief certifying staff manager, his/her duties are assured of performance as "Acting Chief certifying staff manager."

A status book will be provided in the hangar and each shop in which a status report will be left by each of the certifying staff leaving the job before completion of a project, for information to the succeeding certifying staff. Its purpose is to assure a continuing inspection responsibility for in progress work inspections.

All forms upon which work performed is listed have been designed to show the name of the mechanic who performs the work (or supervises it) and the names of the certifying staff inspecting that work.

Samples of work forms, inspection forms, and instructions for completing them, are contained in the appropriate section of this manual.

INCOMING MATERIALS

Reference: Part 6, 6.4.1 This section should explain how compliance is shown, how the inspections are recorded, classification of incoming materials, including checks for damage, preservation and shelf life, identification of parts by part number, and the person responsible to perform the inspection (by title). In addition, it should describe the action to be taken when materials received do not meet specifications.

PARTS RECEIVING POLICY

The chief certifying staff manager of the maintenance organisation (or designee) is responsible to see that all incoming materials, AN or MS and other hardware, parts, components, equipment and other products procured for use by the maintenance organisation are subject to receiving inspection to assure conformance to part number, purchase order and/or other applicable specifications. A record of such inspections will be recorded on maintenance organisation Form No. XXXX, Receiving Inspection. Any products that fail to meet applicable specifications will be red tagged as unserviceable, listing the discrepancy and be returned to the stockroom manager for return to vendor. To preclude those parts from being used, the stockroom manager will place such items in the locked holding area until they are repacked for shipping back to the vendor.

GENERAL TEST REQUIREMENTS:

1. New components manufactured under a type or production certificate, or in accordance with a Technical Standard Order (or similar CAA approved technical data), or components which have been rebuilt by the manufacturer to production specifications, require a visual receiving inspection.

2. Any repaired or overhauled components received from an CAA certificated maintenance organisation do not normally require more than a visual receiving inspection before being returned to service. Repaired or overhauled components that are received from other than an CAA certified maintenance organisation, in addition to the normal receiving inspection, will be functionally checked before being returned to service.

3. All components requiring a functional check are routed to the proper maintenance organisation shop for the accomplishment of this check.
Note: Functional checks are performed in accordance with instructions contained in the appropriate manufacturer's publications. However, if such specific instructions are not available, functional check requirements will be determined by the chief certifying staff manager, and issued on a form to provide a means of recording compliance therewith.

Note: Functional checks are performed in accordance with instructions contained in the appropriate manufacturer's publications. However, if such specific instructions are not available, functional check requirements will be determined by the chief certifying staff manager, and issued on a form to provide a means of recording compliance therewith. If suitable test facilities are not available in maintenance organisation, components may be functionally checked in the aircraft. In any case, all functional checks must be monitored and recorded by the chief certifying staff manager or designee.

4. The Supervisor - Quality Assurance Control or certifying staff may request a functional check of any component overhauled or repaired by any agency, when of the opinion that such a check is required in order to return the component to service.

5. All adhesives, sealers, primers, finishing and other materials having limited shelf life are identified by material control labels showing the expiration date of the shelf life as established by applicable specifications. Inspectors and mechanics will dispose of any materials found in the shop or storerooms without such identification or with expired shelf life.

6. The detailed functions of material inspection are covered by the manufacturer's quality assurance directive and inspection bulletins which will be used to implement the operation of the maintenance organisation with respect to the control and identification of materials, parts and equipment received for direct use in the maintenance organisation. All parts new or overhauled purchased from vendors will be checked for proper approval documentation prior to release for installation by the maintenance organisation.
Upon receipt of a work request for maintenance or alteration on an airframe, engine, accessory, propeller, instrument, radio or a product requiring a specialised service covered by the maintenance organisation certificate, the maintenance department will issue a (name of company) Maintenance organisation Work Order Form XXXX to authorise that work to be accomplished. The form is pre-numbered and that number will be the basic reference for the product’s maintenance record. The work order will specify the work to be accomplished. The work order will be supplemented as necessary with detailed inspection instructions along with applicable forms; to assure proper inspection and repair of the unit involved. The number of additional forms used will be identified on the work order. The original of the printed and numbered work order form will be retained in the base maintenance manager’s office.

A logbook will be maintained in the base maintenance manager’s office for recording each work order in numerical order, identifying the customer, the product for which it was issued along with the manufacturer serial number, special instructions and the work accomplished.

It will be the responsibility of the respective shop manager and chief certifying staff manager to assure that proper supplemental instructions are furnished to assure proper progressive servicing, inspection and testing of the product involved.

Mechanics will enter work accomplished and use last names or initials to sign off that work on the form. Certifying staff will use their inspection stamp to sign off inspections. A list of inspectors and stamp numbers are contained in this manual under Section ____.

See copy of work order and supplemental forms in the appropriate section of this manual.

A copy of the work order with all attachments should be on file as a permanent record of all work accomplished. The record should reflect the signature of each mechanic and certifying staff that performed maintenance on each unit. It should reflect exactly what work was accomplished. It should show all of the parts used. The records should be maintained for a period of not less than two years.

A detailed record shall be kept of all work performed by the maintenance organisation. A copy of each Work Order Form 1234 with all attached supplementary form(s) will be maintained in the maintenance organisation records section. A separate file area is provided for all paper work associated with the maintenance organisations work activities. Each work record is checked by an inspector for work accomplished, parts used signature of mechanic and inspectors who performed maintenance. Records are maintained in active file for two (2) years then transferred to dead storage for 5 additional years.
PRELIMINARY INSPECTION

This information should indicate who is to perform the inspection, the method of inspection and any special testing requirements. Instructions should include the type of form to be used, how defects noted are recorded and the requirement to make them part of the work order.

PRELIMINARY INSPECTION

The Chief certifying staff manager of the maintenance organisation is responsible for the performance of appropriate inspections including functional and non-destructive tests to assure that all units delivered to the maintenance organisation for maintenance, alteration or repair under the privileges of the maintenance organisation certificate are subjected to a preliminary inspection to determine the state of preservation and any defects on the items involved. This inspection will be recorded on the Preliminary Inspection Form XXXX with any discrepancies noted and the form must be attached to the work order identified with the unit involved. It will remain with the applicable inspection records until the unit is released for functional and non-destructive tests. Those forms will show the work order number and will be routed attached to the work order.

Before any work is begun, the Chief certifying staff manager will, in the case of work to be performed for an air operator under the continuous airworthiness requirements of Part 6, make sure that all necessary current information and specifications are included or referred to in the work instructions that are to accompany the article through the maintenance organisation, and that the work is done in accordance with the air operators manual.

HIDDEN DAMAGE INSPECTION

This section should describe who is to perform the inspection (by title), the depth (should include areas adjacent to obviously damaged members or components), how the inspection will be recorded, the recording and handling of any defects noted and the requirement to make the inspection a part of the work order.

INSPECTION FOR HIDDEN DAMAGE

The preliminary inspection is not limited to the area of obvious damage or deterioration but includes a thorough and searching inspection for hidden damage in areas adjacent to the damaged area and/or in the case of deterioration, a thorough review of all similar materials or equipment in a given system or structural area. The scope of this inspection will be governed by the type of unit involved with special consideration accorded previous operating history, Malfunction or Defect Reports, service bulletins and AD notes applicable to the unit involved. The inspector is responsible for listing all discrepancies noted during inspection on the work order prior to release for return to service. See the appropriate section of this manual for proper forms and instructions for using them.

This section should explain how the results of required inspections are recorded and made part of the applicable work order.

PROGRESSIVE INSPECTION

Certifying staff will be assigned to make inspections at various stages of teardown, overhaul, and repair of all units or components received by the maintenance organisation for service. Progressive inspections are accomplished with a frequency determined by applicable manual recommendations and/or maintenance organisation originated work forms.
MAJOR REPAIR AND ALTERATION AIRCRAFT AND COMPONENTS

Following the preliminary inspection, additional records may be prepared by the inspection department to provide a comprehensive historical record of the work performed. These records will contain work orders, service bulletins, AD notes, service letters, type of inspection, detailed figures related to functional tests and special non-destructive tests to be accomplished. The approved engineering or other approved technical data authorising the repair or alteration will be clearly indicated. Where special drawings are made to cover specific repair conditions, a copy of the drawing will be included in the aircraft records.

Units removed from the aircraft will be tagged with the appropriate inspection identification tag listing the aircraft serial number, unit serial number and reason for removal.

No item removed and tagged as above described will be reinstalled unless the unit is cleared as "serviceable" by inspection.

REPAIR, ALTERATION AND OVERHAUL ACCESSORIES AND APPLIANCES

Self-contained accessory and appliance units such as actuators, pumps, valves, generators, etc., which, after preliminary inspection, have been established as eligible for overhaul or repair, will be identified with a green repairable part tag with appropriate repair instructions entered on the face of the tag, as authorised by the work order. No such unit shall be approved for returned to service without a maintenance release tag authorising its return to service.

INSPECTION PROCEDURES

The Chief certifying staff manager is responsible for the complete and efficient performance of inspections assigned to the maintenance organisation to assure inspection acceptance in accordance with manual specifications or other approved technical data.

Shop supervisors are responsible for the accomplishment of all work in accordance with manual specifications or other approved technical data. The work done under the maintenance organisation’s Limited Rating - Specialised Service Non-destructive Inspection by X-ray, magnetic particle, eddy current or ultrasonic must be accomplished in accordance with the (name of company) CAA approved process specification XXXX.

Alterations and repair will be subject to progressive inspection by the certifying staff department. Discrepancies generated during the process of accomplishing the work involved will be recorded on the appropriate work forms. Discrepancies so recorded will be corrected before the unit is submitted for final inspection. Upon completion of this progressive inspection, the area affected is given a shakedown inspection and after all rework is accomplished and accepted, the inspection will clear the unit for final acceptance.

Upon completion of a specific operation, the mechanic will sign off the records using his signature indicating that the item is complete and ready for inspection. The action accomplished to correct a specific discrepancy will be noted under each item on the work order. The certifying staff will then inspect the item to assure conformance to specifications and established workmanship standards. Functional checks of any system affected by the work involved will be accomplished before final acceptance. Inspection acceptance will be indicated by the inspector's stamp or signature.

MAINTENANCE INSPECTION

100-hour and progressive inspections, inspections of amateur built aircraft and aircraft on Part 8, 8.3 programs will be accomplished in accordance with the inspection cards or inspection schedule provided for each specific model aircraft. The inspection paperwork will be supplemented as necessary to cover items to be replaced for time, special inspection items, discrepancies and airworthiness directives. All 100-hour and annual inspection paperwork will comply with 5.6.9.

No aircraft will be returned to service following an inspection as outlined above until all discrepancies affecting airworthiness have been corrected.

Maintenance supervisors are responsible for screening completed work orders covering work performed in their assigned area to assure that all items on the work order have been cleared, that there are no open discrepancies and that all major work accomplished is covered by approved data. Certifying staff will recheck to assure compliance with this section.
After work orders have been screened for completeness and accuracy, they are routed to the base maintenance manager’s office. Such inspection and work records will be retained in active file for a period of not less than two years (as required by Part 6) and then transferred to dead storage for 5 additional years.

CONTINUITY OF MAINTENANCE RESPONSIBILITY

A status book will be provided in the hangar and each shop in which a status report will be entered by each of the lead mechanics informing the next shift of the status of each job not completed. Its purpose is to assure a continuing maintenance responsibility for work in progress.

HANDLING OF PARTS

This section should explain compliance with the rule. Processing of parts, identification, tag, segregation, and protection from damage and/or contamination, parts finishing, preservation, stock control and shelf life.

HANDLING OF PARTS

All items or components undergoing maintenance, repairs and/or alterations in the maintenance organisation shall have the component parts segregated and in containers in order to assure that all parts of the same unit(s) are kept together. Suitable trays, racks, stands and protective coverings (as required) are to be provided in shop areas to ensure maximum protection of all parts. Rejected parts will be identified by the use of a red reject tag and final disposition will be the responsibility of the Chief Certifying Staff Manager.

TAGGING AND IDENTIFICATION OF PARTS

The following is our four-tag system:

White tags - Used for identification of unit and customer only. To be completed by shop supervisor or a designated employee.

Green tag - Will be attached to units or parts requiring repairs or test and will include work to be performed. To be executed and signed by certifying staff only.

Yellow tag - To be attached to completed units which have received final inspection and are approved for return to service. The maintenance release is printed or stamped on the reverse side of this tag. (See Maintenance Release Statement, example in the appropriate section of this manual). This release will be signed by a designated certifying staff person only.

Red tag - Will be attached to rejected parts, pending final disposition. If rejected parts are in large quantities, they can be place in a special container marked “rejected parts.” This tag to be completed by a certifying staff.

All tags contain the following information:

Manufacturers - model - part number - serial number - name of part owner.

The yellow tag will remain attached to the parts returned to the customer.

The red, white and green tags will be made a part of work order file. If the rejected part is returned to the customer, the red tag will remain attached and a record will be made on the work order showing the part was returned to the customer.

PART FINISHING

Painting and spraying is accomplished in an area segregated from assembly areas.

PRESERVATION OF PARTS

Components are preserved in accordance with manufacturer's recommendations or other acceptable industry standards. To afford protection against humidity, extreme temperatures, dust, rough handling or other damage, the component will be preserved by wrapping in suitable containers, plastic bags, and/or rigid boxes containing suitable shock absorption material.

Storage of "Maintenance organisation" preserved components will be accomplished by storing in a separate "Maintenance organisation" location maintained by the "Stores" department. The location should provide maximum...
protection from physical damage. (Expand as necessary the preservation and storage requirements to suit the products worked on under the maintenance organisation ratings.)

SHELF LIFE
For those items having a specific shelf life, Maintenance organisation Form _____(TBD) is completed by the receiving certifying staff during the first ten (10) calendar days of each month.
Components of parts that have exceeded allowable shelf life limits will be red tagged (Condemned) and will be forwarded to the Chief Certifying Staff Manager for final disposition.

INCOMING MATERIAL
All incoming material shall be inspected for quantity, quality, conformity to dimensions or specifications and state of preservation. At this time the cure date of material having shelf life shall be noted, and the older stock shall be used first provided it is not beyond manufacturer's specifications.

HARDWARE AND EQUIPMENT STORAGE
The Stockroom Manager is responsible to the Base Maintenance Manager for the operation of the stockroom and is responsible for controlling, segregating and maintaining all stock and tools as to a serviceable or unserviceable category approved by the Chief certifying staff manager.
In addition the Stockroom manager is required to:
Properly store, segregate and protect materials, parts and supplies.
Provide suitable storage facilities for storing standard parts, spare parts and assure that raw materials are separated from shop and working space.
Provide for the preservation of all articles or parts, while in inventory, that is subject to deterioration and shelf life specifications.
Only acceptable parts and supplies will be issued for any job. Acceptable industry practices shall be followed for the proper protection and storage of materials. (The standards for use by the maintenance organisation should be detailed here.)
RECORD OF TEST AND/OR CALIBRATION

This section should include in house tests applicable to the maintenance organisation ratings and those contracted to outside agencies. It should include a requirement for the signature of the mechanic and/or certifying staff as appropriate. The record should identify the article by serial number or company assigned number.

RECORD OF SPECIALIZED INSPECTION, TEST AND/OR CALIBRATION

Specific notations, attesting accomplishment, will be made on either Form XXXX and/or appropriate printed work forms for recording specialised inspection, testing and/or calibration of a component or aircraft. (See appropriate section of this manual.)

RECORD OF INSPECTIONS

Where a record of the inspection by dimensions, tests or calibration is required by the manufacturer's technical data such record shall be made on an appropriate form properly identified with the Work Order; it must also be dated and signed by the mechanic performing the inspection, tests or calibration and/or the certifying staff as appropriate.

RECORD OF TESTS AND CALIBRATION OF PRECISION EQUIPMENT

A system is maintained on all precision test equipment that will properly identify each piece of equipment. A file system is maintained to properly identify the equipment and record the date and person testing or calibrating each individual piece of precision equipment. (Give details of system here, or state where it can be obtained.)

WORK BY OUTSIDE CONTRACTORS

When test and/or calibrations are performed by the following outside contractors they will be required to provide the records as outlined above. (List here the outside agencies and the work for which they are contracted to do for the maintenance organisation.)

RECORD OF PRECISION TEST EQUIPMENT CALIBRATION.

Identify the person (by title) responsible for the calibration and then test records. The records should include the manufacturer, model and serial or company assigned number, date of check, the method used to calibrate and the frequency, the person or company who performs checks, and the results and/or corrections made, when the next inspection is due, and requirements to tag equipment as appropriate.

CONTROL OF PRECISION TOOLS AND TEST EQUIPMENT

Precision tools, gauges, scales, pressure gauges, ammeters, ohmmeters, voltmeters, radio, electronic, X-ray, eddy current and ultrasonic test equipment used in the maintenance organisation operations are subject to periodic checks and calibration in accordance with appropriate maintenance organisation procedures. (List equipment here and outline procedures as appropriate.)

All maintenance organisation personnel, before using test equipment, are responsible to check that the testing unit has a current calibration label attached. Any piece of test equipment found in the maintenance organisation without a current calibration label attached shall be given to the certifying staff department for re-calibration.

TEST EQUIPMENT CALIBRATION REQUIREMENTS

Test equipment shall be calibrated at periodic intervals established on the basis of stability, purpose and degree of usage. One year shall be the maximum calibration interval. (List calibration periods on equipment list.)

Each piece of test equipment will be labelled. The label will identify the unit by manufacturer, model and serial number. The attached label must indicate the last calibration date and next calibration due date.
During the first week of each month the chief certifying staff manager will review the test equipment calibration history card file and give cards for test equipment requiring calibration to the maintenance manager and each shop foreman as appropriate. It will be the responsibility of those persons to issue work orders to maintenance organisation shops or outside contractors as necessary for the calibration of the units and attachment of updated calibration labels. After calibration, the test unit will be checked for proper labelling and the equipment calibration history card will be updated and returned to the inspection department active file.

At no time will any person be permitted to perform work on aircraft or components using test equipment which is out of calibration. The test equipment labels will be checked by supervisors at random to assure that equipment in use is in calibration. If at any time a piece of test equipment inadvertently exceeds its calibration due date, it will be immediately be removed from service until a calibration check has been performed.

Standards used to calibrate test equipment must be traceable to the States National Standards or an approved foreign country’s standard by certificate from the testing facility. Frequency for calibration standards may vary for different units but must never exceed a 12-month interval.

**RECORD OF SELF-EVALUATIONS.**

Identify the person(s) (by title) responsible to perform the self-evaluations and the individual that ensures that the capability list is kept current. The record(s) of self-evaluation shall include the person (by title), date, and the results and/or corrections made as appropriate.

The self-evaluation along with the capability list shall be reviewed and signed by the accountable manager. Procedures identifying that the maintenance organisation shall not perform such maintenance on any article until such time the accountable manager has accepted and signed the self-evaluation sheet(s) and capability list.

**FINAL INSPECTION AND RELEASE TO SERVICE**

This should explain compliance with the rules, who performs the inspection (by title), how it is recorded, and requires a check of maintenance work package for completion.

**FINAL INSPECTION AND RELEASE TO SERVICE**

Prior to approval for return to service, irrespective of the method to be used to indicate such approval, the Chief certifying staff manager will audit the records "package" as identified by the work order, to determine that all work has been inspected as required for compliance with this inspection system and Part 6. He/she will indicate affirmative findings approving the form per Section XXXX of this manual.

When approval has been given to the above audit, either the Chief certifying staff manager or the individual authorised in the official roster and individual summary of employment, will approve the article for return to service.

This approval will be accomplished as appropriate to the work done, the article involved, the records available with the article, and the instructions of the customer. Care will be exercised to comply with Part 5 in every case.

Whenever the aircraft records (log) are available, record of work accomplished is expected to be made therein. This does not waive any Part 6 records requirements. Neither will Part 5 or Part 9 be considered waived by Part 6 records requirements.

Articles such as appliances, accessories, and individual parts or components will not have an individual record to which an entry may be added. However, the installation of these items on an aircraft constitutes an aircraft maintenance or alteration, and records must be made accordingly.

Routinely, major repair approvals will be handled in accordance with 5.7.1 and paragraph (b) of IS: 5.7.1. A maintenance release is completed as a part of the work order form at the time of approval for return to service. A separate maintenance release card will be completed and shipped on an article that is shipped to a customer. At the request of the customer (to be indicated on the work order when originated), CAA MR-MR&M Form will be completed instead of the maintenance release approval for return to service in accordance with the procedure in paragraph (a) of Part 5 IS: 5.7.1

In all cases where major alteration is involved, CAA MR-MR&M Form will be completed per 5.7.1 and IS: 5.7.1.
The authorised supervisor in whose area the repair or alteration is accomplished will be responsible for establishing that the repair or alteration was made in accordance with the requirements of Part 5 and will sign the conformity statement (Item 6) on CAA MR-MR&M Form.

Certifying Staff responsible for the approval for return to service of aircraft will indicate such approval by signing the approval for return to service (Item 7) on CAA MR-MR&M Form. Appropriate entries will be made in the aircraft record pertinent to the repairs and alterations accomplished by the maintenance organisation. Specific reference will be made by calendar date to the applicable CAA MR-MR&M Form. The original CAA MR-MR&M Form will be inserted in the aircraft record with a copy forwarded to the local CAA office and one copy retained with the copy of the aircraft work order.

It is the responsibility of the certifying staff authorising return to service to assure that the aircraft flight manual is properly revised following any alteration or modification to the aircraft and that the weight and balance record has been amended as necessary.

Aircraft components, appliances, and other items, other than completed aircraft repaired or overhauled as authorised by the maintenance organisation specifications, will be returned to service through the use of a maintenance release pre-printed on the serviceable parts tag described in this section of this manual. The authorised supervisor under whose jurisdiction the work is accomplished will be responsible for the release of units in the category.

No aircraft or unit may be released for return to service until the work order and other records have been reviewed for completeness and final acceptance cleared by inspection. Particular attention shall be accorded the status of applicable airworthiness directives.

MAINTENANCE RELEASE STATEMENT

A maintenance release statement stamp and/or pre-printed tag, prepared in accordance with IS: 5.7.1 will be used to release to service major repairs which have been accomplished by this station in accordance with Part 5. Other records required by 5.7.1 will be executed, as required, regardless of whether an CAA MR-MR&M Form or maintenance release has been used to return the article to service. In any event, the station will indicate on their copy of the work order whether or not a maintenance release was used, including the signature of the authorised certifying staff representative.

The (use only applicable rating or ratings) aircraft, airframe, aircraft engine, propeller or appliance identified above was repaired and inspected in accordance with current maintenance rules of the Guyana Civil Aviation Regulations and is approved for return to service.

"Pertinent details of the repair are on file at this maintenance organisation under Work Order Number ____________ Date ____________"

Signed ___________________________________________

(Signature of authorised representative)

for ______________________________________________

(Maintenance organisation name and certificate number)

____________________________________________

(Address)

NOTE 1: Inspection stamp/symbol will not be used on the maintenance release.
SAMPLE OF MAINTENANCE RELEASE FOR AIR OPERATOR WORK

MAINTENANCE RELEASE STATEMENT

A maintenance release statement stamp and/or pre-printed tag, prepared in accordance with IS: 5.7.1, will be used to release to service major repairs which have been accomplished by this organisation in accordance with Part 5. Other records required by 5.7.1 will be executed, as required, regardless of whether an CAA MR-MR&M Form or maintenance release has been used to return the article to service. In any event, the station will indicate on their copy of the work order whether or not a maintenance release was used, including the signature of the authorised representative.

"Example"

The (use only applicable rating or ratings) aircraft, airframe, aircraft engine, propeller or appliance identified above was repaired and inspected in accordance with current maintenance rules of the Guyana Civil Aviation Regulations and is approved for return to service.

"Pertinent details of the repair are on file at this maintenance organisation under Work Order Number __________ Date __________ "

Signed ______________________________________

(Signature of authorised representative)

for ___________________________________________

(Maintenance organisation name and certificate number)

_________________________________________________

(Address)

NOTE 1: Inspection stamp/symbol will not be used on the maintenance release.

MALFUNCTION OR DEFECT AND MECHANICAL RELIABILITY REPORT

This section should explain in detail how compliance with rules and reporting requirements are to be met, and prescribe the responsibility (by title) of person(s) who prepare and submit reports.

MALFUNCTION OR DEFECT REPORT

This maintenance organisation will report to the CAA within 72 hours after it discovers any serious defect in, or other recurring unairworthy condition of, an aircraft, powerplant, or propeller, or any component of any of them. The report will be made on an CAA Form XXXX, Malfunction or Defect Report, describing the defect or malfunction completely without withholding any pertinent information. In any case, where the filing of a report under the preceding paragraph might prejudice the maintenance organisation, it will be referred to the CAA for a determination as to whether it must be reported. If the defect or malfunction could result in an imminent hazard to flight, the maintenance organisation will use the most expeditious method it can to inform the CAA.

MECHANICAL RELIABILITY REPORTS

When work is being accomplished for an air carrier and a defect as described under the Malfunction or Defect Report is found, the air operator will be notified in order that a Mechanical Reliability Report may be issued by the air operator.
RESPONSIBILITY FOR SUBMITTING REPORTS

The Accountable Manager and Chief Certifying Staff Manager are responsible for preparing and submitting a Malfunction or Defect Report to the CAA Office.

SUBCONTRACTED MAINTENANCE PROCEDURES

SUBCONTRACTED MAINTENANCE

Any work performed by another maintenance organisation for this maintenance organisation will be inspected by the Chief Certifying Staff Manager or certifying staff personnel delegated for such inspection. This inspection will be to verify that the work was performed in an airworthy manner, that parts and materials used were of such a quality to be airworthy, and that the paperwork received with the material verifies the authenticity of the part and work performed. At no time shall the stockroom manager release any parts made by, or parts having had work performed on them by a subcontractor until the Chief Certifying Staff Manager or certifying staff personnel delegated has approved the materials as being airworthy.

All subcontracted work shall be kept separate from regular stock until this inspection has been performed and the material accepted for use.

If for any reason subcontracted material is rejected as being unairworthy, it will immediately be identified as unairworthy and the proper disposition made, such as scrap or return to vendor.

LIST OF SUBCONTRACTED MAINTENANCE

1. Metal plating or anodising.
2. Complex machine operations involving the use of planers, shapers, milling machines, etc.
3. Abrasive air blasting and chemical cleaning operations.
5. Magnetic inspection.
6. Fabricate wood spars.
7. Overhaul and repair hydraulic-pneumatic shock absorber units.
8. Overhaul and repair hydraulic system components.
10. Recovering and refinishing of components and entire aircraft.

PERFORMANCE OF MAINTENANCE, PREVENTIVE MAINTENANCE, ALTERATIONS AND REQUIRED INSPECTION UNDER THE CONTINUOUS AIRWORTHINESS REQUIREMENTS OF PART 9

NOTE: This section should show how the rule is to be complied with, that the work is to be accomplished with the operator's manual and a current copy of the manual is available.

PERFORMANCE OF MAINTENANCE, PREVENTIVE MAINTENANCE, ALTERATIONS AND REQUIRED INSPECTION UNDER THE CONTINUOUS AIRWORTHINESS REQUIREMENTS OF PART 9

This maintenance organisation will perform this work in accordance with the operator's manual. The maintenance organisation will have a current copy of the applicable section of each operator's manual which contracts with the maintenance organisation for the performance of that operator's maintenance. The chief certifying staff manager will be responsible for keeping each operator's manual revised and determining that the operator's manual is current before a work order is issued.
PERFORMANCE OF WORK AT A LOCATION OTHER THAN THE MAINTENANCE ORGANISATION

Reference: Part 6, 6.2.6 In accordance with Part 6, 6.2.6, a maintenance organisation may maintain or alter any article for which it is rated at a place other than the maintenance organisation providing certain preparations are made and certain conditions are met as required by Part 6, 6.2.6 (c)). Performance standards are required to remain acceptable at such places of work. Part 6, 6.2.6(c)(3) requires the maintenance procedure manual to contain the approved procedures governing the work to be performed at a place other than the maintenance organisation. This is a frequently overlooked manual requirement. In order for a procedure to be valid for approval it should:

1. Be described in terms understandable to those persons who are governed by it in the performance of the work.
2. Be monitored regularly so as to ensure it covers the nature of the work that may be needed outside the maintenance organisation. This is necessary as it is difficult to predict the nature of work to be done outside the station.
3. Be tailored for the particular station, the nature of work and the frequency expected. The following are items recommended for consideration:
   a. Who will authorise the work, organise the project, direct it, and who will perform the work?
   b. What type of work tasks will be required (supply, repairs, inspections, and communications)?
   c. Where some of the work is to be done. It may be advantageous to perform support work on components or parts at the base maintenance organisation as a standard procedure.
   d. How will the work projects be monitored and reviewed to assure procedures are adequate and that records identify the projects for accountability?
   e. Occasional explanations within the system description of why certain requirements, controls or reports are necessary will help employees to understand and accept the system.
4. The privilege to perform work at a location other than the maintenance organisation is to be done on a temporary basis. If a permanent station is established at the location, it will be necessary for the maintenance organisation to make application for a maintenance organisation at the location.

PERFORMANCE OF MAINTENANCE AT A LOCATION OTHER THAN THE MAINTENANCE ORGANISATION

(Name of Company) will provide maintenance service for its customers on an emergency on-call basis at a place away from the maintenance organisation. (Name of Company) can only provide this service for work for which the maintenance organisation is rated. Only the Accountable Manager or the Chief Certifying Staff Manager is authorised to initiate a work order for such work.

The base maintenance manager will be responsible for assigning the personnel necessary to perform the work and appoint a person to be in charge of the work force. The chief certifying staff manager will assign the certifying staff responsible to inspect the work and assure that all required forms and work are completed as necessary. The chief certifying staff manager will assign one certifying staff personnel with the responsibility for returning the article to service.

The base maintenance manager will ensure that the article to undergo maintenance and the work force will be in an area safe for the work to be performed and that they will be protected from the elements. The base maintenance manager will be responsible for providing all the necessary manpower, work forms, technical data, tools, and equipment necessary for the accomplishment of the maintenance. The base maintenance manager will establish a system of communications between the field force and the maintenance organisation.

The stockroom manager will be responsible for assigning a stockperson who will provide parts and supply support between the maintenance organisation and the field force. All articles removed by the field force from a product undergoing maintenance at a location away from the maintenance organisation will be routed through the stockroom parts receiving department. The article(s) will be inspected in accordance with the maintenance organisation inspection procedures and either routed to the maintenance organisation shops or to contract maintenance organisations, as appropriate.

All personnel assigned to accomplish work away from the maintenance organisation shall accomplish the specific function of work in the same manner as when performed at the maintenance organisation and in accordance with Part 6.
IS: 6.5.6  CERTIFICATION OF RELEASE TO SERVICE

(a) A certificate of release to service is required for the following:

(1) Before flight at the completion of any package of maintenance scheduled by the approved aircraft maintenance program on the aircraft, whether such maintenance took place as base or line maintenance.

Note: Only in exceptional cases may scheduled maintenance be deferred and then only in accordance with procedures specified in the AMO’s procedures manual. In all cases, the AMO must provide the owner/operator with a list of any uncorrected defects that may exist.

(2) Before flight at the completion of any defect rectification, while the aircraft operates between scheduled maintenance.

(3) At the completion of any maintenance on an aircraft component when off the aircraft.

(b) The certificate of release to service shall contain the following statement: "Certifies that the work specified except as otherwise specified was carried out in accordance with current regulations and in respect to that work the aircraft/aircraft component is considered ready for release to service."

(c) The certificate of release to service shall reference the data specified in the manufacturer's or air carrier operator's instructions or the aircraft maintenance program which itself may cross-reference to a manufacturer's instruction in a maintenance manual, service bulletin, etc.

(d) Where instructions include a requirement to insure that a dimension or test figure is within a specific tolerance as opposed to a general tolerance, the dimension or test figure shall be recorded unless the instruction permits the use of GO/NO gauges. It is not normally sufficient to state that the dimension or the test figure is within tolerance.

(e) The date such maintenance was carried out shall include when the maintenance took place relative to any life or overhaul limitation in terms of date/flying hours/cycles/landings etc., as appropriate.

(f) When extensive maintenance has been carried out, it is acceptable for the certificate of release to service to summarise the maintenance as long as there is a cross-reference to the work-pack containing full details of maintenance carried out. Dimensional information shall be retained in the work-pack record.

(g) The person issuing the release to service shall use a full signature and preferably a certification stamp except in the case where a computer release to service system is used. In this latter case, the Authority will need to be satisfied that only the particular person can electronically issue the release to service.

Note: One such method of compliance is the use of a magnetic or optical personal card in conjunction with a personal identity number (PIN) which is keyed into the computer and known only to the individual.

Note: An example of a model certificate of release to service is shown below. Not intended to be used as an import or export tag.
GUYANA AVIATION REQUIREMENTS
Implementing Standards: Part 6 – Approved Maintenance Organisation

1. Guyana
2. GCAA FORM
   Airworthiness Approval Tag
   Civil Aviation Administration
4. Organisation Name and Address:
5. Work Order, Contract or Invoice Number

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<tr>
<th>Item</th>
<th>Description</th>
<th>Part Number</th>
<th>Eligibility</th>
<th>Quantity</th>
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13. Remarks:

It is important to understand that the existence of this Document alone does not automatically constitute authority to install the part/component/assembly.

Where the user/installer work in accordance with the national regulations of an Airworthiness Authority different than the Airworthiness Authority of the country specified in block 1 it is essential that the user/installer ensures that his/her Airworthiness Authority accepts parts/components/assemblies from the Airworthiness Authority of the country specified in block 1.

Statements in block 14 and 19 do not constitute installation certification. In all cases aircraft maintenance records must contain an installation certification issued in accordance with the national regulations by the user/installer before the aircraft may be flown.

Limited life parts must be accomplished by maintenance history including total time/total cycles/time since new.

14. Return to Service in Accordance with CAA Model Regulations 5.7.1.1

Certifies that the work specified in block 13 (or attached) above was carried out in accordance with CAA airworthiness regulations and in respect to the work performed the part(s) is (are) approved for return to service.

LINE-BY-LINE INSTRUCTIONS FOR COMPLETION OF GCAA FORM:

(a) Block 1. Guyana (Pre-printed)

(b) Block 2. GCAA, Airworthiness Approval Tag, and Guyana Civil Aviation Authority. (Pre-printed)

(c) Block 3. System Tracking Reference Number.
   (1) Fill in the unique number established by the GCAA-approved numbering system.
   (2) If the form is computer-generated, it may be produced as programmed by the computer.

   Shippers must establish a numbering system for traceability in order to fill out block 3 of the form. This system must also provide a means of cross-referencing the number(s) and product(s) being shipped.

(d) Block 4. Organisation.
   (1) Fill in the full name and address of the GCAA-approved organisation or individual shipping the product(s)/part(s) as applicable:
      (i) Company name and address
      (ii) Production Approval Holder (PAH) approval or certificate numbers, when applicable (e.g., production certificate number, approved maintenance organisation certificate numbers, air operator certificate number.
   (2) When a supplier has direct ship authorisation from a PAH, the following information should be entered:
      (i) PAH name and address
      (ii) PAH approval or certificate number
      (iii) c/o Supplier name and address

   NOTE: If an individual product/part is produced as a spare by a supplier, the supplier must have either direct ship authority or hold a production approval (PMA/TSO authorisation) for all products/parts shipped. If the supplier holds its own production approval, and the products/parts were manufactured and are being shipped under that approval, the information required in paragraph (1) above should be listed.

(e) Block 5. Work Order, Contract, or Invoice Number.
   (1) Fill in the contract, work order, or invoice number related to the shipment list, or maintenance release, and state the number of pages attached to the form, including dates, if applicable. If the shipment list contains the information required in Blocks 6 through 12, the respective blocks may be left blank if an original, or true copy, of the list is attached to the form. In this case, the following statement should be entered in Block 13: "This is the certification statement for the products/parts listed on the attached document dated ________, containing pages ______ through _______.
   (2) In addition, the shipment list must cross-reference the number located in Block 3. The shipment list may contain more than one item; but it is the responsibility of the shipper to determine if the GCAA of the importing jurisdiction will accept bulk shipments under a single GCAA Form. If the GCAA does not permit bulk shipments under a single form, Blocks 6 through 12 of each form must be filled in for each product shipped.

(f) Block 6. Item. When GCAA Form is issued a single item number or multiple item numbers may be used for the same part number. Multiple items should be numbered in sequence. If a separate listing is used, enter "List Attached"

   NOTE: The blank form can be computer-generated. However, the format cannot be changed, nor can any words be added or deleted. Pre-printing of some information is permissible, i.e.; the information in blocks 1, 2, 3, 4, 14, and 19. The size of blocks may be varied slightly, but the form must remain readily recognisable. The form may also be reduced in overall size to facilitate placement of the wording on the back of the form onto the face of the document.
(g) **Block 7.** Description. Enter the name or description of the product/part as shown on the design data. For products/parts that do not have design data available, the name as referenced in a part catalogue, overhaul manual, etc., can be used.

(h) **Block 8.** Part Number. Enter each part number of the product.

(i) **Block 9.** Eligibility. State the aircraft, aircraft engine, or propeller make and model on which the PMA part is eligible for installation. If a part is eligible for installation on more than one model enter the words "to be verified by installer or TBV by installer." Where parts are TSO articles, state "TSO Article N/A" since eligibility for installation for TSO articles is determined at the time of installation. 

**NOTE:** For TSO articles GCAA Form does not constitute authority to install a product on a particular aircraft, aircraft engine, or propeller. The user or installer is responsible for confirming that the product is eligible for installation by reference to overhaul manuals, service bulletins, etc., as applicable. While the information in Block 9 is optional, it should be filled out whenever possible. When using GCAA Form for CONFORMITY of certification program products, enter N/A.

(j) **Block 10.** Quantity. State the quantity of each product/part shipped.

**NOTE:** If a PAH or their inventory facilities require a Form 8130-3 for individual products/parts at a later date, the procedures in paragraph 8c of this order should be used.

(k) **Block 11.** Serial/Batch Number. State the serial number or equivalent (identified on the part) on the form for each product/part shipped. If a serial number or equivalent is not required on the part, enter "N/A."

(l) **Block 12.** Status/work. Enter "Newly Overhauled" for those products that have not been operated or placed in service since overhaul. Enter "PROTOTYPE" for products/parts submitted to support type certification programs. Other permissible/appropriate terms to describe the status of the product/part are: "INSPECTED," "REPAIRED," "REBUILT," or "ALTERED."

(m) **Block 13.** Remarks. Enter any information or references to support documentation necessary for the user or installer to make a final determination of airworthiness of the products/parts listed in Block 7. Each statement must specify which item identified in Block 6 is related. Examples of information to be supplied are as follows:

1. Any restrictions (e.g., prototype only).
2. Alternative approved part number.
3. Compliance or non-compliance with airworthiness directives or service bulletins.
4. Information on life-limited parts.
5. Manufacturing, cure, or shelf-life data.
6. Drawing and revision level.
7. When used for conformity the word "CONFORMITY" must be entered in capital letters. In addition, an explanation of the products/parts use, e.g., pending approved data, TC pending, for test only, etc., should be provided. Information concerning a conformity inspection such as design data, revision level, date, project number,
8. When used for spare parts identify whether the parts are PMA, TSO authorised. In addition, if the GCAA Form is for spare parts or sub components of an CAA approved modification or replacement part, the PMA or TSO authorisation should be listed in Block 13.
9. When used for return to service this block should contain the data required by 5.7.1. If other documents such as work orders or travellers, GCAA Form in accordance with Model regulation IS 6.4.8, Maintenance Release Form, are used by the certificate holders to comply with 5.7.1, they should be specifically referenced in this block and be cross referenced.

(n) **Block 14.** Return to Service. The information is already pre-printed in the block.
(o) Block 15. Signature. Signature of the individual authorised by the air agency, air carrier, or the manufacturer in accordance with 5.6.5 (a)(2), (3), and (4). The approval signature shall be manually applied at the time and place of issuance.

(p) Block 16. Certificate number. Enter the air agency or air carrier operating certificate number. For manufacturers returning to service after rebuilding products/parts the production approval number should be entered.

(q) Block 17. Name. The typed or printed name of the individual identified in Block 20.

(r) Block 18. Date. The date the GCAA Form is signed and the product are returned to service. This does not need to be the same as the shipping date, which may occur at a later date.

**IS: 6.5.8 AIRWORTHINESS DATA**

(a) The AMO shall be in receipt of all airworthiness data appropriate to support the work performed from the Authority, the aircraft/aeronautical product design organisation, and any other approved design organisation in the State of Manufacture or State of Design, as appropriate. Some examples of maintenance-related documents are:

1. Civil Aviation Regulations,
2. Associated advisory material,
3. Airworthiness directives,
4. Manufacturers' maintenance manuals,
5. Repair manuals,
6. Supplementary structural inspection documents,
7. Service bulletins,
8. Service letters,
9. Service instructions,
10. Modification leaflets,
11. Aircraft maintenance program,
12. NDT Manual, etc.

*Note: Paragraph (a) primarily refers to maintenance data that has been transcribed from the Authority and all Type Certificate (TC) holders into the AMO's format, such as customised maintenance cards or computer base data.*

*Note: To obtain acceptance from the Authority, it is important that accuracy of transcription is assurred.*

(b) A procedure shall be established to monitor the amendment status of all data and maintain a check that all amendments are being received by being a subscriber to any document amendment scheme.

(c) Airworthiness data shall be made available in the work area in close proximity to the aircraft or aeronautical product being maintained and for supervisors, mechanics, and certifying staff to study.

(d) Where computer systems are used to maintain airworthiness data, the number of computer terminals shall be sufficient in relation to the size of the work program to enable easy access, unless the computer system can produce paper copies. Where microfilm or microfiche readers/printers are used, a similar requirement is applicable.
# PART 7 - INSTRUMENTS AND EQUIPMENT

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INTRODUCTION TO PART 7

Part 7 of these Model Regulations presents standards and recommended practices as regulatory requirements for instruments and equipment on aircraft expected to operate in Guyana. As with the other Parts of this Model Regulation, Part 7 presents the standards and recommended practices in ICAO Annex 6 supplemented by sections from the United States Federal Aviation Regulations (FAR) and/or the European Joint Aviation Regulations (JAR). Supplementation by FAR or JAR regulations allows for more efficient implementation of the basic ICAO standards and recommended practices, based upon the experience gained by the FAA and the JAA.

The requirements in Part 7 address three categories of aircraft operations. The sections of Part 7 applicable to all aircraft address minimum requirements, and are noted by the key [AAC] preceding the particular section. It is important to note that the AAC designation applies to all aircraft in the Commercial Air Transport [CAT] and AOC Holder [AOC] categories unless other, more specific regulations supplant the [AAC] requirement. In some instances, certain items such as Mach meters or sea anchors apply only to aircraft with performance characteristics requiring such items. Some [AAC] requirements apply to passenger-carrying aircraft. In such instances, the requirement addresses the operation of any passenger-carrying aircraft, most particularly corporate aircraft, that may have performance and range capabilities matching the type of aircraft operated by commercial air transport entities or AOC holders. Similarly, some equipment specified for [CAT] or [AOC] aircraft have sections keyed as [AAC]. In such instances, if a non-[CAT] or [AOC] aircraft is fitted with such equipment, the equipment characteristics must comply with the applicable sections designated [AAC].

The key [CAT] addresses those aircraft operated commercially, that is, for compensation or hire, within Guyana or into or from Guyana. [CAT] requirements will apply to [AOC] aircraft unless a section designated as [AOC] supplies a more specific requirement.

The key [AOC] applies to AOC holders operating in Guyana, whether on domestic or international flights. Certain sections, such as those addressing MNPS airspace, may not address airspace contiguous to Guyana, but anticipate that Guyana AOC holder’s aircraft may operate through such airspace in the course of commerce. Such requirements are intended to facilitate the integration of Guyana AOC holders into such operations.

As in other Parts of these Model Regulations, operators of aircraft operated in Guyana but registered in another Contracting State must notify the Authority in Guyana when alterations, major repairs or major alterations are made to the aircraft. Guyana may have unique territorial or geographic features that may affect the operation of aircraft, and must be kept informed of the condition of aircraft operated within its borders. Part 7 includes survival equipment requirements that may apply to Guyana. The Authority is encouraged to review geographic areas within Guyana, and designate those areas requiring specific types or survival equipment.
7.1.1 General

7.1.1.1 Applicability

(a) Part 7 prescribes the minimum instrument and equipment requirements for all aircraft in all operations.

(b) Part 7 requirements use the following key designators—

(1) AAC: all aircraft, including Commercial Air Transport and AOC Holders appropriate to the subject of the regulations, e.g., an all aircraft regulation may only refer to seaplanes, but will include CAT and AOC seaplanes;

(2) CAT: commercial air transport (includes AOC Holders) ), appropriate to the subject of the regulations, e.g., a CAT regulation may only refer to seaplanes, but will include AOC seaplanes; and

(3) AOC: AOC Holders. Where AOC requirements are redundant to AAC or CAT requirements, or more detailed, the AOC requirements will be followed.

7.1.1.2 Definition

Extended overwater operation. In the case of single-engine land planes, extended overwater operation means a distance of more than 185 km (100 nm) from land suitable for making an emergency landing. In the in the case of multi-engine land planes, more than 370 km (200 nm) from land suitable for making an emergency landing, with the capability of continuing flight with one engine inoperative.

7.1.1.3 Acronyms

(a) The following acronyms are used in Part 7:

(1) ADF – Automatic Direction Finder

(2) AOC - Air Operator Certificate

(3) DH – Decision Height

(4) DME – Distance Measuring Equipment

(5) ELT – Emergency Locator Transmitter

(6) ILS – Instrument Landing System

(7) IFR – Instrument Flight Rating

(8) IMC - Instrument Meteorological Conditions

(9) LRNS - Long Range Navigation Systems

(10) MEL – Minimum Equipment List (Part 1)

(11) MHz - Megahertz

(12) MLS – Microwave Landing System

(13) MNPS - Minimal Navigation Performance Specifications

(14) NDB – Non-Directional Beacon

(15) PBE - Pressure Breathing Equipment

(16) RVSM – Reduced Vertical Separation Minimum

(17) SSR – Secondary Surveillance Radar

(18) VFR – Visual Flight Rules (see 8.8.3.1)

(19) VMC - Visual Meteorological Conditions

(20) VOR – VHF Omnidirectional Range

(21) VSM – Vertical Separation Minimum
7.1.1.4 **GENERAL INSTRUMENT AND EQUIPMENT REQUIREMENTS**

(a) [AAC] In addition to the minimum equipment necessary for the issuance of a certificate of airworthiness, the instruments, equipment and flight documents prescribed in Part 7 shall be installed or carried, as appropriate, in aircraft according to the aircraft used and to the circumstances under which the flight is to be conducted.

(b) [AAC] All required instruments and equipment shall be approved and installed in accordance with applicable airworthiness requirements.

(c) [AAC] Prior to operation in Guyana of any aircraft not registered in Guyana that uses an airworthiness inspection program approved or accepted by the State of Registry, the owner/operator shall ensure that instruments and equipment required by Guyana but not installed in the aircraft are properly installed and inspected in accordance with the requirements of the State of Registry.

(d) [AOC] An AOC holder shall ensure that a flight does not commence unless the required equipment—

1. Meets the minimum performance standard and the operational and airworthiness requirements;
2. Is installed such that the failure of any single unit required for either communication or navigation purposes, or both, will not result in the inability to communicate and/or navigate safely on the route being flown; and
3. Is in operable condition for the kind of operation being conducted, except as provided in the MEL.

(e) [AAC] If equipment is to be used by one flight crewmember at his station during flight, it shall be installed so as to be readily operable from his or her station.

(f) [AAC] When a single item of equipment is required to be operated by more than one flight crew member, it shall be installed so that the equipment is readily operable from any station at which the equipment is required to be operated.
7.1.2 Flight and Navigational Instruments

7.1.2.1 General Requirements

(a) [AAC] All aircraft shall be equipped with flight and navigational instruments which will enable the flight crew to—
   (1) Control the flight path of the aircraft;
   (2) Carry out any required procedural manoeuvres; and
   (3) Observe the operating limitations of the aircraft in the expected operating conditions.

(b) [AAC] When a means is provided for transferring an instrument from its primary operating system to an alternative system, the means shall include a positive positioning control and shall be marked to indicate clearly which system is being used.

(c) [AAC] Those instruments that are used by any one flight crew member shall be so arranged as to permit the flight crew member to see the indications readily from his station, with the minimum practicable deviation from the position and line of vision which he normally assumes when looking forward along the flight path.

7.1.2.2 Minimum Flight and Navigational Instruments

(a) [AAC] No person may operate any aircraft unless it is equipped with the following flight and navigational instruments:
   (1) An airspeed indicating system calibrated in knots.
   (2) A sensitive pressure altimeter calibrated in feet with a sub-scale setting calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight.
   (3) An accurate timepiece indicating the time in hours, minutes and seconds (approval not required).
   (4) A magnetic compass.

7.1.2.3 Instruments for Operations Requiring Two Pilots

(a) [AAC] Whenever two pilots are required, each pilot's station shall have separate flight instruments as follows:
   (1) An airspeed indicator calibrated in knots;
   (2) A sensitive pressure altimeter calibrated in feet with a sub-scale setting calibrated in hectopascals/millibars, adjustable for any barometric pressure likely to be set during flight;
   (3) A vertical speed indicator;
   (4) A turn and slip indicator, or a turn co-ordinator incorporating a slip indicator;
   (5) An attitude indicator; and
   (6) A stabilised direction indicator.
7.1.2.4 **IFR AND CONTROLLED VFR INSTRUMENTS’**

(a) All aircraft when operated under IFR, controlled VFR, or when the aircraft cannot be maintained in a desired attitude without reference to one or more flight instruments, shall be equipped with:

1. An airspeed indicating system with a means of preventing malfunctioning due to either condensation or icing;
2. A turn and slip indicator;
3. An attitude indicator (artificial horizon);
4. A heading indicator (directional gyroscope);
5. A means of indicating whether the supply of power to the gyroscopic instruments is adequate;
6. A means of indicating in the flight crew compartment the outside air temperature;
7. A rate-of-climb and descent indicator; and
8. Two (2) sensitive pressure altimeters calibrated in feet with a subscale setting calibrated in hectopascals/millibars or inches mercury adjustable for any barometric pressure likely to be set during flight.

9. Such additional instruments or equipment as may be prescribed by the Authority.

(b) [AOC] No person may operate an aeroplane under IFR, or under VFR over routes that cannot be navigated by reference to visual landmarks, unless the aeroplane is equipped with navigation equipment in accordance with the requirements of air traffic services in the area(s) of operation, but not less than:

1. One VOR receiving system, one ADF system, one DME and one Marker Beacon receiving system;
2. One ILS or MLS where ILS or MLS is required for approach navigation purposes;
3. An Area Navigation System when area navigation is required for the route being flown;
4. An additional VOR receiving system on any route, or part thereof, where navigation is based only on VOR signals; and
5. An additional ADF system on any route, or part thereof, where navigation is based only on NDB signals.

(c) [AAC] All aircraft intended to land in IMC or at night shall be provided with radio navigation equipment capable of receiving signals providing guidance to—

1. A point from which a visual landing can be effected; or
2. Each aerodrome at which it is intended to land in IMC; and
3. Any designated alternate aerodromes.

(d) [AOC] No person may conduct single pilot IFR operations unless the aeroplane is equipped with an autopilot with at least altitude hold and heading mode.
7.1.2.5 **STANDBY ATTITUDE INDICATOR**

(a) [AAC] No person may operate an aeroplane with a maximum certified take-off mass exceeding 5,700 kg or having a maximum approved passenger seating configuration of more than 9 seats unless it is equipped with a single standby attitude indicator (artificial horizon) that—

1. Operates independently of any other attitude indicating system;
2. Is powered continuously during normal operation; and
3. After a total failure of the normal electrical generating system, is automatically powered for a minimum of 30 minutes from a source independent of the normal electrical generating system.

(b) [AAC] When the standby attitude indicator is being operated by emergency power, it shall be clearly evident to the flight crew.

(c) [AAC] Where the standby attitude indicator has its own dedicated power supply there shall be an associated indication, either on the instrument or on the instrument panel when this supply is in use.

*Note: Paragraph (c) shall be complied with no later than 1 April 2000.*

(d) [AAC] If the standby attitude instrument system is installed and usable through flight attitudes of 360° of pitch and roll, the turn and slip indicators may be replaced by slip indicators.
7.1.2.6 INSTRUMENTS AND EQUIPMENT FOR CATEGORY II OPERATIONS

(a) The instruments and equipment listed in this subsection shall be installed in each aircraft operated in a Category II operation:

   Note: This subsection does not require duplication of instruments and equipment required by 7.1.2.2 or any other provisions of Part 7.

(1) Group I.

   (i) Two localizer and glide slope receiving systems.

   Note: Each system shall provide a basic ILS display and each side of the instrument panel must have a basic ILS display. However, a single localizer antenna and a single glide slope antenna may be used.

   (ii) A communications system that does not affect the operation of at least one of the ILS systems.

   (iii) A marker beacon receiver that provides distinctive aural and visual indications of the outer and the middle markers.

   (iv) Two gyroscopic pitch and bank indicating systems.

   (v) Two gyroscopic direction indicating systems.

   (vi) Two airspeed indicators.

   (vii) Two sensitive altimeters adjustable for barometric pressure, having markings at 20 foot intervals and each having a placarded correction for altimeter scale error and for the wheel height of the aircraft.

   (viii) Two vertical speed indicators.

   (ix) A flight control guidance system that consists of either an automatic approach coupler or a flight director system.

   Note: A flight director system must display computed information as steering command in relation to an ILS localizer and, on the same instrument, either computed information as pitch command in relation to an ILS glide slope or basic ILS glide slope information. An automatic approach coupler must provide at least automatic steering in relation to an ILS localizer. The flight control guidance system may be operated from one of the receiving systems required by paragraph (a)(1)(i).

   (x) For Category II operations with decision heights below 150 feet either a marker beacon receiver providing aural and visual indications of the inner marker or a radio altimeter.

(2) Group II.

   (i) Warning systems for immediate detection by the pilot of system faults in items (a)(1)(i), (a)(1)(iv), (a)(1)(v) and (a)(1)(ix), of Group I and, if installed for use in Category III operations, the radio altimeter and autothrottle system.

   (ii) Dual controls.

   (iii) An externally vented static pressure system with an alternate static pressure source.

   (iv) A windshield wiper or equivalent means of providing adequate cockpit visibility for a safe visual transition by either pilot to touchdown and rollout.

   (v) A heat source for each airspeed system pitot tube installed or an equivalent means of preventing malfunctioning due to icing of the pitot system.

Implementing Standard: See IS: 7.1.2.6 for Category II instrument and equipment approval and maintenance requirements.
7.1.2.7 **NAVIGATION EQUIPMENT FOR OPERATIONS IN MNPS AIRSPACE**

(a) [AOC] No AOC holder may operate an aeroplane in MNPS airspace unless it is equipped with navigation equipment that-

1. Continuously provides indications to the flight crew of adherence to or departure from track to the required degree of accuracy at any point along that track; and
2. Has been authorised by the State of Registry for MNPS operations concerned.

   *Note: Equipment shall comply with minimum navigation performance specifications prescribed in ICAO Doc 7030 in the form of Regional Supplementary Procedures.*

(b) [AOC] The navigation equipment required for operations in MNPS airspace shall be visible and usable by either pilot seated at his duty station.

(c) [AOC] For unrestricted operation in MNPS airspace an aeroplane shall be equipped with two independent Long-Range Navigation Systems (LRNS).

(d) [AOC] For operation in MNPS airspace along notified special routes, an aeroplane shall be equipped with one LRNS, unless otherwise specified.
### 7.1.3 Communication Equipment

#### 7.1.3.1 Radio Equipment

(a) [AAC] No person may operate an aircraft unless it is equipped with radio equipment required for the kind of operation being conducted.

(b) [AAC] All aircraft operated in VFR as a controlled flight or in IFR shall be provided with radio communication equipment capable of conducting two-way communication with those aeronautical stations and on those frequencies prescribed by the Authority, including the aeronautical emergency frequency 121.5 MHz.

   *Note: This requirement is considered fulfilled if the ability to conduct the communications specified therein is established during radio propagation conditions which are normal for the route.*

(c) [AOC] No person may operate an aeroplane in IFR, or in VFR over routes that cannot be navigated by reference to visual landmarks, unless the aeroplane is equipped with communication and navigation equipment in accordance with the requirements of air traffic services in the area(s) of operation, but not less than—

(1) Two independent radio communication systems necessary under normal operating conditions to communicate with an appropriate ground station from any point on the route including diversions.

   *Note: Each system shall have an independent antenna installation except that, where rigidly supported non-wire antennae or other antenna installations of equivalent reliability are used, only one antenna is required.*

(2) Secondary Surveillance Radar transponder equipment as required for the route being flown.

(d) [AOC] When more than one communications equipment unit is required, each shall be independent of the other or others to the extent that a failure in any one will not result in failure of any other.

(e) [AAC] No person may operate an aeroplane under IFR unless it is equipped with an audio selector panel accessible to each required flight crewmember.

(f) [AOC] No person may conduct single pilot IFR or night operations unless the aeroplane is equipped with a headset with boom microphone or equivalent and a transmit button on the control wheel.
7.1.3.2 CREW MEMBER INTERPHONE SYSTEM

(a) [AOC] No AOC holder may operate an aeroplane on which a flight crew of more than one is required unless it is equipped with a flight crew interphone system, including headsets and microphones, not of a handheld type, for use by all members of the flight crew.

(b) [AOC] No AOC holder may operate an aeroplane with a maximum certified take-off mass exceeding 15,000 kg or having a maximum approved passenger seating configuration of more than 19 unless it is equipped with a crew member interphone system that—

(1) Operates independently of the public address system except for handsets, headsets, microphones, selector switches and signalling devices;

(2) Provides a means of two-way communication between the flight crew compartment and each—

   (i) Passenger compartment;
   (ii) Galley located other than on a passenger deck level; and
   (iii) Remote crew compartment that is not on the passenger deck and is not easily accessible from a passenger compartment;

(3) Is readily accessible for use—

   (i) From each of the required flight crew stations in the flight crew compartment; and
   (ii) At required cabin crew member stations close to each separate or pair of floor level emergency exits;

(4) Has an alerting system incorporating aural or visual signals for use by flight crew members to alert the cabin crew and for use by cabin crew members to alert the flight crew;

(5) Has a means for the recipient of a call to determine whether it is a normal call or an emergency call; and

(6) Provides on the ground a means of two-way communication between ground personnel and at least two flight crew members.

(c) All flight crew members required to be on flight deck duty shall communicate through boom or throat microphone when below the transition level/altitude.
7.1.4 Aircraft Lights and Instrument Illumination

7.1.4.1 Aircraft Lights and Instrument Illumination

(a) [AAC] All aircraft operated at night shall be equipped with:
   (1) A landing light;
   (2) Illumination for all flight instruments and equipment that are essential for the safe operation of the aircraft;
   (3) Lights in all passenger compartments;
   (4) A flashlight for each crew member station (approval not required);
   (5) Navigation/position lights; and
   (6) Lights to conform to the International regulations for preventing collisions at sea if the aircraft is a seaplane or an amphibian aircraft.

(b) [AOC] No AOC holder may operate an aircraft by night unless in addition to the equipment specified in paragraph (a) above, it is equipped with:
   (1) An additional landing light (a single landing light having two separately energised filaments may fulfil the combined requirements of this sub-paragraph and (a) (1)); and
   (2) An anti-collision light system.
7.1.5 Engine Instruments

7.1.5.1 ENGINE INSTRUMENTS

(a) [CAT] Unless the Authority allows or requires different instrumentation for turbine engine powered aeroplanes to provide equivalent safety, no person may conduct any commercial air transport operations in any aircraft without the following engine instruments:

(1) A fuel pressure indicator for each engine.
(2) A fuel flowmeter.
(3) A means for indicating fuel quantity in each fuel tank to be used.
(4) An oil pressure indicator for each engine.
(5) An oil quantity indicator for each oil-tank when a transfer or separate oil reserve supply is used.
(6) An oil-in temperature indicator for each engine.
(7) A tachometer for each engine.
(8) An independent fuel pressure warning device for each engine or a master warning device for all engines with a means for isolating the individual warning circuits from the master warning device.

(b) [AOC] In addition to the listed equipment requirements in paragraph (a), reciprocating engine aircraft shall have the following:

(1) A carburettor air temperature indicator for each engine.
(2) A cylinder head temperature indicator for each air-cooled engine.
(3) A manifold pressure indicator for each engine.
(4) A device for each reversible propeller, to indicate to the pilot when the propeller is in reverse pitch, that complies with the following:

(i) The device may be actuated at any point in the reversing cycle between the normal low pitch stop position and full reverse pitch, but it may not give an indication at or above the normal low pitch stop position.

(ii) The source of indication shall be actuated by the propeller blade angle or be directly responsive to it.
7.1.6  Warning Instruments and Systems

7.1.6.1  Mach Number Indicator

[AAC] All aircraft with speed limitations expressed in terms of Mach number shall be equipped with a Mach number indicator.

7.1.6.2  Loss of Pressurisation Indicator

[AAC] All pressurised aircraft intended to be operated at flight altitudes at which the atmospheric pressure is less than 376hPa shall be equipped with a device to provide positive warning to the flight crew of any dangerous loss of pressurisation.

7.1.6.3  Landing Gear: Aural Warning Device

(a) [AOC] Each aeroplane with landing gear shall have a landing gear aural warning device that functions continuously under the following conditions:

   (1) For aeroplanes with an established approach wing-flap position, whenever the wing flaps are extended beyond the maximum certified approach climb configuration position in the Aeroplane Flight Manual and the landing gear is not fully extended and locked.

   (2) For aeroplanes without an established approach climb wingflap position, whenever the wing flaps are extended beyond the position at which landing gear extension is normally performed and the landing gear is not fully extended and locked.

(b) [AOC] The warning system required by paragraph (a) of this section:

   (1) May not have a manual shutoff;

   (2) Shall be in addition to the throttle-actuated device installed under the type certification airworthiness requirements; and

   (3) May utilise any part of the throttle-actuated system including the aural warning device.

(c) [AOC] The flap position-sensing unit may be installed at any suitable place in the aeroplane.

7.1.6.4  Altitude Alerting System

(a) [AOC] No AOC holder may operate a turbine propeller powered aeroplane with a maximum certified take-off mass in excess of 5,700 kg or having a maximum approved passenger seating configuration of more than 9 seats, or a turbojet powered aeroplane, unless it is equipped with an altitude alerting system capable of—

   (1) Alerting the flight crew upon approaching preselected altitude in either ascent or descent; and

   (2) Alerting the flight crew by at least an aural signal, when deviating above or below a preselected altitude.

(b) [AAC] For operations in defined portions of airspace where, based on Regional Air Navigation Agreement, a VSM of 300 m (1,000 ft) is applied above FL 290, an aircraft shall be provided with equipment which is capable of providing an alert to the flight crew when a deviation occurs from the selected flight level. The threshold for the alert may not exceed ±90 m (300 ft).

7.1.6.5  Ground Proximity Warning System

(a) [CAT] No AOC holder may operate a turbine-powered aeroplane unless it is equipped with a ground proximity warning system.
(b) [AOC] Each ground proximity warning system shall automatically provide, by means of aural signals which may be supplemented by visual signals, timely and distinctive warning to the flight crew of sink rate, ground proximity, altitude loss after take-off or go around, incorrect landing configuration and downward glideslope deviation.

(c) [AOC] On or after 1 January 1999, a ground proximity warning system shall provide, as a minimum, warnings of the following circumstances—

1. Excessive descent rate.
2. Excessive terrain closure rate.
3. Excessive altitude loss after take-off or go-around.
4. Unsafe terrain clearance while not in landing configuration; and
5. Excessive descent below the instrument glide path.

7.1.6.6 **WEATHER RADAR**

[AOC] No person may operate an aircraft in commercial air transport in an area where potentially hazardous weather conditions may be expected unless it is equipped with a weather radar.

7.1.6.7 **AIRBORNE COLLISION AVOIDANCE SYSTEM (ACAS II)**

(a) (AAC) No person may operate a turbine-engined aeroplane of a maximum certificated take-off mass in excess of 15,000kg or authorized to carry more than 30 passengers unless it is equipped with an airborne collision avoidance system (ACAS II).

(b) (AOC) No person shall operate a turbine engine aeroplane with a maximum certificated takeoff mass in excess of 5700 kg or authorized to carry more than 19 passengers, unless it is equipped with an ACAS.
7.1.4 Flight and Cockpit Voice Recorders

7.1.4.1 Cockpit Voice Recorders

(a) [AOC] No AOC holder may operate a large multi-engine turbine powered aeroplane with approved passenger seating of 10 or more unless an approved cockpit voice recorder system is installed.

(b) [AOC] To facilitate location and identification in case of an accident, the cockpit voice recorder shall—

(1) Be either bright orange or bright yellow;
(2) Have reflective tape affixed to the external surface to facilitate its location under water; and
(3) Have an approved underwater locating device on or adjacent to the recorder, which is secured in such a manner that it is not likely to be separated during a crash impact

7.1.7.2 Flight Recorders

(a) All FDRs shall be capable of retaining the information recorded during at least the last 25 hours of their operation, except for the type IIA FDR which shall be capable of retaining the information recorded during at least the last 30 minutes of its operation.

(1) Aeroplanes for which the individual certificate of airworthiness is first issued on or after January 1st, 1989.

(i) All aeroplanes of a maximum certificated take-off mass of over 27,000kg shall be equipped with a Type 1 FDR.
(ii) All aeroplanes of a maximum certificated take-off mass of over 5,700kg, up to and including 27,000kg, shall be equipped with a Type II FDR.

(2) Aeroplanes for which the individual certificate of airworthiness was first issued on or after January 1st, 1987 but before January 1st, 1989.

(i) All turbine engined aeroplanes of a maximum certificated take-off mass of over 5,700kg, except those in 7.1.7.2 (a) (2)(ii) shall be equipped with a FDR which shall record time, altitude, airspeed, normal acceleration and heading.
(ii) All turbine-engined aeroplanes of a maximum certificated take-off mass of over 27,000kg that are of types of which the prototype was certificated by the appropriate national authority after September 30th, 1969 shall be equipped with a Type II FDR.

(3) Aeroplanes for which the individual certificate of airworthiness was first issued before January 1st, 1987.

(i) All turbine engined aeroplanes of a maximum certificated take-off mass of over 5,700kg shall be equipped with a FDR which shall record time, altitude, airspeed, normal acceleration and heading.

(4) Aeroplanes for which the individual certificate of Airworthiness is first issued after January 1st, 2005

(i) All Aeroplanes of a maximum certificated take-off mass of over 5,700kg shall be equipped with a Type 1 A-FDR.
7.1.5 Emergency, Rescue, and Survival Equipment

7.1.5.1 Emergency Equipment: All Aircraft

(a) [AAC] Each item of emergency and flotation equipment shall be—
   (1) Readily accessible to the crew and, with regard to equipment located in the passenger compartment, to passengers without appreciable time for preparatory procedures;
   (2) Clearly identified and clearly marked to indicate its method of operation;
   (3) Marked as to date of last inspection; and
   (4) Marked as to contents when carried in a compartment or container.

7.1.5.2 Emergency Exit Equipment

(a) [AOC] Each passenger-carrying land plane emergency exit (other than over-the-wing) that is more than 6 feet from the ground with the aeroplane on the ground and the landing gear extended, shall have an approved means to assist the occupants in descending to the ground.

(b) [AOC] Each passenger emergency exit, its means of access, and its means of opening shall be conspicuously marked by a sign visible to occupants approaching along the main passenger aisle.

(c) [AOC] Each passenger-carrying aeroplane shall have an emergency lighting system, independent of the main lighting system that—
   (1) Illuminates each passenger exit marking and locating sign;
   (2) Provides enough general lighting in the passenger cabin; and
   (3) Includes floor proximity emergency escape path marking.

(d) [AOC] Each passenger emergency exit and the means of opening that exit from the outside shall be marked on the outside of the aeroplane.

(e) [AOC] Each passenger-carrying aeroplane shall be equipped with a slip-resistant escape route that meets the requirements under which that aeroplane was type certified.

   Implementing Standard: See IS: 7.1.8.2 for details of the emergency exit equipment requirements.

7.1.5.3 Visual Signalling Devices

(a) [AAC] No person may operate an aircraft over water or across land areas which have been designated by Guyana as areas in which search and rescue would be especially difficult, unless equipped with such signalling devices as may be appropriate to the area overflown, to include—
   (1) Visual signals for use by intercepting and intercepted aircraft; and
   (2) At least one pyrotechnic signalling device for each life raft required for overwater operations.

7.1.5.4 Survival Kits

[AAC] No person may operate an aircraft across land areas which have been designated by Guyana as areas in which search and rescue would be especially difficult, unless equipped with enough survival kits for the number of occupants of the aeroplane and is appropriately equipped for the route to be flown.
7.1.5.5 Emergency Locator Transmitter

(a) [AAC] All aircraft on all flights shall be equipped with an automatically activated ELT.

(b) [AOC] No person may operate an aeroplane in extended overwater operations without having on the aeroplane a survival type ELT that transmits simultaneously on 121.5 and 243.0 MHz, and meets technical standards specified by the Authority.

(c) [AOC] At least one survival type ELT shall be located with each liferaft carried (See 7.1.8.17).

(d) [AAC] Batteries used in ELT’s shall be replaced (or recharged if the battery is rechargeable) when—

1. The transmitter has been in use for more than one cumulative hour; or
2. 50 percent of their useful life (or for rechargeable batteries, 50 percent of their useful life of charge) has expired.

(e) [AAC] The expiration date for a replacement or recharged ELT battery shall be legibly marked on the outside of the transmitter.

Note: The battery useful life (or useful life of charge) requirements do not apply to batteries (such as water-activated batteries) that are essentially unaffected during probable storage intervals.

7.1.5.6 Portable Fire Extinguishers

(a) [AOC] No person may operate an aircraft unless it is equipped with portable fire extinguishers accessible for use in crew, passenger, and cargo compartments as follows:

1. The type and quantity of extinguishing agent shall be suitable for the kinds of fires likely to occur in the compartment where the extinguisher is intended to be used.

Note: For passenger compartments, the extinguisher shall be designed to minimise the hazard of toxic gas concentrations.

2. At least one portable fire extinguisher shall be provided and conveniently located for use in each Class E cargo compartment which is accessible to crew members during flight, and at least one shall be located in each upper and lower lobe galley.

3. At least one portable fire extinguisher shall be conveniently located on the flight deck for use by the flight crew.

4. At least one portable fire extinguisher shall be conveniently located in the passenger compartment of aeroplanes having a passenger seating capacity of 30 or less.

5. For each aeroplane having a passenger seating capacity of more than 30, there shall be at least the following number of portable fire extinguishers conveniently located and uniformly distributed throughout the compartment.

<table>
<thead>
<tr>
<th>Minimum Number of Hand Fire Extinguishers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passenger Seating Capacity</td>
</tr>
<tr>
<td>30 through 60</td>
</tr>
<tr>
<td>61 through 200</td>
</tr>
<tr>
<td>201 through 300</td>
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<tr>
<td>301 through 400</td>
</tr>
<tr>
<td>401 through 500</td>
</tr>
<tr>
<td>501 through 600</td>
</tr>
<tr>
<td>601 or more</td>
</tr>
</tbody>
</table>
7.1.5.7 **LAVATORY FIRE EXTINGUISHER**

(a) [AOC] No person may operate a passenger-carrying transport category aeroplane unless each lavatory in the aeroplane is equipped with a built-in fire extinguisher for each disposal receptacle for towels, paper, or waste located within the lavatory.

(b) [AOC] Built-in lavatory fire extinguishers shall be designed to discharge automatically into each disposal receptacle upon occurrence of a fire in the receptacle.

7.1.5.8 **LAVATORY SMOKE DETECTOR**

(a) [AOC] No person may operate a passenger-carrying transport category aeroplane unless each lavatory in the aeroplane is equipped with a smoke detector system or equivalent that provides—

1. A warning light in the cockpit; or
2. A warning light or audio warning in the passenger cabin which would be readily detected by a flight attendant, taking into consideration the positioning of flight attendants throughout the passenger compartment during various phases of flight.

7.1.5.9 **CRASH AXE**

[AOC] No AOC holder shall operate a large aeroplane unless it is equipped with a crash axe appropriate to effective use in that type of aeroplane, stored in a place not visible to passengers on the aeroplane.

7.1.5.10 **MARKING OF BREAK-IN POINTS**

(a) [AAC] If areas of the fuselage suitable for break-in by rescue crews in an emergency are marked on an aeroplane, such areas shall be marked as shown below, and the colour of the markings shall be red or yellow and, if necessary, they shall be outlined in white to contrast with the background.

(b) If the corner markings are more than 2 m apart, intermediate lines 9 cm x 3 cm shall be inserted so that there is no more than 2 m between adjacent markings.
7.1.5.11 **First-Aid and Emergency Medical Kit**

(a) [AOC] No person may operate and aircraft unless it is equipped with accessible first-aid kits and, on passenger flights, an approved emergency medical kit for treatment of injuries or medical emergencies that might occur during flight time or in minor accidents.

(b) [AOC] The number of first-aid kits to be carried shall be to the following scale:

<table>
<thead>
<tr>
<th>Number of passenger seats installed</th>
<th>Number of first-aid kits required</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 99</td>
<td>1</td>
</tr>
<tr>
<td>100 to 199</td>
<td>2</td>
</tr>
<tr>
<td>200 to 299</td>
<td>3</td>
</tr>
<tr>
<td>300 and more</td>
<td>4</td>
</tr>
</tbody>
</table>

7.1.5.12 **Oxygen Storage and Dispensing Apparatus**

(a) [AAC] All aircraft intended to be operated at altitudes requiring the use of supplemental oxygen shall be equipped with adequate oxygen storage and dispensing apparatus.

(b) [AAC] The oxygen apparatus, the minimum rate of oxygen flow, and the supply of oxygen shall meet applicable airworthiness standards for type certification in the transport category as specified by the Authority.

(c) [AOC] No AOC holder may operate an aeroplane at altitudes above 10,000 feet unless it is equipped with oxygen masks, located so as to be within the immediate reach of flight crew members while at their assigned duty station.

(d) [AOC] No AOC holder may operate a pressurised aeroplane at altitudes above 25,000 feet unless:

1. Flight crew member oxygen masks are of a quick donning type;
2. Sufficient spare outlets and masks and/or sufficient portable oxygen units with masks are distributed evenly throughout the cabin to ensure immediate availability of oxygen to each required cabin crew member regardless of his location at the time of cabin pressurisation failure
3. An oxygen-dispensing unit connected to oxygen supply terminals is installed so as to be immediately available to each occupant, wherever seated. The total number of dispensing units and outlets shall exceed the number of seats by at least 10%. The extra units are to be evenly distributed throughout the cabin.

(e) [AOC] The amount of supplemental oxygen for sustenance required for a particular operation shall be determined on the basis of flight altitudes and flight duration, consistent with the operating procedures established for each operation in the Operations Manual and with the routes to be flown, and with the emergency procedures specified in the Operations Manual.

*Implementing Standard: See IS: 7.1.8.12 to determine the amount of supplemental oxygen needed for non-pressurised and pressurised aircraft.*
7.1.5.13 PROTECTIVE BREATHING EQUIPMENT

(a) [AOC] No AOC holder may operate an aeroplane with a maximum certified takeoff mass exceeding 5700 kg or having a maximum approved seating configuration of more than 19 seats unless—

(1) It has PBE to protect the eyes, nose and mouth of each flight crew member while on flight deck duty and to provide oxygen for a period of not less than 15 minutes; and

(2) It has sufficient portable PBE to protect the eyes, nose and mouth of all required cabin crew members and to provide breathing gas for a period of not less than 15 minutes.

(b) [AOC] The oxygen supply for PBE may be provided by the required supplemental oxygen system.

(c) [AOC] The PBE intended for flight crew use shall be conveniently located on the flight deck and be easily accessible for immediate use by each required flight crew member at their assigned duty station.

(d) [AOC] The PBE intended for cabin crew use shall be installed adjacent to each required cabin crew member duty station.

(e) [AOC] Easily accessible portable PBE shall be provided and located at or adjacent to the required hand fire extinguishers except that, where the fire extinguisher is located inside a cargo compartment, the PBE shall be stowed outside but adjacent to the entrance to that compartment.

(f) [AOC] The PBE while in use shall not prevent required communication.

7.1.5.14 FIRST AID OXYGEN DISPENSING UNITS

(a) [AOC] No AOC holder may conduct a passenger carrying operation in a pressurised aeroplane at altitudes above 25,000 feet, when a cabin crew member is required to be carried, unless it is equipped with—

(1) Undiluted first-aid oxygen for passengers who, for physiological reasons, may require oxygen following a cabin depressurisation; and

(2) A sufficient number of dispensing units, but in no case less than two, with a means for cabin crew to use the supply.

(b) [AOC] The amount of first-aid oxygen required in paragraph (a) for a particular operation and route shall be determined on the basis of—

(1) Flight duration after cabin depressurisation at cabin altitudes of more than 8,000 feet;

(2) An average flow rate of at least 3 litres Standard Temperature Pressure Dry/minute/person; and

(3) At least 2% of the passengers carried, but in no case for less than one person.

7.1.5.15 MEGAPHONES

(a) [AOC] Each person operating a passenger-carrying aeroplane shall have a portable battery-powered megaphone or megaphones readily accessible to the crew members assigned to direct emergency evacuation.

(b) [AOC] The number and location of megaphones required in paragraph (a) shall be determined as follows:

(1) On aeroplanes with a seating capacity of more than 60 and less than 100 passengers, one megaphone shall be located at the most rearward location in the passenger cabin where it would be readily accessible to a normal flight attendant seat; and

(2) On aeroplanes with a seating capacity of more than 99 passengers, two megaphones in the passenger cabin on each aeroplane one installed at the forward end and the other at the most rearward location where it would be readily accessible to a normal flight attendant seat.

Note: The Authority may grant a deviation from the requirements of paragraph (b) if the Authority finds that a different location would be more useful for evacuation of persons during an emergency.
7.1.5.16 **INDIVIDUAL FLOTATION DEVICES**

(a) [AOC] All aircraft operated on flights over water at a distance of more than 93 km (50 NM) from land suitable for making an emergency landing shall be equipped with one life jacket or equivalent individual floatation device for each person on board.

(b) [AOC] All life jackets or equivalent individual floatation devices shall be stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.

(c) [AOC] For extended overwater operations, each individual floatation device shall be fitted with an approved survivor locator light.

(d) [AOC] Upon application by an aircraft operator, the Authority may approve the operation of an aeroplane over water without individual flotation devices, if the aircraft operator shows that the water over which the aeroplane is to be operated is not of such size and depth that individual flotation devices should be required for the survival of its occupants in the event the flight terminates in that water.

7.1.5.17 **LIFE RAFT**

(a) [AOC] No person may operate an aeroplane in commercial air transport in extended overwater operations without having on the aeroplane enough life rafts with rated capacities and buoyancy to accommodate the occupants of the aeroplane.

Note: Unless excess rafts of enough capacity are provided, the buoyancy and seating capacity of the rafts shall accommodate all occupants of the aeroplane in the event of a loss of one raft of the largest rated capacity.

(b) [AOC] Life rafts shall be stowed so as to facilitate their ready use in emergency.

(c) [AOC] Life rafts shall be equipped with—

   (1) A survivor locator light;
   (2) A survival kit;
   (3) A pyrotechnic signalling device; and
   (4) An ELT (See 7.1.8.5).

(d) [AOC] Life rafts which are not deployable by remote control and which have a mass of more than 40 kg shall be equipped with some means of mechanically assisted deployment.

7.1.5.18 **FLOTATION DEVICE FOR HELICOPTER DITCHING**

[AAC] All helicopters flying over water at a distance from land corresponding to more than 10 minutes at normal cruise speed in the case of performance Class 1 or 2 helicopters, or flying over water beyond autorotational or safe forced landing distance from land in the case of performance Class 3 helicopters, shall be fitted with a permanent or rapidly deployable means of floatation so as to ensure a safe ditching of the helicopter.
7.1.6 Miscellaneous Systems and Equipment

7.1.6.1 Seats, Safety Belts, and Shoulder Harnesses
(a) [AOC] Each aircraft used in passenger operations shall be equipped with the following seats, safety belts, and shoulder harnesses that meet the airworthiness requirements for type certification of that aircraft:
   (1) A seat or berth with safety belt for each person on board over an age of 2.
      \textit{Note: A berth designed to be occupied by two persons, such as a multiple lounge or divan seat, shall be equipped with an approved safety belt for use by two occupants during en route flight only.}
   (2) A flight deck station with a combined safety belt and shoulder harness.
   (3) A seat in the passenger compartment for each flight attendant.

7.1.6.2 Passenger and Pilot Compartment Doors
(a) [AOC] No person may conduct any passenger carrying operation unless:
   (1) In all aeroplanes which are equipped with a flight crew compartment door, this door shall be capable of being locked, and means shall be provided by which cabin crew can discreetly notify the flight crew in the event of suspicious activity or security breaches in the cabin.
   (2) From 1\textsuperscript{st} November 2003, all passenger carrying aeroplanes of a maximum certificated take-off mass in excess of 45,500kg or with a passenger seating capacity greater than 60 shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorized persons. This door shall be capable of being locked and unlocked from either pilot's station.

7.1.6.3 Passenger Information Signs
(a) [AOC] No AOC holder may operate a passenger carrying aeroplane unless it is equipped with—
   (1) At least one passenger information sign (using either letters or symbols) notifying when smoking is prohibited and one sign (using either letters or symbols) notifying when safety belts should be fastened shall, when illuminated, be legible to each person seated in the passenger cabin under all probable conditions of cabin illumination;
   (2) Signs which notify when safety belts should be fastened and when smoking is prohibited shall be so constructed that the crew can turn them on and off;
   (3) A sign or placard affixed to each forward bulkhead and each passenger seat back that reads "Fasten Seat Belt While Seated."

7.1.6.4 Public Address System
(a) [AOC] No AOC holder may operate a passenger carrying aeroplane with a maximum approved passenger seating configuration of more than 19 unless a public address system is installed that—
   (1) Operates independently of the interphone systems except for handsets, headsets, microphones, selector switches and signalling devices;
(2) For each required floor level passenger emergency exit which has an adjacent cabin crew seat, has a microphone which is readily accessible to the seated cabin crew member, except that one microphone may serve more than one exit, provided the proximity of the exits allows unassisted verbal communication between seated cabin crew members; and

(3) Is capable of operation within 10 seconds by a cabin crew member at each of those stations in the compartment from which its use is accessible; and

(4) Is audible and intelligible at all passenger seats, toilets, and cabin crew seats and workstations

(5) ICAO Annex 6: 6.2.2

7.1.6.5 MATERIALS FOR CABIN INTERIORS

(a) [AOC] Upon the first major overhaul of an aeroplane cabin or refurbishing of the cabin interior, all materials in each compartment used by the crew or passengers that do not meet the current airworthiness requirements pertaining to materials used in the interior of the cabin for type certification in the transport category as cited by the Authority, shall be replaced with materials that meet the requirements specified by the Authority.

(b) [AOC] Seat cushions, except those on flight crew member seats, in any compartment occupied by crew or passengers shall meet requirements pertaining to fire protection as specified by the Authority.

7.1.6.6 MATERIALS FOR CARGO AND BAGGAGE COMPARTMENTS

(a) [AOC] Each Class C or D cargo compartment greater than 200 cubic feet in volume in a transport category aeroplane type certified after January 1, 1958 shall have ceiling and sidewall liner panels which are constructed of—

(1) Glass fibre reinforced resin;

(2) Materials which meet the test requirements for flame resistance of cargo compartment liners as prescribed for type certification; or

(3) In the case of installations approved prior to March 20, 1989, aluminium.

Note: The term "liner" includes any design feature, such as a joint or fastener, which would affect the capability of the liner to safely contain fire.

7.1.6.7 POWER SUPPLY, DISTRIBUTION, AND INDICATION SYSTEM

(a) [AOC] No AOC holder may operate an aeroplane unless it is equipped with—

(1) A power supply and distribution system that meets the airworthiness requirements for certification of an aeroplane in the transport category, as specified by the Authority, or

(2) A power supply and distribution system that is able to produce and distribute the load for the required instruments and equipment, with use of an external power supply if any one power source or component of the power distribution system fails.

Note: The use of common elements in the power system may be approved if the Authority finds that they are designed to be reasonably protected against malfunctioning.

(3) A means for indicating the adequacy of the power being supplied to required flight instruments.

(b) [AOC] Engine-driven sources of energy, when used, shall be on separate engines.

7.1.6.8 PROTECTIVE CIRCUIT FUSES

[AOC] No AOC holder may operate an aeroplane in which protective fuses are installed unless there are spare fuses available for use in flight equal to at least 10% of the number of fuses of each rating or three of each rating whichever is the greater.
7.1.6.9 **ICING PROTECTION EQUIPMENT**

(a) [AAC] Unless an aeroplane is certified under the transport category airworthiness requirements relating to ice protection, no person may operate an aeroplane in icing conditions unless it is equipped for the prevention or removal of ice on windshields, wings, empennage, propellers, and other parts of the aeroplane where ice formation will adversely affect the safety of the aeroplane.

(b) [AOC] No AOC holder may operate an aircraft in expected or actual icing conditions at night unless it is equipped with a means to illuminate or detect the formation of ice.

> Note: Any illumination that is used shall be of a type that will not cause glare or reflection that would handicap crew members in the performance of their duties.

7.1.6.10 **PITOT HEAT INDICATION SYSTEMS**

(a) [AOC] No AOC holder may operate an aeroplane with a maximum certified take off mass of 5700kg or greater, equipped with a flight instrument pitot heating system, unless the aeroplane is also equipped with an operable pitot heat indication system that complies with the following requirements:

1. The indication provided shall incorporate an amber light that is in clear view of a flight crew member.
2. The indication provided shall be designed to alert the flight crew if either the pitot heating system is switched "off," or the pitot heating system is switched "on" and any pitot tube heating element is inoperative.

7.1.6.11 **STATIC PRESSURE SYSTEM**

[AOC] No person may operate an aircraft unless two independent static pressure systems, vented to the outside atmospheric pressure so that they will be least affected by airflow variation or moisture or other foreign matter, and installed so as to be airtight except for the vent.

7.1.6.12 **WINDSHIELD WIPERS**

[AOC] No AOC holder may operate an aeroplane with a maximum certified take-off mass of more than 5700kg unless it is equipped at each pilot station with a windshield wiper or equivalent means to maintain a clear portion of the windshield during precipitation.

7.1.6.13 **CHART HOLDER**

[AOC] No AOC holder may operate an aeroplane unless a chart holder is installed in an easily readable position which can be illuminated for night operations.
7.1.6.14 **COSMIC RADIATION DETECTION EQUIPMENT**

[AOC] An AOC holder shall ensure that aeroplanes intended to be operated above 15000 m (49 000 ft) are equipped with an instrument to measure and indicate continuously the dose rate of total cosmic radiation being received (i.e., the total of ionising and neutron radiation of galactic and solar origin) and the cumulative dose on each flight.

7.1.6.15 **MARITIME SOUND SIGNALLING DEVICE**

[AAC] All seaplanes for all flights shall be equipped with equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable.

7.1.6.16 **ANCHORS**

[AAC] All seaplanes for all flights shall be equipped with one anchor, and one sea anchor (drogue), when necessary to assist in manoeuvring (approval for the anchors not required).

*Note.* - "Seaplanes” includes amphibians operated as seaplanes.
IS: 7.1.2.6  CATEGORY II: INSTRUMENTS AND EQUIPMENT APPROVAL AND MAINTENANCE REQUIREMENTS

(a) General. The instruments and equipment required by 7.1.2.6 shall be approved as provided in this implementing standard before being used in Category II operations. Before presenting an aircraft for approval of the instruments and equipment, it must be shown that since the beginning of the 12th calendar month before the date of submission—

(1) The ILS localizer and glide slope equipment were bench checked according to the manufacturer's instructions and found to meet those standards specified in RTCA Paper 23-63/DO-177 dated March 14, 1963, “Standards Adjustment Criteria for Airborne Localizer and Glideslope Receivers.”

(2) The altimeters and the static pressure systems were tested and inspected; and

(3) All other instruments and items of equipment specified in 7.1.2.6 that are listed in the proposed maintenance program were bench checked and found to meet the manufacturer's specifications.

(b) Flight control guidance system. All components of the flight control guidance system shall be approved as installed by the evaluation program specified in paragraph (e) if they have not been approved for Category III operations under applicable type or supplemental type certification procedures. In addition, subsequent changes to make, model, or design of the components must be approved under this paragraph. Related systems or devices, such as the autothrottle and computed missed approach guidance system, shall be approved in the same manner if they are to be used for Category II operations.

(c) Radio altimeter. A radio altimeter must meet the performance criteria of this paragraph for original approval and after each subsequent alteration.

(1) It shall display to the flight crew clearly and positively the wheel height of the main landing gear above the terrain.

(2) It shall display wheel height above the terrain to an accuracy of ±5 feet or 5 percent, whichever is greater, under the following conditions:
   (i) Pitch angles of zero to ±5° about the mean approach attitude.
   (ii) Roll angles of zero to 20° in either direction.
   (iii) Forward velocities from minimum approach speed up to 200 knots.
   (iv) Sink rates from zero to 15 feet per second at altitudes from 100 to 200 feet.

(3) Over level ground, it must track the actual altitude of the aircraft without significant lag or oscillation.

(4) With the aircraft at an altitude of 200 feet or less, any abrupt change in terrain representing no more than 10 percent of the aircraft's altitude must not cause the altimeter to unlock, and indicator response to such changes must not exceed 0.1 seconds and, in addition, if the system unlocks for greater changes, it must reacquire the signal in less than 1 second.

(5) Systems that contain a push to test feature must test the entire system (with or without an antenna) at a simulated altitude of less than 500 feet.

(6) The system must provide to the flight crew a positive failure warning display any time there is a loss of power or an absence of ground return signals within the designed range of operating altitudes.

(d) Other instruments and equipment. All other instruments and items of equipment required by 7.1.2.6 shall be capable of performing as necessary for Category II operations. Approval is also required after each subsequent alteration to these instruments and items of equipment.

(e) Evaluation program.

(1) Application. Approval by evaluation is requested as a part of the application for approval of the Category II manual.

(2) Demonstrations. Unless otherwise authorised by the Authority, the evaluation program for each aircraft requires the demonstrations specified in this paragraph. At least 50 ILS approaches shall be flown with at least five approaches on each of three different ILS facilities and no more than one half of the total approaches on any one ILS facility. All approaches shall be flown under simulated instrument conditions to
a 100 foot decision height and 90 percent of the total approaches made shall be successful. A successful approach is one in which—

(i) At the 100 foot decision height, the indicated airspeed and heading are satisfactory for a normal flare and landing (speed must be ±5 knots of programmed airspeed, but may not be less than computed threshold speed if autothrottles are used);

(ii) The aircraft at the 100 foot decision height, is positioned so that the cockpit is within, and tracking so as to remain within, the lateral confines of the runway extended;

(iii) Deviation from glide slope after leaving the outer marker does not exceed 50 percent of full-scale deflection as displayed on the ILS indicator;

(iv) No unusual roughness or excessive attitude changes occur after leaving the middle marker; and

(v) In the case of an aircraft equipped with an approach coupler, the aircraft is sufficiently in trim when the approach coupler is disconnected at the decision height to allow for the continuation of a normal approach and landing.

(3) Records. During the evaluation program the following information shall be maintained by the applicant for the aircraft with respect to each approach and made available to the Authority upon request:

(i) Each deficiency in airborne instruments and equipment that prevented the initiation of an approach.

(ii) The reasons for discontinuing an approach, including the altitude above the runway at which it was discontinued.

(iii) Speed control at the 100 foot DH if auto throttles are used.

(iv) Trim condition of the aircraft upon disconnecting the auto coupler with respect to continuation to flare and landing.

(v) Position of the aircraft at the middle marker and at the decision height indicated both on a diagram of the basic ILS display and a diagram of the runway extended to the middle marker. Estimated touchdown point shall be indicated on the runway diagram.

(vi) Compatibility of flight director with the auto coupler, if applicable.

(vii) Quality of overall system performance.

(4) Evaluation. A final evaluation of the flight control guidance system is made upon successful completion of the demonstrations. If no hazardous tendencies have been displayed or are otherwise known to exist, the system is approved as installed.

(f) Each maintenance program for Category II instruments and equipment shall contain the following:

(1) A list of each instrument and item of equipment specified in 7.1.2.6 that is installed in the aircraft and approved for Category II operations, including the make and model of those specified in 7.1.2.6 (a)(1).

(2) A schedule that provides for the performance of inspections under subparagraph (5) of this paragraph within 3 calendar months after the date of the previous inspection. The inspection shall be performed by a person authorised by Part 5, except that each alternate inspection may be replaced by a functional flight check. This functional flight check shall be performed by a pilot holding a Category II pilot authorisation for the type aircraft checked.

(3) A schedule that provides for the performance of bench checks for each listed instrument and item of equipment that is specified in 7.1.2.6 (a)(1) within 12 calendar months after the date of the previous bench check.

(4) A schedule that provides for the performance of a test and inspection of each static pressure system within 12 calendar months after the date of the previous test and inspection.

(5) The procedures for the performance of the periodic inspections and functional flight checks to determine the ability of each listed instrument and item of equipment specified in 7.1.2.6 (a)(1) to perform as approved for Category II operations including a procedure for recording functional flight checks.

(6) A procedure for assuring that the pilot is informed of all defects in listed instruments and items of equipment.
(7) A procedure for assuring that the condition of each listed instrument and item of equipment upon which
maintenance is performed is at least equal to its Category II approval condition before it is returned to
service for Category II operations.

(8) A procedure for an entry in the maintenance records that shows the date, airport, and reasons for each
discontinued Category II operation because of a malfunction of a listed instrument or item of equipment.

(g) **Bench check.** A bench check required by this section shall comply with this paragraph.

(1) Except as specified in paragraph (g)(2) of this subsection, it shall be performed by a certificated repair
station holding one of the following ratings as appropriate to the equipment checked:
   (i) An instrument rating.
   (ii) An avionics rating.

(2) It shall be performed by a certificated air operator on aircraft identified in its approved specific operating
provisions with the approved authorisations to perform maintenance and approve for return to service its
own aircraft maintained under a continuous maintenance program under an equivalent system identified in
Part 9.

(3) It shall consist of removal of an instrument or item of equipment and performance of the following:
   (i) A visual inspection for cleanliness, impending failure, and the need for lubrication, repair, or
       replacement of parts;
   (ii) Correction of items found by that visual inspection; and
   (iii) Calibration to at least the manufacturer’s specifications unless otherwise specified in the approved
       Category II manual for the aircraft in which the instrument or item of equipment is installed.

(h) **Extensions.** After the completion of one maintenance cycle of 12 calendar months, a request to extend the
period for checks, tests, and inspections is approved if it is shown that the performance of particular
equipment justifies the requested extension.

**IS: 7.1.7.2  FLIGHT RECORDERS**

(a) Flight data recording systems shall record data, in digital form, from which the following information may be
determined within the ranges, accuracy, and recording intervals specified by the Authority:

(1) Time,
(2) Altitude,
(3) Airspeed,
(4) Vertical acceleration,
(5) Heading,
(6) Time of each radio transmission either to or from air traffic control,
(7) Pitch attitude,
(8) Roll attitude,
(9) Side-slip angle of lateral acceleration,
(10) Pitch trim position,
(11) Control column or pitch control surface position,
(12) Control wheel or lateral control surface position,
(13) Rudder pedal or yaw control surface position,
(14) Thrust of each engine,
(15) Position of each thrust reverser,
(16) Trailing edge flap or cockpit flap control position, and
(17) Leading edge flap or cockpit flap control position.
IS: 7.1.8.2 EMERGENCY EXIT EQUIPMENT

(a) The assisting means for a floor level emergency exit shall meet the requirements under which the aeroplane was type certified.

(b) The location of each passenger emergency exit shall be—
   (1) Recognisable from a distance equal to the width of the cabin.
   (2) Indicated by a sign visible to occupants approaching along the main passenger aisle.

(c) There shall be an emergency exit locating sign—
   (1) Above the aisle near each over-the-wing passenger emergency exit, or at another ceiling location if it is more practical because of low headroom;
   (2) Next to each floor level passenger emergency exit, except that one sign may serve two such exits if they both can be seen readily from that sign; and
   (3) On each bulkhead or divider that prevents fore and aft vision along the passenger cabin, to indicate emergency exits beyond and obscured by it, except that if this is not possible, the sign may be placed at another appropriate location.

(d) Each passenger emergency exit marking and each locating sign shall be manufactured to meet the interior emergency exit marking requirements under which the aeroplane was type certified, unless the Authority cites different requirements for compliance with this paragraph.

   Note: No sign may continue to be used if its luminescence (brightness) decreases to below 250 microlamberts.

(e) Sources of general cabin illumination may be common to both the emergency and the main lighting systems if the power supply to the emergency light system is independent of the power supply to the main lighting system.

(f) The emergency lighting system shall provide enough general lighting in the passenger cabin so that the average illumination, when measured at 40-inch intervals at seat armrest height, on the centerline of the main passenger aisle, is at least 0.05 foot-candles.

(g) Each emergency light shall—
   (1) Be operable manually both from the flight crew station and from a point in the passenger compartment that is readily accessible to a normal flight attendant seat;
   (2) Have a means to prevent inadvertent operation of the manual controls; and
   (3) When armed or turned on at either station, remain lighted or become lighted upon interruption of the aeroplane’s normal electric power.
   (4) Provide the required level of illumination for at least 10 minutes at the critical ambient conditions after emergency landing.
   (5) Have a cockpit control device that has an “on”, “off”, and “armed” position.

(h) The location of each passenger emergency exit operating handle and instructions for opening the exit shall be shown in accordance with the requirements under which the aeroplane was type certified, unless the Authority cites different requirements for compliance with this paragraph.

(i) No operating handle or operating handle cover may continue to be used if its luminescence (brightness) decreases to below 100 microlamberts.

(j) Access to emergency exits shall be provided as follows for each passenger carrying aeroplane:
   (1) Each passageway between individual passenger areas, or leading to a Type I or Type II emergency exit, shall be unobstructed and at least 20 inches wide.
   (2) There shall be enough space next to each Type I or Type II emergency exit to allow a crew member to assist in the evacuation of passengers without reducing the unobstructed width of the passageway below that required in paragraph (j)(1) of this section.
   (3) There shall be access from the main aisle to each Type III and Type IV exit. The access from the aisle to these exits shall not be obstructed by seats, berths, or other protrusions in a manner that would reduce the...
effectiveness of the exit. In addition, the access shall meet the emergency exit access requirements under which the aeroplane was type certificated, unless the Authority cites different requirements for compliance with this paragraph.

(4) If it is necessary to pass through a passageway between passenger compartments to reach any required emergency exit from any seat in the passenger cabin, the passageway shall not be obstructed. However, curtains may be used if they allow free entry through the passageway.

(5) No door may be installed in any partition between passenger compartments.

(6) If it is necessary to pass through a doorway separating the passenger cabin from other areas to reach any required emergency exit from any passenger seat, the door shall have a means to latch it in open position, and the door shall be latched open during each takeoff and landing. The latching means shall be able to withstand the loads imposed upon it when the door is subjected to the ultimate inertia forces, relative to the surrounding structure, prescribed in the airworthiness standards for type certification in the transport category as cited by the Authority.

(k) Each passenger emergency exit and the means of opening that exit from the outside shall be marked on the outside of the aeroplane with a 2-inch coloured band outlining the exit on the side of the fuselage.

(l) Each passenger emergency exit marking, including the band, shall be readily distinguishable from the surrounding fuselage area by contrast in colour and shall comply with the following:

(1) If the reflectance of the darker colour is 15 percent or less, the reflectance of the lighter colour shall be at least 45 percent.

(2) If the reflectance of the darker colour is greater than 15 percent, at least a 30 percent difference between its reflectance and the reflectance of the lighter colour shall be provided.

Note: “Reflectance” is the ratio of the luminous flux reflected by a body to the luminous flux it receives.

(3) Exits that are not in the side of the fuselage shall have external means of opening and applicable instructions marked conspicuously in red or, if red is inconspicuous against the background colour, in bright chrome yellow and, when the opening means for such an exit is located on only one side of the fuselage, a conspicuous marking to that effect shall be provided on the other side.

(m) Each passenger-carrying aeroplane shall be equipped with exterior lighting that meets the requirements under which that aeroplane was type certificated, unless the Authority cites different requirement for compliance with this paragraph.

(n) Each passenger-carrying aeroplane shall be equipped with a slip-resistant escape route that meets the requirements under which that aeroplane was type certificated, unless the Authority cites different requirements for compliance with this paragraph.

(o) Each floor level door or exit in the side of the fuselage (other than those leading into a cargo or baggage compartment that is not accessible from the passenger cabin) that is 44 or more inches high and 20 or more inches wide, but not wider than 46 inches, each passenger ventral exit and each tail cone exit, shall meet the requirements of this section for floor level emergency exits.

Note: The Authority may grant a deviation from this paragraph if he finds that circumstances make full compliance impractical and that an acceptable level of safety has been achieved.

(p) Approved emergency exits in the passenger compartments that are in excess of the minimum number of required emergency exits shall meet all of the applicable provisions of this subsection section and shall be readily accessible.

(q) On each large passenger-carrying turbojet powered aeroplane each ventral exit and tail cone exit shall be—

(1) Designed and constructed so that it cannot be opened during flight; and

(2) Marked with a placard readable from a distance of 30 inches and installed at a conspicuous location near the means of opening the exit, stating that the exit has been designed and constructed so that it cannot be opened during flight.
IS: 7.1.8.12  OXYGEN STORAGE AND DISPENSING APPARATUS

(a) The supplemental oxygen supply requirements for non-pressurised aircraft are as follows:

(1) Flight crew members. Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with Table 1. If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply.

(2) Cabin crew members, additional crew members and passengers. Cabin crew members and passengers shall be supplied with oxygen in accordance with Table 1. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.

Table 1- Supplemental Oxygen for Non-Pressurised Aeroplanes

<table>
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<tr>
<th>(a)</th>
<th>(b)</th>
</tr>
</thead>
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<tr>
<td>SUPPLY FOR:</td>
<td>DURATION AND PRESSURE ALTITUDE</td>
</tr>
<tr>
<td>1. All occupants of flight deck seats on flight deck duty</td>
<td>Entire flight time at pressure altitudes above 13,000 ft and for any period exceeding 30 minutes at pressure altitudes above 10,000 ft but not exceeding 13,000 ft</td>
</tr>
<tr>
<td>2. All required cabin crew members</td>
<td>Entire flight time at pressure altitudes above 13,000 ft</td>
</tr>
<tr>
<td>3. 100% of passengers</td>
<td>Entire flight time after 30 minutes at pressure altitudes greater than 10,000 ft but not exceeding 13,000 ft</td>
</tr>
<tr>
<td>6. 10% of passengers</td>
<td></td>
</tr>
</tbody>
</table>

(b) The supplemental oxygen supply requirements for pressurised aircraft are as follows:

(1) The amount of supplemental oxygen required shall be determined on the basis of cabin pressure altitude, flight duration and the assumption that a cabin pressurisation failure will occur at the altitude or point of flight that is most critical from the standpoint of oxygen need, and that, after the failure, the aeroplane will descend in accordance with emergency procedures specified in the Aeroplane Flight Manual to a safe altitude for the route to be flown that will allow continued safe flight and landing.

(2) Following a cabin pressurisation failure, the cabin pressure altitude shall be considered the same as the aeroplane altitude, unless it is demonstrated to the Authority that no probable failure of the cabin or pressurisation system will result in a cabin pressure altitude equal to the aeroplane altitude. Under these circumstances, this lower cabin pressure altitude may be used as a basis for determination of oxygen supply.

(3) Flight crew members.

(i) Each member of the flight crew on flight deck duty shall be supplied with supplemental oxygen in accordance with Table 2. If all occupants of flight deck seats are supplied from the flight crew source of oxygen supply then they shall be considered as flight crew members on flight deck duty for the purpose of oxygen supply. Flight deck seat occupants, not supplied by the flight crew source, are to be considered as passengers for the purpose of oxygen supply.

(4) Cabin crew members, additional crew members, and passengers

(i) Cabin crew members and passengers shall be supplied with supplemental oxygen in accordance with Table 2. Cabin crew members carried in addition to the minimum number of cabin crew members required, and additional crew members, shall be considered as passengers for the purpose of oxygen supply.
The oxygen supply requirements, as specified in Table 2, for aeroplanes not certificated to fly at altitudes above 25,000 ft, may be reduced to the entire flight time between 10,000 ft and 14,000 ft cabin pressure altitudes for all required cabin crew members and for at least 10% of the passengers if, at all points along the route to be flown, the aeroplane is able to descend safely within 4 minutes to a cabin pressure altitude of 14,000 ft.

Table 2 - Requirements for Supplemental Oxygen - Pressurised Aeroplane During and Following Emergency Descent (Note 1)

<table>
<thead>
<tr>
<th>SUPPLY FOR:</th>
<th>DURATION AND CABIN PRESSURE ALTITUDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>All occupants of flight deck seats on flight deck duty flight</td>
<td>Entire flight time when the cabin pressure altitude exceeds 13,000 and entire time when the cabin pressure altitude exceeds 10,000 ft but does not exceed 13,000 ft after the first 30 minutes at those altitudes, but in no case less than: (i) 30 minutes for aeroplanes certificated to fly at altitudes not exceeding 25,000 ft (Note 2) (ii) 2 hours for aeroplanes certificated to fly at altitudes more than 25,000 ft (Note 3).</td>
</tr>
<tr>
<td>2. All required cabin crew members</td>
<td>Entire flight time when cabin pressure altitude exceeds 13,000 ft but not less than 30 minutes (Note 2), and entire flight time when cabin pressure altitude is greater than 10,000 ft but does not exceed 13,000 ft after the first 30 minutes at these altitudes.</td>
</tr>
<tr>
<td>3. 100% of passengers</td>
<td>10 minutes or the entire flight time when the cabin pressure altitude exceeds 15,000 ft whichever is the greater (Note 4)</td>
</tr>
<tr>
<td>6. 30% of passengers</td>
<td>Entire flight time when the cabin pressure altitude exceeds 14,000 ft but does not exceed 15,000 ft</td>
</tr>
<tr>
<td>5. 10% of passengers</td>
<td>Entire flight time when the cabin pressure altitude exceeds 10,000 ft but does not exceed 14,000 ft after the first 30 minutes at these altitudes.</td>
</tr>
</tbody>
</table>
Note 1: The supply provided shall take account of the cabin pressure altitude and descent profile for the routes concerned.

Note 2: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane’s maximum certificated operating altitude to 10,000 ft in 10 minutes and followed by 20 minutes at 10,000 ft.

Note 3: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane’s maximum certificated operating altitude to 10,000 ft in 10 minutes and followed by 110 minutes at 10,000 ft. The oxygen required to meet the Crew Protective Breathing Equipment provisions of this Part may be included in determining the supply required.

Note 4: The required minimum supply is that quantity of oxygen necessary for a constant rate of descent from the aeroplane’s maximum certificated operating altitude to 15,000 ft.
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8.1 GENERAL

8.1.1 Applicability and Definitions

8.1.1.1 Applicability

(a) Part 8 prescribes the requirements for:

1. Operations conducted by airman certified in Guyana while operating aircraft registered in Guyana.
2. Operations of foreign registered aircraft by Guyana AOC holders.
3. Operations of aircraft within Guyana by airman or AOC holders of a foreign State.

(b) For operations outside of Guyana, all Guyana pilots and operators shall comply with these requirements unless compliance would result in a violation of the laws of the foreign State in which the operation is conducted.

Note: Where the particular requirement is applicable only to a particular segment of aviation operations, it will be identified by a reference to those particular operations, such as “commercial air transport” or “small non-turbojet or turbofan aeroplanes.”

Note: Those specific subsections not applicable to foreign operators will include the phrase “This requirement is not applicable to foreign operators.”

8.1.1.2 Definitions

(a) For the purpose of Part 8, the following definitions shall apply—

1. **Advisory airspace.** An airspace of defined dimensions, or designated route, within which air traffic advisory service is available.
2. **Aerial work.** An aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.
3. **Aerobatic flight.** Manoeuvres intentionally performed by an aircraft involving an abrupt change in its attitude, an abnormal attitude, or an abnormal variation in speed.
4. **Air navigation facility.** Any facility used in, available for use in, or designed for use in aid of air navigation, including aerodromes, landing areas, lights, any apparatus or equipment for disseminating weather information, for signalling, for radio directional finding, or for radio or other electrical communication, and any other structure or mechanism having a similar purpose for guiding or controlling flight in the air or the landing and take-off of aircraft.
5. **Calendar day.** The period of elapsed time, using Co-ordinated Universal Time or local time that begins at midnight and ends 24 hours later at the next midnight.
6. **Check airman (aeroplane).** A person who is qualified, and permitted, to conduct an evaluation in an aeroplane, in a flight simulator, or in a flight training device for a particular type aeroplane, for a particular AOC holder.
7. **Check airman (simulator).** A person who is qualified to conduct an evaluation, but only in a flight simulator or in a flight training device for a particular type aircraft, for a particular AOC holder.
8. **Controlled flight.** Any flight which is subject to an air traffic control clearance.
9. **Critical engine.** The engine whose failure would most adversely affect the performance or handling qualities of an aircraft.
10. **Critical phases of flight.** Those portions of operations involving taxiing, takeoff and landing, and all flight operations below 10,000 feet, except cruise flight.
(11) **Deadhead Transportation.** Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crew member’s home station.

(12) **Defined point after takeoff.** The point, within the takeoff and initial climb phase, before which the Class 2 helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

(13) **Defined point before landing.** The point, within the approach and landing phase, after which the Class 2 helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

(14) **Effective length of the runway.** The distance for landing from the point at which the obstruction clearance plane associated with the approach end of the runway intersects the centreline of the runway to the far end.

(15) **Extended overwater operation.** With respect to aircraft other than helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline; and to helicopters, an operation over water at a horizontal distance of more than 50 nm from the nearest shoreline and more than 50 nm from an offshore heliport structure.

(16) **Flight Duty Period.** The total time from the moment a flight crew member commences duty, immediately subsequent to a rest period and prior to making a flight or a series of flights, to the moment the flight crew member is relieved of all duties having completed such flight or series of flights.

(17) **Flight plan.** Specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft. The term “flight plan” is used to mean variously, full information on all items comprised in the flight plan description, covering the whole route of a flight, or limited information required when the purpose is to obtain a clearance for a minor portion of a flight such as to cross an airway, to take off from, or to land at a controlled aerodrome.

(18) **General aviation operation.** An aircraft operation other than a commercial air transport operation or an aerial work operation.

(19) **Helideck.** A heliport located on a floating or fixed offshore structure.

(20) **Heliport.** An aerodrome or defined area on a structure intended to be used wholly or in part for the arrival, departure, and surface movement of helicopters.

(21) **Journey log.** A form signed by the PIC of each flight that records the aeroplane’s registration, crew member names and duty assignments, the type of flight, and the date, place, and time of arrival and departure.

(22) **Landing decision point.** The point used in determining landing performance from which, an engine failure occurring at this point, the landing may be safely continued or a balked landing initiated.

(23) **Line operating flight time.** Flight time recorded by the PIC or SIC while in revenue service for an AOC holder.

(24) **Master minimum equipment list (MMEL).** A list established for a particular aircraft type by the manufacturer with the approval of the State of Manufacture containing items, one or more of which is permitted to be unserviceable at the commencement of a flight. The MMEL may be associated with special operating conditions, limitations or procedures. The MMEL provides the basis for development, review, and approval by the Authority of an individual operator's MEL.
(25) **Obstruction clearance plane.** A plane sloping upward from the runway at a slope of 1:20 to the horizontal, and tangent to or clearing all obstructions within a specified area surrounding the runway as shown in a profile view of that area. In the plane view, the centreline of the specified area coincides with the centreline of the runway, beginning at the point where the obstruction clearance plane intersects the centreline of the runway and proceeding to a point at least 1,500 feet from the beginning point. Thereafter, the centreline coincides with the takeoff path over the ground for the runway (in the case of takeoffs) or with the instrument approach counterpart (for landings), or where the applicable one of these paths has not been established, it proceeds consistent with turns of at least 4,000 foot radius until a point is reached beyond which the obstruction clearance plane clears all obstructions. This area extends laterally 200 feet on each side of the centreline at the point where the obstruction clearance plane intersects the runway and continues at this width to the end of the runway; then it increases uniformly to 500 feet on each side of the centreline at a point 1,500 feet from the intersection of the obstruction clearance plane with the runway; thereafter, it extends laterally 500 feet on each side of the centreline.

(26) **Operational flight plan.** The operator’s plan for the safe conduct of the flight based on considerations of aircraft performance, other operating limitations, and relevant expected conditions on the route to be followed and at the aerodromes or heliports concerned.

(27) **Passenger exit seats.** Those seats having direct access to an exit, and those seats in a row of seats through which passengers would have to pass to gain access to an exit, from the first seat inboard of the exit to the first aisle inboard of the exit. A passenger seat having “direct access” means a seat from which a passenger can proceed directly to the exit without entering an aisle or passing around an obstruction.

(28) **Rest period.** A period free of all restraint, duty or responsibility for an AOC holder conducting commercial air transport operations.

(29) **Takeoff decision point.** The point used in determining takeoff performance of a Class 1 helicopter from which, an engine failure occurring at this point, either a rejected takeoff may be made or a takeoff safely continued.

### 8.1.1.3 Acronyms

(a) The following acronyms are used in Part 8:

1. AFM – Aeroplane Flight Manual
2. AGL – Above Ground Level
3. AOC – Air Operator Certificate
4. AOM – Aircraft Operating Manual
5. APU – Auxiliary Power Unit
6. ATC – Air Traffic Control
7. CAT – Category
8. CDL – Configuration Deviation List
9. CRM – Crew Resource Management
10. DH – Decision Height
11. ETA – Estimated Time of Arrival
12. ETOPS – Extended Twin-engine Operations
13. FE – Flight Engineer
14. FL – Flight Level
(15) GPS – Global Positioning System
(16) IMC – Instrument Meteorological Conditions
(17) INS – Inertial Navigation System
(18) LDA – Localizer-type Directional Aid
(19) LOC – Localizer
(20) LORAN – Long-range Navigation
(21) LVTO – Low Visibility Take Off
(22) MDA – Minimum Decent Altitude
(23) MEA — Minimum En Route Altitude
(24) MEL – Minimum Equipment List (Part 1)
(25) MMEL – Master Minimum Equipment List
(26) MOCA — Minimum Obstruction Clearance Altitude
(27) MSL – Mean Sea Level
(28) NOTAM – Notice to Airmen
(29) RFM – Rotorcraft Flight Manual
(30) RVR – Runway Visibility Range
(31) RVSM – Reduced Vertical Separation Minimum
(32) PBE – Protective Breathing Equipment
(33) PIC – Pilot In Command
(34) SIC – Second In Command
(35) SCA – Senior Cabin Crew member
(36) SM – Statute Miles
(37) TACAN – Tactical Air Navigation System
(38) VMC – Visual Meteorological Conditions
(39) VSM – Vertical Separation Minimum
(40) $V_1$. Takeoff decision speed.
(41) $V_{mo}$. Maximum operating speed.
(42) $V_{so}$. Stalling speed or the minimum steady flight speed in the landing configuration.
8.2 GENERAL OPERATIONS REQUIREMENTS

8.2.1 Aircraft Requirements

8.2.1.1 REGISTRATION MARKINGS

No person may operate a Guyana-registered aircraft unless it displays the proper markings prescribed in Part 4.

8.2.1.2 CIVIL AIRCRAFT AIRWORTHINESS

(a) No person may operate a civil aircraft unless it is in an airworthy condition.

(b) Each PIC shall determine whether an aircraft is in a condition for safe flight.

(c) The PIC shall discontinue a flight as soon as practicable when an unairworthy mechanical, electrical or structural condition occurs.

8.2.1.3 SPECIAL AIRWORTHINESS CERTIFICATE OPERATIONAL RESTRICTIONS

No person may operate an aircraft with a special airworthiness certificate except as provided in the limitations issued with that certificate.

8.2.1.4 AIRCRAFT INSTRUMENTS AND EQUIPMENT

No person may operate an aircraft unless it is equipped with the required instruments and navigation equipment appropriate to type of flight operation conducted and the route being flown.

Note: The instrument and equipment required for specific operations are listed in Part 7.

8.2.1.5 INOPERATIVE INSTRUMENTS AND EQUIPMENT

(a) No person may takeoff an aircraft with inoperative instruments or equipment installed, except as authorised by the Authority.

(b) An AOC Holder shall not operate a multi-engine aircraft with inoperative instruments and equipment installed unless the following conditions are met:

   (1) An approved Minimum Equipment List exists for that aircraft.

   (2) The Authority has issued the AOC Holder specific operating provisions authorising operations in accordance with an approved Minimum Equipment List. The flight crew shall have direct access at all times prior to flight to all of the information contained in the approved Minimum Equipment List through printed or other means approved by the Authority in the AOC Holders specific operating provisions. An approved Minimum Equipment List, as authorised by the specific operating provisions, constitutes an approved change to the type design without requiring recertification.

   (3) The approved Minimum Equipment List must:

      (i) Be prepared in accordance with the limitations specified in paragraph (c) of this section.

      (ii) Provide for the operation of the aircraft with certain instruments and equipment in an inoperative condition.

   (4) Records identifying the inoperative instruments and equipment and the information required by paragraph (b)(3)(ii) of this section must be available to the pilot.
(5) The aircraft is operated under all applicable conditions and limitations contained in the Minimum Equipment List and the specific operating provisions authorising use of the Minimum Equipment List.

(c) The following instruments and equipment may not be included in the Minimum Equipment List:

(1) Instruments and equipment that are either specifically or otherwise required by the airworthiness requirements under which the aircraft is type certificated and which are essential for safe operations under all operating conditions.

(2) Instruments and equipment required by an airworthiness directive to be in operable condition unless the airworthiness directive provides otherwise.

(3) Instruments and equipment required for specific operations under Part 7, Part 8 and/or Part 9 of these regulations.

(d) Notwithstanding paragraphs (c)(1) and (c)(3) of this section, an aircraft with inoperative instruments or equipment may be operated under a special flight permit under 5.4.1.11 of these regulations.

Note: Implementing Standard: See Error! Reference source not found. for specific limitation on inoperative instruments and equipment.

8.2.1.6 CIVIL AIRCRAFT FLIGHT MANUAL, MARKING AND PLACARD REQUIREMENTS

(a) No person may operate a Guyana-registered civil aircraft unless there is available in the aircraft—

(1) A current, approved AFM or RFM; or
(2) An AOM approved by the Authority for the AOC holder;
(3) If no AFM or RFM exists, approved manual material, markings and placards, or any combination thereof which provide the PIC with the necessary limitations for safe operation.

(b) No person may operate a civil aircraft within or over Guyana without complying with the operating limitations specified in the approved AFM or RFM, markings and placards, or as otherwise prescribed by the certifying authority for the aircraft's State of Registry.

(c) Each operator shall display in the aircraft all placards, listings, instrument markings or combination thereof, containing those operating limitations prescribed by the certifying authority for the aircraft's State of Registry for visual presentation.

8.2.1.7 REQUIRED AIRCRAFT AND EQUIPMENT INSPECTIONS

(a) Unless otherwise authorised by the Authority, no person may operate a Guyana civil aircraft unless it has had the following inspections—

(1) An annual inspection within the past 12 calendar months;
(2) For remuneration or hire operations, a 100-hour inspection;
(3) For IFR operations, an altimeter and pitot-static system inspection in the past 24 calendar months;
(4) For transponder equipped aircraft, a transponder check within the past 12 calendar months; and
(5) For ELT-equipped aircraft, an ELT check within the past 12 calendar months.

(b) Aircraft maintained under an alternate maintenance and inspection program approved by the Authority, as specified in 5.7.1.3(a), may not have current annual or 100-hour inspections in their maintenance records.

Note: An "alternate maintenance and inspection program" may include a manufacturer's recommended program, instructions for continued airworthiness, or a program designed by the operator and approved by the Authority.

Note: The requirements of these inspections are provided in Part 5.
8.2.1.8 DOCUMENTS TO BE CARRIED ON AIRCRAFT: ALL OPERATIONS

(a) Except as provided in 8.2.1.6, no person may operate a civil aircraft unless it has within it the following current and approved documents:

1. Registration Certificate issued to the owner.
2. Airworthiness Certificate.
3. Aircraft Journey Log.
5. List of passenger names and points of embarkation and destination, if applicable.
6. Cargo manifest including special loads information.
8. Air Operator Certificate, if required.
10. AFM or RFM.
11. Part(s) of the Operations Manual relevant to operation(s) conducted, if required.
12. MEL.
13. Category II or III Manual, as applicable.
15. Filed ATC flight plan.
16. NOTAMS briefing documentation.
17. Meteorological information.
19. Roster of special situation passengers.
20. Maps and charts for routes of proposed flight or possibly diverted flights.
21. Forms for complying with the reporting requirements of the Authority and the AOC holder.
22. For international flights, a general declaration for customs.
23. Any documentation which may be required by the Authority or States concerned with a proposed flight.

Note: "Special situation passengers" includes armed security personnel, deportees, persons in custody, and persons with special medical needs.

Note: The noise certificate shall state the standards in ICAO Annex 16, Volume 1. The statement may be contained in any document, carried on board, approved by the Authority.
8.3 AIRCRAFT MAINTENANCE REQUIREMENTS

8.3.1.1 APPLICABILITY

(a) This Subpart prescribes the rules governing the inspection of Guyana registered civil aircraft operating within or outside Guyana.

(b) Subsections 8.3.1.3 and 8.3.1.4 do not apply to aircraft subject to an approved continuous maintenance program approved by the Authority for an AOC holder in Part 9.

(c) This Subpart applies to all aircraft, as designated below, operated as commercial air transport in Guyana if the operator has not been designated an AOC holder by Guyana.

(d) This Subpart applies to all general aviation large, complex aircraft operated in Guyana, whether or not the aircraft is registered in Guyana.

(e) Where any aircraft, not registered in Guyana and operating under an inspection program approved or accepted by the State of Registry, does not have the equipment required by Guyana—

8.3.1.2 GENERAL

(a) The registered owner or operator of an aircraft is primarily responsible for maintaining that aircraft in an airworthy condition, including compliance with all airworthiness directives.

(b) No person may perform maintenance, preventive maintenance, or alterations on an aircraft other than as prescribed in this subpart and other applicable regulations, including Part 5.

(c) No person may operate an aircraft for which a manufacturer’s maintenance manual or instructions for continued airworthiness has been issued that contains an airworthiness limitations section unless the mandatory replacement times, inspection intervals and related procedures set forth in specific operating provisions approved by the Authority under Part 9 or in accordance with an inspection program approved under 8.3.1.4(c).

8.3.1.3 MAINTENANCE REQUIRED

(a) Each owner or operator of an aircraft shall—

(1) Have that aircraft inspected as prescribed in Part 8.3 and discrepancies repaired as prescribed in the Performance Rules of Part 5;

(2) Repair, replace, remove, or inspect any inoperative instruments or items of equipment at the next required inspection, except when permitted under the provisions of an Minimum Equipment List (MEL);

(3) Ensure that a placard has been installed on the aircraft when listed discrepancies include inoperative instruments or equipment; and

(4) Ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service.
8.3.1.4 INSPECTIONS

(a) Except as provided in paragraph (c), no person may operate an aircraft unless, within the preceding 12 calendar months, the aircraft has had—

1. An annual inspection in accordance with Part 5 and has been approved for return to service by a person authorised by 5.6.1.7; or
2. An inspection for the issuance of an airworthiness certificate in accordance with Part 5.

Note: No inspection performed under paragraph (b) of this section may be substituted for any inspection required by this paragraph unless it is performed by a person authorised to perform annual inspections and is entered as an “annual” inspection in the required maintenance record.

(b) Except as provided in paragraph (c), no person may operate an aircraft carrying any person (other than a crew member) for hire, and no person may give flight instruction for hire in an aircraft which that person provides, unless within the preceding 100 hours of time in service the aircraft has received an annual or 100-hour inspection and been approved for return to service in accordance with Part 5 of this chapter or has received an inspection for the issuance of an airworthiness certificate in accordance with Part 5 of this chapter. The 100-hour limitation may be exceeded by not more than 10 hours while en route to reach a place where the inspection can be done. The excess time used to reach a place where the inspection can be done must be included in computing the next 100 hours of time in service.

(c) Paragraphs (a) and (b) of this section do not apply to—

An aircraft that carries a special flight permit, a current experimental certificate, or a provisional airworthiness certificate;
An aircraft subject to the requirements of paragraph (d) or (e) of this section; or
Turbine-powered rotorcraft when the operator elects to inspect that rotorcraft in accordance with paragraph (e) of this section.

(d) Progressive inspection. Each registered owner or operator of an aircraft desiring to use a progressive inspection program shall submit a written request to the Authority, and shall provide—

1. Appropriately rated lane in accordance with Part 2, an AMO appropriately rated in accordance with Part 6, or the manufacturer of the aircraft to supervise or conduct the progressive inspection;
2. A current inspection procedures manual available and readily understandable to pilot and maintenance personnel containing, in detail—
   (i) An explanation of the progressive inspection, including the continuity of inspection responsibility, the making of reports, and the keeping of records and technical reference material;
   (ii) An inspection schedule, specifying the intervals in hours or days when routine and detailed inspections will be performed and including instructions for exceeding an inspection interval by not more than 10 hours while en-route and for changing an inspection interval because of service experience;
   (iii) Sample routine and detailed inspection forms and instructions for their use; and
   (iv) Sample reports and records and instructions for their use;
3. Enough housing and equipment for necessary disassembly and proper inspection of the aircraft; and
4. Appropriate current technical information for the aircraft.

Note: The frequency and detail of the progressive inspection shall provide for the complete inspection of the aircraft within each 12 calendar months and be consistent with the current manufacturer’s recommendations, field service experience, and the kind of operation in which the aircraft is engaged. The progressive inspection schedule shall ensure that the aircraft, at all times, will be airworthy and will conform to all applicable aircraft specifications, type certificate data sheets, airworthiness directives, and other approved data acceptable to the Authority. If the progressive inspection is discontinued, the owner or operator shall immediately notify the Authority, in writing, of the discontinuance. After the discontinuance, the first annual inspection under Part 8 is due within 12 calendar months.
after the last complete inspection of the aircraft under the progressive inspection. The 100-hour inspection under 8.2.1.7(a)(2) is due within 100 hours after that complete inspection. A complete inspection of the aircraft, for the purpose of determining when the annual and 100 hour inspections are due, requires a detailed inspection of the aircraft and all its components in accordance with the progressive inspection. A routine inspection of the aircraft and a detailed inspection of several components is not considered to be a complete inspection.

(e) The registered owner or operator of each large aeroplane, turbojet multi-engine aeroplane, turbo propeller-powered multi-engine aeroplane, and turbine-powered rotorcraft shall select, identify in the aircraft maintenance records, and use one of the following programs for the inspection of the aircraft—

(1) A current inspection program recommended by the manufacturer;
(2) A continuous maintenance program that is part of a continuous maintenance program for that make and model of aircraft currently approved by the Authority for use by an AOC holder; or
(3) Any other inspection program established by the registered owner or operator of that aircraft and approved by the Authority.

(f) Each owner/operator shall include in the selected program the name and address of the person responsible for the scheduling of the inspections required by the program and provide a copy of the program to the person performing inspection on the aircraft.

(g) No aircraft shall be approved for return to service unless the replacement times for life-limited parts specified in the aircraft specification-type data sheets are complied with and the aeroplane, including airframe, engines, propellers, rotors, appliances, and survival and emergency equipment, is inspected in accordance with an inspection program selected.

(h) Each person wishing to establish or change an approved inspection program shall submit the program for approval by the Authority and shall include in writing—

(1) Instructions and procedures for the conduct of inspection for the particular make and model aircraft, including necessary tests and checks. The instructions shall set forth in detail the parts and areas of the aeronautical products, including survival and emergency equipment required to be inspected; and
(2) A schedule for the inspections that shall be performed expressed in terms of time in service, calendar time, number of system operations or any combination of these.

(i) When an operator changes from one inspection program to another, the operator shall apply the time in service, calendar times, or cycles of operation accumulated under the previous program, in determining time the inspection is due under the new program.

8.3.1.5 Changes to Aircraft Maintenance Programs

(a) Whenever the Authority finds that revisions to an approved inspection program are necessary for the continued adequacy of the program, the owner or operator shall, after notification by the Authority, make any changes in the program found to be necessary.

(b) The owner or operator may petition the Authority to reconsider the notice, within 30 days after receiving that notice.

(c) Except in the case of an emergency requiring immediate action in the interest of safety, the filing of the petition stays the notice pending a decision by the Authority.
8.3.1.6  **INSPECTIONS: ALL OTHER AIRCRAFT**

(a) No person may operate any other aircraft unless within the preceding 12 calendar months it has—

   (1) Had an inspection in accordance with Performance Rules of Part 5 and approved for return to service by an authorised person; and

   (2) Been issued an Airworthiness Certificate by a representative of the Authority.

(b) No person may operate an aircraft for flight instruction, or for compensation or hire, unless within the preceding 100 hours of time in service the aircraft has been inspected in accordance with the Performance Rules of Part 5 and approved for return to service by an authorised person as identified in Part 5.

8.3.1.7  **CONTENT, FORM, AND DISPOSITION OF MAINTENANCE, PREVENTIVE MAINTENANCE, REBUILDING, AND MODIFICATION RECORDS**

(a) The owner/operator of an aircraft shall keep a maintenance record of—

   (1) The entire aircraft to include—

      (i) Total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all life limited parts;

      (ii) Current inspection status of the aircraft, including the time since required or approved inspections were last performed;

      (iii) Current empty mass and the location of the centre of gravity when empty;

      (iv) Addition or removal of equipment;

      (v) Type and extent of maintenance and alteration, including the time in service and date;

      (vi) When work was performed; and

      (vii) A chronological list of compliance with Airworthiness Directives, including methods of compliance.

   (2) Life limited products—

      (i) Total time in service;

      (ii) Date of the last overhaul;

      (iii) Time in service since the last overhaul; and

      (iv) Date of the last inspection.

   (3) Instruments and equipment, the serviceability and operating life of which are determined by their time in service—

      (i) Records of the time in service as are necessary to determine their serviceability or to compute their operating life; and

      (ii) Date of last inspection.

8.3.1.8  **MAINTENANCE RECORDS RETENTION**

(a) Except for records maintained by an AOC holder, each registered owner or operator shall retain the following records until the work is repeated or superseded by other work of equivalent scope and detail, or for one year after the work is performed—

   (1) Records of the maintenance, preventive maintenance, minor modifications, and records of the 100-hour, annual, and other required or approved inspections, as appropriate, for each aircraft (including the airframe) and each engine, propeller, rotor, and appliance of an aircraft to include—

      (i) A description (or reference to data acceptable to the Authority) of the work performed,

      (ii) The date of completion of the work performed; and

      (iii) The signature and certificate number of the person approving the aircraft for return to service.

   (2) Records containing the following information—
(i) The total time-in-service of the airframe, each engine, each propeller, and each rotor.
(ii) The current status of all life-limited aeronautical products;
(iii) The time since last overhaul of all items installed on the aircraft which are required to be overhauled on a specified time basis;
(iv) The current inspection status of the aircraft, including the time since the last inspection required by the inspection program under which the aircraft and its appliances are maintained.
(v) The current status of applicable Airworthiness Directives including, for each, the method of compliance, the Airworthiness Directive number, and revision date. If the Airworthiness Directive involves recurring action, the time and date when the next action is required.
(vi) Copies of the forms prescribed by this chapter for each major modification to the airframe and currently installed engines, rotors, propellers, and appliances.
(b) The records specified in paragraph (a) of this section shall be retained and transferred with the aircraft at the time the aircraft is sold or leased.
(c) A list of defects shall be retained until the defects are repaired and the aircraft is approved for return to service.
(d) The owner or operator shall make all maintenance records required by this subsection available for inspection by the Authority.

8.3.1.9 TRANSFER OF MAINTENANCE RECORDS
Any owner or operator who sells or leases a Guyana registered aircraft shall transfer to the purchaser/lessor, at the time of sale or lease, the records identified in 8.3.1.8 of that aircraft, in plain language form or in coded form at the election of the purchaser/lessor if the coded form provides for the preservation and retrieval of information in a manner acceptable to the Authority.
8.4 FLIGHT CREW REQUIREMENTS

8.4.1.1 COMPOSITION OF THE FLIGHT CREW

(a) The number and composition of the flight crew may not be less than that specified in the flight manual or other documents associated with the airworthiness certificate.

(b) A SIC is required for IFR commercial air transport operations, unless the Authority has issued a deviation.

8.4.1.2 FLIGHT CREW QUALIFICATIONS

(a) The PIC shall ensure that the licenses of each flight crew member have been issued or rendered valid by the State of Registry, contain the proper ratings, and that all that the flight crew members have maintained recency of experience.

(b) No person may operate a civil aircraft in commercial air transport or aerial work unless that person is qualified for the specific operation and in the specific type of aircraft used.

8.4.1.3 AUTHORISATION IN LIEU OF A TYPE RATING

(a) The Authority may authorise a pilot to operate an aircraft requiring a type rating without a type rating for up to 60 days, provided—

(1) The Authority has determined that an equivalent level of safety can be achieved through the operating limitations on the authorisation;

(2) The applicant shows that compliance with this subsection is impracticable for the flight or series of flights;

(3) The operations—

(i) Involve only a ferry flight, training flight, test flight, or practical test for a pilot license or rating;

(ii) Are within Guyana, unless, by previous agreement with the Authority, the aircraft is flown to an adjacent contracting State for maintenance;

(iii) Are not for compensation or hire unless the compensation or hire involves payment for the use of the aircraft for training or taking a practical test; and

(iv) Involve only the carriage of flight crew members considered essential for the flight.

(4) If the purpose of the authorisation provided by this paragraph cannot be accomplished within the time limit of the authorisation, the Authority may authorise an additional period of up to 60 days.

8.4.1.4 LICENCES REQUIRED

(a) No person may act as PIC or in any other capacity as a required flight crew member of a civil aircraft of:

(1) Guyana registry, unless he or she carries in their personal possession the appropriate and current licence for that flight crew position for that type of aircraft and a valid medical certificate.

(2) Foreign registry, unless he or she carries in their personal possession a valid and current licence for that type of aircraft issued to them by the State in which the aircraft is registered.

8.4.1.5 AIRMAN: LIMITATIONS ON USE OF SERVICES FOR COMMERCIAL AIR TRANSPORT

No person may serve as an airman, nor may any AOC holder use an airman in commercial air transport unless that person is otherwise qualified for the operations for which they are to be used.

Note: The qualifications for airman engaged in commercial air transport are provided in Subpart 8.10.
8.4.1.6 RATING REQUIRED FOR IFR OPERATIONS

(a) No person may act as PIC of a civil aircraft under IFR or in weather conditions less than the minimums prescribed for VFR flight unless—

(1) In the case of an aeroplane, the pilot holds an instrument rating or an ATP licence with an appropriate aeroplane category, class, and type (if required) rating for the aeroplane being flown;

(2) In the case of helicopter, the pilot holds a helicopter instrument rating or an ATP licence for helicopters not limited to VFR operations.

8.4.1.7 SPECIAL AUTHORISATION REQUIRED FOR CATEGORY II/III OPERATIONS

(a) Except as shown in paragraph (b), no person may act as a pilot crew member of a civil aircraft in a Category II/III operation unless—

(1) In the case of a PIC, he or she holds a current Category II or III pilot authorisation for that type aircraft.

(2) In the case of an SIC, he or she is authorised by the State of Registry to act as SIC in that aircraft in Category II/III operations.

(b) An authorisation is not required for individual pilots of an AOC holder which has operations specifications approving Category II or III operations.

8.4.1.8 PILOT LOGBOOKS

(a) Each pilot shall show the aeronautical training and experience used to meet the requirements for a licence or rating, or recency of experience, by a reliable record.

(b) Each PIC shall carry his or her logbook on all general aviation international flights.

(c) A student pilot shall carry his or her logbook, including the proper flight instructor endorsements, on all solo cross-country flights.

Note: The acceptable methods of logging experience are outlined in Part 2 - Personnel Licensing.

8.4.1.9 PIC CURRENCY: TAKEOFF AND LANDINGS

(a) No person may act as PIC of an aircraft carrying passengers, nor of an aircraft certified for more than one required pilot flight crew member unless, within the preceding 90 days that pilot has:

(1) Made 3 takeoffs and landings as the sole manipulator of the flight controls in an aircraft of the same category and class and if a type rating is required, of the same type.

(2) For a tailwheel aeroplane, made the 3 takeoffs and landings in a tailwheel aeroplane with each landing to a full stop.

(3) For night operations, made the 3 takeoffs and landings required by paragraph (a)(1) at night.

(b) A pilot who has not met the recency of experience for takeoffs and landings shall satisfactorily complete a requalification curriculum acceptable to the Authority.

(c) Requirements of paragraphs (a) and (b) may be satisfied in a flight simulator approved by the Authority.
8.4.1.10 PILOT CURRENCY: IFR OPERATIONS
(a) No person may act as PIC or SIC under IFR nor in IMC, unless he or she has within the past 12 calendar months passed an instrument proficiency check in the category, class or type of aircraft, as applicable, conducted by an authorized representative of the Authority.

8.4.1.11 PILOT CURRENCY: GENERAL AVIATION OPERATIONS
(a) No person may act as PIC of an aircraft type certified for more than one pilot unless, since the beginning of the past 12 calendar months, he or she has passed a proficiency check in an aircraft requiring more than one pilot with an authorized representative of the Authority.

(b) No person may act as PIC of an aircraft type certified for more than one pilot unless, since the beginning of the past 24 calendar months, he or she has passed a proficiency check in the type aircraft to be operated.

(c) No person may act as PIC of an aircraft type certified for a single pilot unless, since the beginning of the 24 calendar months, he or she has passed a proficiency check with an authorised representative of the Authority.

(d) The person conducting the proficiency checks shall ensure that each check duplicates the manoeuvres of the type rating practical test.

(e) No person may act as SIC of an aircraft type certified for more than one pilot unless, since the beginning of the 12 calendar months, he or she has—
   (1) Become familiar with the aircraft systems, performance, normal and emergency procedures; and
   (2) Logged 3 takeoff and landings as the sole manipulator of the controls.
   
   Note: Subsection does not apply to pilots engaged in commercial air transport operations. Those requirements are outlined in 8.10.1.21.

8.4.1.12 PILOT PRIVILEGES AND LIMITATIONS
A pilot may conduct operations only within the general privileges and limitations of each licence as specified in Part 2.
8.5 CREW MEMBER DUTIES AND RESPONSIBILITIES

8.5.1.1 AUTHORITY AND RESPONSIBILITY OF THE PIC

(a) The PIC shall be responsible for the operations and safety of the aircraft and for the safety of all persons on board, during flight.

(b) The PIC of an aircraft shall have final authority as to the operation of the aircraft while he or she is in command.

(c) The PIC of an aircraft shall, whether manipulating the controls or not, be responsible for the operation of the aircraft in accordance with the rules of the air, except that the PIC may depart from these rules in emergency circumstances that render such departure absolutely necessary in the interests of safety.

8.5.1.2 COMPLIANCE WITH LOCAL REGULATIONS

(a) The PIC shall comply with the relevant laws, regulations and procedures of the States in which the aircraft is operated.

(b) If an emergency situation which endangers the safety of the aircraft or persons necessitates the taking of action which involves a violation of local regulations or procedures, the PIC shall—

   (1) Notify the appropriate local authority without delay;
   (2) Submit a report of the circumstances, if required by the State in which the incident occurs; and
   (3) Submit a copy of this report to the State of Registry.

(c) Each PIC shall submit reports specified in paragraph (b) to the Authority within 10 days in the form prescribed.

8.5.1.3 NEGLIGENCE OR RECKLESS OPERATIONS OF THE AIRCRAFT

No person may operate an aircraft in a negligent or reckless manner so as to endanger life or property of others.

8.5.1.4 FITNESS OF FLIGHT CREW MEMBERS

(a) No person may act as PIC or in any other capacity as a required flight crew member when they are aware of any decrease in their medical fitness which might render them unable to safely exercise the privileges of his or her licence.

(b) The PIC shall be responsible for ensuring that a flight is not—

   (1) Commenced if any flight crew member is incapacitated from performing duties by any cause such as injury, sickness, fatigue, the effects of alcohol or drugs; or
   (2) Continued beyond the nearest suitable aerodrome if a flight crew members’ capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness or lack of oxygen.

8.5.1.5 USE OF NARCOTICS, DRUGS OR INTOXICATING LIQUOR

(a) No person may act or attempt to act as a crew member of a civil aircraft—

   (1) Within 8 hours after the consumption of any alcoholic beverage;
(2) While under the influence of alcohol; or
(3) While using any drug that affects the person’s faculties in any way contrary to safety.

(b) A crew member shall, up to 8 hours before or immediately after acting or attempting to act as a crew member, on the request of a law enforcement officer or the Authority, submit to a test to indicate the presence of alcohol or narcotic drugs in the blood.

Implementing Standard: See IS:8.5.1.5 for specific requirements pertaining to testing for alcohol or narcotics.

8.5.1.6 Crew Member Use of Seat Belts and Shoulder Harnesses

(a) Each crew member shall have his or her seat belts fastened during takeoff and landing and all other times when seated at his or her station.

(b) Each crew member occupying a station equipped with a shoulder harness shall fasten that harness during takeoff and landing, except that the shoulder harness may be unfastened if the crew member cannot perform the required duties with the shoulder harness fastened.

(c) Each occupant of a seat equipped with a combined safety belt and shoulder harness shall have the combined safety belt and shoulder harness properly secured about that occupant during takeoff and landing and be able to properly perform assigned duties.

(d) At each unoccupied seat, the safety belt and shoulder harness, if installed, shall be secured so as not to interfere with crew members in the performance of their duties or with the rapid egress of occupants in an emergency.

8.5.1.7 Flight Crew Members at Duty Stations

(a) Each required flight crew member shall remain at the assigned duty station during take-off and landing and critical phases of flight.

(b) Each flight crew member shall remain at his or her station during all phases of flight unless—

(1) Absence is necessary for the performance of his or her duties in connection with the operation;
(2) Absence is necessary for physiological needs, provided one qualified pilot remains at the controls at all times; or
(3) The crew member is taking a rest period and a qualified relief crew member replaces him or her at the duty station.

Implementing Standard: IS:8.5.1.7 for specific requirement pertaining to qualified relief crew members.

8.5.1.8 Required Crew Member Equipment

(a) Each crew member involved in night operations shall have a flashlight at his or her station.

(b) Each pilot crew member shall have at his or her station an aircraft checklist containing at least the pre-takeoff, after takeoff, before landing and emergency procedures.

(c) Each pilot crew member shall have at his or her station current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted.

(d) Each flight crew member assessed as fit to exercise the privileges of a license subject to the use of suitable correcting lenses, shall have a spare set of the correcting lenses readily available when performing as a required crew member in commercial air transport.
8.5.1.9 COMPLIANCE WITH CHECKLISTS
The PIC shall ensure that the flight crew follows the approved checklist procedures when operating the aircraft.

8.5.1.10 SEARCH AND RESCUE INFORMATION
For all international flights, the PIC shall have on board the aeroplane essential information concerning the search and rescue services in the areas over which they intend to operate the aircraft.

8.5.1.11 PRODUCTION OF AIRCRAFT AND FLIGHT DOCUMENTATION
The PIC shall, within a reasonable time of being requested to do so by a person authorised by the Authority, produce to that person the documentation required to be carried on the aircraft.

8.5.1.12 LOCKING OF FLIGHT DECK COMPARTMENT DOOR: COMMERCIAL AIR TRANSPORT
The PIC shall ensure that the flight deck compartment door (if installed) is locked at all times during passenger-carrying commercial air transport operations, except as necessary to accomplish approved operations or to provide for emergency evacuation.

8.5.1.13 ADMISSION TO THE FLIGHT DECK: COMMERCIAL AIR TRANSPORT
(a) No person may admit any person to the flight deck of an aircraft engaged in commercial air transport operations unless the person being admitted is—
   (1) An operating crew member;
   (2) A representative of the authority responsible for certification, licensing or inspection, if this is required for the performance of his or her official duties; or
   (3) Permitted by and carried out in accordance with instructions contained in the Operations Manual.
(b) The PIC shall ensure that—
   (1) In the interest of safety, admission on the flight deck does not cause distraction and/or interference with the flight’s operations; and
   (2) All persons carried on the flight deck are made familiar with the relevant safety procedures.

8.5.1.14 ADMISSION OF INSPECTOR TO THE FLIGHT DECK
Whenever, in performing the duties of conducting an inspection, an inspector from the Authority presents the Flight Operations Inspector Credential to the PIC, the PIC shall give the inspector free and uninterrupted access to the flight deck of the aircraft.

8.5.1.15 DUTIES DURING CRITICAL PHASES OF FLIGHT: COMMERCIAL AIR TRANSPORT
(a) No flight crew member may perform any duties during a critical phase of flight except those required for the safe operation of the aircraft.
(b) No PIC may permit a flight crew member to engage in any activity during a critical phase of flight which could distract or interfere with the performance of their assigned duties.
8.5.1.16 **Manipulation of the Controls: Commercial Air Transport**

(a) No PIC may allow an unqualified person to manipulate the controls of an aircraft during commercial air transport operations.

(b) No person may manipulate the controls of an aircraft during commercial air transport operations unless he or she is qualified to perform the applicable crew member functions and is authorised by the AOC holder.

8.5.1.17 **Simulated Abnormal Situations in Flight: Commercial Air Transport**

No person may cause or engage in simulated abnormal or emergency situations or the simulation of IMC by artificial means during commercial air transport operations.

8.5.1.18 **Completion of the Technical Logbook: Commercial Air Transport**

The PIC shall ensure that all portions of the technical logbook are completed at the appropriate points before, during and after flight operations.

8.5.1.19 **Reporting Mechanical Irregularities**

(a) The PIC shall ensure that all mechanical irregularities occurring during flight time are—

(1) For general aviation operations, entered in the aircraft logbook and disposed of in accordance with the MEL or other approved or prescribed procedure.

(2) For commercial air transport operations, entered in the technical log of the aeroplane at the end of that flight time.

8.5.1.20 **Reporting of Facility and Navigation Aid Inadequacies**

Each crew member shall report, without delay, any inadequacy or irregularity of a facility or navigational aid observed in the course of operations to the person responsible for that facility or navigational aid.

8.5.1.21 **Reporting of Hazardous Conditions**

The PIC shall report to the appropriate ATC facility, without delay and with enough detail to be pertinent to the safety of other aircraft, any hazardous flight conditions encountered en route, including those associated with meteorological conditions.

8.5.1.22 **Reporting of Incidents**

(a) *Air traffic report.* The PIC shall submit, without delay, an air traffic incident report whenever an aircraft in flight has been endangered by—

(1) A near collision with another aircraft or object;

(2) Faulty air traffic procedures or lack of compliance with applicable procedures by ATC or by the flight crew; or

(3) A failure of ATC facilities.

(b) *Birds.* In the event a bird constitutes an in-flight hazard or an actual bird strike the PIC shall, without delay—

(1) Inform the appropriate ground station whenever a potential bird hazard is observed; and

(2) Submit a written bird strike report after landing.

(c) *Dangerous Goods.* The PIC shall inform the appropriate ATC facility, if the situation permits, when an in-flight emergency occurs involving dangerous goods on board.
(d) **Unlawful Interference.** The PIC shall submit a report to the local authorities and to the Authority, without delay, following an act of unlawful interference with the crew members on board an aircraft.

### 8.5.1.23 Accident Notification

(a) The PIC shall notify the nearest appropriate authority, by the quickest available means, of any accident involving his or her aircraft that results in serious injury or death of any person, or substantial damage to the aircraft or property.

(b) The PIC shall submit a report to the Authority of any accident which occurred while he or she was responsible for the flight.

### 8.5.1.24 Operation of Flight Deck Voice and Flight Data Recorders

(a) The PIC shall ensure that whenever an aircraft has flight recorders installed, those recorders are operated continuously from the instant—

(1) For a flight data recorder, the aircraft begins its takeoff roll until it has completed the landing roll, and

(2) For a flight deck voice recorder, the initiation of the pre-start checklist until the end of the securing aircraft checklist.

(b) The PIC may not permit a flight data recorder or flight deck voice recorder to be disabled, switched off or erased during flight, unless necessary to preserve the data for an accident or incident investigation.

(c) In event of an accident or incident, the PIC shall act to preserve the recorded data for subsequent investigation.

### 8.5.1.25 Crew Member Oxygen: Minimum Supply and Use

(a) The PIC shall ensure that breathing oxygen and masks are available to crew members in sufficient quantities for all flights at such altitudes where a lack of oxygen might result in impairment of the faculties of crew members.

(b) In no case shall the minimum supply of oxygen on board the aircraft be less than that prescribed by the Authority.

*Note: The requirements for oxygen supply and use are prescribed in Part 7, 7.1.8.12, Required Instruments and Equipment.*

(c) The PIC shall ensure that all flight crew members, when engaged in performing duties essential to the safe operation of an aircraft in flight, use breathing oxygen continuously at cabin altitudes exceeding 10,000 ft for a period in excess of 30 minutes and whenever the cabin altitude exceeds 13,000 ft.

(d) One pilot at the controls of a pressurised aircraft in flight shall wear and use an oxygen mask—

(1) For general aviation operations, at flight levels above 350, if there is no other pilot at their duty station; and

(2) For commercial air transport operations, at flight levels above 250, if there is no other pilot at their duty station.
8.5.1.26 **PORTABLE ELECTRONIC DEVICES**

(a) No PIC or SCA may permit any person to use, nor may any person use a portable electronic device on board an aircraft that may adversely affect the performance of aircraft systems and equipment unless—

(1) For IFR operations other than commercial air transport, the PIC allows such a device prior to its use; or
(2) For commercial air transport operations, the AOC holder makes a determination of acceptable devices and publishes that information in the Operations Manual for the crew members use; and
(3) The PIC informs passengers of the permitted use.
8.6 FLIGHT PLANNING AND SUPERVISION

8.6.1 Flight Plans

8.6.1.1 Submission of a Flight Plan

(a) Prior to operating one of the following, a pilot shall file a VFR or IFR flight plan, as applicable, for—
   (1) Any flight (or portion thereof) to be provided with air traffic control service;
   (2) Any IFR flight within advisory airspace;
   (3) Any flight within or into designated areas, or along designated routes, when so required by the appropriate ATC authority to facilitate the provision of flight information, alerting and search and rescue services;
   (4) Any flight within or into designated areas, or along designated routes, when so required by the appropriate ATC authority to facilitate co-ordination with appropriate military units or with ATC facilities in adjacent states in order to avoid the possible need for interception for the purpose of identification; and
   (5) Any flight across international borders.

(b) The PIC shall submit a flight plan before departure or during flight, to the appropriate ATC facility, unless arrangements have been made for submission of repetitive flight plans.

(c) Unless otherwise prescribed by the appropriate ATC authority, a pilot should submit a flight plan to the appropriate ATC facility—
   (1) At least sixty minutes before departure; or
   (2) If submitted during flight, at a time which will ensure its receipt by the appropriate ATC facility at least ten minutes before the aircraft is estimated to reach—
      (i) The intended point of entry into a control area or advisory area; or
      (ii) The point of crossing an airway or advisory route.

8.6.1.2 Air Traffic Control Flight Plan: Commercial Air Transport

No person may takeoff an aircraft in commercial air transport if an ATC flight plan has not been filed, except as authorised by the Authority.

8.6.1.3 Contents of a Flight Plan

(a) Each person filing an IFR or VFR flight plan shall include in it the following information—
   (1) Aircraft identification;
   (2) Flight rules and type of flight;
   (3) Number and type(s) of aircraft and wake turbulence category;
   (4) Equipment;
   (5) Departure aerodrome and alternate (if required);
   (6) Estimated off-block time;
   (7) Cruising speed(s);
   (8) Cruising level(s);
   (9) Route to be followed;
   (10) Destination aerodrome and alternate (if required);
   (11) Fuel endurance;
(12) Total number of persons on board;
(13) Emergency and survival equipment; and
(14) Other information.

Note: Whatever the purpose for which it is submitted, a flight plan shall contain information, as applicable, on relevant items up to and including “alternate aerodrome(s)” regarding the whole route or the portion thereof for which the flight plan is submitted.

8.6.1.4 PLANNED RECLEARANCE

If during flight planning a person determines that there is a possibility, depending on fuel endurance, that a flight may be able to change destinations and still comply with minimum fuel supply planning requirements, that person shall notify the appropriate ATC facility of this possibility when the flight plan is submitted.

Note: The intent of this provision is to facilitate a new clearance to a revised destination, normally beyond the filed destination aerodrome.

8.6.1.5 CHANGES TO A FLIGHT PLAN

(a) When a change occurs to a flight plan submitted for an IFR flight or a VFR flight operated as a controlled flight, the pilot shall report that change as soon as practicable to the appropriate ATC facility.

(b) For VFR flights other than those operated as controlled flight, the PIC shall report significant changes to a flight plan as soon as practicable to the appropriate ATC facility.

Note: Information submitted prior to departure regarding fuel endurance or total number of persons carried on board, if incorrect at time of departure, constitutes a significant change and shall be reported.

8.6.1.6 CLOSING A FLIGHT PLAN

(a) The PIC shall make a report of arrival either in person or by radio to the appropriate ATC facility at the earliest possible moment after landing at the destination aerodrome, unless ATC automatically closes a flight plan.

(b) When a flight plan has been submitted for a portion of a flight, but not the arrival at destination, the pilot shall close that flight plan en route with the appropriate ATC facility.

(c) When no ATC facility exists at the arrival aerodrome, the pilot shall contact the nearest ATC facility to close the flight plan as soon as practicable after landing and by the quickest means available.

(d) Pilots shall include the following elements of information in their arrival reports—

(1) Aircraft identification;
(2) Departure aerodrome;
(3) Destination aerodrome (only in the case of a diversionary landing);
(4) Arrival aerodrome; and
(5) Time of arrival.
8.6.2 **Flight Planning and Preparation**

8.6.2.1 **AIRCRAFT AIRWORTHINESS AND SAFETY PRECAUTIONS**

(a) The PIC may not operate a civil aircraft in flight until satisfied that—

   (1) The aircraft is airworthy, duly registered and that appropriate certificates are aboard the aircraft;
   (2) The instruments and equipment installed in the aircraft are appropriate, taking into account the expected flight conditions; and
   (3) Any necessary maintenance has been performed and a maintenance release, if applicable, has been issued in respect to the aeroplane.

(b) For commercial air transport operations, the PIC shall certify by signing the aircraft technical log that he or she is satisfied that the requirements of paragraph (a) have been met for a particular flight.

8.6.2.2 **ADEQUACY OF OPERATING FACILITIES**

No person may commence a flight unless it has been determined by every reasonable means available that the ground and/or water areas and facilities available and directly required for such flight and for the safe operation of the aircraft, are adequate, including communication facilities and navigation aids.

*Note: “Reasonable means” denotes use, at the point of departure, of information available to the PIC either through official information published by the aeronautical information services or readily obtainable in other sources.*

8.6.2.3 **WEATHER REPORTS AND FORECASTS**

(a) Before commencing a flight, the PIC shall be familiar with all available meteorological information appropriate to the intended flight.

(b) The PIC shall include, during preparation for a flight away from the vicinity of the place of departure, and for every flight under the instrument flight rules—

   (1) A study of available current weather reports and forecasts; and
   (2) The planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned, because of weather conditions.

8.6.2.4 **WEATHER LIMITATIONS FOR VFR FLIGHTS**

No person will commence a flight to be conducted in accordance with VFR unless available current meteorological reports, or a combination of current reports and forecasts, indicate that the meteorological conditions along the route, or that part of the route to be flown under VFR, will, at the appropriate time, allow VFR operations.

8.6.2.5 **IFR DESTINATION AERODROMES**

(a) For IFR flight planning purposes, no person may commence an IFR flight unless the available information indicates that the weather conditions at the aerodrome of intended landing and, if required, at least one suitable alternate at the estimated time of arrival, will be at or above the—

   (1) Minimum ceiling and visibility values for the standard instrument approach procedure to be used; or
   (2) Minimum operating altitude, if no instrument approach procedure is to be used, that would allow a VMC decent to the aerodrome.
Note: A partial exception is granted for commercial air transport IFR flight planning, to the effect that the weather at the destination does not have to be at or above the approach minima to release and commence a flight, as long as the designated alternate aerodrome meets the IFR weather selection criteria.

8.6.2.6 IFR DESTINATION ALTERNATE REQUIREMENT

(a) No person may commence an IFR flight in an aeroplane without at least one destination alternate aerodrome listed in the flight plan unless—

(1) There is a standard instrument approach procedure prescribed for the aerodrome of intended landing by the jurisdictional authorities; and

(2) Available current meteorological information indicates that the following meteorological conditions will exist from two hours before to two hours after the estimated time of arrival—

   (i) A cloud base of at least 300 m (1,000 ft) above the minimum associated with the instrument approach procedure; and

   (ii) Visibility of at least 5.5 km or of 4 km more than the minimum associated with the procedure.

(b) The ceiling and visibility requirements of paragraph (a) may be reduced upon approval of the Authority for—

   (1) Helicopters; or

   (2) Commercial air transport where no suitable destination alternate exists.

8.6.2.7 IFR ALTERNATE AERODROME SELECTION CRITERIA

(a) If alternate minimums are published, no PIC may designate an alternate aerodrome in an IFR flight plan unless the current available forecast indicates that the meteorological conditions at that alternate at the ETA will be at or above those published alternate minimums.

(b) If alternate minimums are not published, and if there is no prohibition against using the aerodrome as an IFR planning alternate, each PIC shall ensure that the meteorological conditions at that alternate at the ETA will be at or above—

   (1) For a precision approach procedure, a ceiling of at least 600 feet and visibility of not less than 2 statute miles; or

   (2) For a non-precision approach procedure, a ceiling of at least 800 feet and visibility of not less than 2 statute miles.

8.6.2.8 OFF-SHORE ALTERNATES FOR HELICOPTER OPERATIONS

(a) No person may designate an offshore alternate landing site when it is possible to carry enough fuel to have an on-shore alternate landing site.

Note: The selection of offshore alternates should be exceptional cases, the details of which have been approved by the Authority, and should not include payload enhancement in IMC.

(b) Each person selecting an off-shore alternate landing site shall consider the following:

   (1) Until the point of no return, using an on-shore alternate. The offshore alternate may be used only after a point of no return.

   (2) Attaining one engine inoperative performance capability prior to arrival at the alternate.

   (3) Guaranteeing helideck availability.

   (4) The weather information at the helideck shall be available from a source approved by the Authority.

   (5) For IFR operations, an instrument approach procedure shall be prescribed and available.
Note: The landing technique specified in the flight manual following control system failure may preclude the selection of certain helidecks as alternate aerodromes. The mechanical reliability of critical control systems shall be taken into account when determining the suitability and necessity for an offshore alternate.

8.6.2.9 **Takeoff Alternate Aerodromes: Commercial Air Transport Operations**

(a) No person may release or takeoff an aircraft without a suitable takeoff alternate specified in the flight release if it would not be possible to return *for meteorological or performance reasons* to the aerodrome of departure.

(b) Each operator shall ensure that each takeoff alternate specified shall be located within—

1. For two-engine aircraft, one hour flight time at single-engine cruise speed unless the aircraft and crews are authorised for ETOPS; or
2. For three or four-engine aircraft, two hours flight time at single-engine cruise speed.

*Note: All calculations are based on the one-engine-inoperative cruising speed according to the AFM in still air conditions based on the actual takeoff mass.*

8.6.2.10 **Maximum Distance from an Adequate Aerodrome for Twin-engined Aeroplanes Without an ETOPS Approval**

(a) Unless specifically approved by the Authority (ETOPS Approval), an AOC holder shall not operate a twin-engined aeroplane over a route which contains a point further from an adequate aerodrome than, in the case of—

1. Large, turbine engine powered aeroplanes the distance flown in 60 minutes at the one-engine-inoperative cruise speed determined in accordance with paragraph (b) with either:
   i. A maximum approved passenger seating configuration of 20 or more; or
   ii. A maximum take-off mass of 45360kg or more,

2. Reciprocating engine powered aeroplanes:
   i. The distance flown in 120 minutes at the one-engine-inoperative cruise speed determined in accordance with paragraph (b); or
   ii. 300 nautical miles, whichever is less.

(b) An AOC holder shall determine a speed for the calculation of the maximum distance to an adequate aerodrome for each twin-engined aeroplane type or variant operated, not exceeding $V_{mo}$ based upon the true airspeed that the aeroplane can maintain with one-engine-inoperative under the following conditions:

1. International Standard Atmosphere;
2. Level flight:
   i. For turbine engined powered aeroplanes at:
      A. FL 170; or
      B. At the maximum flight level to which the aeroplane, with one engine inoperative, can climb, and maintain, using the gross rate of climb specified in the AFM, whichever is less.
   ii. For propeller driven aeroplanes
      A. FL 80; or
      B. At the maximum flight level to which the aeroplane, with one engine inoperative, can climb, and maintain, using the gross rate of climb specified in the AFM, whichever is less.
(3) Maximum continuous thrust or power on the remaining operating engine;
(4) An aeroplane mass not less than that resulting from:
   (i) Take-off at sea-level at maximum take-off mass until the time elapsed since take-off is equal to
       the applicable threshold prescribed in paragraph (a);
   (ii) All engines climb to the optimum long range cruise altitude until the time elapsed since take-off
        is equal to the applicable threshold prescribed in subparagraph (a); and
   (iii) All engines cruise at the long range cruise speed at this altitude until the time elapsed since
        take-off is equal to the applicable threshold prescribed in paragraph (a).

(c) An AOC holder shall ensure that the following data, specific to each type or variant, is included in the
    Operations Manual:
    (1) The one-engine-inoperative cruise speed determined in accordance with paragraph (b); and
    (2) The maximum distance from an adequate aerodrome determined in accordance with paragraphs (a)
        and (b).

Note: The speeds and altitudes (flight levels) specified above are only intended to be used for establishing the
maximum distance from an adequate aerodrome.

8.6.2.11 EXTENDED RANGE OPERATIONS WITH TWIN-ENGINED AEROPLANES

(a) An AOC holder shall not conduct operations beyond the threshold distance determined in accordance
    with 8.6.2.10 unless approved to do so by the Authority.

(b) In requesting ETOPS approval, each AOC holder shall show to the satisfaction of the Authority that:
    (1) The airworthiness certification of the aeroplane type;
    (2) The reliability of the propulsion system;
    (3) The AOC holder’s maintenance procedures, operating practices, flight dispatch procedures; and
    (4) Crew training programme; for two engines aeroplanes are consistent with the level of safety required
        for current extended range operations with three and four engined turbine-powered aeroplanes

(c) Prior to conducting an ETOPS flight, an AOC holder shall ensure that a suitable ETOPS enroute alternate
    is available, within either the approved diversion time or a diversion time based on MEL generated
    serviceability status of the aeroplane, whichever is shorter.

8.6.2.12 EN ROUTE ALTERNATE AERODROMES: ETOPS OPERATIONS

(a) The PIC shall ensure that the required en route alternates for ETOPS are selected and specified in ATC
    flight plans in accordance with the ETOPS diversion time approved by the Authority.

(b) No person shall select an aerodrome as an ETOPS en-route alternate aerodrome unless the appropriate
    weather reports or forecasts, or any combination thereof, indicate that during a period commencing 1 hour
    before and ending 1 hour after the expected time of arrival at the aerodrome, the weather conditions will
    be at or above the planning minima prescribed in the table below, and in accordance with the operator’s
    ETOPS approval.

Note: The forecast weather criteria used in the selection of alternate aerodromes for IFR flight will also be used for
the selection of ETOPS alternates.
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<tr>
<th>Type of Approach</th>
<th>Planning Minima</th>
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<td>(RVR/visibility required &amp; ceiling, if applicable)</td>
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<td>Aerodrome with</td>
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<td>at least 2 separate approach procedures based on 2</td>
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<td>separate aids serving 2</td>
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<td>separate runways (See note 1)</td>
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<td>separate aids serving 1 runway or, at least 1 approach</td>
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<td>procedure based on 1 aid serving 1 runway</td>
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<tr>
<td>Precision Approach Cat II, III (ILS, MLS)</td>
<td>Precision Approach Cat I Minima</td>
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<td>Non-Precision Approach Minima</td>
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<td>Precision Approach Cat I(ILS, MLS)</td>
<td>Non-Precision Approach Minima</td>
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<td>Circling minima or, if not available, non-precision</td>
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<td>approach minima plus 200 ft/1000m</td>
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<td>Non-Precision Approach</td>
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<td>Circling Approach</td>
<td>Circling Minima</td>
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Note 1: Runways on the same aerodrome are considered to be separate runways when they are separate landing surfaces which may overlay or cross such that if one of the runways is blocked, it will not prevent the planned type of operations on the other runway and each of the landing surfaces has a separate approach based on a separate aid.

### 8.6.2.13 Fuel, Oil, and Oxygen Planning and Contingency Factors

(a) No person may commence a flight unless he or she takes into account the fuel, oil, and oxygen needed to ensure the safe completion of the flight, including any reserves to be carried for contingencies.

(b) Each person computing the required minimum fuel supply shall ensure that additional fuel, oil, and oxygen are carried to provide for the increased consumption that would result from any of the following contingencies—

1. Expected winds or other meteorological conditions;
2. Possible variations in ATC routings;
3. Anticipated traffic delays;
4. A complete instrument approach procedure and possible missed approach at destination;
5. Loss of pressurisation en route;
6. Loss of one power-unit en route; and
7. Any other conditions that may delay landing of the aircraft or increase fuel and oil consumption.

(c) Each person computing the required minimum fuel supply shall ensure that, for flights of more than 2,000 nm, the minimum fuel supply calculation includes an additional amount of fuel equal to that necessary to fly 10% of the total time for the flight from takeoff to destination.

(d) No PIC may commence a flight to an aerodrome where no suitable alternate aerodrome is available because the destination aerodrome is isolated, without enough reserve fuel for two additional hours flight at normal cruise consumption, at 1,500 feet above the aerodrome.

(e) The Authority may grant specific approval for commercial air transport operations to isolated aerodromes without regard to consumption requirement of paragraph (d).

Note: If the Authority requires that fuel, in addition to any other requirement herein, is necessary on a particular route or flight operation in the interest of safety, this additional fuel will be included in the minimum fuel supply for that route.
8.6.2.14 **MINIMUM FUEL SUPPLY FOR VFR FLIGHTS**

(a) No person may commence a flight in an aeroplane under VFR unless, considering the wind and forecast weather conditions, there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—

(1) For flights during the day, for at least 30 minutes thereafter; or
(2) For flights at night, for at least 45 minutes thereafter; and
(3) For international flights, for at least an additional 15% of the total flight time calculated for cruise flight.

(b) No person may commence a flight in a helicopter under VFR unless (considering the wind and forecast weather conditions) there is enough fuel to fly to the first point of intended landing and, assuming normal cruising speed—

(1) For 20 minutes thereafter; or
(2) For international flights, for at least an additional 10% of the total flight time calculated.

8.6.2.15 **MINIMUM FUEL SUPPLY FOR IFR FLIGHTS**

(a) No person may commence a flight under IFR unless there is enough fuel supply, considering weather reports and forecasts, to—

(1) Fly to the first point of intended landing;
(2) Fly from that aerodrome to the planned alternate aerodrome, if required; and
(3) Fly thereafter at normal cruising speed:
   (i) In a propeller-driven aeroplane, for 45 minutes.
   (ii) In a rotorcraft, turbojet or turbofan aeroplane, for 30 minutes in a holding pattern at 450 m (10,000 ft) above the aerodrome, plus a reserve for contingencies specified by the operator and approved by the Authority.

(b) For IFR flights to isolated aerodromes, the 2-hour minimum reserve specified in 8.6.2.13 applies, except paragraph (e) does not apply to commercial air transport operations unless specifically approved by the Authority.

8.6.2.16 **FLIGHT PLANNING DOCUMENT DISTRIBUTION AND RETENTION: COMMERCIAL AIR TRANSPORT**

(a) For commercial air transport operations, the PIC shall complete and sign the following flight preparation documents prior to departure:

(1) An operational flight plan, including NOTAMs and weather pertinent to the flight planning decisions regarding minimum fuel supply, en route performance, and destination and alternate aerodromes.
(2) A load manifest, showing the distribution of the load, centre of gravity, takeoff and landing weights and compliance with maximum operating weight limitations, and performance analysis.
(3) An applicable technical log page, if mechanical irregularities were entered after a previous flight, maintenance or inspection functions were performed or a maintenance release was issued at the departure aerodrome.

(b) No person may takeoff an aircraft in commercial air transport unless all flight release documents, signed by the PIC, are retained and available at the point of departure.

(c) The PIC shall carry a copy of the documents specified in paragraph (a) on the aircraft to the destination aerodrome.

*Note: These documents are in addition to those specified in Subpart 8.2 for all aircraft operations.*
Note: The Authority may approve a different retention location where all documents can be available for subsequent review.
8.6.2.17 **AIRCRAFT LOADING, MASS AND BALANCE**

(a) No person may operate an aircraft unless all loads carried are properly distributed and safely secured.

(b) No person may operate an aircraft unless the calculations for the mass of the aeroplane and centre of gravity location indicate that the flight can be conducted safely, taking into account the flight conditions expected.

*Note: When load masters, load planners or other qualified personnel are provided by the AOC holder in a commercial air transport operation, the PIC may delegate these responsibilities, but shall ascertain that proper loading procedures are followed.*

(c) For commercial air transport operations, no PIC may commence a flight unless the PIC is satisfied that the loading and mass and balance calculations contained in the load manifest are accurate and comply with the aircraft limitations.

8.6.2.18 **MAXIMUM ALLOWABLE WEIGHTS TO BE CONSIDERED ON ALL LOAD MANIFESTS**

(a) The PIC shall ensure that the maximum allowable weight for a flight does not exceed the maximum allowable takeoff weight—

1. For the specific runway and conditions existing at the takeoff time; and
2. Considering anticipated fuel and oil consumption that allows compliance with applicable en route performance, landing weight, and landing distance limitations for destination and alternate aerodromes.

8.6.2.19 **FLIGHT RELEASE REQUIRED: COMMERCIAL AIR TRANSPORT**

(a) No person may start a flight under a flight following system without specific authority from the person authorised by the AOC holder to exercise operational control over the flight.

(b) No person may commence a passenger-carrying flight in commercial air transport for which there is a published schedule, unless a qualified person authorised by the AOC holder to perform operational control functions has issued a flight release for that specific operation or series of operations.

8.6.2.20 **OPERATIONAL FLIGHT PLAN: COMMERCIAL AIR TRANSPORT**

(a) No person may commence a flight unless the operational flight plan has been signed by the PIC.

(b) A PIC may sign the operational flight plan only when the PIC and the person authorised by the operator to exercise operational control have determined that the flight can be safely completed.

*Note: The operational flight plan shall include the routing and fuel calculations, with respect to the meteorological and other factors expected, to complete the flight to the destination and all required alternates.*

(c) The PIC signing the operational flight plan shall have access to the applicable flight planning information for fuel supply, alternate aerodromes, weather reports and forecasts and NOTAMs for the routing and aerodrome.

(d) No person may continue a flight from an intermediate aerodrome without a new operational flight plan if the aircraft has been on the ground more than 6 hours.
8.7 AIRCRAFT OPERATING AND PERFORMANCE LIMITATIONS

8.7.1 All Aircraft

8.7.1.1 Applicability

This Section prescribes the operating and performance limitations for all civil aircraft.

8.7.1.2 General

(a) No person may operate an aircraft that—
   (1) Exceeds its designed performance limitations for any operation, as established by the State of Registry; or
   (2) Exceeds operating limitations contained in the aircraft’s flight manual, or its equivalent.

8.7.1.3 Aircraft Performance Calculations

(a) Each operator shall ensure that the performance data contained in the AFM, RFM, or other authorised source is used to determine compliance with the appropriate requirements of Subpart 8.7.

(b) When applying performance data, each person performing calculations shall account for the aircraft configuration, environmental conditions, and the operation of any system or systems which may have an adverse effect on performance.

8.7.1.4 General Weight and Obstruction Clearance Limitations

(a) No person may takeoff an aircraft without ensuring that the maximum allowable weight for a flight does not exceed the maximum allowable takeoff or landing weight, or any applicable en route performance or landing distance limitations considering the—
   (1) Condition of the takeoff and landing areas to be used;
   (2) Gradient of runway to be used (landplanes only);
   (3) Pressure altitude;
   (4) Ambient temperature;
   (5) Current and forecast winds; and
   (6) Any know conditions (e.g., atmospheric and aircraft configuration) which may adversely affect performance.

(b) No person may takeoff an aircraft at a weight that, assuming normal engine operation, cannot safely clear all obstacles during all phases of flight, including all points along the intended en route path or any planned diversions.
8.7.2 Aircraft Used in Commercial Air Transport

8.7.2.1 Applicability

This Section prescribes aircraft performance and operating limitations for aircraft used in commercial air transport operations, except those aircraft holding a special authority or waiver by the Authority which exempt them from specific operating and performance limitations.

8.7.2.2 General

(a) Each person operating an aircraft engaged in commercial air transport shall comply with the provisions of Section 8.7.2.

(b) The Authority may authorise deviations from the requirements of Section 8.7.2 if special circumstances make a literal observance of a requirement unnecessary for safety.

(c) Where full compliance with the requirements of Section 8.7.2 cannot be shown due to specific design characteristics (e.g., seaplanes, airships, or supersonic aircraft), the operator shall apply approved performance standards that ensure a level of safety not less restrictive than those of relevant requirements of this Section.

(d) No person may operate a single-engine aircraft used for revenue passenger carrying operations unless that aircraft is continually operated in daylight, VFR, excluding over the top.

(e) No person may operate a multiengine aircraft used for revenue passengers carrying operations that is unable to comply with any of the performance limitations of subsections 8.7.2.4 through 8.7.2.8 unless that aircraft is continually operated—

(1) In daylight;

(2) In VFR, excluding over the top operations; and

(3) At a weight that will allow it to climb, with the critical engine inoperative, at least 50 feet a minute when operating at the MEAs of the intended route or any planned diversion, or at 5,000 feet MSL, whichever is higher.

(f) Multiengine aircraft that are unable to comply with paragraph (e)(3) are, for the purpose of this Section, considered to be a single engine aircraft and shall comply with the requirements of paragraph (d).

8.7.2.3 Aircraft Performance Calculations

(a) No person may takeoff an aircraft used in commercial air transport without ensuring that the applicable operating and performance limitations required for this Section can be accurately computed based on the AFM, RFM, or other data source approved by the Authority.

(b) Each person calculating performance and operating limitations for aircraft used in commercial air transport shall ensure that performance data used to determine compliance with this Section can, during any phase of flight, accurately account for—

   (i) Any reasonably expected adverse operating conditions that may affect aircraft performance;

   (ii) One engine failure for aircraft having two engines, if applicable; and

   (iii) Two engine failure for aircraft having three or more engines, if applicable.

(c) When calculating the performance and limitation requirements of subsections 8.7.2.4 to 8.7.2.8, each person performing the calculation shall, for all engines operating and for inoperative engines, accurately account for—
(1) In all phases of flight—
   (i) The effect of fuel and oil consumption on aircraft weight;
   (ii) The effect of fuel consumption on fuel reserves resulting from changes in flight paths, winds, and aircraft configuration;
   (iii) The effect of fuel jettisoning on aircraft weight and fuel reserves, if applicable and approved;
   (iv) The effect of any ice protection system, if applicable and weather conditions require its use;
   (v) Ambient temperatures and winds along intended route and any planned diversion;
   (vi) Flight paths and minimum altitudes required to remain clear of obstacles.

(2) During takeoff and landing—
   (i) The condition of the takeoff runway or area to be used, including any contaminates (e.g., water, slush, snow, ice);
   (ii) The gradient of runway to be used;
   (iii) The runway length including clearways and stopways, if applicable;
   (iv) Pressure altitudes at takeoff and landing sites;
   (v) Current ambient temperatures and winds at takeoff;
   (vi) Forecast ambient temperatures and winds at each destination and planned alternate landing site;
   (vii) The ground handling characteristics (e.g., braking action) of the type of aircraft; and
   (viii) Landing aids and terrain that may affect the takeoff path, landing path, and landing roll.

Note: Where conditions are different from those on which the performance is based, compliance may be determined by interpolation or by computing the effects of changes in the specific variables, if the results of the interpolation or computations are substantially as accurate as the results of direct tests.

Note: To allow for wind effect, takeoff data based on still air may be corrected by taking into account not more than 50 percent of any reported headwind component and not less than 150 percent of any reported tailwind component, and landing data based on.

8.7.2.4 Takeoff Limitations

(a) Aeroplanes. No person may takeoff an aeroplane used in commercial air transport unless the following requirements are met when determining the maximum permitted take-off mass:

   (1) The takeoff run shall not be greater than the length of the runway.

   (2) For turbine engine powered aeroplanes—
      (i) The takeoff distance shall not exceed the length of the runway plus the length of any clearway, except that the length of any clearway included in the calculation shall not be greater than 1/2 the length of the runway; and
      (ii) The accelerate-stop distance shall not exceed the length of the runway, plus the length of any stopway, at any time during takeoff until reaching $V_{1}$.

   (3) For reciprocating engine powered aeroplanes—
      (i) The accelerate-stop distance shall not exceed the length of the runway at any time during takeoff until reaching $V_{1}$.

   (4) If the critical engine fails at any time after the aeroplane reaches $V_{1}$, to continue the takeoff flight path and clear all obstacles either—
      (i) By a height of at least 9.1 m (35 ft) vertically for turbine engine powered aeroplanes or 15.2 m (50 ft) for reciprocating engine powered aeroplanes; and
      (ii) By at least 60 m (200 ft) horizontally within the aerodrome boundaries and by at least 90 meters (300 feet) horizontally after passing the boundaries, without banking more than 15 degrees at any point on the takeoff flight path.
(b) **Helicopters.** No person may takeoff a helicopter used in commercial air transport that, in the event of a critical engine failure, cannot—

1. For Class 1 helicopters—
   
   i. At or before the takeoff decision point, discontinue the takeoff and stop within the rejected takeoff area; or
   
   ii. After the takeoff decision point, continue the takeoff and then climb, clearing all obstacles along the flight path, until a suitable landing site is found.

2. For Class 2 helicopters—
   
   i. Before reaching a defined point after take-off, safely execute a forced landing within the rejected takeoff area, or
   
   ii. At any point after reaching a defined point after take-off, continue the takeoff and then climb, clearing all obstacles along the flight path, until a suitable landing site is found.

8.7.2.5 **EN ROUTE LIMITATIONS: ALL ENGINES OPERATING**

No person may take off a reciprocating engine powered aeroplane used in commercial air transport at a weight that does not allow a rate of climb of at least 6.9 \( V_{so} \) (that is, the number of feet per minute obtained by multiplying the aircraft's minimum steady flight speed by 6.9) with all engines operating, at an altitude of at least 300 m (1,000 ft) above all terrain and obstructions within ten miles of each side of the intended track.

8.7.2.6 **EN ROUTE LIMITATIONS: ONE ENGINE INOPERATIVE**

(a) **Aeroplane.** No person may take off an aeroplane used in commercial air transport having two engines unless that aeroplane can, in the event of a power failure at the most critical point en route, continue the flight to a suitable aerodrome where a landing can be made while allowing—

1. For reciprocating engine powered aeroplanes—
   
   i. At least a rate of climb of 0.079 - (0.106/number of engines installed) \( V_{so}^2 \) (when \( V_{so} \) is expressed in knots) at an altitude of 300 m (1,000 ft) above all terrain and obstructions within 9.3 km (5 sm), on each side of the intended track; and
   
   ii. A positive slope at an altitude of at least 450 m (1,500 ft) above the aerodrome where the aeroplane is assumed to land.

2. For turbine engine powered transport category aeroplanes—
   
   i. A positive slope at an altitude of at least 300 m (1,000 ft) above all terrain and obstructions within 9.3 km (5 sm), on each side of the intended track;
   
   ii. A net flight path from cruising altitude to the intended landing aerodrome that allows at least 600 m (2,000 ft) clearance above all terrain and obstructions within 9.3 km (5 sm), on each side of the intended track; and
   
   iii. A positive slope at an altitude of at least 450 m (1,500 ft) above the aerodrome where the aeroplane is assumed to land;

   *Note: The climb rate specified in paragraph (a)(1)(i) may be amended to 0.026 \( V_{so}^2 \) for large transport category aircraft issued a type certificate prior to 1953.*

   *Note: The 9.3 km (5 sm) clearance margin stated in paragraph (a) shall be increased to 18.5 km (10 sm) if navigational accuracy does not meet the 95% containment level.*

(b) **Helicopter.** No person shall takeoff a helicopter used in commercial air transport having two engines unless that helicopter can, in the event of the critical engine failing and any point in the en route phase,
continue the flight to the destination or alternate landing site without flying below the minimum flight altitude at any point and clearing all obstacles in the approach path by a safe margin.

8.7.2.7 EN ROUTE LIMITATIONS: TWO ENGINES INOPERATIVE

(a) Aeroplane. No person may takeoff an aeroplane used in commercial air transport having three or more engines at such a weight where there is no suitable landing aerodrome within 90 minutes at any point along the intended route (with all engines operating at cruising power), unless that aircraft can, in the event of simultaneous power failure of two critical engines at the most critical point along that route, continue to a suitable landing aerodrome while allowing—

(1) For turbine engine powered aeroplanes—
   (i) A net flight path (considering the ambient temperatures anticipated along the track) clearing vertically by at least 2,000 feet all terrain and obstructions within five statute miles (4.34 nautical miles) on each side of the intended track;
   (ii) A positive slope at 1,500 feet above the aerodrome of intended landing; and
   (iii) Enough fuel to continue to the aerodrome of intended landing, to arrive at an altitude of at least 1,500 feet directly over the aerodrome, and thereafter to fly for 15 minutes at cruise power.

   Note: The consumption of fuel and oil after the engine failure is the same as the consumption that is allowed for in the net flight path data in the AFM.

(2) For reciprocating engine powered aeroplanes—
   (i) A rate of climb at $0.013 V_{so}^2$ feet per minute (that is, the number of feet per minute is obtained by multiplying the number of knots squared by 0.013) at an altitude of 1,000 feet above the highest ground or obstruction within 10 miles on each side of the intended track, or at an altitude of 5,000 feet, which ever is higher; and
   (ii) Enough fuel to continue to the aerodrome of intended landing and to arrive at an altitude of at least 300 m (1,000 ft) directly over that aerodrome.

   Note: When the two engines of the reciprocating aeroplane are predicted to fail at an altitude above the prescribed minimum altitude, compliance with the prescribed rate of climb need not be shown during the descent from the cruising altitude to the prescribed minimum altitude, if those requirements can be met once the prescribed minimum altitude is reached, and assuming descent to be along a net flight path and the rate of descent to be $0.013 V_{so}^2$ greater than the rate in the approved performance data.

   Note: If fuel jettisoning is authorised (or planned), the aeroplane’s weight at the point where the two engines fail is considered to be not less than that which would include enough fuel to proceed to an aerodrome and to arrive at an altitude of at least 300 m (1,000 ft) directly over that aerodrome.

(b) Helicopters. No person shall takeoff a Class 1 or Class 2 helicopter used in commercial air transport having three or more engines unless that helicopter can, in the event of two critical engines failing simultaneously at any point in the en route phase, continue the flight to a suitable landing site.
8.7.2.8 **Landing Limitations**

(a) *Aeroplane*. No person may take off an aeroplane used in commercial operations unless its weight on arrival at either the intended destination aerodrome or any planned alternate aerodrome would allow a full stop landing from a point 50 feet above the intersection of the obstruction clearance plane and the runway, and within—

1. For turbine engine powered aeroplanes, 60 percent of the effective length of each runway.
2. For reciprocating engine powered aeroplanes, 70 percent of the effective length of each runway.

(b) For the purpose of determining the allowable landing weight at the destination aerodrome, each person determining the landing limit shall ensure that—

1. The aeroplane is landed on the most favourable runway and in the most favourable direction, in still air; or
2. The aeroplane is landed on the most suitable runway considering the probable wind velocity and direction, runway conditions, the ground handling characteristics of the aeroplane, and considering other conditions such as landing aids and terrain.

*Note: If the runway at the landing destination is reported or forecast to be wet or slippery, the landing distance available shall be at least 115 percent of the required landing distance unless, based on a showing of actual operating landing techniques on wet or slippery runways, a shorter landing distance (but not less than that required by paragraph (a)) has been approved for a specific type and model aeroplane and this information is included in the AFM.*

(c) A turbine powered transport category aeroplane that would be prohibited from taking off because it could not meet the requirements of paragraph (a)(1), may take off if an alternate aerodrome is specified that meets all the requirements of paragraph (a).

(d) *Helicopters*. No person may take off a helicopter used in commercial air transport unless, with all engines operating on arrival at the intended destination landing site or any planned alternate landing, it can clear all obstacles on the approach path and can land and stop within the landing distance available.

(e) *Helicopters*. No person may take off a helicopter used in commercial air transport unless, in the event of any engine becoming inoperative in the approach and landing phase on arrival at the intended destination landing site or any planned alternate landing, can—

1. For Class 1 helicopters—
   (i) Before the landing decision point, clear all obstacles on the approach path and be able to land and stop within the landing distance available or to perform a balked landing and clear all obstacles in the flight path by an adequate margin; or
   (ii) After the landing decision point, land and stop within the landing distance available.

2. For Class 2 and Class 3 helicopters—
   (i) Before reaching a defined point before landing, safely execute a forced landing within the landing distance available.
8.8 FLIGHT RULES

8.8.1 All Operations

8.8.1.1 Operation of Aircraft on the Ground

(a) No person may taxi an aircraft on the movement area of an aerodrome unless the person at the controls—
   (1) Has been authorised by the owner, the lessee, or a designated agent;
   (2) Is fully competent to taxi the aircraft;
   (3) Is qualified to use the radio if radio communications are required; and
   (4) Has received instruction from a competent person in respect of aerodrome layout, and where appropriate, information on routes, signs, marking, lights, ATC signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aircraft movement at the aerodrome.

(b) No person shall cause a helicopter rotor to be turned under power unless there is a qualified pilot at the controls.

8.8.1.2 Takeoff Conditions

(a) Before commencing takeoff, a PIC shall ensure that—
   (1) According to the available information, the weather at the aerodrome and the condition of the runway intended to be used will allow for a safe takeoff and departure; and
   (2) The RVR or visibility in the takeoff direction of the aircraft is equal to or better than the applicable minimum.

8.8.1.3 Flight into Known or Expected Icing

(a) No person may takeoff an aircraft or continue to operate an aircraft en route when the icing conditions are expected or encountered, without ensuring that the aircraft is certified for icing operations and has sufficient operational de-icing or anti-icing equipment.

(b) No person may takeoff an aircraft when frost, ice or snow is adhering to the wings, control surfaces, propellers, engine inlets or other critical surfaces of the aircraft which might adversely affect the performance or controllability of the aircraft.

(c) For commercial air transport operations, no person may takeoff an aircraft when conditions are such that frost, ice or snow may reasonably be expected to adhere to the aircraft, unless the procedures approved for the AOC holder by the Authority are followed to ensure ground de-icing and anti-icing is accomplished.

8.8.1.4 Altimeter Settings

(a) Each person operating an aircraft shall maintain the cruising altitude or flight level by reference to an altimeter set—
   (1) Below 3,000 ft MSL to—

   Note: This requirement does not apply when operating in airspace and on routes aircraft are required to use of 29.92” below 3,000 MSL.
(i) The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;
(ii) The current reported altimeter setting of a nearby station, if there is not a station along the route; or
(iii) In the case of an aircraft not equipped with a radio, the elevation of the departure aerodrome or an appropriate altimeter setting available before departure; or

(2) At or above 3,000 feet MSL to 29.92" 1013 Hpa.

Implementing Standard: See IS:8.8.1.4 for a table to determine the lowest usable flight level.

8.8.1.5 Minimum Safe Altitudes: General

(a) Except when necessary for takeoff or landing or by permission in writing from the Authority, no person may operate an aircraft below the following altitudes:

(1) Over any area. At an altitude allowing, if a power unit fails, continuation of flight or an emergency landing without undue hazard to persons or property on the surface.

(2) Over any congested area of a city, town, or settlement, or over any open-air assembly of persons, an altitude of 300m (1,000 feet) above the highest obstacle within a horizontal radius of 600m (2,000 feet) of the aircraft.

(3) Areas other than as specified in sub-paragraph (2) above. An altitude of 150m (500 feet) above the surface, except over open water or sparsely populated areas where the aircraft may not be operated closer than 150m (500 feet) to any person, vessel, vehicle, or structure.

(4) Helicopters may be operated at less than the minimums prescribed in sub-paragraphs (2) & (3) above, provided they operate in a manner that is not hazardous to persons and property on the surface. In addition the PIC of a helicopter shall comply with any routes or altitudes for the area that are prescribed for helicopters by the Authority.

8.8.1.6 Minimum Safe VFR Altitudes: Commercial Air Transport Operations

(a) No person may operate an aeroplane in commercial air transport during the day, under VFR, at an altitude less than 1,000 feet above the surface or within 1,000 feet of any mountain, hill, or other obstruction to flight.

(b) No person may operate an aeroplane in commercial air transport at night, under VFR, at an altitude less than 1,000 feet above the highest obstacle within a horizontal distance of five miles from the centre of the intended course, or, in designated mountainous areas, less than 2,000 feet above the highest obstacle within a horizontal distance of five miles from the centre of the intended course.

8.8.1.7 Instrument Approach Operating Minima

No person may operate to or from an aerodrome using operating minima lower than those which may be established for that aerodrome by the State in which it is located, unless that State specifically approves that operation.

8.8.1.8 Category II and III Operations: General Operating Rules

(a) No person may operate a civil aircraft in a Category II or III operation unless—
(1) The PIC and SIC of the aircraft hold the appropriate authorisations and ratings prescribed in 2.2.1.6.
(2) Each flight crew member has adequate knowledge of, and familiarity with, the aircraft and the procedures to be used; and
(3) The instrument panel in front of the pilot who is controlling the aircraft has appropriate instrumentation for the type of flight control guidance system that is being used.

(b) Unless otherwise authorised by the Authority, no person may operate a civil aircraft in a Category II or Category III operation unless each ground component required for that operation and the related airborne equipment is installed and operating.

(c) When the approach procedure being used provides for and requires the use of a DH, the authorised DH is the highest of the following:
   (1) The DH prescribed by the approach procedure.
   (2) The DH prescribed for the PIC.
   (3) The DH for which the aircraft is equipped.

(d) Unless otherwise authorised by the Authority, no pilot operating an aircraft in a Category II or Category III approach that provides and requires use of a DH may continue the approach below the authorised decision height unless the following conditions are met:
   (1) The aircraft is in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres, and where that descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing.
   (2) At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:
      (i) The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.
      (ii) The threshold.
      (iii) The threshold markings.
      (iv) The threshold lights.
      (v) The touchdown zone or touchdown zone markings.
      (vi) The touchdown zone lights.

(e) Unless otherwise authorised by the Authority, each pilot operating an aircraft shall immediately execute an appropriate missed approach whenever, prior to touchdown, the requirements of paragraph (d) of this section are not met.

(f) No person operating an aircraft using a Category III approach without DH may land that aircraft except in accordance with the provisions of the letter of authorisation issued by the Authority.

(g) Paragraphs (a) through (f) of this section do not apply to operations conducted by AOC holders issued a certificate under Part 9. No person may operate a civil aircraft in a Category II or Category III operation conducted by an AOC holder unless the operation is conducted in accordance with that AOC holder’s operations specifications.

8.8.1.9 CATEGORY II AND CATEGORY III MANUAL

(a) Except as provided in paragraph (c) of this section, no person may operate a civil aircraft in a Category II or a Category III operation unless—
   (1) There is available in the aircraft a current and approved Category II or Category III manual, as appropriate, for that aircraft;
   (2) The operation is conducted in accordance with the procedures, instructions, and limitations in the appropriate manual; and
(3) The instruments and equipment listed in the manual that are required for a particular Category II or Category III operation have been inspected and maintained in accordance with the maintenance program contained in the manual.

(b) Each operator must keep a current copy of each approved manual at its principal base of operations and must make each manual available for inspection upon request by the Authority.

(c) Paragraphs (a) and (b) do not apply to operations conducted by an AOC holder issued a certificate under Part 9.

Implementing Standard: See IS:8.8.1.9 for specific Category II manual requirements.

8.8.1.10 AUTHORIZATION FOR DEVIATION FROM CERTAIN CATEGORY II OPERATIONS

The Authority may authorise deviations from the requirements of 8.8.1.8 and 8.8.1.9 for the operation of small aircraft in Category II operations if the Authority finds that the proposed operation can be safely conducted.

Note: Such authorisation does not permit operation of the aircraft carrying persons or property for compensation or hire.

8.8.1.11 DIVERSION DECISION

(a) Except as provided in paragraph (b), the PIC shall land the aircraft at the nearest suitable aerodrome at which a safe landing can be made whenever an engine of an aircraft fails or is shut down to prevent possible damage.

(b) If not more than one engine of an aeroplane having three or more engines fails, or its rotation is stopped, the PIC may proceed to an aerodrome if he or she decides that proceeding to that aerodrome is as safe as landing at the nearest suitable aerodrome after considering the—

(1) Nature of the malfunction and the possible mechanical difficulties that may occur if flight is continued;
(2) Altitude, weight, and usable fuel at the time of engine stoppage;
(3) Weather conditions en route and at possible landing points;
(4) Air traffic congestion;
(5) Kind of terrain; and
(6) Familiarity with the aerodrome to be used.

8.8.1.12 OPERATING NEAR OTHER AIRCRAFT

(a) No person may operate an aircraft so close to another aircraft as to create a collision hazard.

(b) No person may operate an aircraft in formation flight except by arrangement with the PIC of each aircraft in the formation.

(c) No person may operate an aircraft, carrying passengers for hire, in formation flight.

8.8.1.13 RIGHT-OF-WAY RULES: EXCEPT WATER OPERATIONS

(a) General.

(1) Each pilot shall maintain vigilance so as to see and avoid other aircraft; and
(2) When a rule of this subsection gives another aircraft the right-of-way, the pilot shall give way to that aircraft and may not pass over, under, or ahead of it unless well clear.
(b) **In distress.** An aircraft in distress has the right-of-way over all other air traffic.

(c) **Converging.**
   
   (1) When aircraft of the same category are converging at approximately the same altitude (except head-on, or nearly so), the aircraft to the other’s right has the right-of-way.

   (2) If the converging aircraft are of different categories—
      
      (i) A balloon has the right-of-way over any other category of aircraft;
      
      (ii) A glider has the right-of-way over an airship, aeroplane, or rotorcraft; and
      
      (iii) An airship has the right-of-way over an aeroplane or rotorcraft.

(d) **Towing or refuelling.** An aircraft towing or refuelling other aircraft has the right-of-way over all other engine-driven aircraft, except aircraft in distress.

(e) **Approaching head-on.** When aircraft are approaching each other head-on, or nearly so, each pilot of each aircraft shall alter course to the right.

(f) **Overtaking.** Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall alter course to the right to pass well clear.

(g) **Landing.** Aircraft, while on final approach to land or while landing, have the right-of-way over other aircraft in flight or operating on the surface.

   *Note: The PIC may not take advantage of this rule to force an aircraft off the runway surface which has already landed and is attempting to make way for an aircraft on final approach*

(h) **More than one landing aircraft.** When two or more aircraft are approaching an aerodrome for the purpose of landing, the aircraft at the lower altitude has the right-of-way.

   *Note: The PIC will not take advantage of this rule to cut in front of another which is on final approach to land or to overtake that aircraft.*

8.8.1.14 **RIGHT-OF-WAY RULES: WATER OPERATIONS**

(a) **General.** Each person operating an aircraft on the water shall, insofar as possible, keep clear of all vessels and avoid impeding their navigation, and shall give way to any vessel or other aircraft that is given the right-of-way by any rule of this subsection.

(b) **Crossing.** When aircraft, or an aircraft and a vessel, are on crossing courses, the aircraft or vessel to the other’s right has the right-of-way.

(c) **Approaching head-on.** When aircraft, or an aircraft and a vessel, are approaching head-on, or nearly so, each shall alter its course to the right to keep well clear.

(d) **Overtaking.** Each aircraft or vessel that is being overtaken has the right-of-way, and the one overtaking shall alter course to keep well clear.

(e) **Special circumstances.** When aircraft, or an aircraft and a vessel, approach so as to involve risk of collision, each aircraft or vessel shall proceed with careful regard to existing circumstances, including the limitations of the respective craft.

8.8.1.15 **USE OF AIRCRAFT LIGHTS**

(a) If an aircraft has red rotating beacon lights installed, the pilot shall switch those lights on prior to starting engines and display those lights at all times the engines are running.

(b) No person may operate an aircraft between the period from sunset to sunrise unless—
(1) It has lighted navigation lights; and
(2) If anticollision lights are installed, those lights are lighted.

Note: A pilot is permitted to switch off or reduce the intensity of any flashing lights if they do or are likely to adversely affect the satisfactory performance of duties or to subject an outside observer to harmful dazzle.

(c) No person may park or move an aircraft at night in, or in a dangerous proximity to, a movement area of an aerodrome, unless the aircraft—
   (1) Is clearly illuminated;
   (2) Has lighted navigation lights, or
   (3) Is in an area that is marked by obstruction lights.

(d) No person may anchor an aircraft unless that aircraft—
   (1) Has lighted anchor lights; or
   (2) Is in an area where anchor lights are not required on vessels.

8.8.1.16 Simulated Instrument Flight

(a) No person may operate an aircraft in simulated instrument flight unless—
   (1) That aircraft has fully functioning dual controls;
   (2) The other control seat is occupied by a safety pilot who holds at least a private pilot licence with category and class ratings appropriate to the aircraft being flown, and
   (3) The safety pilot has adequate vision forward and to each side of the aircraft, or a competent observer in the aircraft adequately supplements the vision of the safety pilot.

(b) No person may engage in simulated instrument flight conditions during commercial air transport operations.

8.8.1.17 Inflight Simulation of Abnormal Situations

No person may simulate an abnormal or emergency situation during commercial air transport operations.

8.8.1.18 Dropping, Spraying, Towing

(a) Except under conditions prescribed by the Authority, no pilot may take the following actions—
   (1) Dropping, dusting or spraying from an aircraft;
   (2) Towing of aircraft or other objects; or
   (3) Allowing parachute descents.

8.8.1.19 Aerobatic Flight

(a) No person may operate an aircraft in aerobatic flight—
   (1) Over any city, town or settlement;
   (2) Over an open air assembly of persons;
   (3) Within the lateral boundaries of the surface areas of Class B, C, D or E airspace designated for an aerodrome;
   (4) Below an altitude of 1,500 feet above the surface; or
   (5) When the flight visibility is less than 3 statute miles.

(b) No person may operate an aircraft in manoeuvres exceeding a bank of 60 degrees or pitch of 30 degrees from level flight attitude unless all occupants of the aircraft are wearing parachutes packed by a qualified parachute rigger in the past 12 calendar months.
8.8.1.20 **Flight Test Areas**

No person may flight-test an aircraft except over open water, or sparsely populated areas having light traffic.

8.8.1.21 **Prohibited Areas and Restricted Areas**

No person may operate an aircraft in a prohibited area, or in a restricted areas, the particulars of which have been duly published, except in accordance with the conditions of the restrictions or by permission of the State over whose territory the areas are established.

8.8.1.22 **Operations in MNPS or RVSM Airspace**

(a) No person may operate a civil aircraft of Guyana registry in the North Atlantic airspace designated as MNPS airspace or in airspace designated as RVSM without a written authorisation issued by the Authority.

(b) No person may operate an aircraft in MNPS or RVSM airspace, except in accordance with the conditions of the procedures and restrictions required for this airspace.

*Note – See 7.1.2.7 for requirements regarding navigation equipment for operations in MNPS airspace.*
8.8.1.23 OPERATIONS ON OR IN THE VICINITY OF AN UNCONTROLLED AERODROME  
(a) When approaching to land at an aerodrome without an operating control tower, each pilot of—  
(1) An aeroplane shall make all turns of that aeroplane to the left; or to the right, if appropriately indicated by the authorities having jurisdiction over that aerodrome;  
(2) A helicopter shall avoid the flow of aeroplanes.  
(b) When departing an aerodrome without an operating control tower, each pilot of an aircraft shall comply with any traffic patterns established by the authorities having jurisdiction over that aerodrome.  
(c) Each pilot of an aircraft shall land and takeoff into the wind unless safety, the runway configurations, or traffic considerations determine that a different direction is preferable.  

Implementing Standard: See IS:8.8.2.11 for the appropriate displays of light signals or visual markings.

8.8.1.24 AERODROME TRAFFIC PATTERN ALTITUDES: TURBOJET, TURBOFAN, OR LARGE AIRCRAFT  
(a) When arriving at an aerodrome, the PIC of a turbojet, turbofan, or large aircraft shall enter the traffic pattern at least 1,500 feet AGL until further descent is required for landing.  
(b) When departing, the PIC of a turbojet, turbofan, or large aircraft shall climb to 1,500 AGL as rapidly as practicable.

8.8.1.25 COMPLIANCE WITH VISUAL AND ELECTRONIC GLIDE SLOPES  
(a) The PIC of an aeroplane approaching to land on a runway served by a visual approach slope indicator shall maintain an altitude at or above the glide slope until a lower altitude is necessary for a safe landing.  
(b) The PIC of a turbojet, turbofan, or large aeroplane approaching to land on a runway served by an ILS shall fly that aeroplane at or above the glide slope from the point of interception to the middle marker.

8.8.1.26 RESTRICTION OR SUSPENSION OF OPERATIONS: COMMERCIAL AIR TRANSPORT  
If a PIC or an AOC holder knows of conditions, including aerodrome and runway conditions, that are a hazard to safe operations, that person shall restrict or suspend all commercial air transport operations to such aerodromes and runways as necessary until those conditions are corrected.

8.8.1.27 CONTINUATION OF FLIGHT WHEN DESTINATION AERODROME IS TEMPORARILY RESTRICTED: COMMERCIAL AIR TRANSPORT  
(a) No PIC may allow a flight to continue toward any aerodrome of intended landing where commercial air transport operations have been restricted or suspended, unless—  
(1) In the opinion of the PIC, the conditions that are a hazard to safe operations may reasonably be expected to be corrected by the estimated time of arrival; or  
(2) There is no safer procedure.
8.8.1.28 **INTERCEPTION**

When intercepted by a military or government aircraft, each PIC shall comply with the international standards when interpreting and responding to visual signals as specified in the implementing standards.

*Implementing Standard: See IS:8.8.2.11 for signals applicable to interception.*
8.8.2 **Control of Air Traffic**

### 8.8.2.1 ATC CLEARANCES

(a) Each PIC shall obtain an ATC clearance prior to operating a controlled flight, or a portion of a flight as a controlled flight.

(b) Each PIC shall request an ATC clearance through the submission of a flight plan to an ATC facility.

(c) Whenever an aircraft has requested a clearance involving priority, each PIC shall submit a report explaining the necessity for such priority, if requested by the appropriate ATC facility.

(d) No person operating an aircraft on a controlled aerodrome may taxi on the manoeuvring area or any runway without clearance from the aerodrome control tower.

### 8.8.2.2 ADHERENCE TO ATC CLEARANCES

(a) When an ATC clearance has been obtained, no PIC may deviate from the clearance, except in an emergency, unless he or she obtains an amended clearance.

Note: A flight plan may cover only part of a flight, as necessary, to describe that portion of the flight or those manoeuvres which are subject to air traffic control. A clearance may cover only part of a current flight plan, as indicated in a clearance limit or by reference to specific manoeuvres such as taxiing, landing or taking off.

Note: Paragraph 8.8.2.2(a) does not prohibit a pilot from cancelling an IFR clearance when operating in VMC conditions or cancelling a controlled flight clearance when operating in airspace that does not required controlled flight.

(b) When operating in airspace requiring controlled flight, no PIC may operate contrary to ATC instructions, except in an emergency.

(c) Each PIC who deviates from an ATC clearance or instructions in an emergency, shall notify ATC of that deviation as soon as possible.

### 8.8.2.3 COMMUNICATIONS

Each person operating an aircraft on a controlled flight shall maintain a continuous listening watch on the appropriate radio frequency of, and establish two-way communication as required with, the appropriate ATC facility.

Note: More specific procedures may be prescribed by the appropriate ATC authority in respect of aircraft forming part of aerodrome traffic at a controlled aerodrome.

Note: Automatic signalling devices may be used to satisfy the requirement to maintain a continuous listening watch, if authorised by the Authority.

### 8.8.2.4 ROUTE TO BE FLOWN

(a) Unless otherwise authorised or directed by the appropriate ATC facility, the PIC of a controlled flight shall, in so far as practicable—

1. When on an established ATC route, operate along the defined centre line of that route; or
2. When on any other route, operate directly between the navigation facilities and/or points defining that route.
(b) The PIC of a controlled flight operating along an ATC route defined by reference to VORs shall change over for primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the change-over point, where established.

Note: These requirements do not prohibit manoeuvring the aircraft to pass well clear of other air traffic or the manoeuvring of the aircraft in VFR conditions to clear the intended flight path both before and during climb or descent.

8.8.2.5 INADVERTENT CHANGES

(a) A PIC shall take the following action in the event that a controlled flight inadvertently deviates from its current flight plan:

(1) Deviation from track. If the aircraft is off track, the PIC shall adjust the heading of the aircraft to regain track as soon as practicable.

(2) Variation in true airspeed. Each PIC shall inform the appropriate ATC facility if the average true airspeed at cruising level between reporting points varies from that given in the flight plan or is expected to vary by plus or minus 5 per cent of the true airspeed.

(3) Change in time estimate. Each PIC shall notify the appropriate ATC facility and give a revised estimated time given as soon as possible if the time estimate for a reporting point, flight information region boundary, or destination aerodrome, whichever comes first, is found to be in excess of three minutes from that notified to ATC, or such other period of time as is prescribed by the appropriate ATC authority or on the basis of air navigation regional agreements.

8.8.2.6 ATC CLEARANCE: INTENDED CHANGES

(a) Requests for flight plan changes shall include the following information:

(1) Change of cruising level. Aircraft identification, requested new cruising level and cruising speed at this level, and revised time estimates, when applicable, at subsequent flight information region boundaries.

(2) Change of route—

(i) Destination unchanged. Aircraft identification, flight rules; description of new route of flight including related flight plan data beginning with the position from which requested change of route is to commence; revised time estimates, and any other pertinent information.

(ii) Destination change. Aircraft identification; flight rules; description of revised route of flight to revised destination aerodrome including related flight plan data, beginning with the position from which requested change of route is to commence; revised time estimates; alternate aerodrome(s); any other pertinent information.

8.8.2.7 POSITION REPORTS

(a) Each pilot of a controlled flight shall report to the appropriate ATC facility, as soon as possible, the time and level of passing each designated compulsory reporting point, together with any other required information, unless exempted from this requirement by the appropriate ATC authority.

(b) Each pilot of a controlled flight shall make position reports in relation to additional points or intervals when requested by the appropriate ATC facility

8.8.2.8 OPERATIONS ON OR IN THE VICINITY OF A CONTROLLED AERODROME

(a) No person may operate an aircraft to, from, through, or on an aerodrome having an operational control tower unless two-way communications are maintained between that aircraft and the control tower.
(b) On arrival, each PIC shall establish communications required by paragraph (a) prior to 4 nautical miles from the aerodrome when operating from the surface up to and including 2,500 feet.

(c) On departure, each PIC shall establish communications with the control tower prior to taxi.

(d) Takeoff, landing, taxi clearance. No person may, at any aerodrome with an operating control tower, operate an aircraft on a runway or taxiway or takeoff or land an aircraft, unless an appropriate clearance has been received by ATC.

Note: A clearance to “taxi to” the takeoff runway is not a clearance to cross or taxi on to that runway. It does authorise the PIC to cross other runways during the taxi to the assigned runway. A clearance to “taxi to” any other point on the aerodrome is a clearance to cross all runways that intersect the taxi route to the assigned point.

(e) Communications failure. If the radio fails or two-way communication is lost, a PIC may continue a VFR flight operation and land if—

(1) The weather conditions are at or above basic VFR minimums; and
(2) Clearance to land is received by light signals.

Note: During IFR operations, the two-way communications failure procedures will apply.

8.8.2.9 UNLAWFUL INTERFERENCE

(a) A PIC shall, when and if possible, notify the appropriate ATC facility when an aircraft is being subjected to unlawful interference, including—

(1) Any significant circumstances associated with the unlawful interference, and
(2) Any deviation from the current flight plan necessitated by the circumstances.

8.8.2.10 TIME CHECKS

(a) Each PIC shall use Co-ordinated Universal Time (UTC), expressed in hours and minutes of the 24-hour day beginning at midnight, in flight operations.

(b) Each PIC shall obtain a time check prior to operating a controlled flight and at such other times during the flight as may be necessary.

8.8.2.11 UNIVERSAL SIGNALS

(a) Upon observing or receiving any of the designated universal aviation signals, each person operating an aircraft shall take such action as may be required by the interpretation of the signal.

(b) Universal signals shall have only the meanings designated.

(c) Each person using universal signals in the movement of aircraft shall only use them for the purpose indicated.

(d) No person may use signals likely to cause confusion with universal aviation signals.

Implementing Standard: See IS:8.8.2.11 for a list of universal aviation signals.
8.8.3 **VFR Flight Rules**

8.8.3.1 **Visual Meteorological Conditions**

(a) No person may operate an aircraft under VFR when the flight visibility is less than, or at a distance from the clouds that is less than that prescribed, or the corresponding altitude and class of airspace in the following table—

<table>
<thead>
<tr>
<th>Airspace Class</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
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</thead>
<tbody>
<tr>
<td>Above 900m (3,000 ft) MSL or above 300m</td>
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<tr>
<td>Distance from cloud</td>
<td>Clear of cloud</td>
<td>1,500 m horizontally 300m (1,000 ft) vertically</td>
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</tr>
<tr>
<td>Flight visibility</td>
<td>8km at and above 3,050 in (10,000 ft) MSL km below 3,050m (10,000 ft) MSL</td>
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When the height of the transition altitude is lower than 3,050 in (10,000 ft) AMSL, FL 100 should be used in lieu of 10,000 ft.

8.8.3.2 **VFR Weather Minimums for Takeoff and Landing**

(a) No person may enter the traffic pattern, land or takeoff an aircraft under VFR from an aerodrome located in Class B, Class C, Class D or Class airspace unless the—

1. Reported ceiling is at least 1,500 ft; and
2. Reported ground visibility is at least, 5km if reported.

(b) If the ground visibility is not reported, the pilot shall maintain 3 statute miles flight visibility.

(c) Class G Airspace. No person may enter the traffic pattern, land or takeoff an aeroplane under VFR from an aerodrome located in Class G airspace below 1,200 AGL unless—

1. For aeroplanes. The visibility is at least 1 statute mile and the aircraft can be operated clear of clouds within one-half mile of the runway; or
2. For helicopters. The helicopter can be operated clear of clouds at a speed that allows the pilot adequate opportunity to see any air traffic or obstruction in time to avoid a collision.

*Note: The only exception to the required weather minimums of this subsection is during a Special VFR operation.*

8.8.3.3 **Special VFR Operations**

(a) No person may conduct a Special VFR flight operation to enter the traffic pattern, land or takeoff an aeroplane under Special VFR from an aerodrome located in Class B, Class C, Class D or Class airspace unless—

1. Authorised by an ATC clearance;
2. The aircraft remains clear of clouds; and
3. The flight visibility is at least 1 statute mile, 1500 metres

(b) No person may conduct a Special VFR flight operation in an aeroplane between sunset and sunrise unless the—
(1) The PIC is current and qualified for IFR operations; and
(2) The aircraft is qualified to be operated for IFR flight.

8.8.3.4 VFR CRUISING ALTITUDES

(a) Each person operating an aircraft in level cruising flight under VFR at altitudes above 900 m (3,000 ft) from the ground or water, shall maintain:

(1) For magnetic courses from zero degrees to 179 degrees, any odd thousand MSL altitude or flight level plus 500 feet (such as FL35, FL 55 or FL 215).

(2) For magnetic courses from 180 degrees to 359 degrees, any even thousand MSL altitude or flight level plus 500 feet (such as FL45, FL65 or FL 225).

Paragraph (a) does not apply when otherwise authorised by ATC, when operating in a holding pattern, or during manoeuvring in turns.

8.8.3.5 ATC CLEARANCES FOR VFR FLIGHTS

(a) Each pilot of a VFR flight shall obtain and comply with ATC clearances and maintain a listening watch before and during operations—

(1) Within Classes B, C and D airspace;
(2) As part of aerodrome traffic at controlled aerodromes; and
(3) Under Special VFR.

8.8.3.6 VFR FLIGHTS REQUIRING ATC AUTHORISATION

(a) Unless authorised by the appropriate ATC authority, no pilot may operate in VFR flight—

(1) Above FL 200; or
(2) At transonic and supersonic speeds.

Note: ATC authorisation for VFR flights may not be granted in areas where a vertical separation minimum of only 300m (1,000 ft) applied above FL 290.

8.8.3.7 WEATHER DETERIORATION BELOW VMC

(a) Each pilot of a VFR flight operated as a controlled flight shall, when he or she finds it is not practical or possible to maintain flight in VMC in accordance with the ATC flight plan—

(1) Request an amended clearance enabling the aircraft to continue in VMC to its destination or to an alternative aerodrome, or to leave the airspace within which an ATC clearance is required;
(2) If no clearance can be obtained, continue to operate in VMC and notify the appropriate ATC facility of the action being taken either to leave the airspace concerned or to land at the nearest suitable aerodrome;
(3) Operating within a control zone, request authorisation to operate as a special VFR flight; or
(4) Request clearance to operate in IFR, if currently rated for IFR operations.

8.8.3.8 CHANGING FROM VFR TO IFR

(a) Each pilot operating in VFR who wishes to change to IFR shall—

(1) If a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan; or
(2) Submit a flight plan to the appropriate ATC facility and obtain a clearance prior to proceeding IFR when in controlled airspace.

8.8.3.9 TWO-WAY RADIO COMMUNICATION FAILURE IN VFR
(a) If radio failure occurs in VFR while under ATC control, or if VFR conditions are encountered after the failure, each pilot shall—
   (1) Continue the flight under VFR;
   (2) Land at the nearest suitable aerodrome; and
   (3) Report arrival to ATC by the most expeditious means possible.
8.8.4 IFR Flight Rules

8.8.4.1 IFR in Controlled Airspace

(a) No person may operate an aircraft in controlled airspace under IFR unless that person has—
   (1) Filed an IFR flight plan; and
   (2) Received an appropriate ATC clearance.

8.8.4.2 IFR Flights Outside Controlled Airspace

(a) Each PIC of an IFR flight operating outside controlled airspace but within or into areas, or along routes, designated by the appropriate ATC authority, shall maintain a listening watch on the appropriate radio frequency and establish two-way communication, as necessary, with the ATC facility providing flight information service.

(b) Each PIC of an IFR flight operating outside controlled airspace for which the appropriate ATC authority requires a flight plan, a listening watch on the appropriate radio frequency and establishment of two-way communication, as necessary, with the ATC facility providing flight information service, shall report position as specified for controlled flights.

8.8.4.3 IFR Takeoff Minimums for Commercial Air Transport

(a) Unless otherwise authorised by the Authority, no pilot operating an aircraft in commercial air transport operations may accept a clearance to take off from a civil aerodrome under IFR unless weather conditions are at or above—
   (1) For aircraft, other than helicopters, having two engines or less—1 statute mile visibility.
   (2) For aircraft having more than two engines—1/2 statute mile visibility.
   (3) For helicopters—1/2 statute mile visibility.

8.8.4.4 Minimum Altitudes for IFR Operations

(a) Operation of aircraft at minimum altitudes. Except when necessary for takeoff or landing, no person may operate an aircraft under IFR below—
   (1) The applicable minimum altitudes prescribed by the authorities having jurisdiction over the airspace being overflown; or
   (2) If no applicable minimum altitude is prescribed by the authorities—
      (i) Over high terrain or in mountainous areas, at a level which is at least 600 in (2,000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft; and
      (ii) Elsewhere than as specified in paragraph (a), at a level which is at least 300 in (1,000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.
   (3) If an MEA and a MOCA are prescribed for a particular route or route segment, a person may operate an aircraft below the MEA down to, but not below, the MOCA, when within 22 nautical miles of the VOR concerned.

(b) Climb for obstacle clearance.
   (1) If unable to communicate with ATC, each pilot shall climb to a higher minimum IFR altitude immediately after passing the point beyond which that minimum altitude applies
   (2) If ground obstructions intervene, each pilot shall climb to a point beyond which that higher minimum altitude applies, at or above the applicable MCA.
8.8.4.5 **MINIMUM ALTITUDES FOR USE OF AN AUTOPILOT**

(a) For en route operations, no person may use an autopilot at an altitude above the terrain that is less than 500 feet.

*Note: If the maximum altitude loss specified in the AFM for a malfunction under cruise conditions when multiplied by two is more than 500 feet, then it becomes the controlling minimum altitude for use of the autopilot.*

(b) For instrument approach operations, no person may use an autopilot at an altitude above the terrain that is less than 50 feet below the MDA or DH.

*Note: If the maximum altitude loss specified in the AFM for a malfunction under approach conditions when multiplied by two is more than 50 feet, then it becomes the controlling minimum altitude for use of the autopilot.*

(c) For Category III approaches, the Authority may approve the use of a flight control guidance system with automatic capability to touchdown.

8.8.4.6 **IFR CRUISING ALTITUDE OR FLIGHT LEVEL IN CONTROLLED AIRSPACE**

(a) Each person operating an aircraft under IFR in level cruising flight in controlled airspace shall maintain the altitude or flight level assigned that aircraft by ATC.

(b) If the ATC clearance assigns “VFR conditions on-top,” each person shall maintain a VFR cruising altitude in VMC.

*Note: The requirements for VFR cruising altitudes are in 8.8.3.4.*

8.8.4.7 **IFR CRUISING ALTITUDE OR FLIGHT LEVEL IN UNCONTROLLED AIRSPACE**

(a) Each person operating an aircraft in level cruising flight under IMC at altitudes above 900 m (3,000 ft) from the ground or water, shall maintain—

1. For magnetic courses from zero degrees to 179 degrees, any odd thousand MSL altitude or flight level, such as 5,000, 7,000, or FL 210; and FL50, FL70
2. For magnetic courses from 180 degrees to 359 degrees, any even thousand MSL altitude or flight level, such as 4,000, 6,000 or FL 220. and FL40, FL60

(b) A person may deviate from the cruising altitudes specified in paragraph (a) only when—

1. Authorised by ATC;
2. Operating in a holding pattern; or

8.8.4.8 **IFR RADIO COMMUNICATIONS**

(a) Each PIC of an aircraft operated under IFR in controlled airspace shall have a continuous watch maintained on the appropriate frequency and shall report by radio as soon as possible—

1. The time and altitude of passing each designated reporting point, or the reporting points specified by ATC, except that while the aircraft is under radar control, only the passing of those reporting points specifically requested by ATC need be reported;
2. Any unforecast weather conditions encountered; and
3. Any other information relating to the safety of flight, such as hazardous weather or abnormal radio station indications.
8.8.4.9 **Operation Under IFR in Controlled Airspace: Malfunction Reports**

(a) The PIC of each aircraft operated in controlled airspace under IFR shall report as soon as practical to ATC any malfunctions of navigational, approach, or communication equipment occurring in flight.

(b) In each report specified in paragraph (a), the PIC shall include the—

1. Aircraft identification;
2. Equipment affected;
3. Degree to which the capability of the pilot to operate under IFR in the ATC system is impaired; and
4. Nature and extent of assistance desired from ATC.

8.8.4.10 **Continuation of IFR Flight Toward a Destination**

No pilot may continue an IFR flight toward an aerodrome or heliport of intended landing, unless the latest available meteorological information indicates that the conditions at that aerodrome, or at least one destination alternate aerodrome will, at the expected time of arrival, be at or above the specified instrument approach minima.

8.8.4.11 **Instrument Approach Procedures and IFR Landing Minimums**

No person may make an instrument approach at an airport except in accordance with IFR weather minimums and instrument approach procedures set forth in the AOC holder's operations specifications.

8.8.4.12 **Commencing an Instrument Approach: Commercial Air Transport**

(a) In commercial air transport operations, no pilot may continue an approach past the final approach fix, or where a final approach fix is not used, begin the final approach segment of an instrument approach procedure, at any aerodrome unless—

1. A source approved by the Authority issues a weather report for that aerodrome; and
2. The latest weather report for that aerodrome reports the visibility to be equal to or more than the visibility minimums prescribed for that procedure.

(b) If a pilot begins the final approach segment of an instrument approach procedure and subsequently receives a weather report indicating below-minimum conditions, the pilot may continue the approach to DH or MDA.

*Note: For the purpose of this subsection, the final approach segment begins at the final approach fix or facility prescribed in the instrument approach procedure. When a final approach fix is not prescribed for a procedure that includes a procedure turn, the final approach segment begins at the point where the procedure turn is completed and the aircraft is established inbound toward the aerodrome on the final approach course within the distance prescribed in the procedure.*

8.8.4.13 **Instrument Approaches to Civil Aerodromes**

(a) Each person operating an civil aircraft shall use a standard instrument approach procedure prescribed by the authorities having jurisdiction over the aerodrome, unless otherwise authorised by the Authority.

(b) Authorised DH or MDA. For the purpose of this section, when the approach procedure being used provides for and requires the use of a DH or MDA, the authorised DH or MDA is the highest of the following:

1. The DH or MDA prescribed by the approach procedure.
2. The DH or MDA prescribed for the PIC.
(3) The DH or MDA for which the aircraft is equipped.

8.8.4.14 **Operation Below DH or MDA**

(a) Where a DH or MDA is applicable, no pilot may operate a civil aircraft at any aerodrome or heliport below the authorised MDA, or continue an approach below the authorised DH unless—

1. The aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres;
2. For commercial air transport operations, a descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing;
3. The flight visibility is not less than the visibility prescribed in the standard instrument approach being used; and
4. At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot—
   (i) The approach light system, except that the pilot may not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable.
   (ii) The threshold;
   (iii) The threshold markings;
   (iv) Threshold lights;
   (v) The runway end identifier lights;
   (vi) The visual approach slope indicator;
   (vii) The touchdown zone or touchdown zone markings;
   (viii) The touchdown zone lights;
   (ix) The runway or runway markings; or
   (x) The runway lights.

*Note: These visual references do not apply to Category II and III operations. The required visual references under Category II and III operations are provided in the AOC holder’s operations specifications or a special authorisation prescribed by the Authority.*

8.8.4.15 **Landing During Instrument Meteorological Conditions**

No pilot operating a civil aircraft may land that aircraft when the flight visibility is less than the visibility prescribed in the standard instrument approach procedure being used.

8.8.4.16 **Execution of a Missed Approach Procedure**

(a) Each pilot operating a civil aircraft shall immediately execute an appropriate missed approach procedure when either of the following conditions exist:

1. Whenever the required visual reference criteria is not met in the following situations:
   (i) When the aircraft is being operated below MDA; or
   (ii) Upon arrival at the missed approach point, including a DH where a DH is specified and its use is required, and at any time after that until touchdown.
2. Whenever an identifiable part of the aerodrome is not distinctly visible to the pilot during a circling manoeuvre at or above MDA, unless the inability to see an identifiable part of the aerodrome results only from a normal bank of the aircraft during the circling approach.
8.8.4.17 Change from IFR Flight to VFR Flight

(a) An pilot electing to change from IFR flight to VFR flight shall notify the appropriate ATC facility specifically that the IFR flight is cancelled and then communicate the changes to be made to his or her current flight plan.

(b) When a pilot operating under IFR encounters VMC, he or she may not cancel the IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period of time in uninterrupted VMC.

8.8.4.18 Two-Way Radio Communications Failure in IFR

(a) If two-way radio communication failure occurs in IFR conditions, or if continued flight in VFR is judged not feasible, each pilot shall continue the flight according to the following:

(1) Route—
   (i) By the route assigned in the last ATC clearance received;
   (ii) If being radar vectored, by the direct route from the point of radio failure to the fix, route, or airway specified in the vector clearance;
   (iii) In the absence of an assigned route, by the route that ATC has advised may be expected in a further clearance; or
   (iv) In the absence of an assigned route or a route that ATC has advised may be expected in a further clearance, by the route filed in the flight plan.

(2) Altitude. At the highest of the following altitudes or flight levels for the route segment being flown—
   (i) The altitude or flight level assigned in the last ATC clearance received;
   (ii) The minimum altitude (converted, if appropriate, to minimum flight level for IFR operations); or
   (iii) The altitude or flight level ATC advised may be expected in a further clearance.

(3) Leave clearance limit.
   (i) When the clearance limit is at a fix from which an approach begins, commence descent or descent and approach—
      (A) As close as possible to the expect-further-clearance time if one has been received, or
      (B) If one has not been received, as close as possible to the estimated time of arrival as calculated from the filed or amended (with ATC) estimated time en route.
   (ii) If the clearance limit is not a fix from which an approach begins—
      (A) Leave the clearance limit at the expect-further-clearance time if one has been received, or if none has been received, upon arrival over the clearance limit,
      (B) Proceed to a fix from which an approach begins, and
      (C) Commence descent or descent and approach as close as possible to the ETA as calculated from the filed or amended with ATC estimated time en route.

8.9 Passengers and Passenger Handling

8.9.1 All Passenger Carrying Operations

8.9.1.1 Unacceptable Conduct

(a) No person on board may interfere with a crew member in the perform of his or her duties.

(b) Each passenger shall fasten his or her seat belt and keep it fastened while the seat belt sign is lighted.
(c) No person on board an aircraft shall recklessly or negligently act or omit to act in such a manner as to endanger the aircraft or persons and property therein.

(d) No person may secrete him or herself nor secrete cargo on board an aircraft.

(e) No person may smoke while the no-smoking sign is lighted.

(f) No person may smoke in any aeroplane lavatory.

(g) No person may tamper with, disable or destroy any smoke detector installed in any aeroplane lavatory.

8.9.1.2 Refuelling with Passengers on Board

(a) No PIC may allow an aircraft to be refuelled when passengers are embarking, on board or disembarking unless—
   (1) The aircraft is manned by qualified personnel ready to initiate and direct an evacuation; and
   (2) Two-way communication is maintained between the qualified personnel in the aircraft and the ground crew supervising the refuelling.

(b) Helicopters. Unless specifically authorised by the Authority, no person will allow a helicopter to be refuelled when—
   (1) Passengers are embarking, on board, or disembarking; or
   (2) The rotors are turning.

8.9.1.3 Passenger Seats, Safety Belts, and Shoulder Harnesses

(a) The PIC shall ensure that each person on board occupies an approved seat or berth with their own individual safety belt and shoulder harness (if installed) properly secured about them during takeoff and landing.

(b) Each passenger shall have his or her seatbelt securely fastened at any other time the PIC determines it is necessary for safety.

(c) A safety belt provided for the occupant of a seat may not be used during takeoff and landing by more than one person who has reached his or her second birthday.

Note: When cabin crew members are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted prior to takeoff.

8.9.1.4 Passenger Briefing

(a) The PIC shall ensure that crew members and passengers are made familiar, by means of an oral briefing or by other means, with the location and use of the following items, if appropriate—
   (1) Seat belts;
   (2) Emergency exits;
   (3) Life jackets;
   (4) Oxygen dispensing equipment; and
   (5) Other emergency equipment provided for individual use, including passenger emergency briefing cards.

(b) The PIC shall ensure that all persons on board are aware of the locations and general manner of use of the principal emergency equipment carried for collective use.

Note: For commercial air transport operations, the briefing shall contain all subjects approved by the Authority for the specific operations conducted as included in the pertinent Operations Manual.
8.9.1.5 **INFILIGHT EMERGENCY INSTRUCTION**

In an emergency during flight, the PIC shall ensure that all persons on board are instructed in such emergency action as may be appropriate to the circumstances.

*Note: When cabin crew members are required in a commercial air transport operation, the PIC may delegate this responsibility, but shall ascertain that the proper briefing has been conducted.*

8.9.1.6 **PASSENGER OXYGEN: MINIMUM SUPPLY AND USE**

(a) The PIC shall ensure that breathing oxygen and masks are available to passengers in sufficient quantities for all flights at such altitudes where a lack of oxygen might harmfully effect passengers.

(b) The PIC shall ensure that the minimum supply of oxygen prescribed by the Authority is on board the aircraft.

*Note: The requirements for oxygen storage and dispensing apparatus are prescribed in Part 7.*

(c) The PIC shall require all passengers to use oxygen continuously at cabin pressure altitudes above 15,000 feet.

8.9.1.7 **ALCOHOL OR DRUGS**

No person may permit the boarding or serving of any person who appears to be intoxicated or who demonstrates, by manner or physical indications, that that person is under the influence of drugs (except a medical patient under proper care).
8.9.2 **Commercial Air Transport Passenger Carrying Operations**

8.9.2.1 **Passenger Compliance with Instructions**

Each passenger on a commercial air transport flight shall comply with instructions given by a crew member in compliance with this section.

8.9.2.2 **Denial of Transportation**

(a) An AOC holder may deny transportation because a passenger—

(1) Refuses to comply with the instructions regarding exit seating restrictions prescribed by the Authority; or

(2) Has a handicap that can be physically accommodated only by an exit row seat.

8.9.2.3 **Carriage of Persons Without Compliance with These Passenger-Carrying Requirements**

(a) The passenger-carrying requirements of paragraph (b) do not apply when carrying—

(1) A crew member not required for the flight;

(2) A representative of the Authority on official duty;

(3) A person necessary to the safety or security of cargo or animals; or

(4) Any person authorised by the AOC holder’s Operation Manual procedures, as approved by the Authority.

(b) No person may be carried without compliance to the passenger carrying requirements unless—

(1) There is an approved seat with an approved seat belt for that person;

(2) That seat is located so that the occupant is not in any position to interfere with the flight crew members performing their duties;

(3) There is unobstructed access from their seat to the flight deck or a regular or emergency exit;

(4) There is a means for notifying that person when smoking is prohibited and when seat belts shall be fastened; and

(5) That person has been orally briefed by a crew member on the use of emergency equipment and exits.

8.9.2.4 **Cabin Crew Members at Duty Stations**

(a) During taxi, cabin crew members shall remain at their duty stations with safety belts and shoulder harness fastened except to perform duties related to the safety of the aircraft and its occupants.

(b) During takeoff and landing, cabin crew members shall be located as near as practicable to required floor level exits and shall be uniformly distributed throughout the aircraft to provide the most effective egress of passengers in event of an emergency evacuation.

(c) When passengers are on board a parked aircraft, cabin crew members (or another person qualified in emergency evacuation procedures for the aircraft) will be placed in the following manner:

(1) If only one qualified person is required, that person shall be located in accordance with the AOC holder’s Operations Manual procedures.

(2) If more than one qualified person is required, those persons shall be spaced throughout the cabin to provide the most effective assistance for the evacuation in case of an emergency.
8.9.2.5 **Evacuation Capability**

The PIC, SCA and other person assigned by the AOC holder shall ensure that, when passengers are on board the aircraft prior to movement on the surface, at least one floor-level exit provides for egress of passengers through normal or emergency means.

8.9.2.6 **Arming of Automatic Emergency Exits**

No person may cause an aeroplane carrying passengers to be moved on the surface, takeoff or land unless each automatically deployable emergency evacuation assisting means installed on the aircraft is ready for evacuation.

8.9.2.7 **Accessibility of Emergency Exits and Equipment**

No person may allow carry-on baggage or other items to block access to the emergency exits when the aircraft is moving on the surface, during takeoff or landing, or while passengers remain on board.

8.9.2.8 **Stops Where Passengers Remain on Board**

(a) At stops where passengers remain on board the aircraft, the PIC, the SCA, or both shall ensure that—
   1. All engines are shut down;
   2. At least one floor level exit remains open to provide for the deplaning of passengers; and
   3. There is at least one person immediately available who is qualified in the emergency evacuation of the aircraft and who has been identified to the passengers on board as responsible for the passenger safety.

(b) If refuelling with passengers on board, the PIC or a designated company representative shall ensure that the AOC holder’s Operations Manual procedures are followed.

8.9.2.9 **Carrriage of Persons with Reduced Mobility**

(a) No person may allow a person of reduced mobility to occupy seats where their presence could—
   1. Impede the crew in their duties;
   2. Obstruct access to emergency equipment; or
   3. Impede the emergency evacuation of the aircraft.

8.9.2.10 **Exit Row Seating**

No PIC or SCA may allow a passenger to sit in an emergency exit row if the PIC or SCA determine that it is likely that the passenger would be unable to understand and perform the functions necessary to open an exit and to exit rapidly.

*Implement Standard: See Error! Reference source not found. for additional requirements pertaining to exit row seating.*

8.9.2.11 **Prohibition Against Carrriage of Weapons**

No person may, while on board an aircraft being operated in commercial air transport, carry on or about their person a deadly or dangerous weapon, either concealed or unconcealed.

*Note: This section does not apply to officials or employees of the State who are authorised to carry weapons or crew members and other persons authorised by the AOC holder to carry arms.*
8.9.2.12 Oxygen for Medical Use by Passengers

(a) An AOC holder may allow a passenger to carry and operate equipment for the storage, generation or dispensing of medical oxygen only as prescribed by the Authority.

(b) No person may smoke, and no crew member may allow any person to smoke within 10 feet of oxygen storage and dispensing equipment carried for the medical use of a passenger.

(c) No crew member may allow any person to connect or disconnect oxygen dispensing equipment to or from a oxygen cylinder while any other passenger is aboard the aircraft.

8.9.2.13 Carry-on Baggage

(a) No person may allow the boarding of carry-on baggage unless it can be adequately and securely stowed in accordance with the AOC holder’s Operations Manual procedures.

(b) No person may allow aircraft passenger entry doors to be closed in preparation for taxi or pushback unless at least one required crew member has verified that each article of baggage has been properly stowed in overhead racks with approved restraining devices or doors, or in approved locations aft of the bulkhead.

(c) No person may allow carry-on baggage to be stowed in a location that would cause that location to be loaded beyond its maximum placard weight limitation.

Note: The stowage locations shall be capable of restraining the articles in crash impacts severe enough to induce the ultimate inertia forces specified in the emergency landing conditions under which the aircraft was type-certified.

8.9.2.14 Carriage of Cargo in Passenger Compartments

No person may allow the carriage of cargo in the passenger compartment of an aeroplane except as prescribed by the Authority.

Implementing Standard: See Error! Reference source not found. for specific requirements pertaining to carriage of cargo in passenger compartments.

8.9.2.15 Passenger Information Signs

The PIC shall turn on required passenger information signs during any movement on the surface, for each takeoff and each landing, and when otherwise considered to be necessary.

8.9.2.16 Required Passenger Briefings

(a) No person may commence a takeoff unless the passengers are briefed prior to takeoff in accordance with the AOC holder’s Operation Manual procedures on—

(1) Smoking limitations and prohibitions;
(2) Emergency exit location and use;
(3) Use of safety belts;
(4) Emergency floatation means location and use;
(5) Fire extinguisher location and operation;
(6) Placement of seat backs;
(7) If flight is above 12,000 feet MSL, the normal and emergency use of oxygen; and
(8) The passenger briefing card.
(b) Immediately before or immediately after turning the seat belt sign off, the PIC or SCA shall ensure that the passengers are briefed to keep their seat belts fastened while seated, even when the seat belt sign is off.

(c) Before each takeoff, the PIC or SCA shall ensure that any persons of reduced mobility are personally briefed on—
   (1) The route to the most appropriate exit; and
   (2) The time to begin moving to the exit in event of an emergency.

8.9.2.17  PASSENGER BRIEFING: EXTENDED OVERWATER OPERATIONS

No person may commence extended overwater operations unless all passengers have been orally briefed on the location and operations of life preservers, liferafts and other flotation means, including a demonstration of the method of donning and inflating a life preserver.

8.9.2.18  PASSENGER SEAT BELTS

(a) Each passenger occupying a seat or berth shall fasten his or her safety belt and keep it fastened while the "Fasten Seat Belt" sign is lighted or, in aircraft not equipped with such a sign, whenever instructed by the PIC.

(b) No passenger safety belt may be used by more than one occupant during takeoff and landing.

(c) At each unoccupied seat, the safety belt and shoulder harness, if installed, shall be secured so as not to interfere with crew members in the performance of their duties or with the rapid egress of occupants in an emergency.

   Note: A person who has not reached his or her second birthday may be held by an adult who is occupying a seat or berth.

   Note: A berth, such as a multiple lounge or divan seat, may be occupied by two persons provided it is equipped with an approved safety belt for each person and is used during en route flight only.

8.9.2.19  PASSENGER SEAT BACKS

No PIC or SCA may allow the takeoff or landing of an aircraft unless each passenger seat back is in the upright position.

   Note: Exceptions may only be made in accordance with procedures in the AOC holder’s Operations Manual provided the seat back does not obstruct any passenger’s access to the aisle or to any emergency exit.

8.9.2.20  STOWAGE OF FOOD, BEVERAGE AND PASSENGER SERVICE

(a) No PIC or SCA may allow the movement of an aircraft on the surface, takeoff or land—
   (1) When any food, beverage or tableware furnished by the AOC holder is located at any passenger seat; and
   (2) Unless each food and beverage tray and seat back tray table is in the stowed position.

8.9.2.21  SECURING OF ITEMS OF MASS IN PASSENGER COMPARTMENT

(a) No person may allow the takeoff or landing of an aircraft unless each item of mass in the passenger cabin is properly secured to prevent it from becoming a hazard during taxi, takeoff and landing and during turbulent weather conditions.
(b) No person may allow an aircraft to move on the surface, takeoff or land unless each passenger serving cart is secured in its stowed position.
8.10 CREW MEMBER AND FLIGHT OPERATIONS OFFICER QUALIFICATIONS: COMMERCIAL AIR TRANSPORT

8.10.1.1 LIMITATION OF PRIVILEGES OF PILOTS WHO HAVE ATTAINED THEIR 60TH BIRTHDAY AND CURTAILMENT OF PRIVILEGES OF PILOTS WHO HAVE ATTAINED THEIR 65TH BIRTHDAY

(a) No person may serve nor may any AOC holder use a person as a required PIC in single pilot operations on aircraft engaged in international commercial air transport operations if that person has reached their 60th birthday.

(b) For aircraft engaged in international commercial air transport operations requiring more than one pilot as flight crewmembers, the AOC holder may use one pilot up to age 65 provided that the other pilot is less than age 60.

(c) Check airmen who have reached their 65th birthday may continue their check airman functions, but may not serve as or occupy the position of a required pilot flight crewmember on an aeroplane engaged in international commercial air transport operations.

(d) Check airmen who do not hold an appropriate medical certificate may continue their check airman functions, but may not serve as or occupy the position of a required pilot flight crewmember on an aeroplane engaged in commercial air transport operations.

8.10.1.2 PIC LICENSE REQUIREMENTS: TURBOJET, TURBOFAN, OR LARGE AIRCRAFT

No pilot may act as PIC of a turbojet, turbofan, or large aircraft in commercial air transportation operations unless he or she holds an ATP licence and a type rating for that aircraft.

8.10.1.3 PIC LICENCE REQUIREMENTS: NON TURBOJET OR TURBOFAN SMALL AEROPLANES

(a) No pilot may act as PIC of a non-turbojet or turbofan small aircraft in commercial air transport during—

   (1) IFR operations unless he or she holds a commercial pilot licence with appropriate category and class ratings for the aircraft operated, and an instrument rating and meets the experience requirements for the operation, or

   (2) Day VFR operations unless he or she holds a commercial pilot licence with appropriate category and class ratings for the aircraft operated.

8.10.1.4 PIC AERONAUTICAL EXPERIENCE: SMALL AEROPLANES

(a) No pilot may act as PIC of a small aeroplane in commercial air transport during—

   (1) IFR operations unless he or she meets the minimum aeronautical experience requirements necessary to qualify for the ATP licence, or

   (2) VFR operations unless he or she has logged a minimum of 500 hours of time as a pilot, including at least 100 hours of cross-country flight time including 25 hours of which were at night.

8.10.1.5 SIC LICENCE REQUIREMENTS

(a) No pilot may act as SIC of an aircraft in commercial air transport operations unless he or she—

   (1) Holds a commercial pilot licence with appropriate category and class ratings for the aircraft operated; and
(2) Holds an instrument rating.

8.10.1.6 FE LICENCE REQUIREMENTS
No person may act as the flight engineer of an aircraft unless he or she holds a flight engineer licence with the appropriate class rating.

8.10.1.7 ONE PILOT QUALIFIED TO PERFORM FE FUNCTIONS
The AOC holder shall ensure that, on all flights requiring a flight engineer, there is assigned at least one other flight crew member qualified to perform the FE duties in the event the FE becomes incapacitated.

8.10.1.8 PERSONS QUALIFIED TO FLIGHT RELEASE
(a) No person may act as a flight operations officer in releasing a scheduled passenger-carrying commercial air transport operation unless that person—
   (1) Holds a flight operations officer licence or an ATP rating; and
   (2) Is currently qualified with the AOC holder for the operation and type of aircraft used.

8.10.1.9 COMPANY PROCEDURES INDOCTRINATION
No person may serve nor may any AOC holder use a person as a crew member or flight operations officer/flight dispatcher unless that person has completed the company procedures indoctrination curriculum approved by the Authority, which shall include a complete review of operations manual procedures pertinent to the crew member or flight operation officer’s duties.

Implementing Standard: See Error! Reference source not found. for knowledge area and programme hour requirements.

8.10.1.10 INITIAL DANGEROUS GOODS TRAINING
No person may serve nor may any AOC holder use a person as a crew member unless he or she has completed the appropriate initial dangerous goods curriculum approved by the Authority.

Implementing Standard: See IS:8.10.1.10 for specific course curriculum requirements.

8.10.1.11 INITIAL SECURITY TRAINING
No person may serve nor may any AOC holder use a person as a crew member unless he or she has completed the initial security curriculum approved by the Authority.

8.10.1.12 INITIAL CREW RESOURCE MANAGEMENT
No person may serve nor may any AOC holder use a person as a flight operations officer or crew member or flight operations officer unless that person has completed the initial CRM curriculum approved by the Authority.

Implementing Standard: IS:8.10.1.12 for course curriculum topics.

8.10.1.13 INITIAL EMERGENCY EQUIPMENT DRILLS
No person may serve nor may any AOC holder use a person as a crew member unless that person has completed the appropriate initial emergency equipment curriculum and drills for the crew member position approved by the Authority for the emergency equipment available on the aircraft to be operated.
8.10.1.14 Initial Aircraft Ground Training

(a) No person may serve nor may any AOC holder use a person as a crew member or flight operations officer unless he or she has completed the initial ground training approved by the Authority for the aircraft type.

(b) Initial aircraft ground training for flight crew members shall include the pertinent portions of the operations manuals relating to aircraft-specific performance, mass and balance, operational policies, systems, limitations, normal, abnormal and emergency procedures on the aircraft type to be used.

Implementation Standard: See IS:8.10.1.14(b) for specific course curriculum requirements for flight crew members.

Note: The AOC holder may have separate initial aircraft ground training curricula of varying lengths and subject emphasis which recognise the experience levels of flight crew members approved by the Authority.

(c) For cabin crew members, initial aircraft ground training shall include the pertinent portions of the operations manuals relating to aircraft-specific configuration, equipment, normal and emergency procedures for the aircraft types within the fleet.

Implementation Standard: See IS:8.10.1.14 (c) for specific course curriculum requirements for cabin crew members.

(d) For flight operations officers, aircraft initial ground training shall include the pertinent portions of the operations manuals relating to aircraft-specific flight preparation procedures, performance, mass and balance, systems, limitations for the aircraft types within the fleet.

Implementation Standard: See IS:8.10.1.14 (d) for specific course curriculum requirements for flight operations officers.

8.10.1.15 Initial Aircraft Flight Training

(a) No person may serve nor may any AOC holder use a person as a flight crew member unless he or she has completed the initial flight training approved by the Authority for the aircraft type.

(b) Initial flight training shall focus on the manoeuvring and safe operation of the aircraft in accordance with AOC holder’s normal, abnormal and emergency procedures.

(c) An AOC holder may have separate initial flight training curriculum which recognise the experience levels of flight crew members approved by the Authority.

Implementation Standard: See IS:8.10.1.15 for specific flight curriculum.

8.10.1.16 Initial Specialised Operations Training

(a) No person may serve nor may any AOC holder use a person as a flight crew member unless he or she has completed the appropriate initial specialised operations training curriculum approved by the Authority.

(b) Specialised operations for which initial training curricula shall be developed include—

1) Low minimums operations, including low visibility takeoffs and Category II and III operations;
2) Extended range operations;
3) Specialised navigation; and
4) PIC right seat qualification.

Implementation Standard: See IS:8.10.1.16 for specific initial specialised operations training curriculum.
8.10.1.17 Aircraft Differences

No person may serve nor may any AOC holder use a person as a flight operations officer or crew member on an aircraft of a type for which a differences curriculum is included in the AOC holder's approved training program, unless that person has satisfactorily completed that curriculum, with respect to both the crew member position and the particular variant of that aircraft.

*Implementing Standard:* See IS:8.10.1.17 for aircraft differences training pertaining to flight operations officers.

8.10.1.18 Use of Simulators

(a) Each aeroplane simulator and other training device that is used for flight crew member qualification shall—

(1) Be specifically approved by the Authority for—

(i) The AOC holder;
(ii) The type aeroplane, including type variations, for which the training or check is being conducted;
(iii) The particular manoeuvre, procedure, or crew member function involved;

(2) Maintain the performance, functional, and other characteristics that are required for approval;

(3) Be modified to conform with any modification to the aeroplane being simulated that results in changes to performance, functional, or other characteristics required for approval;

(4) Be given a daily functional pre-flight check before use; and

(5) Have a daily discrepancy log kept by the appropriate instructor or check airman at the end of each training or check flight.

8.10.1.19 Introduction of New Equipment or Procedures

No person may serve nor may any AOC holder use a person as a flight crew member when that service would require expertise in the use of new equipment or procedures for which a curriculum is included in the AOC holder's approved training program, unless that person has satisfactorily completed that curriculum, with respect to both the crew member position and the particular variant of that aircraft.

8.10.1.20 Aircraft Proficiency Checks

(a) No person may serve nor may any AOC holder use a person as a pilot flight crew member unless, since the beginning of the 6th calendar month before that service, that person has passed the proficiency check prescribed by the Authority in the make and model aircraft on which their services are required.

Note: For a pilot operating VFR only, the proficiency check shall exclude instrument procedures and maneuvers as appropriate.

*Implementing standard:* See IS: 8.10.1.20 for specific operation and procedures pertaining to the proficiency checks.

8.10.1.21 Re-establishing Recency of Experience: Pilot

(a) In addition to meeting all applicable training and checking requirements, a required pilot flight crew member who, in the preceding 90 days has not made at least three takeoffs and landings in the type
aeroplane in which that person is to serve, shall, under the supervision of a check airman, re-establish recency of experience as follows:

(1) Make at least three takeoffs and landings in the type aeroplane in which that person is to serve or in a qualified simulator.

(2) Make at least one takeoff with a simulated failure of the most critical powerplant, one landing from the minimum ILS authorised for the AOC holder, and one landing to a full stop.

(b) When using a simulator to accomplish any of the takeoff and landing training requirements necessary to re-establish recency of experience, each required flight crew member position shall be occupied by an appropriately qualified person and the simulator shall be operated as if in a normal in-flight environment without use of the repositioning features of the simulator.

(c) A check airman who observes the takeoffs and landings of a pilot flight crew member shall certify that the person being observed is proficient and qualified to perform flight duty in operations and may require any additional manoeuvres that are determined necessary to make this certifying statement.

8.10.1.22 PAIRING OF LOW EXPERIENCE CREW MEMBERS

(a) If an SIC has fewer than 100 hours of flight time in the type aeroplane being flown in commercial air transport, and the PIC is not an appropriately qualified check pilot, the PIC shall make all takeoffs and landings in situations designated as critical by the Authority.

(b) No PIC or SIC may conduct operations for a type aeroplane in commercial air transport unless either pilot has at least 75 hours of line operating flight time, either as PIC or SIC.

(c) The Authority may, upon application by the AOC holder, authorise deviations from paragraph (b) by an appropriate amendment to the operations specifications in any of the circumstances identified in IS:8.10.1.22.

Implementing Standard: See IS:8.10.1.22 for those situations designated as critical by the Authority and for circumstances authorising a deviation from paragraph (b).

8.10.1.23 FLIGHT ENGINEER PROFICIENCY CHECKS

(a) No person may serve nor may any AOC holder use a person as a flight engineer on an aeroplane unless within the preceding 6 calendar months he or she has—

(1) Had a proficiency check in accordance with the requirements prescribed by the Authority; or

(2) 50 hours flight time with an AOC holder as flight engineer in the type aeroplane.

Implementing Standard: See IS:8.10.1.21 for specific procedures used in FE proficiency checks.

8.10.1.24 COMPETENCE CHECKS: CABIN CREW MEMBERS

No person may serve nor may any AOC holder use a person as a cabin crew member unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check prescribed by the Authority performing the emergency duties appropriate to that person’s assignment.

Implementing Standard: See IS:8.10.1.24 for specific procedures used in cabin crew member competence checks.

8.10.1.25 COMPETENCE CHECKS: FLIGHT OPERATIONS OFFICERS

No person may serve nor may any AOC holder use a person as a flight operations officer unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check,
prescribed by the Authority, performing the flight preparation and subsequent duties appropriate to that person's assignment.

Implementing Standard: See IS:8.10.1.25 for specific procedures used in flight operation officer competence checks.

8.10.1.26 Supervised Line Flying: Pilots

(a) Each pilot initially qualifying as PIC shall complete a minimum of 10 flights performing the duties of a PIC under the supervision of a check airman.

(b) Each PIC transitioning to a new aircraft type shall complete a minimum of 5 flights performing the duties of a PIC under the supervision of a check airman.

(c) Each pilot qualifying for duties other than PIC shall complete a minimum of 5 flights performing those duties under the supervision of a check airman.

(d) During the time that a qualifying PIC is acquiring operating experience, a check pilot who is also serving as the PIC shall occupy a pilot station.

(e) In the case of a transitioning PIC, the check pilot serving as PIC may occupy the observer's seat if the transitioning pilot has made at least two takeoffs and landings in the type aeroplane used, and has satisfactorily demonstrated to the check pilot that he is qualified to perform the duties of a PIC for that type of aeroplane.

8.10.1.27 Supervised Line Flying: Flight Engineers

Each person qualifying as a flight engineer for an aircraft type shall perform those functions for a minimum of five flights under the supervision of a check airman or a qualified flight engineer.

8.10.1.28 Supervised Line Experience: Cabin Crew Members

Each person qualifying as a cabin crew member shall perform those functions for a minimum of two flights under the supervision of a senior cabin crew member.

Note: While qualifying, this person may not be a required crew member.

8.10.1.29 Line Observations: Flight Operations Officers

No person may serve nor may any AOC holder use a person as a flight operations officer unless, since the beginning of the 12th calendar month before that service, that person has observed, on the flight deck, the conduct of two complete flights over routes representative of those for which that person is assigned duties.

8.10.1.30 Route and Area Checks: Pilot Qualification

(a) No person may serve nor may any AOC holder use a person as a pilot unless, within the preceding 12 calendar months, that person has passed a route check in which he or she satisfactorily performed their assigned duties in one of the types of aeroplanes they are to fly.

(b) No person may perform PIC duties over a designated special operational area that requires a special navigation system or procedures or in ETOPS operations unless their competency with the system and procedures has been demonstrated to the AOC holder within the past 12 calendar months.

(c) Each PIC shall demonstrate special operational competency by navigation over the route or area as PIC under the supervision of a check airman and, on a continuing basis, by flights performing PIC duties.
(d) No person may serve nor may any AOC holder use a person as PIC for operations into aerodromes outside a 75 nautical miles radius of the Cheddi Jagan International Airport – Timehri unless the pilot has logged at least 200 hours of flight time operating into such aerodromes with a qualified pilot.

8.10.1.31 PIC Low Minimums Authorisation

(a) Until a PIC has 15 flights performing PIC duties in the aircraft type (which included 5 approaches to landing using Category I or II procedures), he or she may not plan for or initiate an instrument approach when the ceiling is less than 300 feet and the visibility less than 1 mile.

(b) Until a PIC has 20 flights performing PIC duties in the aircraft type (which included 5 approach and landing using Category III procedures), he or she may not plan for or initiate an approach when the ceiling is less than 100 feet or the visibility is less than 1200 RVR.

8.10.1.32 Designated Special Aerodromes and Heliports: PIC Qualification

(a) No person may serve nor may any AOC holder use a person as PIC for operations at designated special aerodromes and heliports unless within the preceding 12 calendar months—

1. The PIC has been qualified by the AOC holder through a pictorial means acceptable to the [AUTHORITY] for that aerodrome; or
2. The PIC or the assigned SIC has made a takeoff and landing at that aerodrome while serving as a flight crew member for the AOC holder.

(b) Designated special aerodrome and heliport limitations are not applicable if the operation will occur—

1. During daylight hours;
2. When the visibility is at least 3 miles; and
3. When the ceiling at that aerodrome is at least 1000 feet above the lowest initial approach altitude prescribed for an instrument approach procedure.

(c) No person may serve nor may any AOC holder use a person as PIC for operations into any aerodrome with runway length less than 2000 feet unless that pilot has been checked into that aerodrome by the chief pilot or an approved pilot and the pilot's log has been endorsed by the 'checking pilot.'

8.10.1.33 Recurrent Training: Flight Crew Members

(a) No person may serve nor may any AOC holder use a person as a flight crew member unless within the preceding 12 calendar months that person has completed the recurrent ground and flight training curricula approved by with the Authority.

(b) The recurrent ground training shall include training on—

1. Aircraft systems and limitations and normal, abnormal and emergency procedures;
2. Emergency equipment and drills;
3. Crew resource management;
4. Recognition or transportation of dangerous goods; and
5. Security training.

(c) The recurrent flight training curriculum shall include—

1. Manoeuvring and safe operation of the aircraft in accordance with AOC holder’s normal, abnormal and emergency procedures;
2. Manoeuvres and procedures necessary for avoidance of in-flight hazards; and
3. For authorised pilots, at least one low visibility takeoff to the lowest applicable minimum LVTO and two approaches to the lowest approved minimums for the AOC holder, one of which is to be a missed approach.
Implementing Standard: See IS:8.10.1.33 for detailed recurrent training requirements.

Note: Satisfactory completion of a proficiency check with the AOC holder for the type aircraft and operation to be conducted may be used in lieu of recurrent flight training.

8.10.1.34 Recurrent Training: Cabin Crew Members

(a) No person may serve nor may any AOC holder use a person as a cabin crew member unless within the preceding 12 calendar months that person has completed the recurrent ground curricula approved by the Authority.
(b) The recurrent ground training shall include training on—
   (1) Aircraft-specific configuration, equipment and procedures;
   (2) Emergency and first aid equipment and drills;
   (3) Crew resource management;
   (4) Recognition or transportation of dangerous goods; and
   (5) Security training.

   Implementing Standard: See IS:8.10.1.34 for specific emergency program training requirements for cabin crew members.

8.10.1.35 RECURRENT TRAINING: FLIGHT OPERATIONS OFFICERS

   (a) No person may serve nor may any AOC holder use a person as a flight operations officer unless within the preceding 12 calendar months that person has completed the recurrent ground curricula approved by the Authority.

   (b) The recurrent ground training shall include training on—
       (1) Aircraft-specific flight preparation;
       (2) Crew resource management; and
       (3) Recognition or transportation of dangerous goods.

   Implementing Standard: See IS:8.10.1.35 for specific program training requirements for flight operations officers.

8.10.1.36 CHECK AIRMAN TRAINING

   No person may serve nor may any AOC holder use a person as a check airman unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

   Implementing Standard: See IS:8.10.1.36 for specific training program requirements for check airmen.

8.10.1.37 FLIGHT INSTRUCTOR TRAINING

   No person may serve nor may any AOC holder use a person as an instructor unless he or she has completed the curricula approved by the Authority for those functions for which they are to serve.

   Implementing Standard: See IS:8.10.1.37 for specific training program requirements for instructor.
8.10.1.38 **Flight Instructor Qualifications**

(a) No AOC holder may use a person nor may any person serve as a flight instructor in an established training program unless, with respect to the aeroplane type involved, that person—

1. Holds the airman licences and rating required to serve as a PIC, a flight engineer, or a flight navigator, as applicable;
2. Has satisfactorily completed the appropriate training phases for the aeroplane, including recurrent training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable;
3. Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, flight engineer, or flight navigator, as applicable;
4. Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check; and
5. Holds at least a Class III medical certificate unless serving as a required crew member, in which case holds a Class I or a Class II medical certificate as appropriate.

8.10.1.39 **Check Airman Pilot Qualifications**

(a) No AOC holder may use a person, nor may any person serve as a check airman in an established training program unless, with respect to the aeroplane type involved, that person—

1. Holds the airman licences and ratings required to serve as a PIC, a flight engineer, or a flight navigator, as applicable;
2. Has satisfactorily completed the appropriate training phases for the aeroplane, including recurrent training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable;
3. Has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC, flight engineer, or flight navigator, as applicable;
4. Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check;
5. Holds at least a Class III medical certificate unless serving as a required crew member, in which case holds a Class I or a Class II medical certificate as appropriate; and
6. Has been approved by the Authority for the check airman duties involved.

8.10.1.40 **Check Airman Designation**

No person may serve nor may any AOC holder use a person as a check airman for any flight check unless that person has been designated by name and approved function by the Authority within the preceding 12 calendar months.

8.10.1.41 **Check Airman Limitations**

(a) No person may serve nor may any AOC holder use a person as a check airman for any check—

1. In an aircraft as a required pilot flight crew member unless that person holds the required airman licences and ratings and has completed for the AOC holder all applicable training, qualification and currency requirements of this Part applicable to the crew position and the flight operations being checked;
2. In an aircraft as an observer check airman unless that person holds the airman licences and ratings and has completed all applicable training, qualification and line observation requirements of this Part applicable to the position and the flight operations being checked; or
(3) In a simulator unless that person has completed or observed with the AOC holder all training, qualification and line observation requirements of this Part applicable to the position and flight operations being checked.

8.10.1.42 SUBSTITUTION OF SIMULATOR EXPERIENCE

(a) No AOC holder may use a simulator for training or checking unless that simulator has been specifically approved for the AOC holder in writing by the Authority.

(b) No AOC holder may use a simulator for any purpose other than that specified in the Authority's approval.

8.10.1.43 LINE QUALIFICATION: CHECK AIRMAN AND INSTRUCTOR

(a) No person may serve nor may any AOC holder use a person as a check airman or simulator instructor unless, since the beginning of the 12th calendar month before that service, that person has—
   (1) Flown at least 5 flights as a required crew member for the type of aircraft involved; or
   (2) Observed, on the flight deck, the conduct of 2 complete flights in the aircraft type to which the person is assigned.

8.10.1.44 TERMINATION OF A PROFICIENCY, COMPETENCE OR LINE CHECK

If it is necessary to terminate a check for any reason, the AOC holder may not use the crew member or flight operations officer in commercial air transport operations until the completion of a satisfactory recheck.

8.10.1.45 RECORDING OF CREW MEMBER QUALIFICATIONS

(a) The AOC holder shall record in its records maintained for each crew member and flight operations officer, the completion of each of the qualifications required by this Part.

(b) A pilot may complete the curricula required by this Part may be accomplished concurrently or intermixed with other required curricula, but completion of each of these curricula shall be recorded separately.

8.10.1.46 MONITORING OF TRAINING AND CHECKING ACTIVITIES

(a) To enable adequate supervision of its training and checking activities, the AOC holder shall forward to the Authority at least 24 hours prior to the scheduled activity the dates, report times and report location of all—
   (1) Training for which a curriculum is approved in the AOC holder’s training program; and
   (2) Proficiency, competence and line checks.

(b) Failure to provide the information required by paragraph (a) may invalidate the training or check and the Authority may require that it be repeated for observation purposes.

8.10.1.47 ELIGIBILITY PERIOD

(a) Crew members who are required to take a proficiency check, a test or competency check, or recurrent training to maintain qualification for commercial air transport operations may complete those requirements at any time during the eligibility period.

(b) The eligibility period is defined as the three calendar month period including the month-prior, the month-due, and the month-after any due date specified by this subsection.

(c) Completion of the requirement at any time during the period shall be considered as completed in the month-due for calculation of the next due date.
8.10.1.48 REDUCTIONS IN REQUIREMENTS

(a) The Authority may authorise reductions in, or waive, certain portions of the training requirements of this subpart, taking into account the previous experience of the crew members.

(b) Any AOC holder request for reduction or waiver shall be made in writing and outline the basis under which the request is made.

(c) If the request was for a specific crew member, the correspondence from the Authority authorising the reduction and the basis for it shall be filed in the record the AOC holder maintains for that crew member.

(d) A person who progresses successfully through flight training, is recommended by their instructor or a check airman, and successfully completes the appropriate flight check for a check airman, or is permitted by the Authority, to complete a course in less than programmed time, need not complete the programmed hours of flight training for the particular aeroplane.

Note: Whenever the Authority finds that 20 percent of the flight checks given at a particular training base during the previous 6 months are unsuccessful, this method of approval will not be used by the AOC holder at that base until the Authority finds that the effectiveness of the flight training there has improved.
8.11 REST PERIODS, DUTY, AND FLIGHT TIME: COMMERCIAL AIR TRANSPORT

8.11.1 APPLICABILITY
This section is applicable to the rest, duty and flight time of critical personnel engaged in commercial air transport flight operations.

8.11.2 COMPLIANCE WITH SCHEDULING REQUIREMENTS
(a) The Authority will consider a person in compliance with prescribed standards if he or she exceeds the prescribed flight duty limitations when—
   (1) The flight is scheduled and normally terminates within the prescribed limitations; but
   (2) Due to circumstances beyond the control of the AOC holder (such as adverse weather conditions) are not expected at the time of departure to reach the destination within the scheduled time.
(b) The Authority will consider a person in compliance with prescribed duty limitations, if he or she exceeds those limitations during an emergency or adverse situations beyond the control of the AOC holder.

8.11.3 DUTY AND REST PERIODS
(a) With respect to duty periods, no AOC holder may schedule:
   (1) A flight crew member for more than 16 hours of duty, except as prescribed in IS:8.11.1.13.
   (2) A flight crew member for more than 8 hours of flight deck duty in any 24 consecutive hours, except as prescribed in the implementing standards.
   (3) A cabin crew member for more than 14 consecutive hours of duty, except as prescribed in the implementing standards.
   (4) A dispatcher for more than 10 consecutive hours of duty within a 24 consecutive hour period, unless he or she is given an intervening rest period.

   Note: A person is considered to be on duty if they are performing any tasks on behalf of the AOC holder, whether scheduled, requested or self initiated.

(b) If an AOC holder requires a flight crew member to engage in deadhead transportation for more than 4 hours, one half of that time shall be treated as duty time, unless they are given 10 hours of rest on the ground before being assigned to flight duty.

(c) With respect to rest periods, no AOC holder may assign, nor may any person—
   (1) Perform duties in commercial air transport unless that person has had at least the minimum rest period applicable to those duties as prescribed in IS:8.11.1.3; or
   (2) Accept an assignment to any duty with the AOC holder during any required rest period.

   Note: The minimum rest period is considered to be 8 consecutive hours.

(d) The AOC holder may exercise the option to reduce a crew member’s rest period as provided in the implementing standards, which will require that the crew member’s next rest period be longer.

(e) The AOC holder shall relieve the flight crew member, flight operations officer, or cabin crew member from all duties for 24 consecutive hours during any 7 consecutive day period.
Note: Time spent in transportation, not local in character, that is required by the AOC holder to position crew members to or from flights is not considered part of a rest period.

Note: Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crew member’s home station is not considered part of a rest period.

Implementing Standard: See IS:8.11.1.3 for a table consolidating all scheduling and actual event requirements.

8.11.1.4 Duty Aloft

(a) The Authority will consider all time spent on an aircraft as an assigned or relief flight crew member, whether resting or performing tasks to be duty aloft.

(b) The Authority will consider a flight crew member to be on continuous duty aloft unless he or she receives a rest period of 9 consecutive hours on the ground.

(c) Each AOC holder shall provide adequate sleeping quarters, including a berth, on the aeroplane whenever a flight crew member is scheduled to be aloft for more than 12 hours during any 24 consecutive hours.

8.11.1.5 Maximum Number of Flight Time Hours

No AOC holder may schedule any flight crew member and no flight crew member may accept an assignment for flight time in commercial air transport, if that crew member’s total flight time or duty aloft in commercial flying will exceed the limitations prescribed in the implementing standards.

Implementing Standard: See IS:8.11.1.5 tables showing maximum flight time hours.

8.11.1.6 Special Flight Duty Schemes

(a) The Authority may approve a special flight duty scheme for an AOC holder.

(b) An AOC holder may elect to apply the flight crew member flight duty and rest requirements to the cabin crew members.
8.12 FLIGHT RELEASE: COMMERCIAL AIR TRANSPORT

8.12.1.1 APPLICABILITY
This Subpart is applicable to an AOC holder and the person designated by the AOC holder to issue a flight release.

8.12.1.2 QUALIFIED PERSONS REQUIRED FOR OPERATIONAL CONTROL FUNCTIONS
(a) A qualified person shall be designated by the AOC holder to exercise the functions and responsibilities for operational control of each flight in commercial air transport.

(b) For passenger-carrying flights conducted on a published schedule, a licensed and qualified flight operations officer or equivalently qualified person shall be on-duty at an operations base to perform the operational control functions.

(c) For all other flights, the qualified person exercising operational control responsibilities shall be available for consultation prior to, during and immediately following the flight operation.

(d) For all flights, the PIC shares in the responsibility for operational control of the aircraft and has the situational authority to make decisions regarding operational control issues in-flight.

1) Where a decision of the PIC differs from that recommended, the person making the recommendation shall make a record of the associated facts.

8.12.1.3 FUNCTIONS ASSOCIATED WITH OPERATIONAL CONTROL
(a) The person exercising responsibility for operational control for an AOC holder shall—

1) Authorise the specific flight operation;

2) Ensure that an airworthy aircraft properly equipped for the flight is available;

3) Ensure that qualified personnel and adequate facilities are available to support and conduct the flight;

4) Ensure that proper flight planning and preparation is made;

5) Ensure that flight locating and flight following procedures are followed; and

6) For scheduled, passenger-carrying flights, ensure the monitoring of the progress of the flight and the provision of information that may be necessary to safety.

8.12.1.4 OPERATIONAL CONTROL DUTIES
(a) For passenger-carrying flights conducted on a published schedule, the qualified person performing the duties of a flight operations officer shall—

1) Assist the PIC in flight preparation and provide the relevant information required;

2) Assist the PIC in preparing the operational and ATC flight plans;

3) Sign the dispatch copy of the flight release;

4) Furnish the PIC while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight; and

5) In the event of an emergency, initiate the applicable procedures contained in the AOC holder's operations manual.

(b) A qualified person performing the operational control duties shall avoid taking any action that would conflict with the procedures established by—

1) Air traffic control;
(2) The meteorological service;
(3) The communications service; or
(4) AOC holder.

8.12.1.5 CONTENTS OF A FLIGHT RELEASE/OPERATIONAL FLIGHT PLAN
(a) The flight release/operational flight plan must contain at least the following information concerning each flight:
   (1) Company or organisation name.
   (2) Make, model, and registration number of the aircraft being used.
   (3) Flight or trip number, and date of flight.
   (4) Name of each flight crew member, cabin crew member, and PIC.
   (5) Departure aerodrome, destination aerodromes, alternate aerodromes, and route.
   (6) Minimum fuel supply (in gallons or pounds).
   (7) A statement of the type of operation (e.g., IFR, VFR).
   (8) The latest available weather reports and forecasts for the destination aerodrome and alternate aerodromes.
   (9) Any additional available weather information that the PIC considers necessary.

8.12.1.6 FLIGHT RELEASE: AIRCRAFT REQUIREMENTS
(a) No person may issue a flight release for a commercial air transport operation unless the aircraft is airworthy and properly equipped for the intended flight operation.
(b) No person may issue a flight release for a commercial air transport operation using an aircraft with inoperative instruments and equipment installed, except as specified in the Minimum Equipment List approved for the AOC holder for that type aircraft.

8.12.1.7 FLIGHT RELEASE: FACILITIES AND NOTAMS
(a) No person may release an aircraft over any route or route segment unless there are adequate communications and navigational facilities in satisfactory operating condition as necessary to conduct the flight safely.
(b) The flight operations officer shall ensure that the PIC is provided all available current reports or information on aerodrome conditions and irregularities of navigation facilities that may effect the safety of the flight.

Note: For their review of the operational flight plan, the PIC will be provided with all available NOTAMs with respect to the routing, facilities and aerodromes.

8.12.1.8 FLIGHT RELEASE: WEATHER REPORTS AND FORECASTS
(a) No person may release a flight unless he or she is thoroughly familiar with reported and forecast weather conditions on the route to be flown.
(b) No person may release a flight unless he or she has communicated all information and reservations they may have regarding weather reports and forecasts to the PIC.
8.12.1.9 **Flight Release in Icing Conditions**

(a) No person may release an aircraft, when in their opinion or that of the PIC, the icing conditions that may be expected or are met exceed that for which the aircraft is certified and has sufficient operational de-icing or anti-icing equipment.

(b) No person may release an aircraft any time conditions are such that frost, ice or snow may reasonably be expected to adhere to the aircraft, unless there is the available to the PIC at the aerodrome of departure adequate facilities and equipment to accomplish the procedures approved for the AOC holder by the Authority for ground de-icing and anti-icing.

8.12.1.10 **Flight Release under VFR or IFR**

No person may release a flight under VFR or IFR unless the weather reports and forecasts indicated that the flight can reasonably be expected to be completed as specified in the release.

8.12.1.11 **Flight Release: Minimum Fuel Supply**

No person may issue a flight release for a commercial air transport operation unless the fuel supply specified in the release is equivalent to or greater than the minimum flight planning requirements of this Part, including anticipated contingencies.

8.12.1.12 **Flight Release: Aircraft Loading and Performance**

(a) No person may issue a flight release unless he or she is familiar with the anticipated loading of the aircraft and is reasonably certain that the proposed operation will not exceed the—

(1) Centre of gravity limits;
(2) Aircraft operating limitations; and
(3) Minimum performance requirements.

8.12.1.13 **Flight Release: Amendment or Re-release En Route**

(a) Each person who amends a flight release while the flight is en route shall record that amendment.

(b) No person may amend the original flight release to change the destination or alternate aerodrome while the aircraft is en route unless the flight preparation requirements for routing, aerodrome selection and minimum fuel supply are met at the time of amendment or re-release.

(c) No person may allow a flight to continue to an aerodrome to which it has been released if the weather reports and forecasts indicate changes which would render that aerodrome unsuitable for the original flight release.

8.12.1.14 **Flight Release with Airborne Weather Radar Equipment**

No person may release a large aeroplane carrying passengers under IFR or night VFR conditions when current weather...include the word 'Pressurized' between ‘a’ and ‘large’, and remove the words ‘under IFR or night VFR’ and replaced with ‘at night or under instrument meteorological’.
IS: 8.2.1.5  **Inoperative Instruments and Equipment**

(a) This implementing standard authorises flight operations with inoperative instruments and equipment installed in situations where no master minimum equipment list (MMEL) is available and no MEL is required for the specific aircraft operation under these regulations.

(b) The inoperative instruments and equipment may not be—

1. Part of the VFR-day instruments and equipment prescribed in Part 7;
2. Required on the aircraft’s equipment list or the operations equipment list for the kind of flight operation being conducted;
3. Required by Part 7 for the specific kind of flight operation being conducted; or
4. Required to be operational by an airworthiness directive.

(c) To be eligible for these provisions, the inoperative instruments and equipment shall be—

1. Determined by the PIC not to be a hazard to safe operation;
2. Deactivated and placarded *Inoperative*; and

   *Note: If deactivation of the inoperative instrument or equipment involves maintenance, it must be accomplished and recorded in accordance with Part 5.*

3. Removed from the aircraft, the flight deck control placarded and the maintenance recorded in accordance with Part 5.

(d) The following instruments and equipment may not be included in the MEL:

1. Instruments and equipment that are either specifically or otherwise required by the certification airworthiness requirements and which are essential for safe operations under all operating conditions.
2. Instruments and equipment required for operable condition by an airworthiness directive, unless the airworthiness directive provides otherwise.
3. Instruments and equipment required for specific operations.

   *Note: The required instruments and equipment for specific operations are listed in Part 7.*

IS: 8.2.1.6  **Use of Narcotics, Drugs or Intoxicating Liquor**

(a) Whenever there is a reasonable basis to believe that a person may not be in compliance with Error! Reference source not found. 8.5.1.5 and upon the request of the Authority, that person shall furnish the Authority or authorise any clinic, doctor, or other person to release to the Authority, the results of each blood test taken for presence of alcohol or narcotic substances up to 8 hours before or immediately after acting or attempting to act as a crew members.

(b) Any test information provided to the Authority under the provisions of this section may be used as evidence in any legal proceeding.

IS: 8.2.1.7  **Flight Crew Members at Duty Stations**

(a) A required flight crew member may leave the assigned duty station if the crew member is taking a rest period, and relief is provided—

1. For the assigned PIC during the en route cruise portion of the flight by a pilot who holds an airline transport pilot licence and an appropriate type rating, and who is currently qualified as PIC or SIC, and is qualified as PIC of that aircraft during the en route cruise portion of the flight; and
2. In the case of the assigned SIC, by a pilot qualified to act as PIC or SIC of that aircraft during en route operations.
IS:8.8.1.9 CATEGORY II MANUAL

(a) Application for approval. An applicant for approval of a Category II manual or an amendment to an approved Category II manual shall submit the proposed manual or amendment to the Authority. If the application requests an evaluation program, it shall include the following:

1. The location of the aircraft and the place where the demonstrations are to be conducted; and
2. The date the demonstrations are to commence (at least 10 days after filing the application).

(b) Contents. Each Category II manual must contain:

1. The registration number, make, and model of the aircraft to which it applies;
2. A maintenance program; and
3. The procedures and instructions related to recognition of DH, use of runway visual range information, approach monitoring, the decision region (the region between the middle marker and the decision height), the maximum permissible deviations of the basic ILS indicator within the decision region, a missed approach, use of airborne low approach equipment, minimum altitude for the use of the autopilot, instrument and equipment failure warning systems, instrument failure, and other procedures, instructions, and limitations that may be found necessary by the Authority.

IS:8.8.1.4 ALTIMETER SETTINGS

The lowest usable flight level is determined by the atmospheric pressure in the area of operation as follows:

a) For flights within the Timehri TMA (30NM radius centred TIM/DME) as determined by Timehri approach control based on current altimeter settings.

b) For flights within the CTA (75NM radius centred TIM/DME) as determined by Georgetown ACC, based on current altimeter settings.

c) For flights along ATS routes as published on enroute charts.

IS:8.8.2.11 UNIVERSAL AVIATION SIGNALS

(a) Distress signals. The following signals, used either together or separately, mean that grave and imminent danger threatens, and immediate assistance is requested:

Note: None of the provisions in this section shall prevent the use, by an aircraft in distress, of any means at its disposal to attract attention, make known its position and obtain help.

Note: For full details of telecommunication transmission procedures for the distress and urgency signals, see ICAO Annex 10, Volume II, Chapter 5.

Note: For details of the search and rescue visual signals, see ICAO Annex 12.

1. A signal made by radiotelegraphy or by any other signalling method consisting of the group SOS (• • • — — — • • •• • •• in the Morse Code);

2. A signal sent by radiotelephony consisting of the spoken word MAYDAY;

3. Rockets or shells throwing red lights, fired one at a time at short intervals;

4. A parachute flare showing a red light.

Note: Article 41 of the ITU Radio Regulations (Nos. 3268, 3270 and 3271 refer) provides information on the alarm signals for actuating radiotelegraph and radiotelephone auto-alarm systems: 3268 The radiotelegraph alarm signal consists of a series of twelve dashes sent in one minute, the duration of each dash being four seconds and the duration of the interval between consecutive dashes one second. It may be transmitted by hand but its transmission by means of an automatic instrument is recommended. 3270 The radiotelephone alarm signal consists of two substantially sinusoidal audio frequency tones transmitted alternately. One tone shall have a frequency of 2 200 Hz and the other a frequency of 1 300 Hz.
Hz, the duration of each tone being 250 milliseconds. The radiotelephone alarm signal, when generated by automatic means, shall be sent continuously for a period of at least thirty seconds but not exceeding one minute; when generated by other means, the signal shall be sent as continuously as practicable over a period of approximately one minute.

(b) The following signals, used either together or separately, mean that an aircraft wishes to give notice of difficulties which compel it to land without requiring immediate assistance:

1. The repeated switching on and off of the landing lights; or
2. The repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

(c) The following signals, used either together or separately, mean that an aircraft has a very urgent message to transmit concerning the safety of a ship, aircraft or other vehicle, or of some person on board or within sight:

1. A signal made by radiotelegraphy or by any other signalling method consisting of the group XXX.
2. A signal sent by radiotelephony consisting of the spoken words PAN, PAN.

(d) The following signals shall be used in the event of interception.

1. Signals initiated by intercepting aircraft and responses by intercepted aircraft.

<table>
<thead>
<tr>
<th>Series</th>
<th>INTERCEPTING Aircraft Signals</th>
<th>Meaning</th>
<th>INTERCEPTED Aircraft Responds</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DAY or NIGHT — Rocking aircraft and flashing navigational lights at irregular intervals (and landing lights in the case of a helicopter) from a position slightly above and ahead of, and normally to the left of, the intercepted aircraft (or to the right if the intercepted aircraft is a helicopter) and, after acknowledgement, a slow level turn, normally to the left, (or to the right in the case of a helicopter) on the desired heading.</td>
<td>You have been intercepted. Follow me.</td>
<td>DAY or NIGHT - Rocking aircraft, flashing navigational lights at irregular intervals and following.</td>
<td>Understood, will comply.</td>
</tr>
<tr>
<td></td>
<td>Note 1. — Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Note 2. — If the intercepting aircraft is not able to keep pace with the intercepting aircraft, the latter is expected to fly a series of race-track patterns and to rock the aircraft each time it passes the intercepted aircraft.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>DAY or NIGHT — An abrupt break-away manoeuvre from the intercepted aircraft consisting of a climbing turn of 90 degrees or more without crossing the line of flight of the intercepted aircraft.</td>
<td>You may proceed.</td>
<td>DAY or NIGHT - Rocking the aircraft.</td>
<td>Understood, will comply.</td>
</tr>
<tr>
<td>3</td>
<td>DAY or NIGHT — Lowering landing gear (if fitted), showing steady landing lights and overflying runway in use or, if the intercepted aircraft is a helicopter, overflying the helicopter landing area. In the case of helicopters, the intercepting helicopter makes a landing approach, coming to hover near to the landing area.</td>
<td>Land at this aerodrome.</td>
<td>DAY or NIGHT - Lowering landing gear (if fitted), showing steady landing lights and following the intercepting aircraft and, if, after overflying the runway in use or helicopter landing area, landing is considered safe, proceeding to land.</td>
<td>Understood, will comply.</td>
</tr>
</tbody>
</table>
(2) **Signals initiated by intercepted aircraft and responses by intercepting aircraft.**

<table>
<thead>
<tr>
<th>Series</th>
<th>INTERCEPTED Aircraft Signals</th>
<th>Meaning</th>
<th>INTERCEPTING Aircraft Responds</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>DAY or NIGHT — Raising landing gear (if fitted) and flashing landing lights while passing over runway in use or helicopter landing area at a height exceeding 300 m (1,000 ft) but not exceeding 600 m (2,000 ft) (in the case of a helicopter, at a height exceeding 50 m (170 ft) but not exceeding 100 m (330 ft) above the aerodrome level, and continuing to circle runway in use or helicopter landing area. If unable to flash landing lights, flash any other lights available.</td>
<td>Aerodrome you have designated is inadequate.</td>
<td>DAY or NIGHT — If it is desired that the intercepted aircraft follow the intercepting aircraft to an alternate aerodrome, the intercepting aircraft raises its landing gear (if fitted) and uses he Series 1 signals prescribed for intercepting aircraft.</td>
<td>Understood, follow me.</td>
</tr>
<tr>
<td>5</td>
<td>DAY or NIGHT — Regular switching on and off of all available lights but in such a manner as to be distinct from flashing lights.</td>
<td>Cannot comply.</td>
<td>DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>DAY or NIGHT — Irregular flashing of all available lights.</td>
<td>In distress.</td>
<td>DAY or NIGHT — Use Series 2 signals prescribed for intercepting aircraft.</td>
<td>Understood</td>
</tr>
</tbody>
</table>

(e) **Visual signals used to warn an unauthorised aircraft.** By day and by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars will indicate to an unauthorised aircraft that it is flying in or about to enter a restricted, prohibited, or danger area, and that the aircraft is to take such remedial action as may be necessary.

(f) **Signals for aerodrome traffic.** Aerodrome controllers shall use and pilots shall obey the following light and pyrotechnic signals:

<table>
<thead>
<tr>
<th>Light</th>
<th>From Aerodrome Control to:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directed towards aircraft concerned (See Figure 1.1)</td>
<td>Aircraft in flight</td>
</tr>
<tr>
<td>Steady green</td>
<td>• Cleared to land</td>
</tr>
<tr>
<td>Steady red</td>
<td>• Give way to other aircraft and continue circling</td>
</tr>
<tr>
<td>Series of green flashes</td>
<td>• Return for landing*</td>
</tr>
<tr>
<td>Series of red flashes</td>
<td>• Aerodrome unsafe, do not land</td>
</tr>
<tr>
<td>Series of white flashes</td>
<td>• Land at this aerodrome and proceed to apron*</td>
</tr>
<tr>
<td>Red pyrotechnic</td>
<td>• Notwithstanding any previous instructions, do not land for the time being</td>
</tr>
</tbody>
</table>

*Clearances to land and to taxi will be given in due course.*
(g) Pilots shall acknowledge aerodrome controller signals as follows:

1) When in flight:
   i) During the hours of daylight by rocking the aircraft's wings;

   \textit{Note. - This signal should not be expected on the base and final legs of the approach.}

   ii) During the hours of darkness by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

2) When on the ground:
   i) During the hours of daylight by moving the aircraft's ailerons or rudder;

   ii) During the hours of darkness by flashing on and off twice the aircraft's landing lights or, if not so equipped, by switching on and off twice its navigation lights.

(h) Aerodrome authorities shall use the following visual ground signals shall be use during the following situations:

1) \textit{Prohibition of landing.} A horizontal red square panel with yellow diagonals (Figure 8.2) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.

   \begin{figure}[h]
   \centering
   \includegraphics[width=\textwidth]{figure8.2}
   \caption{Figure 8.2}
   \end{figure}

2) \textit{Need for special precautions while approaching or landing.} A horizontal red square panel with one yellow diagonal (Figure 8.3) when displayed in a signal area indicates that owing to the bad state of the manoeuvring area, or for any other reason, special precautions must be observed in approaching to land or in landing.
(3) **Use of runways and taxiways.**
   
   (i) A horizontal white dumb-bell (Figure 8.4) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

   ![Figure 8.4](image)

   (ii) The same horizontal white dumb-bell as in Figure 8.4, but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure 8.5) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways.

   ![Figure 8.5](image)

(4) **Closed runways or taxiways.** Crosses of a single contrasting colour, yellow or white (Figure 8.6), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

   ![Figure 8.6](image)

(5) **Directions for landing or take-off.**
   
   (i) A horizontal white or orange landing T (Figure 8.7) indicates the direction to be used by aircraft for landing and take-off, which shall be in a direction parallel to the shaft of the T towards the cross arm.

   ![Figure 8.7](image)

   Note: When used at night, the landing T is either illuminated or outlined in white coloured lights.

(6) **Right-hand traffic.** When displayed in a signal area, or horizontally at the end of the runway or strip in use, a right-hand arrow of conspicuous colour (Figure 8.9) indicates that turns are to be made to the right before landing and after take-off.

   ![Figure 8.9](image)
(7) *Air traffic services reporting office.* The letter C displayed vertically in black against a yellow background (Figure 8.10) indicates the location of the air traffic services reporting office.

![Figure 8.10](image)

(8) *Glider flights in operation.* A double white cross displayed horizontally (Figure 8.11) in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.

![Figure 8.11](image)

(i) The following marshalling signals shall be used from a signalman to an aircraft.

*Note: These signals are designed for use by the signalman, with hands illuminated as necessary to facilitate observation by the pilot, and facing the aircraft in a position:*

(1) For fixed-wing aircraft, the signalman shall be positioned forward of the left-wing tip within view of the pilot and, for helicopters, where the signalman can best be seen by the pilot.

*Note: The meaning of the relevant signals remains the same if bats, illuminated wands or torchlights are held.*

*Note: The aircraft engines are numbered, for the signalman facing the aircraft, from right to left (i.e. No. 1 engine being the port outer engine).*

*Note: Signals marked with an asterisk are designed for use to hovering helicopters.*

(2) Prior to using the following signals, the signalman shall ascertain that the area within which an aircraft is to be guided is clear of objects which the aircraft might otherwise strike.

*Note: The design of many aircraft is such that the path of the wing tips, engines and other extremities cannot always be monitored visually from the flight deck while the aircraft is being manoeuvred on the ground.*
1. To proceed under further guidance by signalman
Signalman directs pilot if traffic conditions on aerodrome require this action.

2. This bay
Arms above head in vertical position with palms facing inward.

3. Proceed to next signalman
Right or left arm down, other arm moved across the body and extended to indicate direction of next signalman.

4. Move ahead
Arms a little aside, palms facing backward and repeatedly moved upward-backward from shoulder height.

5. Turn
a) Turn to your left: right arm downward, left arm repeatedly moved upward-backward. Speed of arm movement indicating rate of turn.
b) Turn to your right: left arm downward, right arm repeatedly moved upward-backward. Speed of arm movement indicating rate of turn.

6. Stop
Arms repeatedly crossed above head (the rapidity of the arm movement should be related to the urgency of the stop, i.e. the faster the movement the quicker the stop).

7. Brakes
a) Engage brakes: raise arm and hand, with fingers extended, horizontally in front of body, then clench fist.
b) Release brakes: raise arm, with fist clenched, horizontally in front of body, then extend fingers.

8. Chocks
a) Chocks inserted: arms down, palms facing inwards, move arms from extended position inwards.
b) Chocks removed: arms down, palms facing outwards, move arms outwards.

9. Start engine(s)
Left hand overhead with appropriate number of fingers extended, to indicate the number of the engine to be started, and circular motion of right hand at head level.

10. Cut engines
Either arm and hand level with shoulder, hand across throat, palm downward. The hand is moved sideways with the arm remaining bent.
11. Slow down
Arms down with palms toward ground, then moved up and down several times.

12. Slow down engine(s) on indicated side
Arms down with palms toward ground, then either right or left hand waved up and down indicating the left or right side engine(s) respectively should be slowed down.

13. Move back
Arms by sides, palms facing forward, swept forward and upward repeatedly to shoulder height.

14. Turns while backing
a) For tail to starboard: point left arm down, and right arm brought from overhead, vertical position to horizontal forward position, repeating right arm movement.
b) For tail to port: point right arm down, and left arm brought from overhead, vertical position to horizontal forward position, repeating left arm movement.

15. All clear
Right arm raised at elbow with thumb erect.

16. Hover
Arms extended horizontally sideways.

*17. Move upwards
Arms extended horizontally to the side beckoning upwards, with palms turned up. Speed of movement indicates rate of ascent.

*18. Move downwards
Arms extended horizontally to the side beckoning downwards, with palms turned down. Speed of movement indicates rate of descent.

*19. Move horizontally
Appropriate arm extended horizontally sideways in direction of movement and other arm moved in front of body in same direction, in a repeating movement.

*20. Land
Arms crossed and extended downwards in front of the body
(j) Signals from the pilot of an aircraft to a signalman.

(1) The PIC or SIC shall use the following signals when communicating with a signalman:

Note: These signals are designed for use by a pilot in the cockpit with hands plainly visible to the signalman, and illuminated as necessary to facilitate observation by the signalman.

Note: The aircraft engines are numbered in relation to the signalman facing the aircraft, from right to left (i.e. No. 1 engine being the port outer engine).

(2) Brakes engaged: raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.

(3) Brakes released. raise arm, with fist clenched, horizontally in front of face, then extend fingers.

Note: The moment the fist is clenched or the fingers are extended indicates, respectively, the moment of brake engagement or release.

(4) Insert chocks: arms extended, palms outwards, move hands inwards to cross in front of face.

(5) Remove chocks: hands crossed in front of face, palms outwards, move arms outwards.

(6) Ready to start engine(s). Raise the appropriate number of fingers on one hand indicating the number of the engine to be started.
INTERCEPTION OF CIVIL AIRCRAFT

1 Principles to be observed by States

1.1 To achieve the uniformity in regulations which is necessary for the safety of navigation of civil aircraft due regard shall be had by Contracting States to the following principles when developing regulations and administrative directives:

a) Interception of civil aircraft will be undertaken only as a last resort;

b) If undertaken, an interception will be limited to determining the identity of the aircraft, unless it is necessary to return the aircraft to its planned track, direct it beyond the boundaries of national airspace, guide it away from a prohibited, restricted or danger area or instruct it to effect a landing at a designated aerodrome;

c) Practice interception of civil aircraft will not be undertaken;

d) Navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established; and

e) In the case where an intercepted civil aircraft is required to land in the territory overflown, the aerodrome designated for the landing is to be suitable for the safe landing of the aircraft type concerned.

Note - In the unanimous adoption by the 25th Session (Extraordinary) of the ICAO Assembly on 10 May 1984 of Article 3 to the Convention on International Civil Aviation, the Contracting States have recognised that “every State must refrain from resorting to the use of weapons against civil aircraft in flight.”

1.2 Contracting States shall publish a standard method that has been established for the manoeuvring of aircraft intercepting a civil aircraft. Such method shall be designed to avoid any hazard for the intercepted aircraft.

1.3 Contracting States shall ensure that provision is made for the use of secondary surveillance radar, A here available, to identify civil aircraft in areas where they may be subject to interception.

2 Action by intercepted aircraft

2.1 An aircraft which is intercepted by another aircraft shall immediately:

a) Follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in Appendix 1;

b) Notify, if possible, the appropriate air traffic services unit;

c) Attempt to establish radio communication with the intercepting aircraft or with the appropriate intercept control unit by making a general call on the emergency frequency 121.5 MHz, giving the identity of the intercepted aircraft and the nature of the flight; and if no contact has been established and if practicable, repeating this call on the emergency frequency 243 MHz;

d) If equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

2.2 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

2.3 If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

(k) Radio communication during interception

(1) If radio contact is established during interception but communication in a common language is not possible, attempts shall be made to convey instructions, acknowledgement of instructions and essential information by using the phrases and pronunciations in the table below and transmitting each phrase twice:
### Phrases for use by INTERCEPTING aircraft

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALL SIGN</td>
<td>KOL SA-IN</td>
<td>What is your call sign?</td>
</tr>
<tr>
<td>FOLLOW</td>
<td>FOL-LO</td>
<td>Follow me</td>
</tr>
<tr>
<td>DESCEND</td>
<td>DEE-SEND</td>
<td>Descend for landing</td>
</tr>
<tr>
<td>YOU LAND</td>
<td>YOU LAAND</td>
<td>Land at this aerodrome</td>
</tr>
<tr>
<td>PROCEED</td>
<td>PRO-SEED</td>
<td>You may proceed</td>
</tr>
</tbody>
</table>

### Phrases for use by INTERCEPTED aircraft

<table>
<thead>
<tr>
<th>Phrase</th>
<th>Pronunciation</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALL SIGN</td>
<td>KOL SA-IN</td>
<td>My call sign is (call sign)</td>
</tr>
<tr>
<td>WILCO</td>
<td>VILL-KO</td>
<td>Understood</td>
</tr>
<tr>
<td>CAN NOT</td>
<td>KANN NOTT</td>
<td>Unable to comply</td>
</tr>
<tr>
<td>REPEAT</td>
<td>REE-PEET</td>
<td>Repeat your instruction</td>
</tr>
<tr>
<td>AM LOSST</td>
<td>AM LOSST</td>
<td>Position unknown</td>
</tr>
<tr>
<td>MAYDAY</td>
<td>MAYDAY</td>
<td>I am in distress</td>
</tr>
<tr>
<td>HIJACK</td>
<td>HI-JACK</td>
<td>I have been hijacked</td>
</tr>
<tr>
<td>LAND</td>
<td>LAAND</td>
<td>I request to land at (place name)</td>
</tr>
<tr>
<td>DESCEND</td>
<td>DEE-SEND</td>
<td>I require descent</td>
</tr>
</tbody>
</table>

1. In the second column, syllables to be emphasised are underlined.
2. The call sign required to be given is that used in radiotelephone communications with air traffic services units and corresponding to the aircraft identification in the flight plan.
3. Circumstances may not always permit, nor make desirable, the use of the phrase "HIJACK".

#### (l) Cruising Levels

1. The PIC shall observe the following cruising levels except when, on the basis of regional air navigation agreements, a modified table of cruising levels based on a nominal vertical separation minimum of less than 600 m (2,000 ft) but not less than 300 m (1,000 ft) is prescribed for use, under specified conditions, by aircraft operating above FL 290 within designated portions of the airspace.

### TRACK**

<table>
<thead>
<tr>
<th>From 000 Degrees to 179 Degrees***</th>
<th>From 180 Degrees to 359 Degrees***</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FL</strong></td>
<td>VFR Flights</td>
</tr>
<tr>
<td></td>
<td><strong>Altitude</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Meters</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Feet</strong></td>
</tr>
<tr>
<td>90</td>
<td>10</td>
</tr>
<tr>
<td>10</td>
<td>300</td>
</tr>
<tr>
<td>30</td>
<td>900</td>
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<tr>
<td>50</td>
<td>1500</td>
</tr>
<tr>
<td>70</td>
<td>2150</td>
</tr>
<tr>
<td>90</td>
<td>2750</td>
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<tr>
<td>110</td>
<td>3350</td>
</tr>
<tr>
<td>130</td>
<td>3950</td>
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<td>150</td>
<td>4550</td>
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<td>170</td>
<td>5200</td>
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<tr>
<td>190</td>
<td>5800</td>
</tr>
<tr>
<td>210</td>
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<tr>
<td>230</td>
<td>7000</td>
</tr>
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</tr>
<tr>
<td>270</td>
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<td>290</td>
<td>8850</td>
</tr>
<tr>
<td>310</td>
<td>9500</td>
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<tr>
<td>330</td>
<td>10050</td>
</tr>
<tr>
<td>350</td>
<td>10600</td>
</tr>
<tr>
<td>370</td>
<td>11000</td>
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<tr>
<td>390</td>
<td>11500</td>
</tr>
<tr>
<td>410</td>
<td>12000</td>
</tr>
<tr>
<td>430</td>
<td>12500</td>
</tr>
<tr>
<td>450</td>
<td>13000</td>
</tr>
<tr>
<td>490</td>
<td>14000</td>
</tr>
<tr>
<td>etc.</td>
<td>etc.</td>
</tr>
</tbody>
</table>

**Magnetic track, or in polar areas at latitudes higher than 70 degrees and within such extensions to those areas as may be prescribed by the appropriate ATS authorities, grid tracks as determined by a network of lines parallel to the Greenwich Meridian superimposed on a polar stereographic chart in which the direction towards the North Pole is employed as the Grid North.

***Except where, on the basis of regional air navigation agreements, from 090 to 269 degrees and from 270 to 089 degrees is prescribed to accommodate predominant traffic directions and appropriate transition procedures to be associated therewith are specified.
IS:8.9.2.10 EXIT ROW SEATING

(a) No cabin crew member may seat a person in a passenger exit seat if it is likely that the person would be unable to perform one or more of the applicable functions listed below—

(1) The person lacks sufficient mobility, strength, or dexterity in both arms and hands, and both legs—

(i) To reach upward, sideways, and downward to the location of emergency exit and exit-slide operating mechanisms;
(ii) To grasp and push, pull, turn, or otherwise manipulate those mechanisms;
(iii) To push, shove, pull, or otherwise open emergency exits;
(iv) To lift out, hold, deposit on nearby seats, or manoeuvre over the seatbacks to the next row objects the size and weight of over-wing window exit doors;
(v) To remove obstructions of size and weight similar over-wing exit doors;
(vi) To reach the emergency exit expeditiously;
(vii) To maintain balance while removing obstructions;
(viii) To exit expeditiously;
(ix) To stabilise an escape slide after deployment; or
(x) To assist others in getting off an escape slide;

(2) The person is less than 15 years of age or lacks the capacity to perform one or more of the applicable functions listed above without the assistance of an adult companion, parent, or other relative;

(3) The person lacks the ability to read and understand instructions required by this section and related to emergency evacuation provided by the AOC holder in printed or graphic form or the ability to understand oral crew commands;

(4) The person lacks sufficient visual capacity to perform one or more of the above functions without the assistance of visual aids beyond contact lenses or eyeglasses;

(5) The person lacks sufficient aural capacity to hear and understand instructions shouted by flight crew members, without assistance beyond a hearing aid;

(6) The person lacks the ability adequately to impart information orally to other passengers; or

(7) The person has a condition or responsibilities, such as caring for small children, that might prevent the person from performing one or more of the functions listed above; or a condition that might cause the person harm if he or she performs one or more of the functions listed above.

(b) Determinations as to the suitability of each person permitted to occupy an exit seat shall be made by the cabin crew members or other persons designated in the AOC holder's operations manual.

(c) In the event a cabin crew member determines that a passenger assigned to an exit seat would be unable to perform the emergency exit functions, or if a passenger requests a non-exit seat, the cabin crew member shall expeditiously relocate the passenger to a non-exit seat.

(d) In the event of full booking in the non-exit seats, and if necessary to accommodate a passenger being relocated from an exit seat, the cabin crew member shall move a passenger who is willing and able to assume the evacuation functions, to an exit seat.

(e) Each AOC ticket agent shall, prior to boarding, assign seats consistent with the passenger selection criteria and the emergency exit functions, to the maximum extent feasible.

(f) Each AOC ticket agent shall make available for inspection by the public at all passenger loading gates and ticket counters at each aerodrome where it conducts passenger operations, written procedures established for making determinations in regard to exit row seating;

(g) Each cabin crew member shall include in their passenger briefings a request that a passenger identify himself or herself to allow reseating if he or she—

(1) Cannot meet the selection criteria;
(2) Has a nondiscernible condition that will prevent him or her from performing the evacuation functions;
(3) May suffer bodily harm as the result of performing one or more of those functions; or
(4) Does not wish to perform emergency exit functions.

(h) Each cabin crew member shall include in their passenger briefings a reference to the passenger information cards and the functions to be performed in an emergency exit.

(i) Each passenger shall comply with instructions given by a crew member or other authorised employee of the AOC holder implementing exit seating restrictions

(j) No PIC may allow taxi or pushback unless at least one required crew member has verified that all exit rows and escape paths are unobstructed and that no exit seat is occupied by a person the crew member determines is likely to be unable to perform the applicable evacuation functions.

(k) The procedures required by this standard will not become effective until final approval is granted by the Authority. Approval will be based solely upon the safety aspects of the AOC holder's procedures. In order to comply with this standard AOC holders shall—

(1) Establish procedures that address the requirements of this standard; and
(2) Submit their procedures for preliminary review and approval to the Authority

**IS:8.9.2.14 CARRIAGE OF CARGO IN PASSENGER COMPARTMENTS**

(a) Cargo may be carried anywhere in the passenger compartment if it is carried in an approved cargo bin that meets the following requirements—

(1) The bin must withstand the load factors and emergency landing conditions applicable to the passenger seats of the aeroplane in which the bin is installed, multiplied by a factor of 1.15, using the combined weight of the bin and the maximum weight of cargo that may be carried in the bin;
(2) The maximum weight of cargo that the bin is approved to carry and any instructions necessary to insure proper weight distribution within the bin must be conspicuously marked on the bin;
(3) The bin may not impose any load on the floor or other structure of the aeroplane that exceeds the load limitations of that structure;
(4) The bin must be attached to the seat tracks or to the floor structure of the aeroplane, and its attachment must withstand the load factors and emergency landing conditions applicable to the passenger seats of the aeroplane in which the bin is installed, multiplied by either the factor 1.15 or the seat attachment factor specified for the aeroplane, whichever is greater, using the combined weight of the bin and the maximum weight of cargo that may be carried in the bin;
(5) The bin may not be installed in a position that restricts access to or use of any required emergency exit, or of the aisle in the passenger compartment;
(6) The bin must be fully enclosed and made of material that is at least flame resistant;
(7) Suitable safeguards must be provided within the bin to prevent the cargo from shifting under emergency landing conditions; and
(8) The bin may not be installed in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passenger is provided.

(b) Cargo, including carry-on baggage, may be carried anywhere in the passenger compartment of a small (Group B) aeroplane if it is carried in an approved cargo rack, bin, or compartment installed in or on the aeroplane, if it is secured by an approved means, or if it is carried in accordance with each of the following—

(1) For cargo, it is properly secured by a safety belt or other tie-down having enough strength to eliminate the possibility of shifting under all normally anticipated flight and ground conditions, or for carry-on baggage, it is restrained so as to prevent its movement during air turbulence;
(2) It is packaged or covered to avoid possible injury to occupants;
(3) It does not impose any load on seats or in the floor structure that exceeds the load limitation for those components;
(4) It is not located in a position that obstructs the access to, or use of, any required emergency or regular exit, or the use of the aisle between the crew and the passenger compartment, or is located in a position that obscures any passenger's view of the "seat belt" sign, "no smoking" sign or placard, or any required exit sign, unless an auxiliary sign or other approved means for proper notification of the passengers is provided;
(5) It is not carried directly above seated occupants.
(6) It is stowed in compliance with these restrictions during takeoff and landing.
(7) For cargo-only operations, if the cargo is loaded so that at least one emergency or regular exit is available to provide all occupants of the aeroplane a means of unobstructed exit from the aeroplane if an emergency occurs.

IS: 8.10.1.9 COMPANY PROCEDURES INDOCTRINATION

(a) Each AOC holder shall ensure that all operations personnel are provided company indoctrination training that covers the following areas:
   (1) AOC holder's organisation, scope of operation, and administrative practices as applicable to their assignments and duties.
   (2) Appropriate provisions of these regulations and other applicable regulations and guidance materials.
   (3) AOC holder policies and procedures.
   (4) Applicable crew member manuals.
   (5) Appropriate portions of the AOC holder's operations manual.

(b) The AOC holder shall provide a minimum of 40 programmed hours of instruction for company procedures indoctrination training unless a reduction is determined appropriate by the Authority.

IS: 8.10.1.10 INITIAL DANGEROUS GOODS TRAINING

(a) Each AOC holder not holding a permanent approval to carry dangerous goods shall ensure that—
   (1) Personnel engaged in general cargo handling have received training to carry out their duties in respect of dangerous goods. At a minimum this training shall cover the areas identified in Column 1 of Table 1 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how to identify such goods; and
   (2) Aircraft crew members, passenger handling staff, and security staff employed by the AOC holder who deal with the screening of a passengers and their baggage, have received training which, at a minimum, shall cover the areas identified in Column 2 of Table 1 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify them and what requirements apply to the carriage of such goods by passengers.

<table>
<thead>
<tr>
<th>Areas Of Dangerous Goods Training</th>
<th>1</th>
<th>2</th>
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</thead>
<tbody>
<tr>
<td>General Philosophy</td>
<td>x</td>
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<tr>
<td>Limitations On Dangerous Goods In Air Transport</td>
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<tr>
<td>Package Marking And Labelling</td>
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<tr>
<td>Dangerous Goods In Passengers Baggage</td>
<td>x</td>
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<tr>
<td>Emergency Procedures</td>
<td></td>
<td>x</td>
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</tbody>
</table>

Note: x indicates an area to be covered.

(b) Each AOC holder holding a permanent approval to carry dangerous goods shall ensure that—
   (1) Personnel engaged in the acceptance of dangerous goods have received training and are qualified to carry out their duties. At a minimum, this training shall cover the areas identified in Column 1 of Table 2 and be to a depth sufficient to ensure the staff can take decisions on the acceptance or refusal of dangerous goods offered for carriage by air;
(2) Personnel engaged in ground handling, storage and loading of dangerous goods have received training to enable them to carry out their duties in respect of dangerous goods. At a minimum, this training shall cover the areas identified in Column 2 of Table 2 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them;

(3) Personnel engaged in general cargo handling have received training to enable them to carry out their duties in respect of dangerous goods. At a minimum, this training shall cover the areas identified in Column 3 of Table 2 and be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them;

(4) Flight crew members have received training which, at a minimum, shall cover the areas identified in Column 4 of Table 2. Training shall be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how they should be carried on an aeroplane; and

(5) Passenger handling staff; security staff employed by the operator who deal with the screening of passengers and their baggage; and crew members (other than flight crew members) have received training which, at a minimum, shall cover the areas identified in Column 5 of Table 2. Training shall be to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and what requirements apply to the carriage of such goods by passengers or, more generally, their carriage on an aeroplane.

(c) Each AOC holder shall ensure that all personnel who require dangerous goods training receive recurrent training at intervals of not longer than 2 years.

(d) Each AOC holder shall ensure that records of dangerous goods training are maintained for all personnel required such training and that these records are maintained at the location where the personnel perform such duties.

(e) Each AOC holder shall ensure that its handling agent’s staff are trained in accordance with the applicable column of Table 1 or Table 2.

Table 2

<table>
<thead>
<tr>
<th>Areas Of Training</th>
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<th>3</th>
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<tbody>
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<td>General Philosophy</td>
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<tr>
<td>Limitations On Dangerous Goods In The Air Transport</td>
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<td>X</td>
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<td>General Packing Requirements And Packing Instructions</td>
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<td>Packaging Specifications Marking</td>
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<tr>
<td>Package Marking And Labelling</td>
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<tr>
<td>Documentation From The Shipper</td>
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<tr>
<td>Acceptance Of Dangerous Good, Including The Use Of A Checklist</td>
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<tr>
<td>Loading, Restrictions On Loading And Segregation</td>
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<tr>
<td>Inspections For Damage Or Leakage And Decontamination Procedures</td>
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<td>x</td>
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<tr>
<td>Provision Of Information To Commander</td>
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<tr>
<td>Dangerous Goods In Passengers’ Baggage</td>
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<tr>
<td>Emergency Procedures</td>
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</tbody>
</table>

Note: x indicates an area to be covered.

(f) An AOC holder shall provide dangerous goods training manuals which contain adequate procedures and information to assist personnel in identifying packages marked or labelled as containing hazardous materials including—

(i) Instructions on the acceptance, handling, and carriage of hazardous materials:

(ii) Instructions governing the determination of proper shipping names and hazard classes:

(iii) Packaging, labelling, and marking requirements:
(iv) Requirements for shipping papers, compatibility requirements, loading, storage, and handling requirements; and
(v) Restrictions.

**IS:8.10.1.12 INITIAL CREW RESOURCE MANAGEMENT TRAINING**

(a) Each AOC holder shall ensure that the flight operations officer and all aircraft crew members have CRM training as part of their initial and recurrent training requirements.

(b) A CRM training program shall include—
   1. An initial indoctrination/awareness segment;
   2. A method to provide recurrent practice and feedback; and
   3. A method of providing continuing reinforcement.

(c) Curriculum topics to be contained in an initial CRM training course include—
   1. Communications processes and decision behaviour;
   2. Internal and external influences on interpersonal communications;
   3. Barriers to communication;
   4. Listening skills;
   5. Decision making skills;
   6. Effective briefings;
   7. Developing open communications;
   8. Inquiry, advocacy, and assertion training;
   9. Crew self-critique;
   10. Conflict resolution;
   11. Team building and maintenance;
   12. Leadership and followship training;
   13. Interpersonal relationships;
   14. Workload management;
   15. Situational awareness;
   16. How to prepare, plan and monitor task completions;
   17. Workload distribution;
   18. Distraction avoidance;
   19. Individual factors; and

**IS:8.10.1.13 INITIAL EMERGENCY EQUIPMENT DRILLS**

(a) Each aircraft crew member shall accomplish emergency training during the specified training periods, using those items of installed emergency equipment for each type of aeroplane in which he or she is to serve:

(b) During initial training, each aircraft crew member shall perform the following one-time emergency drills—
   1. Protective Breathing Equipment/Firefighting Drill:
      (i) Locate source of fire or smoke (actual or simulated fire).
      (ii) Implement procedures for effective crew co-ordination and communication, including notification of flight crew members about fire situation.
      (iii) Don and activate installed PBE or approved PBE simulation device.
      (iv) Manoeuvre in limited space with reduced visibility.
      (v) Effectively use the aircraft's communication system.
      (vi) Identify class of fire.
(vii) Select the appropriate extinguisher.
(viii) Properly remove extinguisher from securing device.
(ix) Prepare, operate and discharge extinguisher properly.
(x) Utilise correct firefighting techniques for type of fire.

(2) Emergency Evacuation Drill:
(i) Recognise and evaluate an emergency.
(ii) Assume appropriate protective position.
(iii) Command passengers to assume protective position.
(iv) Implement crew co-ordination procedures.
(v) Ensure activation of emergency lights.
(vi) Assess aircraft conditions.
(vii) Initiate evacuation (dependent on signal or decision).
(viii) Command passengers to release seatbelts and evacuate.
(ix) Assess exit and redirect, if necessary; to open exit, including deploying slides and commanding helpers to assist.
(x) Command passengers to evacuate at exit and run away from aircraft.
(xi) Assist special need passengers, such as handicapped, elderly, and persons in a state of panic.
(xii) Actually exit aircraft or training device using at least one of the installed emergency evacuation slides.

Note: The crew member may either observe the aeroplane exits being opened in the emergency mode and the associated exit slide/raft pack being deployed and inflated, or perform the tasks resulting in the accomplishment of these actions.

(c) Each aircraft crew member shall accomplish additional emergency drills during initial and recurrent training, including performing the following emergency drills—

(1) Emergency Exit Drill:
(i) Correctly pre-flight each type of emergency exit and evacuation slide or slideraft (if part of cabin crew member's assigned duties).
(ii) Disarm and open each type of door exit in normal mode.
(iii) Close each type of door exit in normal mode.
(iv) Arm of each type of door exit in emergency mode.
(v) Opening each type of door exit in emergency mode.
(vi) Use manual slide inflation system to accomplish or ensure slide or slideraft inflation.
(vii) Open each type of window exit.
(viii) Remove escape rope and position for use.

(2) Hand Fire Extinguisher Drill:
(i) Pre-flight each type of hand fire extinguisher.
(ii) Locate source of fire or smoke and identify class of fire.
(iii) Select appropriate extinguisher and remove from securing device.
(iv) Prepare extinguisher for use.
(v) Actually operate and discharge each type of installed hand fire extinguisher.

Note: Fighting an actual or a simulated fire is not necessary during this drill.

(vi) Utilise correct firefighting techniques for type of fire.
(vii) Implement procedures for effective crew co-ordination and communication, including notification of crew members about the type of fire situation.

(3) Emergency Oxygen System Drill:
(i) Actually operate portable oxygen bottles, including masks and tubing.
(ii) Verbally demonstrate operation of chemical oxygen generators.
(iii) Prepare for use and operate oxygen device properly, including donning and activation.
(iv) Administer oxygen to self, passengers, and to those persons with special oxygen needs.
(v) Utilise proper procedures for effective crew co-ordination and communication.
(vi) Activate PBE.
(vii) Manually open each type of oxygen mask compartment and deploy oxygen masks.
(viii) Identify compartments with extra oxygen masks.
(ix) Implement immediate action decompression procedures.
(x) Reset oxygen system, if applicable.

(4) Flotation Device Drill:
(i) Don and inflate life vests.
(ii) Remove and use flotation seat cushions.
(iii) Demonstrate swimming techniques using a seat cushion.

(5) Ditching Drill, if applicable:

Note: During a ditching drill students shall perform the "prior to impact" and "after impact" procedures for a ditching, as appropriate to the specific operator's type of operation.

(i) Implement crew co-ordination procedures, including briefing with captain to obtain pertinent ditching information and briefing flight crew members.
(ii) Co-ordinate time frame for cabin crew and passenger preparation.
(iii) Adequately brief passengers on ditching procedures.
(iv) Ensure cabin is prepared, including the securing of carry-on baggage, lavatories, and galleys.
(v) Demonstrate how to properly deploy and inflate sliderafts.
(vi) Remove, position, attach sliderafts to aircraft.
(vii) Inflate rafts.
(viii) Use escape ropes at overwing exits.
(ix) Command helpers to assist.
(x) Use slides and seat cushions as flotation devices.
(xi) Remove appropriate emergency equipment from aircraft.
(xii) Board rafts properly.
(xiii) Initiate raft management procedures (i.e., Disconnecting rafts from aircraft, applying immediate first aid, rescuing persons in water, salvaging floating rations and equipment, deploying sea anchor, tying rafts together, activating or ensuring operation of emergency locator transmitter).
(xiv) Initiate basic survival procedures (i.e., Removing and utilising survival kit items, repairing and maintaining raft, ensuring protection from exposure, erecting canopy, communicating location, providing continued first aid, providing sustenance).
(xv) Use heaving line to rescue persons in water.
(xvi) Tie sliderafts or rafts together.
(xvii) Use life line on edge of slideraft or raft as a handhold.
(xviii) Secure survival kit items.

(d) Each aircraft crew member shall accomplish additional emergency drill requirements during initial and recurrent training including observing the following emergency drills—

(1) Lifteraft Removal and Inflation Drill, if applicable:
(i) Removal of a liferaft from the aircraft or training device.
(ii) Inflation of a liferaft.

(2) Slideraft Transfer Drill:
(i) Transfer of each type of slideraft pack from an unusable door to a usable door.
(ii) Disconnect sliderafts at unusable door.
Redirect passengers to usable slideraft.
Installation and deployment of slideraft at usable door.

(3) Slide and Slideraft Deployment, Inflation, and Detachment Drill:
   (i) Engage slide girt bar in floor brackets.
   (ii) Inflate slides with and without quick-release handle (manually and automatically).
   (iii) Disconnecting slide from aircraft for use as a flotation device.
        Arm sliderafts for automatic inflation.
   (iv) Disconnecting slideraft from the aircraft.

(4) Emergency Evacuation Slide Drill:
   (i) Open armed exit with slide or slideraft deployment and inflation.
   (ii) Egress from aircraft via the evacuation slide and run away to a safe distance.

IS: 8.10.1.14 (B) INITIAL AIRCRAFT GROUND TRAINING - FLIGHT CREW

(a) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown. Instructions shall include at least the following general subjects—

   (1) AOC holder’s dispatch, flight release, or flight locating procedures;
   (2) Principles and methods for determining weight and balance, and runway limitations for takeoff;
   (3) Adverse weather recognition and avoidance, and flight procedures which shall be followed when operating in the following conditions:
       (i) Icing.
       (ii) Fog.
       (iii) Turbulence.
       (iv) Heavy precipitation.
       (v) Thunderstorms.
       (vi) Low-level windshear and microburst.
       (vii) Low visibility.
   (4) Normal and emergency communications procedures and navigation equipment including the AOC holder’s communications procedures and ATC clearance requirements;
   (5) Navigation procedures used in area departure, en route, area arrival, approach and landing phases;
   (6) Approved crew resource management training;
   (7) Air traffic control systems, procedures, and phraseology;
   (8) Aircraft performance characteristics during all flight regimes, including:
       (i) The use of charts, tables, tabulated data and other related manual information
       (ii) Normal, abnormal, and emergency performance problems.
       (iii) Meteorological and weight limiting performance factors (such as temperature, pressure, contaminated runways, precipitation, climb/runway limits).
       (iv) Inoperative equipment performance limiting factors (such as MEL/CDL, inoperative antiskid).
       (v) Special operational conditions (such as unpaved runways, high altitude aerodromes and drift down requirements).

(b) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to their duties, the type of operations conducted and aircraft flown, including at least the following aircraft systems:

   (1) Aircraft:
       (i) Aircraft dimensions, turning radius, panel layouts, cockpit and cabin configurations.
       (ii) Other major systems and components or appliances of the aircraft.
   (2) Powerplants:
(i) Basic engine description.
(ii) Engine thrust ratings.
(iii) Engine components such as accessory drives, ignition, oil, fuel control, hydraulic, and bleed air features.

(3) Electrical.
   (i) Sources of aircraft electrical power (engine driven generators, APU generator, and external power);
   (ii) Electrical buses;
   (iii) Circuit breakers;
   (iv) Aircraft battery; and
   (v) Standby power systems.

(4) Hydraulic.
   (i) Hydraulic reservoirs, pumps, accumulators; filters, check valves, interconnects and actuators; and
   (ii) Other hydraulically operated components.

(5) Fuel.
   (i) Fuel tanks (location and quantities);
   (ii) Engine driven pumps;
   (iii) Boost pumps;
   (iv) System valves and crossfeeds;
   (v) Quantity indicators; and
   (vi) Provisions for fuel jettisoning.

(6) Pneumatic.
   (i) Bleed air sources (APU or external ground air); and
   (ii) Means of routing, venting and controlling bleed air via valves, ducts, chambers, and temperature and pressure limiting devices.

(7) Air conditioning and pressurisation.
   (i) Heaters, air conditioning packs, fans, and other environmental control devices;
   (ii) Pressurisation system components such as outflow and negative pressure relief valves; and
   (iii) Automatic, standby, and manual pressurisation controls and annunciators.

(8) Flight controls.
   (i) Primary controls (yaw, pitch, and roll devices);
   (ii) Secondary controls (leading/trailing edge devices, flaps, trim, and damping mechanisms);
   (iii) Means of actuation (direct/indirect or fly by wire); and
   (iv) Redundancy devices.

(9) Landing gear.
   (i) Landing gear extension and retraction mechanism including the operating sequence of struts, doors, and locking devices, and brake and antiskid systems, if applicable;
   (ii) Steering (nose or body steering gear);
   (iii) Bogie arrangements;
   (iv) Air/ground sensor relays; and
   (v) Visual downlock indicators.

(10) Ice and rain protection.
    (i) Rain removal systems; and
    (ii) Anti-icing and/or de-icing system(s) affecting flight controls, engines, pitot static probes, fluid outlets, cockpit windows, and aircraft structures.

(11) Equipment and furnishings.
    (i) Exits;
(ii) Galleys;
(iii) Water and waste systems;
(iv) Lavatories;
(v) Cargo areas;
(vi) Crew member and passenger seats;
(vii) Bulkheads;
(viii) Seating and/or cargo configurations; and
(ix) Non-emergency equipment and furnishings.

(12) Navigation equipment.
   (i) Flight directors;
   (ii) Horizontal situation indicator;
   (iii) Radio magnetic indicator;
   (iv) Navigation receivers (GPS, ADF, VOR, OMEGA, LORAN-C, RNAV, Marker Beacon, DME);
   (v) Inertial systems (INS, IRS);
   (vi) Functional displays;
   (vii) Fault indications and comparator systems;
   (viii) Aircraft transponders;
   (ix) Radio altimeters;
   (x) Weather radar; and
   (xi) Cathode ray tube or computer generated displays of aircraft position and navigation information.

(13) Auto flight system.
   (i) Autopilot;
   (ii) Autothrottles;
   (iii) Flight director and navigation systems;
   (iv) Automatic approach tracking;
   (v) Autoland; and
   (vi) Automatic fuel and performance management systems.

(14) Flight instruments.
   (i) Panel arrangement;
   (ii) Flight instruments (attitude indicator, directional gyro, magnetic compass, airspeed indicator, vertical speed indicator, altimeters, standby instruments); and
   (iii) Instrument power sources and instrument sensory sources (e.g., Pitot static pressure).

(15) Display systems.
   (i) Weather radar; and
   (ii) Other CRT displays (e.g., checklist, vertical navigation or longitudinal navigation displays).

(16) Communication equipment.
   (i) VHF/HF radios;
   (ii) Audio panels;
   (iii) Inflight interphone and passenger address systems;
   (iv) Voice recorder; and
   (v) Air/ground passive communications systems (ACARS).

(17) Warning systems.
   (i) Aural, visual, and tactile warning systems (including the character and degree of urgency related to each signal); and
   (ii) Warning and caution annunciator systems (including ground proximity and takeoff warning systems).
(18) Fire protection.
   (i) Fire and overheat sensors, loops, modules, or other means of providing visual and/or aural
       indications of fire or overheat detection;
   (ii) Procedures for the use of fire handles, automatic extinguishing systems and extinguishing
       agents; and
   (iii) Power sources necessary to provide protection for fire and overheat conditions in engines,
       APU, cargo bay/wheel well, cockpit, cabin and lavatories.

(19) Oxygen.
   (i) Passenger, crew, and portable oxygen supply systems;
   (ii) Sources of oxygen (gaseous or solid);
   (iii) Flow and distribution networks;
   (iv) Automatic deployment systems;
   (v) Regulators, pressure levels and gauges; and
   (vi) Servicing requirements.

(20) Lighting.
   (i) Cockpit, cabin, and external lighting systems;
   (ii) Power sources;
   (iii) Switch positions; and
   (iv) Spare lightbulb locations.

(21) Emergency equipment.
   (i) Fire and oxygen bottles;
   (ii) First aid kits;
   (iii) Liferafts and life preservers;
   (iv) Crash axes;
   (v) Emergency exits and lights;
   (vi) Slides and sliderafts;
   (vii) Escape straps or handles; and
   (viii) Hatches, ladders and movable stairs.

(22) Auxiliary Power Unit (APU).
   (i) Electric and bleed air capabilities;
   (ii) Interfaces with electrical and pneumatic systems;
   (iii) Inlet doors and exhaust ducts;
   (iv) Fuel supply.

(c) Each AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to
    their duties, the type of operations conducted and aircraft flown, including at least the following aircraft
    systems integration items:

(1) Use of checklist.
   (i) Safety chocks;
   (ii) Cockpit preparation (switch position and checklist flows);
   (iii) Checklist callouts and responses; and
   (iv) Checklist sequence.

(2) Flight planning.
   (i) Performance limitations (meteorological, weight, and MEL/CDL items);
   (ii) Required fuel loads;
   (iii) Weather planning (lower than standard takeoff minimums or alternate requirements).

(3) Navigation systems.
   (i) Pre-flight and operation of applicable receivers;
(ii) Onboard navigation systems; and
(iii) Flight plan information input and retrieval.

(4) Autoflight.
   (i) Autopilot, autothrust, and flight director systems, including the appropriate procedures, normal and abnormal indications, and annunciators.

(5) Cockpit familiarisation
   (i) Activation of aircraft system controls and switches to include normal, abnormal and emergency switches; and
   (ii) Control positions and relevant annunciators, lights, or other caution and warning systems.

IS: 8.10.1.14  **(C)**INITIAL AIRCRAFT GROUND TRAINING - CABIN CREW MEMBERS

(a) Each AOC holder shall have an initial ground training curriculum for cabin crew members applicable to the type of operations conducted and aircraft flown, including at least the following general subjects:

(1) Aircraft familiarisation.
   (i) Aircraft characteristics and description;
   (ii) Flightdeck configuration;
   (iii) Cabin configuration;
   (iv) Galleys;
   (v) Lavatories; and
   (vi) Stowage areas.

(2) Aircraft equipment and furnishings.
   (i) Cabin crew member stations;
   (ii) Cabin crew member panels;
   (iii) Passenger seats;
   (iv) Passenger service units and convenience panels;
   (v) Passenger information signs;
   (vi) Aircraft markings; and
   (vii) Aircraft placards.

(3) Aircraft systems.
   (i) Air conditioning and pressurisation system;
   (ii) Aircraft communication systems (call, interphone and passenger address);
   (iii) Lighting and electrical systems;
   (iv) Oxygen systems (flightcrew, observer and passenger); and
   (v) Water system.

(4) Aircraft exits.
   (i) General information;
   (ii) Exits with slides or sliders (pre-flight and normal operation);
   (iii) Exits without slides (pre-flight and normal operations); and
   (iv) Window exits.

(5) Crew member communication and co-ordination.
   (i) Authority of PIC;
   (ii) Routine communication signals and procedures; and
   (iii) Crew member briefing.

(6) Routine crew member duties and procedures.
   (i) Crew member general responsibilities;
   (ii) Reporting duties and procedures for specific aircraft;
   (iii) Predeparture duties and procedures prior to passenger boarding;
(iv) Passenger boarding duties and procedures;
(v) Prior to movement on the surface duties and procedures;
(vi) Prior to takeoff duties and procedures applicable to specific aircraft;
(vii) Inflight duties and procedures;
(viii) Prior to landing duties and procedures;
(ix) Movement on the surface and arrival duties and procedures;
(x) After arrival duties and procedures; and
(xi) Intermediate stops.

(7) Passenger handling responsibilities.
   (i) Crew member general responsibilities;
   (ii) Infants, children, and unaccompanied minors;
   (iii) Passengers needing special assistance;
   (iv) Passengers needing special accommodation;
   (v) Carry-on stowage requirements;
   (vi) Passenger seating requirements; and
   (vii) Smoking and no smoking requirements.

(8) Approved Crew Resource Management (CRM) training for cabin crew members.
   (b) Each AOC holder shall have an initial ground training curriculum for cabin crew members applicable to the
type of operations conducted and aircraft flown, including at least the following aircraft specific emergency
subjects:
   (1) Emergency equipment.
      (i) Emergency communication and notification systems;
      (ii) Aircraft exits;
      (iii) Exits with slides or sliderafts (emergency operation);
      (iv) Slides and sliderafts in a ditching;
      (v) Exits without slides (emergency operation);
      (vi) Window exits (emergency operation);
      (vii) Exits with tailcones (emergency operation);
      (viii) Cockpit exits (emergency operation);
      (ix) Ground evacuation and ditching equipment;
      (x) First aid equipment;
      (xi) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing
equipment (PBE));
      (xii) Firefighting equipment;
      (xiii) Emergency lighting systems; and
      (xiv) Additional emergency equipment.
   (2) Emergency assignments and procedures.
      (i) General types of emergencies specific to aircraft;
      (ii) Emergency communication signals and procedures;
      (iii) Rapid decompression;
      (iv) Insidious decompression and cracked window and pressure seal leaks;
      (v) Fires;
      (vi) Ditching;
      (vii) Ground evacuation;
      (viii) Unwarranted evacuation (i.e., passenger initiated);
      (ix) Illness or injury;
      (x) Abnormal situations involving passengers or crew members;
(xi) Hijacking;
(xii) Bomb threat;
(xiii) Turbulence;
(xiv) Other unusual situations; and
(xv) Previous aircraft accidents and incidents.

(3) Aircraft specific emergency drills.
   (i) Emergency exit drill;
   (ii) Hand fire extinguisher drill;
   (iii) Emergency oxygen system drill;
   (iv) Flotation device drill;
   (v) Ditching drill, if applicable;
   (vi) Lifer raft removal and inflation drill, if applicable;
   (vii) Slide raft pack transfer drill, if applicable;
   (viii) Slide or slide raft deployment, inflation, and detachment drill, if applicable; and
   (ix) Emergency evacuation slide drill, if applicable.

(c) Each AOC holder shall ensure that initial ground training for cabin crew members includes a competence check given by the appropriate supervisor or ground instructor to determine his or her ability to perform assigned duties and responsibilities.

(d) Each AOC holder shall ensure that initial ground training for cabin crew members consists of at least the following programmed hours of instruction:
   (1) Multi-engine turbine: 16 hours; and
   (2) Multi-engine reciprocating: 8 hours.

IS: 8.10.1.14  (D) INITIAL AIRCRAFT GROUND TRAINING - FLIGHT OPERATIONS OFFICER

(a) Each AOC holder shall provide initial aircraft ground training for flight operations officers that include instruction in at least the following general dispatch subjects:
   (1) Normal and emergency communications procedures
   (2) Available sources of weather information
   (3) Actual and prognostic weather charts
   (4) Interpretation of weather information
   (5) Adverse weather phenomena (e.g., clear air turbulence, windshear, and thunderstorms)
   (6) Notice to Airmen (NOTAM) system
   (7) Navigational charts and publications
   (8) Air traffic control (ATC) and instrument procedures
   (9) Familiarisation with operational area
   (10) Characteristics of special aerodromes and other operationally significant aerodromes which the operator uses (i.e., terrain, approach aids, or prevailing weather phenomena)
   (11) Joint flight operations officer/pilot responsibilities
   (12) Approved Crew Resource Management (CRM) training for flight operations officers

(b) Each AOC holder shall provide initial aircraft ground training for flight operations officers that include instruction in at least the following aircraft characteristics:
   (1) General operating characteristics of the AOC holder’s aircraft
   (2) Aircraft specific training with emphasis on the following topics:
      (i) Aircraft operating and performance characteristics,
      (ii) Navigation equipment,
      (iii) Instrument approach and communications equipment, and
(iv) Emergency equipment.

(3) Flight manual training
(4) Equipment training

(c) Each AOC holder shall provide initial aircraft ground training for flight operations officers that include instruction in at least the following emergency procedures:

(1) Assisting the flight crew in an emergency
(2) Alerting of appropriate governmental, company and private agencies

(d) Each AOC holder shall ensure that initial ground training for flight operations officers includes a competence check given by an appropriate supervisor or ground instructor that demonstrates the required knowledge and abilities.

IS:8.10.1.15 INITIAL AIRCRAFT FLIGHT TRAINING

(a) Each AOC holder shall ensure that pilot initial flight training includes at least the following:

Note: Flight training may be conducted in an appropriate aircraft or adequate training simulator (simulator shall have landing capability).

(1) Preparation
   (i) Visual inspection (for aircraft with a flight engineer, use of pictorial display authorised)
   (ii) Pre-taxi procedures
   (iii) Performance limitations

(2) Surface operation
   (i) Pushback
   (ii) Powerback taxi, if applicable to type of operation to be conducted
   (iii) Starting
   (iv) Taxi
   (v) Pre take-off checks

(3) Takeoff
   (i) Normal
   (ii) Crosswind
   (iii) Rejected
   (iv) Power failure after V₁
   (v) Lower than standard minimum, if applicable to type of operation to be conducted

(4) Climb
   (i) Normal
   (ii) One-engine inoperative during climb to en route altitude

(5) En route
   (i) Steep turns (PIC only)
   (ii) Approaches to stalls (takeoff, en route, and landing configurations)
   (iii) Inflight powerplant shutdown
   (iv) Inflight powerplant restart
   (v) High speed handling characteristics

(6) Descent
   (i) Normal
   (ii) Maximum rate

(7) Approaches
   (i) VFR procedures
(ii) Visual approach with 50% loss of power on one-engine (2 engines inoperative on 3-engine aeroplanes) (PIC only)
(iii) Visual approach with slat/flap malfunction
(iv) IFR precision approaches (ILS normal and ILS with one-engine inoperative)
(v) IFR non-precision approaches (NDB normal and VOR normal)
(vi) Non-precision approach with one engine inoperative (LOC backcourse procedures, SDF/LDA, GPS, TACAN and circling approach procedures)

Note: Simulator shall be qualified for training/checking on the circling manoeuvre.

(vii) Missed approach from precision approach
(viii) Missed approach from non-precision approach
(ix) Missed approach with powerplant failure

(8) Landings
(i) Normal with a pitch mistrim (small aircraft only)
(ii) Normal from precision instrument approach
(iii) Normal from precision instrument approach with most critical engine inoperative
(iv) Normal with 50% loss of power on one side (2 engines inoperative on 3-engine aeroplanes) (PIC only)
(v) Normal with flap/slat malfunction
(vi) Rejected landings
(vii) Crosswind
(viii) Manual reversion/degraded control augmentation
(ix) Short/soft field (small aircraft only)
(x) Glassy/rough water (seaplanes only)

(9) After landing
(i) Parking
(ii) Emergency evacuation
(iii) Docking, mooring, and ramping (seaplanes only)

(10) Other flight procedures during any airborne phase
(i) Holding
(ii) Ice accumulation on airframe
(iii) Air hazard avoidance
(iv) Windshear/microburst

(11) Normal, abnormal and alternate systems procedures during any phase
(i) Pneumatic/pressurisation
(ii) Air conditioning
(iii) Fuel and oil
(iv) Electrical
(v) Hydraulic
(vi) Flight controls
(vii) Anti-icing and de-icing systems
(viii) Autopilot
(ix) Flight management guidance systems and/or automatic or other approach and landing aids
(x) Stall warning devices, stall avoidance devices, and stability augmentation systems
(xi) Airborne weather radar
(xii) Flight instrument system malfunction
(xiii) Communications equipment
(xiv) Navigation systems
(12) Emergency systems procedures during any phase
   (i) Aircraft fires
   (ii) Smoke control
   (iii) Powerplant malfunctions
   (iv) Fuel jettison
   (v) Electrical, hydraulic, pneumatic systems
   (vi) Flight control system malfunction
   (vii) Landing gear and flap system malfunction

(b) Each AOC Holder shall ensure that flight engineer flight training includes at least the following:
   (1) Training and practice in procedures related to the carrying out of flight engineer duties and functions. This training and practice may be accomplished either in flight, in an aeroplane simulator or a training device.
   (2) A proficiency check as specified in Section 8.10.1.23.

(c) Each AOC holder shall ensure that flight training includes at least the following:
   (1) Initial flight training for flight navigators must include flight training and a flight check that is adequate to ensure the crewmember's proficiency in the performance of his/her assigned duties.
   (2) The flight training and check specified in paragraph (1) must be performed-
      (i) In-flight or in an appropriate training device; or
      (ii) In commercial air transport operations, if performed under the supervision of a qualified flight navigator.

IS: 8.10.1.16 INITIAL SPECIALISED OPERATIONS TRAINING

(a) Each AOC holder shall provide initial specialised operations training to ensure that each pilot and flight operations officer is qualified in the type of operation in which he or she serves and in any specialised or new equipment, procedures, and techniques, such as:
   (1) Class II navigation
      (i) Knowledge of specialised navigation procedures, such as MNPS
      (ii) Knowledge of specialised equipment, such as INS, LORAN, OMEGA
   (2) CAT II and CAT III approaches
      (i) Special equipment, procedures and practice
      (ii) A demonstration of competency
   (3) Lower than standard minimum takeoffs
      (i) Runway and lighting requirements
      (ii) Rejected takeoffs at, or near, V1 with a failure of the most critical engine
      (iii) Taxi operations
      (iv) Procedures to prevent runway incursions under low visibility conditions
   (4) Extended range operations with two engine aeroplanes
   (5) Airborne radar approaches
   (6) Autopilot instead of SIC

IS: 8.10.1.17 AIRCRAFT DIFFERENCES - FLIGHT OPERATIONS OFFICER

(a) Each AOC holder shall provide aircraft differences training for flight operations officers when the operator has aircraft variances within the same type of aircraft, which includes at least the following:
   (1) Operations procedures—
      (i) Operations under adverse weather phenomena conditions, including clear air turbulence, windshear, and thunderstorms;
(ii) Weight and balance computations and load control procedures;
(iii) Aircraft performance computations, to include takeoff weight limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations;
(iv) Flight planning procedures, to include route selection, flight time, and fuel requirements analysis;
(v) Dispatch release preparation;
(vi) Crew briefings;
(vii) Flight monitoring procedures;
(viii) Flightcrew response to various emergency situations, including the assistance the aircraft flight operations officer can provide in each situation;
(ix) MEL and CDL procedures;
(x) Manual performance of all required procedures in case of the loss of automated capabilities;
(xi) Training in appropriate geographic areas;
(xii) ATC and instrument procedures, to include ground hold and central flow control procedures; and
(xiii) Radio/telephone procedures.

2) Emergency procedures—
   (i) Actions taken to aid the flightcrew; and
   (ii) AOC holder and Authority notification.

**IS: 8.10.1.20  AIRCRAFT PROFICIENCY CHECK: PILOT**

**AIRCRAFT PROFICIENCY CHECK: PILOT**

(a) Satisfactory completion of a PIC proficiency check following completion of an approved air carrier training program for the particular type aircraft, satisfies the requirement for an aircraft type rating practical test if—
   (1) That proficiency check includes all manoeuvres and procedures required for a type rating practical test.; and
   (2) Proficiency checks are be conducted by an examiner approved by the Authority.

(b) Aircraft proficiency checks for PIC and SIC must include the following operations and procedures listed in Table A. As noted, examiners may waive certain events on the flight test based on an assessment of the pilot’s demonstrated level of performance.
Table A

<table>
<thead>
<tr>
<th>TYPE OF OPERATION OR PROCEDURE</th>
<th>PIC or SIC</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ground Operations</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Preflight inspection</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>Taxiing</td>
<td>PIC/SIC</td>
<td>Both pilots may take simultaneous credit.</td>
</tr>
<tr>
<td>Powerplant checks</td>
<td>PIC/SIC</td>
<td>Both pilots may take simultaneous credit.</td>
</tr>
<tr>
<td><strong>Takeoffs</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal</td>
<td>PIC/SIC</td>
<td>May be waived if performed on immediately preceding check</td>
</tr>
<tr>
<td>Instrument</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>Crosswind</td>
<td>PIC/SIC</td>
<td>May be waived if performed on immediately preceding check</td>
</tr>
<tr>
<td>With powerplant failure</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>Rejected takeoff</td>
<td>PIC/SIC</td>
<td>Both pilots may take simultaneous credit. May be waived.</td>
</tr>
<tr>
<td><strong>Instrument Procedures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Area departure</td>
<td>PIC/SIC</td>
<td>May be waived if Area Arrival performed.</td>
</tr>
<tr>
<td>Area arrival</td>
<td>PIC/SIC</td>
<td>May be waived if Area Departure performed.</td>
</tr>
<tr>
<td>Holding</td>
<td>PIC/SIC</td>
<td>May be waived if performed on immediately preceding check</td>
</tr>
<tr>
<td>ILS approach-all engine/s</td>
<td>PIC/SIC</td>
<td>Maybe waived for multi-engine a/c</td>
</tr>
<tr>
<td>ILS approach – Simulated asymmetric engine failure.</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>Coupled ILS approach</td>
<td>PIC/SIC</td>
<td>Both pilots may take simultaneous credit.</td>
</tr>
<tr>
<td>Nonprecision approach</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>Missed approach-all engine/s</td>
<td>PIC/SIC</td>
<td>Maybe waived for multi-engine a/c</td>
</tr>
<tr>
<td>Missed approach-simulated asymmetric engine failure</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>Circling approach</td>
<td>PIC/SIC</td>
<td>Only when authorized in the AOC holder’s Operations Manual. May be waived.</td>
</tr>
<tr>
<td><strong>Inflight Maneuvers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steep turns</td>
<td>PIC only</td>
<td>May be waived if performed on immediately preceding check</td>
</tr>
<tr>
<td>Specific flight characteristics</td>
<td>PIC/SIC</td>
<td>As applicable to make of a/c</td>
</tr>
<tr>
<td>Approaches to stalls</td>
<td>PIC/SIC</td>
<td>May be waived if performed on immediately preceding check</td>
</tr>
<tr>
<td>Powerplant failure</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td><strong>Landings</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Normal landing</td>
<td>PIC/SIC</td>
<td>May be waived if performed on immediately preceding check</td>
</tr>
<tr>
<td>Landing from an ILS</td>
<td>PIC/SIC</td>
<td>May be waived if performed on immediately preceding check</td>
</tr>
<tr>
<td>Crosswind landing</td>
<td>PIC/SIC</td>
<td>May be waived if performed on immediately preceding check</td>
</tr>
<tr>
<td>Landing with failed engine</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>Landing from circling approach</td>
<td>PIC/SIC</td>
<td>Only if authorized in Operations Manual. May be waived.</td>
</tr>
<tr>
<td><strong>Abnormal Procedures</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 engine inoperative approach (3 and 4 engine aircraft)</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>Rejected landing</td>
<td>PIC/SIC</td>
<td></td>
</tr>
<tr>
<td>2 engine inoperative landing (3 and 4 engine aircraft)</td>
<td>PIC only</td>
<td></td>
</tr>
<tr>
<td><strong>Other Events</strong></td>
<td></td>
<td>Examiner’s discretion.</td>
</tr>
<tr>
<td>Notes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

( c ) The oral and flight test phases of a proficiency check should not be conducted simultaneously.

( d ) When the examiner determines that an applicant’s performance is unsatisfactory, the examiner may terminate the flight test immediately or, with the consent of the applicant, continue with the flight test until the remaining events are completed.
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IS:8.10.1.21  FLIGHT ENGINEER PROFICIENCY CHECKS

(a) Examiners shall include during proficiency checks for flight engineers an oral or written examination of the normal, abnormal, and emergency procedures listed below:

(1) Normal procedures—
   (i) Interior pre-flight
   (ii) Panel set-up
   (iii) Fuel load
   (iv) Engine start procedures
   (v) Taxi and before takeoff procedures
   (vi) Takeoff and climb Pressurisation
   (vii) Cruise and fuel management
   (viii) Descent and approach
   (ix) After landing and securing
   (x) Crew co-ordination
   (xi) Situational awareness, traffic scan, etc.
   (xii) Performance computations
   (xiii) Anti-ice, de-ice

(2) Abnormal and emergency procedures—
   (i) Troubleshooting
   (ii) Knowledge of checklist
   (iii) Ability to perform procedures
   (iv) Crew co-ordination
   (v) Minimum equipment list (MEL) and configuration deviation list (CDL)
   (vi) Emergency or alternate operation of aeroplane flight systems

IS:8.10.1.22  PAIRING OF LOW EXPERIENCE CREW MEMBERS: COMMERCIAL AIR TRANSPORT

(b) Situations designated as critical by the Authority at special aerodromes designated by the Authority or at special aerodromes designated by the AOC holder include—

   (1) The prevailing visibility value in the latest weather report for the aerodrome is at or below 3/4 mile;
   (2) The runway visual range for the runway to be used is at or below 4,000 feet;
   (3) The runway to be used has water, snow, slush or similar conditions that may adversely affect aeroplane performance;
   (4) The braking action on the runway to be used is reported to be less than "good";
   (5) The crosswind component for the runway to be used is in excess of 15 knots;
   (6) Windshear is reported in the vicinity of the aerodrome; or
   (7) Any other condition in which the PIC determines it to be prudent to exercise the PIC’s prerogative.

(c) Circumstances which would be routinely be considered for deviation from the required minimum line operating flight time include—

   (1) A newly certified AOC holder does not employ any pilots who meet the minimum flight time requirements;
   (2) An existing AOC holder adds to its fleet a type aeroplane not before proven for use in its operations; or
   (3) An existing AOC holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the aeroplanes operated from that domicile.
**IS: 8.10.1.24  COMPETENCE CHECKS: CABIN CREW MEMBERS**

(a) Evaluators shall conduct competency checks for cabin crew members to demonstrate that the candidate’s proficiency level is sufficient to successfully perform assigned duties and responsibilities.

(b) A qualified supervisor or inspector, approved by the Authority, shall observe and evaluate competency checks for cabin crew members.

(c) Evaluators shall include during each cabin crew member competency check a demonstrated knowledge of:

1. **Emergency equipment**—
   - (i) Emergency communication and notification systems;
   - (ii) Aircraft exits;
   - (iii) Exits with slides or slidrafts (emergency operation);
   - (iv) Slides and slidrafts in a ditching;
   - (v) Exits without slides (emergency operation);
   - (vi) Window exits (emergency operation);
   - (vii) Exits with tailcones (emergency operation);
   - (viii) Cockpit exits (emergency operation);
   - (ix) Ground evacuation and ditching equipment;
   - (x) First aid equipment;
   - (xi) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));
   - (xii) Firefighting equipment;
   - (xiii) Emergency lighting systems; and
   - (xiv) Additional emergency equipment.

2. **Emergency procedures**—
   - (i) General types of emergencies specific to aircraft;
   - (ii) Emergency communication signals and procedures;
   - (iii) Rapid decompression;
   - (iv) Insidious decompression and cracked window and pressure seal leaks;
   - (v) Fires;
   - (vi) Ditching;
   - (vii) Ground evacuation;
   - (viii) Unwarranted evacuation (i.e., Passenger initiated);
   - (ix) Illness or injury;
   - (x) Abnormal situations involving passengers or crew members;
   - (xi) Turbulence; and
   - (xii) Other unusual situations.

3. **Emergency drills**—
   - (i) Location and use of all emergency and safety equipment carried on the aeroplane;
   - (ii) The location and use of all types of exits;
   - (iii) Actual donning of a lifejacket where fitted;
   - (iv) Actual donning of protective breathing equipment; and
   - (v) Actual handling of fire extinguishers.

4. **Crew Resource Management**—
   - (i) Decision making skills;
   - (ii) Briefings and developing open communication;
   - (iii) Inquiry, advocacy, and assertion training; and
(iv) Workload management.

(5) Dangerous goods—
(i) Recognition of and transportation of dangerous goods;
(ii) Proper packaging, marking, and documentation; and
(iii) Instructions regarding compatibility, loading, storage and handling characteristics.

(6) Security—
(i) Hijacking; and
(ii) Disruptive passengers.

IS:8.10.1.25 Competence Checks: Flight Operations Officers
(a) Evaluators shall conduct competency checks for flight operations officers to demonstrate that the candidate's proficiency level is sufficient to ensure the successful outcome of all dispatch operations.
(b) A qualified supervisor or inspector, approved by the Authority, shall observe and evaluate competency checks for flight operations officers.
(c) Each competency check for flight operations officers shall include:
   (1) An evaluation of all aspects of the dispatch function;
   (2) A demonstration of the knowledge and abilities in normal and abnormal situations; and
   (3) An observation of actual flights being dispatched
(d) Each evaluator of newly hired flight operations officers shall include during initial competency checks an evaluation of all of geographic areas and types of aircraft the flight operations officer will be qualified to dispatch. (Note: The supervisor may approve a competency check of representative aircraft types when, in the supervisor's judgement, a check including all types is impractical or unnecessary)
(e) Evaluators may limit initial equipment and transition competency checks solely to the dispatch of the types of aeroplanes on which the aircraft dispatcher is qualifying (unless the check is to simultaneously count as a recurrent check).
(f) Each evaluator of flight operations officers shall include, during recurrent and requalification competency checks, a representative sample of aircraft and routes for which the aircraft dispatcher maintains current qualification.
(g) The Authority requires special operations competency checks before an aircraft dispatcher is qualified in ETOPS or other special operations authorised by the Authority.

IS: 8.10.1.33 Recurrent Training: Flight Crew
(a) Each AOC holder shall establish a recurrent training program for all flight crew members in the AOC holder’s operations manual and shall have it approved by the Authority.
(b) Each flight crew member shall undergo recurrent training relevant to the type or variant of aeroplane on which he or she is certified to operate and for the crew member position involved.
(c) Each AOC holder shall have all recurrent training conducted by suitably qualified personnel.
(d) Each AOC holder shall ensure that flight crew member recurrent ground training includes at least the following:
   (1) General subjects
      (i) Flight locating procedures
      (ii) Principles and method for determining weight/balance and runway limitations
      (iii) Meteorology to ensure practical knowledge of weather phenomena including the principles of frontal system, icing, fog, thunderstorms, windshear, and high altitude weather situations
      (iv) ATC systems and phraseology
      (v) Navigation and use of navigational aids
(vi) Normal and emergency communication procedures  
(vii) Visual cues before descent to MDA  
(viii) Accident/incident and occurrence review  
(ix) Other instructions necessary to ensure the pilot’s competence

(2) Aircraft systems and limitations

(i) Normal, abnormal, and emergency procedures  
(ii) Aircraft performance characteristics  
(iii) Engines and or propellers  
(iv) Major aircraft components  
(v) Major aircraft systems (i.e., flight controls, electric, hydraulic and other systems as appropriate)  
(vi) Ground icing and de-icing procedures and requirements

(3) Emergency equipment and drills

(4) Every 12 months—

(i) Location and use of all emergency and safety equipment carried on the aeroplane;  
(ii) The location and use of all types of exits;  
(iii) Actual donning of a lifejacket where fitted;  
(iv) Actual donning of protective breathing equipment; and  
(v) Actual handling of fire extinguishers.

(5) Every 3 years—

(i) Operation of all types of exits;  
(ii) Demonstration of the method used to operate a slide, where fitted; and  
(iii) Fire-fighting using equipment representative of that carried in the aeroplane on an actual or simulated fire;  

Note: With halon extinguishers, an alternative method acceptable to the authority may be used.

(iv) Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment;  
(v) Actual handling of pyrotechnics, real or simulated, where fitted;  
(vi) Demonstration in the use of the life-raft(s), where fitted;  
(vii) An emergency evacuation drill;  
(viii) A ditching drill, if applicable; and  
(ix) A rapid decompression drill, if applicable.

(6) Crew resource management—

(i) Decision making skills;  
(ii) Briefings and developing open communication;  
(iii) Inquiry, advocacy, and assertion training;  
(iv) Workload management; and  
(v) Situational awareness.

(7) Dangerous goods—

(i) Recognition of and transportation of dangerous goods;  
(ii) Proper packaging, marking, and documentation; and  
(iii) Instructions regarding compatibility, loading, storage and handling characteristics.

(8) Security—

(i) Hijacking; and  
(ii) Disruptive passengers.

(e) Each AOC holder shall verify knowledge of the recurrent ground training by an oral or written examination.  
(f) Each AOC holder shall ensure that pilot recurrent flight training include at least the following:
Note: Flight training may be conducted in an appropriate aircraft or adequate training simulator (simulator shall have landing capability).

(1) Preparation—
   (i) Visual inspection (use of pictorial display authorised); and
   (ii) Pre-taxi procedures.

(2) Surface operation—
   (i) Performance limitations;
   (ii) Cockpit management;
   (iii) Securing cargo;
   (iv) Pushback;
   (v) Powerback taxi;
   (vi) Starting;
   (vii) Taxi; and
   (viii) Pre take-off checks.

(3) Takeoff—
   (i) Normal;
   (ii) Crosswind;
   (iii) Rejected;
   (iv) Power failure after $V_1$;
   (v) Powerplant failure during second segment; and
   (vi) Lower than standard minimum.

(4) Climb—
   (i) Normal; and
   (ii) One-engine inoperative during climb to en route altitude.

(5) En route—
   (i) Steep turns;
   (ii) Approaches to stalls (takeoff, en route, and landing configurations);
   (iii) Inflight powerplant shutdown;
   (iv) Inflight powerplant restart; and
   (v) High speed handling characteristics.

(6) Descent—
   (i) Normal; and
   (ii) Maximum rate.

(7) Approaches—
   (i) VFR procedures;
   (ii) Visual approach with 50% loss of power on one-engine (2 engines inoperative on 3-engine aeroplanes) (PIC only);
   (iii) Visual approach with slat/flap malfunction;
   (iv) IFR precision approaches (ILS normal and ILS with one-engine inoperative);
   (v) IFR non-precision approaches (NDB normal and VOR normal);
   (vi) Non-precision approach with one engine inoperative (LOC backcourse, SDF/LDA, GPS, TACAN and circling approach procedures);

   Note: Simulator shall be qualified for training/checking on the circling manoeuvre.

   (vii) Missed approach from precision approach;
   (viii) Missed approach from non-precision approach; and
   (ix) Missed approach with powerplant failure.

(8) Landings—
(i) Normal with a pitch mistrim (small aircraft only);  
(ii) Normal from precision instrument approach;  
(iii) Normal from precision instrument approach with most critical engine inoperative;  
(iv) Normal with 50% loss of power on one side (2 engines inoperative on 3-engine aeroplanes) (PIC only);  
(v) Normal with flap/slat malfunction;  
(vi) Rejected landings;  
(vii) Crosswind;  
(viii) Short/soft field (small aircraft only); and  
(ix) Glassy/rough water (seaplanes only).

(9) After landing—  
(i) Parking;  
(ii) Emergency evacuation; and  
(iii) Docking, mooring, and ramping (seaplanes only).

(10) Other flight procedures during any airborne phase—  
(i) Holding;  
(ii) Ice accumulation on airframe;  
(iii) Air hazard avoidance; and  
(iv) Windshear/microburst.

(11) Normal, abnormal and alternate systems procedures during any phase—  
(i) Pneumatic/pressurisation;  
(ii) Air conditioning;  
(iii) Fuel and oil;  
(iv) Electrical;  
(v) Hydraulic;  
(vi) Flight controls;  
(vii) Anti-icing and de-icing systems;  
(viii) Flight management guidance systems and/or automatic or other approach and landing aids;  
(ix) Stall warning devices, stall avoidance devices, and stability augmentation systems;  
(x) Airborne weather radar;  
(xi) Flight instrument system malfunction;  
(xii) Communications equipment;  
(xiii) Navigation systems;  
(xiv) Auto-pilot;  
(xv) Approach and landing aids; and  
(xvi) Flight instrument system malfunction.

(12) Emergency systems procedures during any phase—  
(i) Aircraft fires;  
(ii) Smoke control;  
(iii) Powerplant malfunctions;  
(iv) Fuel jettison;  
(v) Electrical, hydraulic, pneumatic systems;  
(vi) Flight control system malfunction; and  
(vii) Landing gear and flap system malfunction.

(g) Each AOC holder shall ensure that flight engineer recurrent flight training includes at least the flight training specified in IS: 8.10.1.15(b).
(h) Each AOC holder shall ensure that flight navigator recurrent training includes enough training and an in-flight check to ensure competency with respect to operating procedures and navigation equipment to be used and familiarity with essential navigation information pertaining to the AOC holder's routes that require a flight navigator.

(i) The AOC holder may combine recurrent training with the AOC holder's proficiency check.

(j) Recurrent ground and flight training curricula may be accomplished concurrently or intermixed, but completion of each of these curricula shall be recorded separately.

IS: 8.10.1.34 RECURRENT EMERGENCY TRAINING: CABIN CREW MEMBERS

(a) Each AOC holder shall establish and have approved by the Authority a recurrent training program for all cabin crew members.

(b) Each cabin crew member shall undergo recurrent training in evacuation and other appropriate normal and emergency procedures and drills relevant to their assigned positions and the type(s) and/or variant(s) of aeroplane on which they operate.

(c) Each AOC holder shall have all recurrent training conducted by suitably qualified personnel.

(d) Each AOC holder shall ensure that, every 12 months, each cabin crew member receive recurrent training in at least the following:

(1) Emergency equipment—
   (i) Emergency communication and notification systems;
   (ii) Aircraft exits;
   (iii) Exits with slides or sliderafts (emergency operation);
   (iv) Slides and sliderafts in a ditching;
   (v) Exits without slides (emergency operation);
   (vi) Window exits (emergency operation);
   (vii) Exits with tailcones (emergency operation);
   (viii) Cockpit exits (emergency operation);
   (ix) Ground evacuation and ditching equipment;
   (x) First aid equipment;
   (xi) Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));
   (xii) Firefighting equipment;
   (xiii) Emergency lighting systems; and
   (xiv) Additional emergency equipment.

(2) Emergency procedures—
   (i) General types of emergencies specific to aircraft;
   (ii) Emergency communication signals and procedures;
   (iii) Rapid decompression;
   (iv) Insidious decompression and cracked window and pressure seal leaks;
   (v) Fires;
   (vi) Ditching;
   (vii) Ground evacuation;
   (viii) Un warranted evacuation (i.e., passenger initiated);
   (ix) Illness or injury;
   (x) Abnormal situations involving passengers or crew members;
   (xi) Turbulence; and
   (xii) Other unusual situations.
(3) Emergency drills.

(4) Every 12 months—
   (i) Location and use of all emergency and safety equipment carried on the aeroplane;
   (ii) The location and use of all types of exits;
   (iii) Actual donning of a lifejacket where fitted;
   (iv) Actual donning of protective breathing equipment; and
   (v) Actual handling of fire extinguishers.

(5) Every 3 years—
   (i) Operation of all types of exits;
   (ii) Demonstration of the method used to operate a slide, where fitted;
   (iii) Fire-fighting using equipment representative of that carried in the aeroplane on an actual or simulated fire;

   Note: With Halon extinguishers, an alternative method acceptable to the Authority may be used.
   (iv) Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment;
   (v) Actual handling of pyrotechnics, real or simulated, where fitted;
   (vi) Demonstration in the use of the life-raft(s), where fitted;
   (vii) An emergency evacuation drill;
   (viii) A ditching drill, if applicable;
   (ix) A rapid decompression drill, if applicable;

(6) Crew resource management—
   (i) Decision making skills;
   (ii) Briefings and developing open communication;
   (iii) Inquiry, advocacy, and assertion training; and
   (iv) Workload management.

(7) Dangerous goods—
   (i) Recognition of and transportation of dangerous goods;
   (ii) Proper packaging, marking, and documentation; and
   (iii) Instructions regarding compatibility, loading, storage and handling characteristics.

(8) Security—
   (i) Hijacking; and
   (ii) Disruptive passengers.

   (e) An AOC holder may administer each of the recurrent training curricula concurrently or intermixed, but shall record completion of each of these curricula separately.

IS: 8.10.1.35 RECURRENT TRAINING - FLIGHT OPERATIONS OFFICER

(a) Each AOC holder shall establish and maintain a recurrent training program, approved by the Authority and established in the AOC holder’s operations manual, to be completed annually by each flight operations officer.

(b) Each flight operations officer shall undergo recurrent training relevant to the type(s) and/or variant(s) of aeroplane and operations conducted by the AOC holder.

(c) Each AOC holder shall conduct all recurrent training by suitably qualified personnel.

(d) An AOC holder shall ensure that, every 12 months, each flight operations officer receive recurrent training in at least the following:
   (1) Aircraft-specific flight preparation;
   (2) Emergency assistance to flight crews;
(3) Crew Resource Management; and
(4) Dangerous goods.

(e) An AOC holder may administer each of the recurrent ground and flight training curricula concurrently or intermixed, but shall record completion of each of these curricula separately.

**IS: 8.10.1.36 CHECK AIRMAN TRAINING**

(a) No person may use a person, nor may any person serve as a check airman (aeroplane) or check airman (simulator) in a training program unless, with respect to the aeroplane type involved, that person has satisfactorily completed the appropriate training phases for the aeroplane, including recurrent training, that are required to serve as PIC or flight engineer, as applicable.

(b) Each AOC holder shall ensure that initial ground training for check airmen includes:
   
   (1) Check airman duties, functions, and responsibilities;
   
   (2) Applicable regulations and the AOC holder's policies and procedures;
   
   (3) Appropriate methods, procedures, and techniques for conducting the required checks;
   
   (4) Proper evaluation of student performance including the detection of:
      
      (i) Improper and insufficient training, and
      
      (ii) Personal characteristics of an applicant that could adversely affect safety;
   
   (5) Appropriate corrective action in the case of unsatisfactory checks; and
   
   (6) Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aeroplane.

(c) Transition ground training for all check airmen shall include the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aeroplane to which the check airman is in transition.

(d) Each AOC holder shall ensure that the initial and transition flight training for check airmen (aeroplane) includes:

   (1) Training and practice in conducting flight evaluations (from the left and right pilot seats for pilot check airmen) in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight checks;

   (2) The potential results of improper, untimely, or non-execution of safety measures during an evaluation; and

   (3) The safety measures (to be taken from either pilot seat for pilot check airmen) for emergency situations that are likely to develop during an evaluation.

(e) Each AOC holder shall ensure that the initial and transition flight training for check airmen (simulator) includes:

   (1) Training and practice in conducting flight checks in the required normal, abnormal, and emergency procedures to ensure competence to conduct the evaluations checks required by this part (this training and practice shall be accomplished in a flight simulator or in a flight training device).

   (2) Training in the operation of flight simulators or flight training devices, or both, to ensure competence to conduct the evaluations required by this Part.

(f) An AOC holder may accomplish flight training for check airmen in full or in part in an aircraft, in a flight simulator, or in a flight training device, as appropriate.

**IS: 8.10.1.37 FLIGHT INSTRUCTOR TRAINING**

(a) No person may use a person, nor may any person serve as flight instructor in a training program unless:

   (1) That person has satisfactorily completed initial or transition flight instructor training; and
(2) Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority, an AOC holder’s check airman, or an examiner employed by the AOC holder.

(b) An AOC holder may accomplish the observation check for a flight instructor, in part or in full, in an aeroplane, a flight simulator, or a flight training device.

(c) Each AOC holder shall ensure that initial ground training for flight instructors includes the following—

1. Flight instructor duties, functions, and responsibilities;
2. Applicable regulations and the AOC holder's policies and procedures;
3. Appropriate methods, procedures, and techniques for conducting the required checks;
4. Proper evaluation of student performance including the detection of:
   (i) Improper and insufficient training, and
   (ii) Personal characteristics of an applicant that could adversely affect safety;
5. Appropriate corrective action in the case of unsatisfactory checks;
6. Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aeroplane;
7. Except for holders of a flight instructor licence:
   (i) The fundamental principles of the teaching-learning process;
   (ii) Teaching methods and procedures; and
   (iii) The instructor-student relationship.

(d) Each AOC holder shall ensure that the transition ground training for flight instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aeroplane to which the flight instructor is in transition.

(e) Each AOC holder shall ensure that the initial and transition flight training for flight instructors (aeroplane), flight engineer instructors (aeroplane), and flight navigator instructors (aeroplane) includes the following:

1. The safety measures for emergency situations that are likely to develop during instruction.
2. The potential results of improper, untimely, or non-execution of safety measures during instruction.
3. For pilot flight instructor (aeroplane):
   (i) Inflight training and practice in conducting flight instruction from the left and right pilot seats in the required normal, abnormal, and emergency procedures to ensure competence as an instructor; and
   (ii) The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction.
4. For flight engineer instructors (aeroplane) and flight navigator instructors (aeroplane), in-flight training to ensure competence to perform assigned duties.

(f) An AOC holder may accomplish the flight training requirements for flight instructors in full or in part in flight, in a flight simulator, or in a flight training device, as appropriate.

(g) An AOC holder shall ensure that the initial and transition flight training for flight instructors (simulator) includes the following:

1. Training and practice in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight instruction required by this part. This training and practice shall be accomplished in full or in part in a flight simulator or in a flight training device.
2. Training in the operation of flight simulators or flight training devices, or both, to ensure competence to conduct the flight instruction required by this Part.

IS: 8.11.1.3 DUTY AND REST PERIODS

Each AOC holder and each pilot shall use the following tables to consolidate all scheduling and actual event requirements with respect to crew member duty and rest periods for commercial air transport operations.
### Acceptable Variations to the Basic Duty vs. Rest Requirements

This table outlines flight crew maximum duty periods (including duty aloft) and prescribed rest periods.

<table>
<thead>
<tr>
<th>Consecutive Hours of Flight Deck Duty</th>
<th>Intervening Rest Period</th>
<th>Flight Deck Duty (24 hour period)</th>
<th>Duty Aloft (Hours)</th>
<th>Total Duty Period (Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Pilot Crew</td>
<td>8</td>
<td>16</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2 Pilot Crew</td>
<td>8</td>
<td>16</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>2 Pilot + FE</td>
<td>9</td>
<td>NA</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>2 Pilots + 1 Relief Pilot</td>
<td>8</td>
<td>2X Actual Hours Flown</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>2 Pilot + 2 Relief Pilots</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>16</td>
</tr>
</tbody>
</table>

### Acceptable Scheduled Initial Rest Period Reduction by Lengthening the Subsequent Rest Period

<table>
<thead>
<tr>
<th>Flight Deck Duty Period (Hours)</th>
<th>Rest Period (Hours)</th>
<th>Authorised Reduced Rest Period (Hours)</th>
<th>Next Rest Period if Reduction Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 8</td>
<td>9</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>8-9</td>
<td>10</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>9 or more</td>
<td>11</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>
Situations Requiring Longer Flight Crew Member Rest Periods

<table>
<thead>
<tr>
<th>Period of Time</th>
<th>Total Flight Time (Hours)</th>
<th>Intervening Rest Period (Hours)</th>
<th>Subsequent Rest Period (Hours)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 or 2 Pilot Crew</td>
<td>24</td>
<td>8+</td>
<td>2X Actual Hours Flown (but not less than 8 hours)</td>
</tr>
<tr>
<td>2 Pilots + FE</td>
<td>48</td>
<td>20+</td>
<td>NA</td>
</tr>
<tr>
<td>2 Pilots + FE</td>
<td>72</td>
<td>24+</td>
<td>NA</td>
</tr>
<tr>
<td>2 Pilots + FE + Relief Crew</td>
<td>Return to Base</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Acceptable Situations for Reducing Initial Cabin Crew member Rest Period Through the Addition of Extra Cabin Crew Members on the Flights

<table>
<thead>
<tr>
<th>Scheduled Duty Period (Hours)</th>
<th>Extra Cabin Crew Members Required</th>
<th>Rest Period (Hours)</th>
<th>Authorised Reduced Rest Period (Hours)</th>
<th>Next Rest Period if Reduction Taken</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 or less</td>
<td>0</td>
<td>9</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>14-16</td>
<td>1</td>
<td>12</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>16-18</td>
<td>2</td>
<td>12</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>18-20</td>
<td>3</td>
<td>12</td>
<td>10</td>
<td>14</td>
</tr>
</tbody>
</table>

IS.8.11.1.5 Maximum Allowable Flight Hours

Each AOC holder and each pilot shall use the following tables shall be used to determine the maximum allowable flight hours.

<table>
<thead>
<tr>
<th>Maximum Allowable Flight Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled or Charter Flights</td>
</tr>
<tr>
<td>Stage Lengths less than 4000 miles</td>
</tr>
<tr>
<td>Aircraft more than 5700 kg.</td>
</tr>
<tr>
<td>1,000</td>
</tr>
<tr>
<td>NA</td>
</tr>
<tr>
<td>100</td>
</tr>
<tr>
<td>30</td>
</tr>
</tbody>
</table>

| Scheduled Flights               |
| Stage Lengths more than 4000 miles |
| Aircraft more than 5700 kg.       |
| 1,000                          |
| NA                             |
| 100                            |
| 30                             |

Maximum Duty Aloft
2 Pilot + FE
| 1,200                          |
| 300                            |
| 120                            |
| 34                             |

Maximum Duty Aloft With Relief
| 1,200                          |
| 350                            |
| 120                            |
| 40                             |
### Maximum Allowable Flight Hours

<table>
<thead>
<tr>
<th></th>
<th>Pilot + FE</th>
<th>NA</th>
<th>Relief</th>
<th>Relief</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charter Flights</td>
<td>1,000</td>
<td>NA</td>
<td>100</td>
<td>32</td>
</tr>
<tr>
<td>Stage Lengths of more than 4000 miles</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft more than 5700 kg.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Duty Aloft 2 Pilot + FE</td>
<td>1,200</td>
<td>300</td>
<td>120</td>
<td>34</td>
</tr>
<tr>
<td>Maximum Duty Aloft With Relief</td>
<td>1,200</td>
<td>350</td>
<td>120</td>
<td>44</td>
</tr>
<tr>
<td>Scheduled</td>
<td>1,200</td>
<td>400</td>
<td>120</td>
<td>34</td>
</tr>
<tr>
<td>Aircraft less than 5700 Kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charter</td>
<td>1,400</td>
<td>500</td>
<td>120</td>
<td>34</td>
</tr>
<tr>
<td>Aircraft less than 5700 Kg (Charter)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
IS: 9.2.2.2 MANAGEMENT PERSONNEL REQUIRED FOR COMMERCIAL AIR TRANSPORT OPERATIONS

(a) Each AOC holder shall make arrangements to ensure continuity of supervision if operations are conducted in the absence of any required management personnel.

(b) Required management personnel shall be contracted to work sufficient hours such that the management functions are fulfilled.

(c) A person serving in a required management position for an AOC holder may not serve in a similar position for any other AOC holder, unless a deviation is issued by the Authority.

(d) The minimum initial qualifications for a Director of Operations are—
   (1) An ATP license; and
   (2) 3 years experience as PIC in commercial air transport operations of large aircraft.

(e) The minimum qualifications for a Chief Pilot are—
   (1) An ATP license with the appropriate ratings for at least one of the aircraft used in the AOC holder’s operations; and
   (2) 3 years experience as PIC in commercial air transport operations.

   Note: The Authority may accept a commercial pilot license with instrument rating in lieu of the ATP license if the PIC requirements for the operations conducted require only a commercial certificate.

(f) The minimum entry qualifications for a Director of Maintenance are—
   (1) An Aircraft Maintenance Engineer (AME) license with airframe and powerplant ratings; and
   (2) 3 years experience in maintaining the same category and class of aircraft used by the AOC holder including 1 year in the capacity of returning aircraft to service.

(g) An AOC holder may employ a person who does not meet the appropriate airman qualification or experience if the Authority issues a deviation finding that that person has comparable experience and can effectively perform the required management functions.

IS: 9.2.2.9 COMPANY PROCEDURES INDOCTRINATION

(a) Each AOC holder shall ensure that the Quality Manager and the Director of Maintenance are provided company indoctrination training that covers the following areas:
   (1) AOC holder’s organisation, scope of operation and maintenance, and administrative practices as applicable to their assignments and duties.
   (2) Appropriate provisions of these regulations and other applicable regulations and guidance materials.
   (3) AOC holder policies and procedures.
   (4) Appropriate portions of the AOC holder’s operations manual and maintenance control manual.

IS: 9.2.3.2 DRY LEASING OF FOREIGN REGISTERED AIRCRAFT

(a) An AOC holder may dry lease an aircraft for the purpose of commercial air transportation to any AOC holder of a State which is signatory to the Chicago Convention provided that the following conditions are met:
   (1) The aircraft carries an appropriate airworthiness certificate issued, in accordance with ICAO Annex 8, by the country of registration and meets the registration and identification requirements of that country.
   (2) The aircraft is of a type design which complies with all of the requirements that would be applicable to that aircraft were it registered in Guyana, including the requirements which shall be met for issuance of a Guyana standard airworthiness certificate (including type design conformity, condition for safe operation, and the noise, fuel venting, and engine emission requirements).
(3) The aircraft is maintained according to an approved maintenance program.
(4) The aircraft is operated by Guyana-certified airmen employed by the AOC holder.

(b) Each AOC holder shall provide the Authority with a copy of the dry lease to be executed.

(c) Operational control of any dry leased aircraft rests with the AOC holder operating that aircraft.

(d) The Authority will remove a dry leased aircraft from the lessor’s AOC holder’s operations specifications and list it on the foreign AOC holder lessee’s operations specifications.

(e) Each AOC holder engaged in dry leasing aircraft shall make the dry lease agreement explicit concerning the maintenance programme and MEL to be followed during the term of the dry lease.

**IS: 9.2.3.3 AIRCRAFT INTERCHANGE**

(a) Before operating under an interchange agreement, each AOC holder shall show that—

1. The procedures for the interchange operation conform with safe operating practices;
2. Required crew members and flight operations officers meet approved training requirements for the aircraft and equipment to be used and are familiar with the communications and dispatch procedures to be used;
3. Maintenance personnel meet training requirements for the aircraft and equipment, and are familiar with the maintenance procedures to be used;
4. Flight crew members and flight operations officers meet appropriate route and airport qualifications;
5. The aircraft to be operated are essentially similar to the aircraft of the AOC holder with whom the interchange is effected; and
6. The arrangement of flight instruments and controls that are critical to safety are essentially similar, unless the authority determines that the AOC holder has adequate training programmes to insure that any potentially hazardous dissimilarities are safely overcome by flight crew familiarisation.

(b) Each AOC holder conducting an interchange agreement shall include the pertinent provisions and procedures of the agreement in its manuals.

(c) The AOC holder shall amend their operations specifications to reflect an interchange agreement.

(d) The AOC holder shall comply with the applicable regulations of the State of Registry of an aircraft involved in an interchange agreement while it has operational control of that aircraft.
IS: 9.2.3.4  WET LEASING

(a) Each AOC holder shall provide the Authority with a copy of the wet lease to be executed.

(b) The Authority will determine which party to a wet lease agreement has operational control considering the extent and control of certain operational functions such as:

   (1) Initiating and terminating flights.
   (2) Maintenance and servicing of aircraft.
   (3) Scheduling crewmembers.
   (4) Paying crewmembers.
   (5) Training crewmembers.

(c) Each AOC holder engaged in a wet leasing arrangement shall amend its operations specifications to contain the following information:

   (1) The names of the parties to the agreement and the duration of the agreement.
   (2) The make, model, and series of each aircraft involved in the agreement.
   (3) The kind of operation.
   (4) The expiration date of the lease agreement.
   (5) A statement specifying the party deemed to have operational control.
   (6) Any other item, condition, or limitation the Authority determines necessary.

IS: 9.2.3.5  EMERGENCY EVACUATION DEMONSTRATION

(a) Each AOC holder shall conduct a partial emergency evacuation and ditching evacuation, observed by the Authority that demonstrates the effectiveness of its crew member emergency training and evacuation procedures.

(b) Prior to conducting an emergency evacuation demonstration, the AOC holder shall apply for and obtain approval from the Authority.

(c) Cabin crew members used in the emergency evacuation demonstrations shall—

   (1) Be selected at random by the Authority;
   (2) Have completed the AOC holder's Authority-approved training programme for the type and model of aircraft; and
   (3) Have passed the drills and competence check on the emergency equipment and procedures.

(d) To conduct the partial emergency evacuation demonstration, the AOC holder's assigned cabin crew members shall, using the AOC holder's line operating procedures—

   (1) Demonstrate the opening of 50 percent of the required floor-level emergency exits and 50 percent of the required non-floor-level emergency exits (whose opening by a cabin crew member is defined as an emergency evacuation duty) and deployment of 50 percent of the exit slides, selected by the Authority; and
   (2) Prepare for use those exits and slides within 15 seconds.

(e) To conduct the ditching evacuation demonstration, the AOC holder's assigned cabin crew members shall—

   (1) Demonstrate their knowledge and use of each item of required emergency equipment;
   (2) Prepare the cabin for ditching within 6 minutes after the intention to ditch is announced;
   (3) Remove each life raft from storage (one life raft, selected by the Authority, shall be launched and properly inflated or one slide life raft properly inflated); and
   (4) Enter the raft (the raft shall include all required emergency equipment) and completely set it up for extended occupancy.
IS: 9.2.3.6 Demonstration Flights

(a) Each AOC holder shall conduct demonstration flights for each type of aircraft, including those aircraft materially altered in design, and for each kind of operation the AOC holder intends to conduct.

Definition: “Materially altered aircraft” refers to aircraft having powerplants installed other than those for which it is certified; or alterations to the aircraft or its components that materially affect flight characteristics.

(b) Each AOC holder shall conduct demonstration flights which contain at least:

1. One hundred total hours of flight time, unless the Authority determines that a satisfactory level of proficiency has been demonstrated in fewer hours;
2. Five hours of night time, if night flights are to be authorised;
3. Five instrument approach procedures under simulated or actual instrument weather conditions, if IFR flights are to be authorised; and
4. Entry into a representative number of en route airports, as determined by the Authority

(c) No person may carry passengers in an aircraft during demonstration flights, except for those needed to make the demonstration flight and those designated by the Authority.

(d) For those AOC holders of aircraft of less than 5700 kg, the necessity and extent of demonstration shall be at the option of the Authority.

IS: 9.3.1.2 Operations Manual

(a) Each AOC holder shall ensure that the contents and structure of the operations manual are in accordance with rules and regulations of the Authority, and is relevant to the area(s) and type(s) of operation.

(b) An AOC holder may design a manual to be more restrictive than the Authority’s requirements.

(c) Each AOC holder shall ensure that the operations manual presents the items of information listed below, to meet the requirements of 9.3.1.2(g). The manual may consist of two or more parts containing together all such information in a format and manner based upon the outline presented in paragraph (d) below. Each part of the operations manual must contain all information required by each group of personnel addressed in that part.

1. General –
   (i) Instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations;
   (ii) Rules limiting the flight time and flight duty periods and providing for adequate rest periods for flight crewmembers and cabin crew;
   (iii) A list of the navigational equipment to be carried including any requirements relating to operations in RNP airspace;
   (iv) Where relevant to the operations, the long range navigation procedures, engine failure procedure for ETOPS and the nomination and utilization of diversion aerodrome;
   (v) The circumstances in which a radio listening watch is to be maintained;
   (vi) The method for determining minimum flight altitudes;
   (vii) The methods for determining aerodrome operating minima;
   (viii) Safety precautions during refuelling with passengers on board;
   (ix) Ground handling arrangements and procedures;
   (x) Procedures, as prescribed in ICAO Annex 12, for PICs observing an accident;
   (xi) The flight crew for each type of operation including the designation of the succession of command;
(xii) Specific instructions for the computation of the quantities of fuel and oil to be carried, having regard to all circumstances of the operation including the possibility of the failure of one or more powerplants while enroute;
(xiii) The conditions under which oxygen shall be used and the amount of oxygen determined in accordance with GARS sub-section 7.1.8.12
(xiv) Instructions for mass and balance control;
(xv) Instructions for the conduct and control of ground de-icing/anti-icing operations;
(xvi) The specifications for the Operational Flight Plan;
(xvii) Standard operating procedures (SOP) for each phase of flight;
(xviii) Instructions on the use of normal checklists and the timing of their use;
(xix) Departure contingency procedures;
(xx) Instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude call outs;
(xxi) Instructions on the use of autopilots and auto throttles in IMC;
(xxii) Instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved;
(xxiii) Departure and approach briefings;
(xxiv) Route and destination familiarization;
(xxv) Stabilized approach procedures;
(xxvi) Limitation on high rates of descent near the surface;
(xxvii) Conditions required to commence or to continue an instrument approach;
(xxviii) Instructions for the conduct of precision and non-precision instrument approach procedures;
(xxix) Allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach and landing operations;
( xxx) Instructions and training requirements for the avoidance of controlled flight into terrain and policy for the use of the ground proximity warning system (GPWS);
( xxxi) Policy, instructions, procedures and training requirements for the avoidance of collisions and the use of the airborne collision avoidance system (ACAS);
( xxxii) Information and instructions relating to the interception of civil aircraft including –
(A) Procedures, as described in GARS Part 8, for PICs of intercepted aircraft; and
(B) Visual signals for use by intercepting and intercepted aircraft as described in GARS Part 8.
( xxxiii) For aeroplanes intended to be operated above 15000 m (49,000 ft)
(A) Information which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation; and
(B) Procedures in the event that a decision to descend is taken, covering –:
(aa) The necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance; and
(bb) The action to be taken in the event that communication with the ATS unit cannot be established or is interrupted;
( xxxiv) Details of the accident prevention and flight safety programme provided in accordance with GARS Subsection 9.3.1.30, including a statement of safety policy and the responsibility of personnel;
( xxxv) Information and instructions on the carriage of dangerous goods, including action to be taken in the event of an emergency;
( xxxvi) Security instructions and guidance; and
( xxxvii) The search procedure checklist for searching for bombs, concealed weapons, explosives or other dangerous devices. This shall include information on the least-risk bomb location specific to the aircraft.
(2) Aircraft operating information –
   (i) Certification limitations and operating limitations;
   (ii) The normal, abnormal and emergency procedures to be used by the flight crew and the related checklists;
   (iii) Operating instructions and information on climb performance with all engines operating;
   (iv) Flight planning data for preflight and in-flight planning with different thrust/power and speed settings;
   (v) Instructions and data for mass and balance calculations;
   (vi) Instructions for aircraft loading and securing of load;
   (vii) Aircraft systems, associated controls and instructions for their use;
   (viii) The MEL and CDL for the aeroplane types operated and specific operations authorized, including any requirements relating to operations in RNP airspace;
   (ix) Checklist of emergency and safety equipment and instructions for its use;
   (x) Emergency evacuation procedures, including type-specific procedures, crew coordination, assignment of crew’s emergency positions and the emergency duties assigned to each crewmember;
   (xi) The normal, abnormal and emergency procedures to be used by the cabin crew, the checklist relating thereto and aircraft systems information as required, including a statement related to the necessary procedures for the coordination between flight and cabin crew;
   (xii) Survival and emergency equipment for different routes and the necessary procedures to verify its normal functioning before take-off, including procedures to determine the required amount of oxygen and the quantity available; and
   (xiii) The ground-air visual signal code for use by survivors, as contained in GARs Part 8.

(3) Routes and aerodromes –
   (i) A route guide to ensure that the flight crew will have, for each flight, information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures as applicable for the operation, and such other information as the operator may deem necessary for the proper conduct of flight operations;
   (ii) The minimum flight altitudes for each route to be flown;
   (iii) Aerodrome operating minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes;
   (iv) The increase of aerodrome operating minima in case of degradation of approach or aerodrome facilities;
   (v) The necessary information for compliance with all flight profiles required by regulations, including but not limited to, the determination of –
      (A) Take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by system failures which affect the take-off distance;
      (B) Take-off climb limitations;
      (C) Enroute climb limitations;
      (D) Approach climb limitations and landing climb limitations;
      (E) Landing runway length requirements for dry, wet, and contaminated conditions including systems failures which affect the landing distance; and
      (F) Supplementary information, such as tire speed limitations.

(4) Training –
   (i) Details of the flight crew training programme as required by GARs sub-part 8.10;
   (ii) Details of the cabin crew duties training programme as required by GARs sub-part 8.10; and
   (iii) Details of the flight operations officer/flight dispatcher training programme when employed in conjunction with a method of flight supervision as detailed in GARs sub-part 8.10
(a) The operations manual may be based upon the following outline.

Vol. 1- General

0.0 Administration and Control of Operations Manual

0.1 Introduction

(a) A statement that the manual complies with all applicable Authority regulations and requirements and with the terms and conditions of the applicable Air Operator Certificate.

(b) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel in the performance of their duties.

(c) A list and brief description of the various operations manual parts, their contents, applicability and use.

(d) Explanations and definitions of terms and words used in the manual.

0.2 System of Amendment and Revision

(a) An operations manual shall describe who is responsible for the issuance and insertion of amendments and revisions.

(b) A record of amendments and revisions with insertion dates and effective dates is required.

(c) A statement that handwritten amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety.

(d) A description of the system for the annotation of pages and their effective dates.

(e) A list of effective pages and their effective dates.

(f) Annotation of changes (on text pages and as practicable, on charts and diagrams).

(g) A system for recording temporary revisions.

(h) A description of the distribution system for the manuals, amendments and revisions.

(i) A statement of who is responsible for notifying the Authority of proposed changes and working with the Authority on changes requiring Authority approval.

1.0 Organisation and Responsibilities

1.1 Organisational Structure

A description of the organisational structure including the general company organisation and operations department organisation. The relationship between the operations department and the other departments of the company. In particular, the subordination and reporting lines of all divisions, departments etc., which pertain to the safety of flight operations, shall be shown.

1.2 Responsible Manager

The name of each manager responsible for flight operations, the maintenance system, crew training and ground operations shall be listed. A description of their function and responsibilities shall be included.
1.3 Responsibilities and Duties of Operations Management Personnel

A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and with compliance with applicable regulations shall be listed.

1.4 Authority, Duties and Responsibilities of a PIC

A statement defining the authority, duties and responsibilities of the PIC shall be listed.

1.5 Duties and Responsibilities of Crew Members Other Than the PIC

A statement defining the authority, duties, and responsibilities of all required aircraft crewmembers shall be listed.

2.0 Operational Control And Supervision

2.1 Supervision of the Operation by the AOC Holder

A description of the system for supervision of the operation by the AOC holder shall be listed. This description shall show how the safety of flight operations and the qualifications of personnel involved in all such operations are supervised and monitored. In particular, the procedures related to the following items shall be described:

(a) Competence of operations personnel; and
(b) Control, analysis and storage of records, flight documents, additional information, and safety related data.

2.2 System of Promulgation of Additional Operational Instructions and Information

A description of any system for promulgating information which may be of an operational nature but is supplementary to that in the operations manual. The applicability of this information and the responsibilities for its promulgation shall be included.

2.3 Accident Prevention and Flight Safety Programme

A description of the main aspects of the flight safety programme including:
(a) Programmes to achieve and maintain risk awareness by all persons involved in flight operations; and
(b) Evaluation of accidents and incidents and the promulgation of related information.

2.4 Operational Control

A description of the objectives, procedures and responsibilities necessary to exercise operational control with respect to flight safety.

3.0 Quality System

A description of the quality system adopted including at least:
(a) Quality policy;
(b) A description of the organisation of the Quality System; and,
(c) Allocation of duties and responsibilities

4.0 Crew Composition

4.1 Crew Composition
An explanation of the method for determining crew compositions taking into account of the following:
   (a) Experience (total and on type), recency and qualification of the crew members; and
   (b) The designation of the PIC and, if required by the duration of the flight, the procedures for the relief of the PIC or other members of the flight crew.

4.2 Designation of the PIC

The rules applicable to the designation of a PIC.

4.3 Flight Crew Incapacitation

Instructions on the succession of command in the event of flight crew incapacitation.

5.0 Qualification Requirements

5.1 Qualifications

A description of the required license rating(s), qualification/competency (e.g., for routes and airports) experience, training, checking and recency of experience for operations personnel to conduct their duties. Consideration shall be given to the aircraft type, kind of operation, and composition of the crew.

5.2 Flight Crew

(a) Operation on more than one type or variant.

5.3 Cabin Crew

(a) Senior cabin crew member.
(b) Cabin crewmember.
   (i) Required cabin crewmember.
   (ii) Additional cabin crewmember, and
   (iii) Cabin crewmember during familiarisation flights.

(c) Operation on more than one type or variant.

5.4 Other Operations Personnel

6.0 Crew Health Precautions

6.1 Crew Health Precautions

The relevant regulations and guidance for crew members concerning health including:

(a) Alcohol and other intoxicating liquor;
(b) Narcotics;
(c) Drugs;
(d) Sleeping tablets;
(e) Pharmaceutical preparations;
(f) Immunisation;
(g) SCUBA diving;
(h) Blood donation;
(i) Meal precautions prior to and during flight;
(j) Sleep and rest; and
(k) Surgical operations.

7.0 Flight Time Limitations

7.1 Flight and Duty time Limitations and Rest Requirements

The scheme developed by the operator to comply with the provisions of GARs sub-part 8.11

8.0 Operating Procedures

8.1 Flight Preparation Instructions

As applicable to the operation:

8.1.1 Minimum Flight Altitudes.
A description of the method of determination and application of minimum altitudes including:

(a) A procedure to establish the minimum altitudes/flight levels for VFR flights; and
(b) A procedure to establish the minimum altitudes/flight levels for IFR flights.

8.1.2 Criteria for determining the usability of aerodromes.

8.1.3 Methods for establishing aerodrome operating minima.

The method for establishing aerodrome operating minima for IFR flights in accordance with GARs 9.3.1.29. Reference must be made to procedures for the determination of the visibility and/or runway visual range and for the applicability of the actual visibility observed by the pilots, the reported visibility and the reported runway visual range.

8.1.4 En-route Operating Minima for VFR flights or VFR portions of a flight and, where single engined aeroplanes are used, instructions for route selection with respect to the availability of surfaces which permit a safe forced landing.

8.1.5 Presentation and Application of Aerodrome and En-route Operating Minima

8.1.6 Interpretation of meteorological information.
Explanatory material on the decoding of MET forecasts and MET reports relevant to the area of operations, including the interpretation of conditional expressions.

8.1.7 Determination of the quantities of fuel, oil and water methanol carried.
The methods by which the quantities of fuel, oil and water methanol to be carried are determined and monitored in flight. This section must also include instructions on the measurement and distribution of the fluid carried on board. Such instructions must take account of all circumstances likely to be encountered on the flight, including the possibility of in-flight replanning and of failure of one or more of the aeroplane's power plants. The system for maintaining fuel and oil records must also be described.

8.1.8 Mass and Centre of Gravity.

The general principles of mass and centre of gravity including:

(a) definitions;
(b) Methods, procedures and responsibilities for preparation and acceptance of mass and centre of gravity calculations;
(c) The policy for using standard and/or actual masses;
(d) The method for determining the applicable passenger, baggage and cargo mass;
(e) The applicable passenger and baggage masses for various types of operations and aeroplane type;
(f) General instruction and information necessary for verification of the various types of mass and balance documentation in use;
(g) Last Minute Changes procedures;
(h) Specific gravity of fuel, oil and water methanol; and
(i) Seating policy/procedures.

8.1.9 ATS Flight Plan.

Procedures and responsibilities for the preparation and submission of the air traffic services flight plan. Factors to be considered include the means of submission for both individual and repetitive flight plans.

8.1.10 Operational Flight Plan.

Procedures and responsibilities for the preparation and acceptance of the operational flight plan. The use of the operational flight plan must be described including samples of the operational flight plan formats in use.

8.1.11 Operator's Aeroplane Technical Log.

The responsibilities and the use of the operator's Aeroplane Technical Log must be described, including samples of the format used.

8.1.12 List of documents, forms and additional information to be carried.

8.2 Ground Handling Instructions

8.2.1 Fuelling Procedures.

A description of fuelling procedures, including:

(a) Safety precautions during refuelling and defuelling including when an APU is in operation or when a turbine engine is running and the prop rakes are on;
(b) Refuelling and defuelling when passengers are embarking, on board or disembarking;
(c) Precautions to be taken to avoid mixing fuels; and
(d) Method to ensure required amount of fuel is loaded.

8.2.2 Aircraft, Passengers And Cargo Handling Procedures Related To Safety.

A description of the handling procedures to be used when allocating seats and embarking and disembarking passengers and when loading and unloading the aircraft. Further procedures, aimed at achieving safety whilst the aircraft is on the ramp, shall also be given. Handling procedures shall include:
(a) Sick passengers and persons with reduced mobility;
(b) Permissible size and weight of hand baggage;
(c) Loading and securing of items in the aircraft;
(d) Special loads and classification of load compartments (i.e., dangerous goods, live animals, etc.);
(e) Positioning of ground equipment;
(f) Operation of aircraft doors;
(g) Safety on the ramp, including fire prevention, blast and suction areas;
(h) Start-up, ramp departure and arrival procedures;
(i) Servicing of aircraft;
(j) Documents and forms; and
(k) Multiple occupancy of aircraft seats.

8.2.3 Procedures for the Refusal of Embarkation.

Procedures to ensure that persons who appear to be intoxicated or who demonstrate by manner or physical indications that they are under the influence of alcohol or drugs, except medical patients under proper care, are refused embarkation.

8.2.4 De-icing and Anti-Icing on the Ground.

A description of the de-icing and anti-icing policy and procedures for aircraft on the ground. These shall include descriptions of the types and effects of icing and other contaminants on aircraft while stationary, during ground movements and during take-off. In addition, a description of the fluid types used shall be given including:

(a) Proprietary or commercial names;
(b) Characteristics;
(c) Effects on aircraft performance; and
(d) Precautions during usage.

8.3 Flight Procedures

8.3.1 VFR/IFR Policy

A description of the policy for allowing flights to be made under VFR, or of requiring flights to be made under IFR, or of changing from one to the other.

8.3.2 Navigation Procedures.

A description of all navigation procedures relevant to the type(s) and area(s) of operation. Consideration must be given to:

(a) standard navigational procedures including policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the aeroplane;
(b) MNPS and POLAR navigation and navigation in other designated areas;
(c) RNAV;
(d) In-flight replanning;
(e) Procedures in the event of system degradation; and
(f) RVSM.

8.3.3 Altimeter setting procedures

8.3.4 Altitude alerting system procedures
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| 8.3.8   | Adverse and potentially hazardous atmospheric conditions. Procedures for operating in, and/or avoiding, adverse and potentially hazardous atmospheric conditions including:  
  
  (a) Thunderstorms;  
  (b) Icing conditions;  
  (c) Turbulence;  
  (d) Windshear;  
  (e) Jetstream;  
  (f) Volcanic ash clouds;  
  (g) Heavy precipitation;  
  (h) Sandstorms;  
  (i) Mountain waves; and  
  (j) Significant Temperature inversions. |
| 8.3.9   | Wake Turbulence  
Wake turbulence separation criteria, taking into account aeroplane types, wind conditions and runway location. |
| 8.3.10  | Crew members at their stations.  
The requirements for crew members to occupy their assigned stations or seats during the different phases of flight or whenever deemed necessary in the interest of safety. |
| 8.3.11  | Use of safety belts for crew and passengers.  
The requirements for crew members and passengers to use safety belts and/or harnesses during the different phases of flight or whenever deemed necessary in the interest of safety. |
| 8.3.12  | Admission to Flight Deck.  
The conditions for the admission to the flight deck of persons other than the flight crew. The policy regarding the admission of Inspectors from the Authority must also be included. |
| 8.3.13  | Use of vacant crew seats.  
The conditions and procedures for the use of vacant crew seats. |
| 8.3.14  | Incapacitation of crew members.  
Procedures to be followed in the event of incapacitation of crew members in flight. Examples of the types of incapacitation and the means for recognising them must be included. |
| 8.3.15  | Cabin safety Requirements.  
Procedures covering:  
  
  (a) Cabin preparation for flight, in-flight requirements and preparation for landing including procedures for securing the cabin and galleys;  
  (b) Procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the aeroplane; |
(c) Procedures to be followed during passenger embarking, on board or disembarking;
(d) Procedures when refuelling/defuelling with passengers embarking, on board or disembarking;
(e) Smoking on board and;
(f) Use of portable electronic equipment and cellular telephones.

8.3.16 Passengers briefing procedures.
The contents, means and timing of passenger briefing in accordance with GARs 8.9.1.4, 8.9.2.16 & 8.9.2.17 as applicable.

8.3.17 Procedures for aeroplanes operated whenever required cosmic or solar radiation detection equipment is carried.
Procedures for the use of cosmic and solar radiation detection equipment and for recording its readings including actions to be taken in the event that limit values specified in the Operations Manual are exceeded. In addition, the procedures, including ATS procedures, to be followed in the event that a decision to descend or re-route is taken.

8.4 All Weather Operations
A description of the operational procedures associated with All Weather Operations.

8.5 ETOPs( Extended range Twin-engined Operations)
A description of the ETOPS operational procedures.

8.6 Use of the Minimum Equipment and Configuration Deviation List(s)

8.7 Non Revenue Flights
Procedures and limitation for:

(a) Training flights;
(b) Test flights;
(c) Delivery flights;
(d) Ferry flight;
(e) Demonstration flight; and
(f) Positioning flights,

Including the kind of persons who may be carried on such flights.

8.8 Oxygen Requirements

8.8.1 All explanation of the conditions under which oxygen must be provided and used.

8.8.2 The oxygen requirements specified for;

(a) Flight crew;
(b) Cabin crew; and
(c) Passengers.

9.0 Dangerous Goods And Weapons

9.1 Transport of Dangerous Goods
Information, instructions and general guidance on the transport of dangerous goods including:
(a) AOC holder’s policy on the transport of dangerous goods;
(b) Guidance on the requirements for acceptance, labelling, handling, stowage and segregation of dangerous goods;
(c) Procedures for responding to emergency situations involving dangerous goods;
(d) Duties of all personnel involved; and
(e) Instructions on the carriage of the AOC holder's employees.

9.2 Transport of Weapons
The conditions under which weapons, munitions of war and sporting weapons may be carried.

10.0 Security
10.1 Security Policies and Procedures
A description of security policies and procedures for handling and reporting crime on board such as unlawful interference, sabotage, bomb threats, and hijacking.

10.2 Security Instructions and Guidance
Security instructions and guidance of a non-confidential nature which shall include the authority and responsibilities of operations personnel.

10.3 Preventative Security Measures and Training
A description of preventative security measures and training. (Note: Parts of the security instructions and guidance may be kept confidential.)

11.0 Handling Of Accidents And Occurrences
Procedures for the handling, notifying and reporting of accidents and occurrences. This section shall include:
(a) Definitions of accidents and occurrences and the relevant responsibilities of all persons involved;
(b) The descriptions of which company departments, Authorities or other institutions have to be notified by which means and in which sequence in case of an accident;
(c) Special notification requirements in the event of an accident or occurrence when dangerous goods are being carried;
(d) A description of the requirements to report specific occurrences and accidents;
(e) The forms used for reporting and the procedure for submitting them to the Authority shall also be included; and
(f) If the AOC holder develops additional safety related reporting procedures for its own internal use, a description of the applicability and related forms to be used.

12.0 Rules of the Air
Rules of the Air including:
(a) Territorial application of the Rules of the Air;
(b) The circumstances during which a radio listening watch shall be maintained;
(c) ATC clearances, adherence to flight plan and position reports;
(d) The ground/air visual codes for use by survivors, description and use of signal aids; and
(e) Distress and urgency signals.

Vol. 2- Aircraft Operating Information- Type related (See IS 9.3.1.4)
Vol.3 - Route Guide.(See IS 9.3.1.20)
Vol. 4 – Training (See IS 9.3.1.3)
### IS 9.3.1.3 TRAINING PROGRAMMES MANUAL

Each AOC holder and AOC applicant shall ensure that a training programme, published as a separate part, or volume of the operations manual, contains the following

#### 1.0 Training Syllabi And Checking Programmes

**1.1 General Requirements.**

Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight shall be developed to meet the respective requirements of the Authority. An AOC holder may not use, nor may any person serve in a required crewmember capacity or operational capacity unless that person meets the training and currency requirements established by the Authority for that respective position.

**1.2 Flight Crew.**

The training syllabi and checking programmes for flight crew members shall include:

- (a) A written training programme acceptable to the Authority that provides for initial, transition, difference, and recurrent training, as appropriate, for flight deck crew members for each type of aircraft flown by that crew member. This written training programme shall include both normal and emergency procedures training applicable for each type of aircraft flown by the crewmember.
- (b) Adequate ground and flight training facilities and properly qualified instructors required to meet training objectives and needs.
- (c) Appropriately trained and qualified instructors, device operators, and other required training items needed to meet the training needs for each type and variation of aircraft flown by the AOC holder.
- (d) Adequate numbers of ground, flight, and check pilots to ensure adequate training and flight testing of flight crew members.
- (e) A record system acceptable to the Authority to show compliance with appropriate training and currency requirements.

**1.3 Cabin Crew.**

The training syllabi and checking programmes for cabin crew members shall include:

- (a) Basic initial ground training covering duties and responsibilities.
- (b) Appropriate Authority rules and regulations.
- (c) Appropriate portions of the AOC holder’s operating manual.
- (d) Appropriate emergency training as required by the Authority and the AOC holder’s operating manual.
- (e) Appropriate flight training.
- (f) Appropriate recurrent, upgrade, or difference training, as required, to maintain currency in both type and any variance the crew member may be required to work in.
- (g) Maintain a training record system acceptable to the Authority to show compliance with all required training.

**1.4 All Aircraft Crew.**

A written training programme shall be developed for all aircraft crew members in the emergency procedures appropriate to each make and model of aircraft flown in by the crew member. Areas shall include:

- (a) Instruction in emergency procedures, assignments, and crew co-ordination.
- (b) Individual instruction in the use of onboard emergency equipment such as fire extinguishers, emergency breathing equipment, first aid equipment and its proper use, emergency exits and evacuation slides, and the aircraft’s oxygen system including the use of portable emergency oxygen bottles. Flight deck crewmembers shall also practice using their emergency equipment designed to protect them in case of a cockpit fire or smoke.
- (c) Training shall also include instruction in potential emergencies such as rapid decompression, ditching, fire fighting, aircraft evacuation, medical emergencies, hijacking, and disruptive passengers.
- (d) Scheduled recurrent training to meet Authority requirements.

**1.5 All Operations Personnel.**

The training syllabi and checking programmes for all operations personnel shall include:

- (a) Training in the safe transportation and recognition of all dangerous goods permitted by the Authority to be shipped by air. Training shall include the proper packaging, marking, labelling, and documentation of dangerous articles and magnetised materials.
- (b) All appropriate security training required by the Authority.
- (c) A method of providing any required notification of an accident or incident involving dangerous goods.

**1.6 Operations Personnel Other Than Aircraft Crew.**

Operations personnel other than aircraft crew (e.g., flight operations officer, handling personnel etc.), a written training programme shall be developed that pertains to their respective duties. The training programme shall provide for initial, recurrent, and any required upgrade training.

#### 2.0 Procedures for Training and Checking

**2.1 Proficiency Checking Procedures**

Procedures to be applied in the event that personnel do not achieve or maintain the required standards.

**2.2 Procedures Involving the Simulation of Abnormal or Emergency Situations.**

Procedures to ensure that abnormal or emergency situations requiring the application of part or all of abnormal or emergency procedures, and simulation of IMC by artificial means, are not simulated during commercial air transportation flights.

#### 3.0 Document Retention

**3.1 Documentation To Be Stored And Storage Periods**

An AOC holder shall retain all documentation required by appropriate Authority or the Authority of a foreign country in which the AOC holder is operating for the time specified by the respective Authority or for the time period needed to show compliance with appropriate regulations or this operations manual, whichever is longer.
IS: 9.3.1.4 **AIRCRAFT OPERATING MANUAL**

Each AOC applicant and AOC holder should submit and maintain an aircraft operating manual containing at least the following.

### 1.0 General Information and Units of Measurement

1.0 General Information (e.g. aircraft dimensions), including a description of the units of measurement used for the operation of the aircraft type concerned and conversion tables.

### 2.0 Limitations

2.1 Certification and Operational Limitations

A description of the certified limitations and the applicable operational limitations including:

- (a) Certification status;
- (b) Passenger seating configuration for each aircraft type including a pictorial presentation;
- (c) Types of operation that are approved (e.g. IFR/VFR, CAT II/III, flights in known icing conditions etc.);
- (d) Crew composition;
- (e) Operating within mass and centre of gravity limitations;
- (f) Speed limitations;
- (g) Flight envelopes;
- (h) Wind limits including operations on contaminated runways;
- (i) Performance limitations for applicable configurations;
- (j) Runway slope;
- (k) Limitations on wet or contaminated runways;
- (l) Airframe contamination; and
- (m) Post landing

### 3.0 Normal Procedures

3.1 Normal Procedures

The normal procedures and duties assigned to the crew, the appropriate checklists, the system for use of the checklists and a statement covering the necessary co-ordination procedures between flight and cabin crew. The following normal procedures and duties shall be included:

- (a) Pre-flight;
- (b) Pre-departure and loading;
- (c) Altimeter setting and checking;
- (d) Taxi, Take-Off and Climb;
- (e) Noise abatement;
- (f) Cruise and descent;
- (g) Approach, landing preparation and briefing;
- (h) VFR approach;
- (i) Instrument approach;
- (j) Visual approach and circling;
- (k) Missed approach;
- (l) Normal landing;
- (m) Post landing; and
- (n) Operation on wet and contaminated runways.

3.2 Specific Flight Deck Procedures

(a) Determining airworthiness of aircraft
(b) Obtaining flight release
(c) Initial cockpit preparation
(d) Standard operating procedures
(e) Cockpit discipline
(f) Standard call-outs
(d) Communications
(e) Flight safety
(f) Push-back and towing procedures
(g) Taxi guidelines and ramp signals
(h) Take-off and climb out procedures
(i) Choice of runway
(j) Take-off in limited visibility
(k) Take-off in adverse weather
(l) Use and limitations of weather radar
(m) Use of landing lights
(n) Monitoring of flight instruments
(o) Power settings for take-off
(p) Malfunctions during take-off
(q) Rejected take-off decision
(r) Climb, best angle, best rate
(s) Sterile cockpit procedures
(t) En route and holding procedures
(u) Cruise control
(v) Navigation log book
(w) Descent, approach and landing procedures
(x) Standard call-outs
(y) Reporting maintenance problems
(z) How to obtain maintenance and service en route

4.0 Abnormal And Emergency Procedures

4.1 Abnormal and Emergency Procedures and Duties

The manual shall contain a listing of abnormal and emergency procedures assigned to crew members with appropriate check-lists that include a system for use of the check-lists and a statement covering the necessary co-ordination procedures between flight and cabin crew. The following abnormal and emergency procedures and duties shall be included:

(a) Crew incapacitation;
(b) Fire and smoke drills;
(c) Unpressurised and partially pressurised flight;
(d) Exceeding structural limits such as overweight landing;
(e) Exceeding cosmic radiation limits;
(f) Lightning strikes
(g) Distress communications and alerting ATC to emergencies;
(h) Engine failure;
(i) System failures;
(j) Guidance for diversion in case of serious technical failure;
(k) Ground proximity warning;
(1) TCAS warning;
(m) Windshear; and
(n) Emergency landing/ditching.
(o) Aircraft evacuation
(p) Fuel Jettisoning and Overweight Landing:
   • General considerations and policy
   • Fuel jettisoning procedures and precautions
(q) Emergency Procedures:
   • Emergency decent
   • Low fuel
   • Dangerous goods incident or accident
(r) Interception procedures
(s) Emergency signal for cabin crew members
(t) Communication Procedures
(u) Radio listening watch

5.0 Performance Data

Performance data shall be provided in a form in which it can be used without difficulty.

5.1 Performance Data.

Performance material which provides the necessary data to allow the flight crew to comply with the approved aircraft flight manual performance requirements shall be included to allow the determination of:

(a) Take-off climb limits - Mass, Altitude, Temperature;
(b) Take-off field length (dry, wet, contaminated);
(c) Net flight path data for obstacle clearance calculation or, where applicable, take-off flight path;
(d) The gradient losses for banked climb outs;
(e) En route climb limits;
(f) Approach climb limits;
(g) Landing limits;
(h) Landing field length (dry, wet, contaminated) including the effects of an inflight failure of a system or device, if it affects the landing distance;
(i) Brake energy limits; and
(j) Speeds applicable for the various flight stages (also considering wet or contaminated runways).

5.1.1. Supplementary Performance Data

Supplementary data covering flights in icing conditions. Any certified performance related to an allowable configuration, or configuration deviation, such as anti-skid inoperative, shall be included.

5.1.2. Other Acceptable Performance Data

If performance data, as required for the appropriate performance class, is not available in the approved AFM, then other data acceptable to the Authority shall be included. Alternatively, the operations manual may contain cross-reference to the approved data contained in the AFM where such data is not likely to be used often or in an emergency.
5.2 Additional Performance Data.
Additional performance data where applicable including:
(a) All engine climb gradients;
(b) Drift-down data;
(c) Effect of de-icing/anti-icing fluids;
(d) Flight with landing gear down;
(e) For aircraft with 3 or more engines, one engine inoperative ferry flights; and
(f) Flights conducted under the provisions of a configuration deviation list (CDL).

6.0 Flight Planning
6.1 Flight Planning Data
Data and instructions necessary for pre-flight and inflight planning including factors such as speed schedules and power settings. Where applicable, procedures for engine(s) out operations, ETOPS and flights to isolated airports shall be included.

6.2 Fuel Calculations
The method for calculating fuel needed for the various stages of flight.

7.0 Mass And Balance.
7.1 Calculating Mass and Balance
Instructions and data for the calculation of mass and balance including:
(a) Calculation system (e.g. Index system);
(b) Information and instructions for completion of mass and balance documentation, including manual and computer generated types;
(c) Limiting mass and centre of gravity of the various versions;
(d) Dry operating mass and corresponding centre of gravity or index.

8.0 Loading.
8.1 Loading Procedures
Procedures and provisions for loading and securing the load in the aircraft.

8.1 Loading Dangerous Goods
The operations manual shall contain a method to notify the PIC when dangerous goods is loaded in the aircraft.

9.0 Configuration Deviation List
The Configuration Deviation List (CDL), if provided by the manufacturer, taking account of the aeroplane types and variants operated including procedures to be followed when an aeroplane is being dispatched under the terms of its CDL.

10.0 Minimum Equipment List
The Minimum Equipment List (MEL) taking account of the aeroplane types and variants operated and the types (s) and area(s) of operation. The MEL include the navigational equipment and take into account the required navigation performance for the route and area of operation.

11.0 Survival And Emergency Equipment Including Oxygen
11.1 List of Survival Equipment to be Carried
A list of the survival equipment to be carried for the routes to be flown and the procedures for checking the serviceability of this equipment prior to take-off. Instructions regarding the location, accessibility and use of survival and emergency equipment and its associated check list(s) shall also be included.

11.2 Oxygen Usage
The procedure for determining the amount of oxygen required and the quantity that it available. The flight profile, number of occupants and possible cabin decompression shall be considered. The information provided shall be in a form in which it can be used without difficulty.

11.3 Emergency Equipment Usage
A description of the proper use of the following emergency equipment:
(a) Life jackets
(b) Life rafts
(c) Medical kits/first aid kits
(d) Survival kits
(e) Emergency locator transmitter (ELT)
(f) Visual signalling devices
(g) Evacuation slides
(h) Emergency lighting

12.0 Emergency Evacuation Procedures
12.1 Instructions for Emergency Evacuation
Instructions for preparation for emergency evacuation including, crew co-ordination and emergency station assignment.
12.2 Emergency Evacuation Procedures
A description of the duties of all members of the crew for the rapid evacuation of an aircraft and the handling of the passengers in the event of a forced landing, ditching or other emergency.

13.0 Aircraft Systems.
13.1 Aircraft Systems
A description of the aircraft systems, related controls and indications and operating instructions.

14.0 Route and Airport Instructions and Information (optional for this manual)
14.1 Instructions and Information
Instructions and information relating to communications, navigation and airports including minimum flight levels and altitudes for each route to be flown and operating minima for each airport planned to be used, including:
   (a) Minimum flight level/altitude;
   (b) Operating minima for departure, destination and alternate airports;
   (c) Communication facilities and navigation aids;
   (d) Runway data and airport facilities;
   (e) Approach, missed approach and departure procedures including noise abatement procedures;
   (f) Communications-failure procedures;
   (g) Search and rescue facilities in the area over which the aircraft is to be flown;
   (h) A description of the aeronautical charts that shall be carried on board in relation to the type of flight and the route to be flown, including the method to check their validity;
   (i) Availability of aeronautical information and MET services;
   (j) En route COM/NAV procedures, including holding;
   (k) Airport categorisation for flight crew competence qualification.
IS: 9.3.1.10 TRAINING TO PROFICIENCY

(a) A course of training in an aircraft simulator may be included for use in proficiency checks if that course—

(1) Provides at least 4 hours of training at the pilot controls of an aircraft simulator as well as a proper briefing before and after the training;

(2) Provides training in at least the procedures and manoeuvres set forth in the proficiency check requirements; and

(3) Provides line-oriented training that—

(i) Utilises a complete flight crew;

(ii) Includes at least the manoeuvres and procedures that may be expected in line operations;

(iii) Is representative of the flight segment appropriate to the operations being conducted by the AOC; and

(4) Is given by an instructor who meets the applicable requirements of a check airman.

IS: 9.3.1.18 PASSENGER BRIEFING CARDS

(a) Each AOC holder shall, at each exit seat, provide passenger information cards that include the following information in the primary language in which emergency commands are given by the crew:

(1) Functions required of a passenger in the event of an emergency in which a crew member is not available to assist—

(i) Locate the emergency exit;

(ii) Recognise the emergency exit opening mechanism;

(iii) Comprehend the instructions for operating the emergency exit;

(iv) Operate the emergency exit;

(v) Assess whether opening the emergency exit will increase the hazards to which passengers may be exposed;

(vi) Follow oral directions and hand signals given by a crew member;

(vii) Stow or secure the emergency exit door so that it will not impede use of the exit;

(viii) Assess the condition of an escape slide, activate the slide, and stabilise the slide after deployment to assist others in getting off the slide;

(ix) Pass expeditiously through the emergency exit; and

(x) Assess, select, and follow a safe path away from the emergency exit

(2) A request that a passenger identify himself or herself to allow reseating if he or she—

(i) Cannot perform the emergency functions stated in the information card;

(ii) Has a nondiscernible condition that will prevent him or her from performing the functions;

(iii) May suffer bodily harm as the result of performing one or more of those functions; or

(iv) Does not wish to perform those functions;

(v) Lacks the ability to read, speak, or understand the language or the graphic form in which instructions are provided by the AOC holder.
IS: 9.3.1.19  AERONAUTICAL DATA CONTROL SYSTEM

(a) Each AOC holder shall provide aeronautical data for each airport used by the AOC holder which includes the following:

(1) Airports:
   (i) Facilities.
   (ii) Navigational and communications aids.
   (iii) Construction affecting takeoff, landing, or ground operations.
   (iv) Air traffic facilities.

(2) Runways, clearways, and stopways:
   (i) Dimensions.
   (ii) Surface.
   (iii) Marking and lighting systems.
   (iv) Elevation and gradient.

(3) Displaced thresholds:
   (i) Location.
   (ii) Dimensions.
   (iii) Takeoff or landing or both.

(4) Obstacles:
   (i) Those affecting takeoff and landing performance computations.
   (ii) Controlling obstacles.
   (iii) Instrument flight procedures.
   (iv) Departure procedure.
   (v) Approach procedure.
   (vi) Missed approach procedure.

(5) Special information:
   (i) Runway visual range measurement equipment.
   (ii) Prevailing winds under low visibility conditions.

IS 9.3.1.20  Route Guide

Each AOC holder and AOC applicant must ensure the route guide, published as a part, or a volume of the Operations Manual, contains the following.

1.0 Route and Aerodrome Instructions and Information

1.1 Instructions and Information

Instructions and information relating to communications, navigation and aerodromes including minimum flight levels and altitudes for each route to be flown and operating minima for each aerodrome planned to be used, including:

(a) Minimum flight level/altitude;
(b) Operating minima for departure, destination and alternate aerodromes;
(c) Communication facilities and navigation aids;
(d) Runway data and aerodrome facilities;
(e) Approach, missed approach and departure procedures including noise abatement procedures;
(f) Communications-failure procedures;
(g) Search and rescue facilities in the area over which the aircraft is to be flown;
(h) A description of the aeronautical charts that shall be carried on board in relation to the type of flight and the route to be flown, including the method to check their validity;
(i) Availability of aeronautical information and MET services;
(j) En route COM/NAV procedures, including holding;
(k) Airport categorisation for flight crew competence qualification.

IS: 9.3.1.21 WEATHER REPORTING SOURCES

(a) The Authority approves and considers the following sources of weather reports satisfactory for flight planning or controlling flight movement:
   (1) Guyana Meteorological Office.
   (2) Guyana-operated automated surface observation stations.

   Note: Some automated systems cannot report all required items for a complete surface aviation weather report.

   (3) Guyana-operated supplemental aviation weather reporting stations.
   (4) Observations taken by airport traffic control towers.
   (5) Guyana-contracted weather observatories.
   (6) Any active meteorological office operated by a foreign state which subscribes to the standards and practices of ICAO conventions.

   Note: These meteorological offices are normally listed in the MET tables located in ICAO Regional Air Navigation Plans.

   (7) Any military weather reporting sources approved by the Authority.

   Note: Use of military sources is limited to control of those flight operations which use military airports as departure, destination, alternate, or diversionary airports.

   (8) Near real time reports such as pilot reports, radar reports, radar summary charts, and satellite imagery reports made by commercial weather sources or other sources specifically approved by the Authority.

   (9) An AOC holder operated and maintained weather reporting system approved by the Authority.

IS: 9.3.1.22 DE-ICING AND ANTI-ICING PROGRAMME

(a) Contents of the AOC holder's ground de-icing and anti-icing programme shall include a detailed description of—
   (1) How the AOC holder determines that conditions are such that frost, ice, or snow may reasonably be expected to adhere to the aircraft and that ground de-icing and anti-icing operational procedures shall be in effect;
   (2) Who is responsible for deciding that ground de-icing and anti-icing operational procedures shall be in effect;
   (3) The procedures for implementing ground de-icing and anti-icing operational procedures; and
   (4) The specific duties and responsibilities of each operational position or group responsible for getting the aircraft safely airborne while ground de-icing and anti-icing operational procedures are in effect.

(b) The AOC holder’s programme shall include procedures for flight crew members to increase or decrease the determined holdover time in changing conditions. The holdover time shall be supported by data acceptable to the Authority. If the maximum holdover time is exceeded, takeoff is prohibited unless at least one of the following conditions exists-
   (1) A pre-takeoff contamination check is conducted outside the aircraft (within five minutes prior to beginning take off) to determine that the wings, control surfaces, and other critical surfaces, as defined in the certificate holder's programme, are free of frost, ice, or snow;
(2) It is otherwise determined by an alternate procedure, approved by the Authority and in accordance with the AOC holder’s approved programme, that the wings, control surfaces, and other critical surfaces are free of frost, ice, or snow; or
(3) The wings, control surfaces, and other critical surfaces are de-iced again and a new holdover time is determined.

IS: 9.3.1.24  FLIGHT FOLLOWING SYSTEM

(a) Each AOC holder shall have an approved flight following system established and adequate for the proper monitoring of each flight, considering the operations to be conducted.

(b) For AOC holders having flight following centres, these centres shall be located at those points necessary to ensure—
   (1) The proper monitoring of the progress of each flight with respect to its departure at the point of origin and arrival at its destination, including intermediate stops and diversions; and
   (2) That the PIC is provided with all information necessary for the safety of the flight.

(c) An AOC holder conducting charter operations may arrange to have flight following facilities provided by persons other than its employees, but in such a case the AOC holder continues to be primarily responsible for operational control of each flight.

(d) Each AOC holder conducting charter operations using a flight following system shall show that the system has adequate facilities and personnel to provide the information necessary for the initiation and safe conduct of each flight to—
   (1) The flight crew of each aircraft; and
   (2) The persons designated by the certificate holder to perform the function of operational control of the aircraft.

(e) Each AOC holder conducting charter operations shall show that the personnel required to perform the function of operational control are able to perform their duties.

9.3.1.30 FLIGHT SAFETY DOCUMENTS SYSTEMS

(a) A flight safety documents system is one in which all documentation associated with the flight safety programme, including the published standards, procedures and guidance for flight safety personnel, the means of advising company personnel of safety-related information or recording/documenting safety information, is produced, disseminated, completed and maintained in a standardized manner.

(b) Guidance in the preparation of a flight safety documents system may be found in ICAO Annex 6, Attachment H. The information contained therein deals with the following topics.
   (1) Organization of the system;
   (2) Validation of the system’s components;
   (3) Design of the documentation;
   (4) Deployment or dissemination of the documentation; and
   (5) Amendment of the documentation.
IS: 9.4.1.4  AOC HOLDER’S MAINTENANCE CONTROL MANUAL

Each AOC applicant and AOC holder should submit and maintain a maintenance control manual containing at least the following.

*Note: The manual may be put together in any subject order and subjects combined so long as all applicable subjects are covered in this manual.*

### Part 1.0 Administration and Control of the Maintenance Control Manual

#### 1.1 Introduction

(a) A statement that the manual complies with all applicable Authority regulations and requirements and with the terms and conditions of the applicable Air Operator Certificate.

(b) A statement that the manual contains maintenance and operational instructions that are to be complied with by the relevant personnel in the performance of their duties.

(c) A list and brief description of the various Maintenance Control Manual parts, their contents, applicability and use.

(d) Explanations and definitions of terms and words used in the manual.

#### 1.2 System of Amendment and Revision

(a) A Maintenance Control Manual shall describe who is responsible for the issuance and insertion of amendments and revisions.

(b) A record of amendments and revisions with insertion dates and effective dates is required.

(c) A statement that hand-written amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety.

(d) A description of the system for the annotation of pages and their effective dates.

(e) A list of effective pages and their effective dates.

(f) Annotation of changes (on text pages and as practicable, on charts and diagrams).

(g) A system for recording temporary revisions.

(h) A description of the distribution system for the manuals, amendments and revisions.

(i) A statement of who is responsible for notifying the Authority of proposed changes and working with the Authority on changes requiring Authority approval.

### PART 2.0 GENERAL ORGANISATION

#### 2.1 Corporate commitment by the AOC

#### 2.2 General information:

(a) Brief description of organization

(b) Relationship with other organizations

(c) Fleet composition - Type of operation

(d) Line station locations

#### 2.3 Maintenance management personnel:

(a) Accountable Manager

(b) Nominated Postholder

(c) Maintenance co-ordination

(d) Duties and responsibilities

(e) Organization chart(s)

(f) Manpower resources and training policy

#### 2.4 Notification procedure to the Authority regarding changes to the maintenance arrangements locations, personnel, activities, or approval.

### PART 3.0: MAINTENANCE PROCEDURES

#### 3.1 Aircraft logbook utilization and MEL application.

#### 3.2 Aircraft maintenance programme - development and amendment.

#### 3.3 Time and maintenance records, responsibilities, retention.

#### 3.4 Accomplishment and control of mandatory continued airworthiness information (Airworthiness Directives).

#### 3.5 Analysis of the effectiveness of the maintenance programme.

#### 3.6 Non-mandatory modification embodiment policy.

#### 3.7 Major modification standards.

#### 3.8 Defect reports:

(a) Analysis

(b) Liaison with manufacturers and Regulatory Authorities

(c) Deferred defect policy

#### 3.9 Engineering activity.

#### 3.10 Reliability programmes

(a) Airframe

(b) Propulsion

(c) Components

#### 3.11 Pre-flight inspection:

(a) Preparation of aircraft for flight
b) Sub-contracted Ground Handling functions

c) Security of Cargo and Baggage loading

d) Control of refuelling, Quantity/Quality

e) Control of snow, ice, dust and sand contamination to an approved aviation standard.

3.12 Aircraft weighing.

3.13 Flight test procedures

3.14 Sample of documents, tags and forms used.

3.15 Appropriate portions of the AOC holder’s operations manual.

**IS: 9.4.1.6  AOC HOLDER’S ADDITIONAL QUALITY SYSTEM FOR MAINTENANCE**

(a) Each AOC shall establish a plan acceptable to the Authority to show when and how often the activities as required in 9.4.1.2 will be monitored. In addition, reports should be produced at the completion of each monitoring investigation and include details of discrepancies of non-compliance with procedures or requirements

(b) The feedback part of the system shall address who is required to rectify discrepancies and non-compliance in each particular case and the procedure to be followed if rectification is not completed within appropriate time scales. The procedure should lead to the Accountable Manager.

(c) To ensure effective compliance with 9.4.1.6 each AOC Holder and AOC applicant should use the following elements

(6) Product sampling - the part inspection of a representative sample of the aircraft fleet;

(7) Defect sampling - the monitoring of defect rectification performance;

(8) Concession sampling - the monitoring of any concession to not carry out maintenance on time;

(9) On time maintenance sampling - the monitoring of when (flying hours/calendar time/flight cycles, etc) aircraft and their components are brought in for maintenance;

(10) Sample reports of unairworthy conditions and maintenance errors on aircraft and components.

*Note: The primary purpose of the Quality System for maintenance is to monitor compliance with the approved procedures specified in an operator’s maintenance control manual to ensure compliance with Subpart 9.4 and thereby ensure the maintenance aspects of the operational safety of the aircraft. In particular, this part of the Quality System provides a monitor of the effectiveness of maintenance, reference 9.4.1.2, and should include a feedback system to ensure that corrective actions are identified and carried out in a timely manner.*
9.1 AIR OPERATOR CERTIFICATE

9.1.1 APPLICABILITY

(a) Part 9 applies to the carriage of passengers, cargo or mail for remuneration or hire by persons whose principal place of business or permanent residence is located in Guyana.

(b) This Part of the regulations prescribes requirements for the original certification and continued validity of Air Operator Certificates (AOC) issued by Guyana.

(c) Except where specifically noted, Part 9 applies to all commercial air transport operations by AOC holders for which Guyana is the State of the Operator under the definitions provided in Annex 6 to the Chicago Convention.

9.1.1.2 DEFINITIONS

(a) For the purpose of Part 9, the following definitions shall apply—

(1) **Accountable Manager.** The manager who has corporate authority for ensuring that all prescribed actions are performed to the standard required by the Authority. When authorised by the Authority, the accountable manager may delegate all or part of his or her authority in writing to another person within the organisation, who becomes the accountable manager for the matters delegated.

Note: The “accountable manager” is not specifically defined under ICAO, but the concept is partially discussed in ICAO Doc. 9642, Section IV, Chapter 2, as being either the CEO or a high level corporate official who has financial responsibility for the entire organisation. This person is not defined under the current FAR’s. The definition of accountable manager used in this Part is adapted from the current JAR’s 145.5. JAR 145.5 IEM gives examples of the accountable manager as the CEO, president, managing director, director general, general manager, etc.

(2) **Acceptance checklist.** A document used to assist in carrying out a check on the external appearance of packages of dangerous goods and their associated documents to determine that all appropriate requirements have been met.

(3) **Aircraft Technical Log.** A document attached to an aircraft for recording defects and malfunctions discovered during operation and for recording details of all maintenance carried out whilst the aircraft is operating between scheduled visits to the base maintenance facility. It also contains operating information relevant to flight safety and maintenance data that the operating crew need to know.

(4) **Airworthiness Release.** The air operator's aircraft are released for service following maintenance by a person specifically authorised by the air operator rather than by an individual or maintenance organisation on their own behalf. In effect, the person signing the release acts in the capacity of an authorised agent for the operator and is certifying that the maintenance covered by the release was accomplished according to the air operator's continuous maintenance program. Responsibility for each step of the accomplished maintenance is borne by the person signing for that step and the airworthiness release certifies the entire maintenance work package. This arrangement in no way reduces the responsibility of licensed aircraft maintenance technicians (AMT) or maintenance organisations for maintenance functions or tasks they perform or supervise. The air operator is obligated to designate, by name or occupational title, each licensed AMT or maintenance organisation authorised to execute the airworthiness release. In addition, the air operator should designate when a release is required. Normally, a release is required following inspections prescribed by the air operations specifications maintenance activities involving inspections, and any other significant maintenance.
(5) **Cargo aircraft.** Any aircraft carrying goods or property but not passengers. In this context the following are not considered to be passengers:

(i) A crew member.

(ii) An operator's employee permitted by, and carried in accordance with, the instructions contained in the Operations Manual.

(iii) An authorised representative of an Authority.

(iv) A person with duties in respect of a particular shipment on board.

(6) **Consignment:** One or more packages of dangerous goods accepted by an operator from one shipper at one time and at one address, receipted for in one lot and moving to one consignee at one destination address.

(7) **Crew Member:** A person assigned by an operator to duty on an aircraft during a flight duty period.

(8) **Dangerous Goods:** Articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those instructions.

(9) **Dangerous goods accident.** An occurrence associated with and related to the transport of dangerous goods which results in fatal or serious injury to a person or major property damage.

(10) **Dangerous goods incident.** An occurrence, other than a dangerous goods accident, associated with and related to the transport of dangerous goods, not necessarily occurring on board an aircraft, which results in injury to a person, property damage, fire, breakage, spillage, leakage of fluid or radiation or other evidence that the integrity of the packaging has not been maintained. Any occurrence relating to the transport of dangerous goods which seriously jeopardises an aircraft or its occupants is deemed to constitute a dangerous goods incident.

(11) **Dangerous goods transport document.** A document specified by the ICAO Technical Instructions for the Safe Transportation of Dangerous Goods by Air (See definition, below). It is completed by the person who offers dangerous goods for air transport and contains information about those dangerous goods. The document bears a signed declaration indicating that the dangerous goods are fully and accurately described by their proper shipping names and UN numbers (if assigned) and that they are correctly classified, packed, marked, labelled and in a proper condition for transport.

(12) **Directly in Charge.** A person assigned to a position in which he or she is responsible for the work of a shop or station that performed maintenance, preventive maintenance, or modifications, or other functions affecting aircraft airworthiness.

(13) **Equivalent system of maintenance.** An AOC holder may conduct maintenance activities through an arrangement with an AMO or may conduct its own maintenance, preventive maintenance, or alterations, so long as the AOC holder's maintenance system is approved by the Authority and is equivalent to that of an AMO, except that the approval for return to service of an aircraft/aeronautical product shall be made by an appropriately licensed aviation maintenance technician or aviation repair specialists in accordance with Part 2, as appropriate.

(14) **Freight container.** A freight container is an article of transport equipment for radioactive materials, designed to facilitate the transport of such materials, either packaged or unpackaged, by one or more modes of transport.
(15) **Handling agent.** An agency which performs on behalf of the operator some or all of the latter's functions including receiving, loading, unloading, transferring or other processing of passengers or cargo.

(16) **Holdover time.** The estimated time de-icing/anti-icing fluid will prevent the formation of frost or ice and the accumulation of snow on the protected surfaces of an aircraft. Holdover time begins when the final application of de-icing or anti-icing fluid commences and expires when the de-icing or anti-icing fluid applied to the aircraft loses its effectiveness.

(17) **Interchange agreement.** A leasing agreement which permits an air carrier to dry lease and take or relinquish operational control of an aircraft at an airport.

(18) **Maintenance Control Manual.** A manual approved by the authority containing procedures, instructions and guidance for use by maintenance and concerned operational personnel in the execution of their duties.

(19) **Operations manual.** A manual approved by the authority containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

(20) **Overpack.** An enclosure used by a single shipper to contain one or more packages and to form one handling unit for convenience of handling and stowage.

(21) **Package.** The complete product of the packing operation consisting of the packaging and its contents prepared for transport.

(22) **Packaging.** Receptacles and any other components or materials necessary for the receptacle to perform its containment function and to ensure compliance with the packing requirements.

(23) **Proper shipping name.** The name to be used to describe a particular article or substance in all shipping documents and notifications and, where appropriate, on packaging.

(24) **Serious injury.** An injury which is sustained by a person in an accident and which:

(i) Requires hospitalisation for more than 48 hours, commencing within seven days from the date the injury was received;

(ii) Results in a fracture of any bone (except simple fractures of fingers, toes or nose); or

(iii) Involves lacerations which cause severe haemorrhage, nerve, muscle or tendon damage; or

(iv) Involves injury to any internal organ; or

(v) Involves second or third degree burns, or any burns affecting more than 5% of the body surface; or

(vi) Involves verified exposure to infectious substances or injurious radiation.

(25) **State of Origin.** The State in which dangerous goods were first loaded on an aircraft.

(26) **State of the Operator.** The State in which the operator’s principal place of business is located or, if there is no such place of business, the operator’s permanent residence.

(27) **Technical instructions.** The latest effective edition of the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc. 9284-AN/905), including the supplement and any addendum, approved and published by decision of the Council of the ICAO. The term “Technical Instructions” is used in this Part.

(28) **Training to proficiency.** The process of the check airman administering each prescribed manoeuvre and procedure to a pilot as necessary until it is performed successfully during the training period.

(29) **UN number.** The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.
(30) **Unit load device.** Any type of aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

### 9.1.1.3 ACRONYMS

(a) The following acronyms are used in Part 9.

1. **AOC** – Air Operator Certificate (Civil Aviation Law)
2. **AMO** – Approved Maintenance Organisation (Part 1)
3. **ATP** – Air Transport Pilot
4. **CDL** – Configuration Deviation List
5. **MEL** – Minimum Equipment List (Part 1)
6. **UN** – United Nations
9.1.1.4 **COMPLIANCE WITH AN AIR OPERATOR CERTIFICATE**

(a) No operator may operate an aircraft in commercial air transport unless that operator holds an AOC for the operations being conducted.

(b) No person may operate an aircraft in commercial air transport operations which are not authorised by the terms and conditions of its AOC.

(c) Each AOC holder shall, at all times, continue in compliance with the AOC terms, conditions of issuance, and maintenance requirements in order to hold that certificate.

*Note: Failure to comply may result in the revocation or suspension of the AOC.*

9.1.1.5 **APPLICATION FOR AN AIR OPERATOR CERTIFICATE**

(a) An operator applying to the Authority for an AOC shall submit an application—

(1) In a form and manner prescribed by the Authority; and

(2) Containing any information the Authority requires the applicant to submit.

(b) Each applicant shall make the application for an initial issue of an AOC at least 90 days before the date of intended operation, except the Operations Manual specified in 9.3.1.4 and Maintenance Control Manual specified in 9.4.1.4 which may be submitted later than but not less than 60 days before the date of intended operation.

9.1.1.6 **ISSUANCE OR DENIAL OF AIR OPERATOR CERTIFICATE**

(a) The Authority may issue an AOC if, after investigation, the Authority finds that the applicant—

(1) Is a citizen of Guyana;

(2) Has its principle place of business and its registered office, if any, located in Guyana;

(3) Meets the applicable regulations and standards for the holder of an AOC;

(4) Is properly and adequately equipped for safe operations in commercial air transport and maintenance of the aircraft; and

(5) Holds the economic authority issued by the Guyana under the provisions of the Act of 2000.

(b) The Authority may deny application for an AOC if the Authority finds that—

(1) The applicant is not properly or adequately equipped or is not able to conduct safe operations in commercial air transport;

(2) The applicant previously held an AOC which was revoked; or

(3) An individual that contributed to the circumstances causing the revocation process of an AOC obtains a substantial ownership or is employed in a position required by this regulation.
9.1.1.7 CONTENTS OF AIR OPERATOR CERTIFICATE

(a) The AOC will consist of two documents—
   (1) A one-page certificate for public display signed by the Authority, and
   (2) Multi-page AOC specific operating provisions containing the terms and conditions
       applicable to the AOC holder’s certificate.

(b) The Authority will issue an AOC which will contain—
   (1) The name and location (main place of business) of the AOC holder;
   (2) The date of issue and period of validity for each page issued;
   (3) A description of the type of operations authorised;
   (4) The type(s) of aircraft(s) authorised for use;
   (5) The authorised areas of operations; and
   (6) Other Special authorisations, approvals and limitations issued by the Authority in
       accordance with the standards which are applicable to the operations and maintenance
       conducted by the AOC holder.

9.1.1.8 DURATION OF AN AIR OPERATOR CERTIFICATE

(a) An AOC, or any portion of the AOC, issued by the Authority is effective until—
   (1) The Authority amends, suspends, revokes or otherwise terminates the certificate;
   (2) The AOC holder surrenders it to the Authority; or
   (3) The AOC holder suspends operations for more than 60 days.

9.1.1.9 AMENDMENT OF AN AIR OPERATOR CERTIFICATE

(a) The Authority may amend any AOC if—
   (1) The Authority determines that safety in commercial air transport and the public interest
       require the amendment; or
   (2) The AOC holder applies for an amendment, and the Authority determines that safety in
       commercial air transport and the public interest allows the amendment.

(b) If the Authority stipulates in writing that an emergency exists requiring immediate amendment in
    the public interest with respect to safety in commercial air transportation, such an amendment is
    effective without stay on the date the AOC holder receives notice.

(c) An AOC holder may appeal the amendment, but shall operate in accordance with it, unless it is
    subsequently withdrawn.

(d) Amendments proposed by the Authority, other than emergency amendments, become effective
    30 days after notice to the AOC holder, unless the AOC holder appeals the proposal in writing
    prior to the effective date. The filing of an appeal stays the effective date until the appeal process
    is completed.

(e) Amendments proposed by the AOC holder shall be made at least 30 days prior to the intended
    date of any operation under that amendment.

(f) No person may perform a commercial air transport operation for which an AOC amendment is
    required, unless it has received notice of the approval from the Authority.
9.1.1.10 ACCESS FOR INSPECTION

(a) To determine continued compliance with the applicable regulations, the AOC holder shall—
   (1) Grant the Authority access to and co-operation with any of its organisations, facilities and aircraft;
   (2) Ensure that the Authority is granted access to and co-operation with any organisation or facilities that it has contracted for services associated with commercial air transport operations and maintenance services; and
   (3) Grant the Authority free and uninterrupted access to the flight deck of the aircraft during flight operations.

(b) Each AOC holder shall provide to the Authority a forward observer’s seat on each of the AOC holder’s aircraft from which the flight crew’s actions and conversations may be easily observed.

Note: The suitability of the seat location and the ability to monitor crewmember actions, conversations and radio communications is determined by the Authority.

9.1.1.11 CONDUCTING TESTS AND INSPECTIONS

(a) The Authority will conduct on-going validation of the AOC holder’s continued eligibility to hold its AOC and associated approvals.

(b) The AOC holder shall allow the Authority to conduct tests and inspections, at any time or place, to determine whether an AOC holder is complying with the applicable laws, regulations and AOC terms and conditions.

(c) The AOC holder shall make available at its principal base of operations—
   (1) All portions of its current Air Operator Certificate;
   (2) All portions of its Operations and Maintenance Manuals; and
   (3) A current listing that includes the location and individual positions responsible for each record, document and report required to be kept by the AOC holder under the applicable aviation law, regulations or standards.

(d) Failure by any AOC holder to make available to the Authority upon request, all portions of the AOC, Operations and Maintenance Manuals and any required record, document or report is grounds for suspension of all or part of the AOC.
9.2 AIR OPERATOR CERTIFICATION AND CONTINUED VALIDITY

9.2.1.1 APPLICABILITY
Subpart 9.2 provides requirements applicable to the certification and continued validity of all AOC holders.

9.2.2 Administration

9.2.2.1 BASE OF OPERATIONS
(a) Each AOC holder that is not authorised to conduct maintenance under its AOC certificate shall maintain a principal base of operations.
(b) Each AOC holder that is authorised to conduct maintenance under its AOC certificate shall maintain a principal base of operations and maintenance.
(c) An AOC holder may establish a main operations base and a main maintenance base at the same location or at separate locations.
(d) Each AOC holder shall provide written notification of intent to the Authority at least 30 days before it proposes to establish or change the location of either base.

9.2.2.2 MANAGEMENT PERSONNEL REQUIRED FOR COMMERCIAL AIR TRANSPORT OPERATIONS
(a) Each AOC holder shall have an accountable manager, acceptable to the Authority, who has corporate authority for ensuring that all flight operations and maintenance activities can be financed and carried out to the highest degree of safety standards required by the Authority.
(b) When conducting commercial air transport operations, the AOC holder shall have qualified personnel, with proven competency in civil aviation, available and serving in the following positions or their equivalent:
   (1) Director of Operations.
   (2) Chief Pilot.
   (3) Director of Safety.
   (4) Director of Maintenance
   (5) Quality Manager.

   Note: “Competency in civil aviation” means that an individual shall have a technical qualification and management experience acceptable to the Authority for the position served.

   (c) The Authority may approve positions or numbers of positions, other than those listed, if the AOC holder is able to show that it can perform the operation with the highest degree of safety under the direction of fewer or different categories of management personnel due to the—
      (1) The kind of operations involved;
      (2) The number of aircraft used; and
      (3) The area of operation.

   Implementing Standard: See IS: 9.2.2.2 for additional management personnel requirements.

9.2.2.3 QUALITY SYSTEM
(a) Each AOC holder shall establish a quality system and designate a quality manager to monitor compliance with, and adequacy of, procedures required to ensure safe operational practices and
airworthy aircraft. Compliance monitoring shall include a feedback system to the accountable manager to ensure corrective action as necessary.

(b) Each AOC holder shall ensure that each quality system includes a quality assurance programme that contains procedures designed to verify that all operations are being conducted in accordance with all applicable requirements, standards and procedures.

(c) The quality system, and the quality manager, shall be acceptable to the Authority.

(d) Each AOC holder shall describe the quality system in relevant documentation.

(e) Notwithstanding (a) above, the Authority may accept the nomination of two Quality Managers, one for operations and one for maintenance, provided that the operator has designated one Quality Management Unit to ensure that the Quality System is applied uniformly throughout the entire operation.

9.2.2.4 SUBMISSION AND REVISION OF POLICY AND PROCEDURE MANUALS

(a) Each manual required by this part must:
   (1) Include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety;
   (2) Be in a form that is easy to revise and contains a system which allows personnel to determine the current revision status of each manual;
   (3) Have a date of the last revision on each page concerned;
   (4) Not be contrary to any applicable Guyana regulation and the AOC holder’s specific operating provisions; and
   (5) Each manual will include a reference to appropriate civil aviation regulations.

(b) No person may cause the use of any policy and procedure for flight operations or airworthiness function prior to co-ordination with the Authority.

(c) Each AOC holder shall submit the proposed policy or procedure to the Authority at least 30 days prior to the date of intended implementation.

9.2.2.5 RETENTION AND MAINTENANCE OF PERSONNEL RECORDS

(a) Each AOC holder shall maintain current records which detail the qualifications and training of all its employees, and contract employees, involved in the operational control, flight operations, ground operations and maintenance of the air operator.

(b) Each AOC holder shall maintain records for those employees performing crew member or flight operations officer duties in sufficient detail to determine whether the employee meets the experience and qualification for duties in commercial air transport operations.

(c) Each AOC holder shall retain the following records:
   (1) Flight and duty records.
   (2) Flight crew records.
   (3) Fuel and oil records.

9.2.2.6 FLIGHT DECK VOICE AND FLIGHT DATA RECORDER RECORDS

(a) Each AOC holder shall retain:
   (1) The most recent flight data recorder calibration, including the recording medium from which this calibration is derived; and
   (2) The flight data recorder correlation for one aircraft of any group of aircraft operated by the AOC holder—
      (i) That are of the same type;
(ii) On which the model flight recorder and its installation are the same; and
(iii) On which there is no difference in type design with respect to the original installation of instruments associated with the recorder.

(b) In the event of an accident or occurrence requiring immediate notification of the Authority, the AOC holder shall remove and keep recorded information from the flight deck voice recorder and flight data recorder for at least 60 days or, if requested by the Authority, for a longer period.

9.2.2.7 AIRCRAFT RECORDS: DOMESTIC AND FLAG OPERATIONS

(a) Each AOC holder conducting domestic or flag operations shall maintain a current list of each aircraft that it operates in scheduled air transportation and shall send a copy of the record and each change to the Authority.

(b) Aircraft of another certificate holder operated under an interchange agreement shall be incorporated by reference.

9.2.2.8 AOC HOLDER’S AIRCRAFT TECHNICAL LOG

Each AOC holder shall have an aircraft technical log that is carried on the aircraft that contains a journey records section and an aircraft maintenance record section. The journey records section is further described in 9.3.1.15 and the aircraft maintenance record section is further described in 9.4.1.9.

9.2.2.9 COMPANY PROCEDURES INDOCTRINATION

(a) No person may serve nor may any AOC holder use a person as a Quality Manager or the Director of Maintenance 9.4.1.2 unless that person has completed the company indoctrination curriculum approved by the Authority, which shall include a complete review of the operations manual and maintenance control manual procedures pertinent to their duties.

Implementing Standard IS: 9.2.2.9 for additional company procedures training requirements
9.2.3 Aircraft

9.2.3.1 Authorised Aircraft

(a) No person may operate an aircraft in commercial air transport unless that aircraft has an appropriate current airworthiness certificate, is in an airworthy condition, and meets the applicable airworthiness requirements for these operations, including those related to identification and equipment.

(b) No person may operate any specific type of aircraft in commercial air transport until it has completed satisfactory initial certification, which includes the issuance of an AOC listing that type of aircraft.

(c) No person may operate additional or replacement aircraft of a type for which it is currently authorised unless it can show that each aircraft has completed an evaluation process for inclusion in the AOC holder’s fleet.

9.2.3.2 Dry Leasing of Foreign Registered Aircraft

(a) An AOC holder may dry-lease a foreign-registered aircraft for commercial air transport as authorised by the Authority.

(b) No person may be authorised to operate a foreign registered aircraft unless—

(1) There is in existence a current agreement between the Authority and the State of Registry that, while the aircraft is operated by the Guyana AOC holder, the operations regulations of Guyana are applicable;

(2) There is in existence a current agreement between the Authority and the State of Registry that—

(i) While the aircraft is operated by the AOC holder, the airworthiness regulations of the State of Registry are applicable; or,

(ii) If the State of Registry agrees to transfer some or all of the responsibility for airworthiness to the Authority under Article 83 bis of the Chicago Convention, the airworthiness regulations of Guyana shall apply to the extent agreed upon by the Authority and State of Registry.

(3) The agreement acknowledges that the Authority shall have free and uninterrupted access to the aircraft at any place and any time.

Implementing Standard: See IS: 9.2.3.2 for additional requirements for dry leasing of foreign-registered aircraft.

9.2.3.3 Aircraft Interchange

No person may interchange aircraft with another AOC holder without the approval of the Authority.

Implementing Standard: See IS: 9.2.3.3 for requirements pertaining to aircraft interchange agreements approved by the Authority.

9.2.3.4 Wet-Leasing

(a) No person may conduct wet-lease operations on behalf of another air operator except in accordance with the applicable laws and regulations of the country in which the operation occurs and the restrictions imposed by the Authority.

(b) No person may allow another entity or air operator to conduct wet-lease operations on its behalf unless—
(1) That air operator holds an AOC or its equivalent from a Contracting State that authorises those operations; and

(2) The AOC holder advises the Authority of such operations and provides a copy of the AOC under which the operation was conducted.

*Implementing Standard: See IS: 9.2.3.4 for additional requirements when wet leasing aircraft.*

**9.2.3.5 Emergency Evacuation Demonstration**

(a) No person may use an aircraft type and model in commercial air transport passenger-carrying operations unless it has first conducted, for the Authority, an actual full capacity emergency evacuation demonstration for the configuration in 90 seconds or less.

(b) The full capacity actual demonstration may not be required, if the AOC holder provides a written petition for deviation with evidence that—

   (1) A satisfactory full capacity emergency evacuation for the aircraft to be operated was demonstrated during the aircraft type certification or during the certification of another air operator; and

   (2) There is an engineering analysis, which shows that an evacuation is still possible within the 90-second standard, if the AOC holder’s aircraft configuration differs with regard to number of exits or exit type or number of cabin crew members or location of the cabin crew members.

(c) If a full capacity demonstration is not required, no person may use an aircraft type and model in commercial air transport passenger-carrying operations unless it has first demonstrated to the Authority that its available personnel, procedures and equipment could provide sufficient open exits for evacuation in 15 seconds or less.

(d) No person may use a land plane in extended overwater operations unless it has first demonstrated to the Authority that it has the ability and equipment to efficiently carry out its ditching procedures.

*Implementing Standard: See IS: 9.2.3.5 for additional requirements concerning emergency evacuation demonstrations.*

**9.2.3.6 Demonstration Flights**

(a) No person may operate an aircraft type in commercial air transport unless it first conducts satisfactory demonstration flights for the Authority in that aircraft type.

(b) No person may operate an aircraft in a designated special area, or using a specialised navigation system, unless it conducts a satisfactory demonstration flight for the Authority.

(c) Demonstration flights required by paragraph (a) shall be conducted in accordance with the regulations applicable to the type of operation and aircraft type used.

(d) The Authority may authorise deviations from this section if the Authority finds that special circumstances make full compliance with this section unnecessary.

*Implementing Standard: See IS: 9.2.3.6 for additional requirements concerning demonstration flights.*
9.2.4 Facilities and Operations Schedules

9.2.4.1 Facilities

(a) Each operator shall maintain operational and airworthiness support facilities at the main operating base, appropriate for the area and type of operation.

(b) Each AOC holder shall arrange appropriate ground handling facilities at each airport used to ensure the safe servicing and loading of its flights.

9.2.4.2 Operations Schedules

In establishing flight operations schedules, each AOC holder conducting scheduled operations shall allow enough time for the proper servicing of aircraft at intermediate stops, and shall consider the prevailing winds en route and cruising speed for the type of aircraft. This cruising speed may not be more than that resulting from the specified cruising output of the engines.
9.3 AOC FLIGHT OPERATIONS MANAGEMENT

9.3.1.1 APPLICABILITY
Subpart 9.3 provides those certification requirements that apply to management of flight operations personnel and their functions.

9.3.1.2 OPERATIONS MANUAL
(a) Each AOC holder shall issue to the crewmembers and persons assigned operational control functions, an Operations Manual acceptable to the Authority.
(b) The Operations Manual shall contain the overall (general) company policies and procedures regarding the flight operations it conducts.
(c) Each AOC holder shall prepare and keep current an Operations Manual which contains the AOC procedures and policies for the use and guidance of its personnel.
(d) Each AOC holder shall issue the Operations Manual, or pertinent portions, together with all amendments and revisions to all personnel that are required to use it.
(e) No person may provide for use of its personnel in commercial air transport any Operations Manual or portion of this manual which has not been reviewed and found acceptable or approved for the AOC holder by the Authority.
(f) Each AOC holder shall ensure that the contents of the Operations Manual includes at least those subjects designated by the Authority that are applicable to the AOC holder’s operations.

(g) Unless otherwise acceptable to the Authority, each AOC holder shall provide an Operations Manual containing information on operations administration and supervision, accident prevention and flight safety programmes, personnel training, flight crew and cabin crew member fatigue and flight time limitations, flight operations, aeroplane performance, routes, guides and charts, minimum flight altitudes, aerodrome operating minima, search and rescue, dangerous goods, navigation, communications, security, and human factors. The operations manual shall encompass the matters set forth above and may be issued in parts, or as a series of volumes, corresponding to a specific aspect of operations.

1) The operations manual shall be organised with the following structure:
   i) General;
   ii) Aircraft operating information;
   iii) Routes and aerodromes; and
   iv) Training.

2) Subjects specific to aspects of operations are listed below. Subjects presented with reference to a specific section shall be addressed in accordance with the requirements of the referenced section.

   (1) Aircraft Operating Manual. (9.3.1.4)
   (2) Minimum Equipment List and Configuration Deviation List. (9.3.1.12)
   (3) Training Programme. (9.3.1.3)
   (4) Aircraft Performance Planning Manual. (9.3.1.13)
   (5) Route Guide. (9.3.1.20)
   (6) Dangerous Goods Procedures.
   (7) Accident Reporting Procedures.
   (8) Security Procedures.
   (9) Aircraft Loading and Handling Manual. (9.3.1.15)
9.3.1.3 TRAINING PROGRAMME

(a) Each AOC holder shall ensure that all operations personnel are properly instructed in their duties and responsibilities and the relationship of such duties to the operation as a whole.

(b) Each AOC holder shall have a training programme approved by the Authority containing the general training, checking, and record keeping policies.

(c) Each AOC holder shall have approval of the Authority prior to using a training curriculum for the purpose of qualifying a crewmember, or person performing operational control functions, for duties in commercial air transport.

(d) Each AOC holder shall submit to the Authority any revision to an approved training programme, and shall receive written approval from the Authority before that revision can be used.

Implementing Standard: See IS 9.3.1.3 for a training programme outline.

9.3.1.4 AIRCRAFT OPERATING MANUAL

(a) Each AOC holder or applicant shall submit proposed aircraft operating manuals for each type and variant of aircraft operated, containing the normal, abnormal and emergency procedures relating to the operation of the aircraft for approval by the Authority.

(b) Each Aircraft Operating Manual shall be based upon the aircraft manufacturer’s data for the specific aircraft type and variant operated by the AOC holder and shall include specific operating parameters, details of the aircraft systems, and of the check lists to be used applicable to the operations of the AOC that are approved by the Authority. The design of the manual shall observe human factors principles.

(c) The Aircraft Operating Manual shall be issued to the flight crewmembers and persons assigned operational control functions to each aircraft operated by the AOC.

Note: Implementing Standard IS: 9.3.1.4 presents an outline for an Aircraft Operating Manual that combines numerous manual requirements.

9.3.1.5 AOC HOLDER’S AIRCRAFT TECHNICAL LOG – JOURNEY RECORDS SECTION

(a) Each AOC holder shall use an aircraft technical log containing a journey records section which includes the following information for each flight: (See 9.4.1.9 for maintenance section of the aircraft technical log)

1. Aircraft nationality and registration;
2. Date;
3. Names of crewmembers;
4. Duty assignments of crewmembers;
5. Place of departure;
6. Place of arrival;
7. Time of departure;
8. Time of arrival;
9. Hours of flight;
10. Nature of flight (private, aerowork, scheduled, non-scheduled);
11. Incidents, observations, if any; and
12. Signature of person in charge.
9.3.1.6 **DESIGNATION OF PIC FOR COMMERCIAL AIR TRANSPORT**

The AOC holder shall, for each commercial air transport operation, designate in writing one pilot as the PIC.

9.3.1.7 **REQUIRED CABIN CREW MEMBERS**

(a) The AOC holder shall schedule, and the PIC shall ensure that the minimum number of required cabin crew members are on board passenger-carrying flights.

(b) The number of cabin crew members may not be less than minimum prescribed by the Authority in the AOC holders’ operations provisions or the following, whichever is greater—

   (1) For a seating capacity of 20 to 50 passengers: 1 cabin crew member; and
   (2) One additional cabin crew member for each unit, or part of a unit, of 50 passenger seat capacity.

(c) When passengers are on board a parked aircraft, the minimum number of flight crew members shall be one-half that required for the flight operation, but never less than one cabin crew member (or another person qualified in the emergency evacuation procedures for the aircraft).

*Note: Where one-half would result in a fractional number, it is permissible to round down to the next whole number.*

9.3.1.8 **CARRIAGE OF SPECIAL SITUATION PASSENGERS**

(a) No AOC holder may allow the transportation of special situation passengers except—

   (1) As provided in the AOC holder’s Operations Manual procedures; and
   (2) With the knowledge and concurrence of the PIC.

9.3.1.9 **CREW MEMBER CHECKING AND STANDARDISATION PROGRAMME**

Each AOC holder shall have a programme of checking and standardisation of crew members approved by the Authority.

9.3.1.10 **TRAINING TO PROFICIENCY: PILOTS**

An AOC holder may train its pilots to proficiency on those manoeuvres and procedures that area prescribed by the Authority for pilot proficiency checks, during every other proficiency check following the initial check.

*Implementing Standard: See IS: 9.3.1.10 for requirements pertaining to aircraft simulator training used in a proficiency check.*
9.3.1.11 **Cockpit Check Procedure**

(a) Each AOC holder shall issue to the flight crews and make available on each aircraft, the flight deck condensed checklist procedures approved by the Authority appropriate to the type and variant of aircraft.

(b) Each AOC holder shall ensure that approved procedures include each item necessary for flight crew members to check for safety before starting engines, taking off, or landing, and for engine and systems abnormalities and emergencies.

(c) Each AOC holder shall ensure that the checklist procedures are designed so that a flight crewmember will not need to rely upon their memory for items to be checked.

(d) Each AOC holder shall make the approved procedures readily useable in the cockpit of each aircraft and the flight crew shall be required to follow them when operating the aircraft.

9.3.1.12 **Minimum Equipment List and Configuration Deviation List**

(a) Each AOC holder shall provide for the use of the flight crew members, maintenance personnel and persons assigned operational control functions during the performance of their duties, an MEL approved by the Authority.

(b) The MEL shall be specific to the aircraft type and variant which contains the circumstances, limitations and procedures for release or continuance of flight of the aircraft with inoperative components, equipment or instruments.

(c) Each AOC holder may provide for the use of flight crew, maintenance personnel and persons assigned operational control functions during the performance of their duties a Configuration Deviation List (CDL) specific to the aircraft type if one is provided and approved by the State of Design. An AOC Holder operations manual shall contain those procedures acceptable to the Authority for operations in accordance with the CDL requirements.

9.3.1.13 **Performance Planning Manual**

(a) Each AOC holder shall provide for the use of the flight crew members and persons assigned operational control functions during the performance of their duties, a performance planning manual acceptable to the Authority.

(b) The performance planning manual shall be specific to aircraft type and variant which contains adequate performance information to accurately calculate the performance in all normal phases of flight operation.

9.3.1.14 **Performance Data Control System**

(a) Each AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current performance data for each aircraft, route and airport that it uses.

(b) The system approved by the Authority shall provide current obstacle data for departure and arrival performance calculations.

9.3.1.15 **Aircraft Loading and Handling Manual**

(a) Each AOC holder shall provide for the use of the flight crew members, ground handling personnel and persons assigned operational control functions during the performance of their duties, an aircraft handling and loading manual acceptable to the Authority.
(b) This manual shall be specific to the aircraft type and variant which contains the procedures and limitations for servicing and loading of the aircraft.

9.3.1.16 **MASS AND BALANCE DATA CONTROL SYSTEM**

Each AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current information regarding the mass and balance of each aircraft operated.

9.3.1.17 **CABIN CREW MEMBER MANUAL**

(a) The AOC holder shall issue to the cabin crew members and provide to passenger agents during the performance of their duties, a cabin crew member manual acceptable to the Authority.

(b) The cabin crew member manual shall contain those operational policies and procedures applicable to cabin crew members and the carriage of passengers.

(c) The AOC holder shall issue to the cabin crew members, a manual specific to the aircraft type and variant which contains the details of their normal, abnormal and emergency procedures and the location and operation of emergency equipment.

*Note: These manuals may be combined into one manual for use by the cabin crew members.*

9.3.1.18 **PASSENGER BRIEFING CARDS**

(a) Each AOC holder shall carry on each passenger carrying aircraft, in convenient locations for the use of each passenger, printed cards supplementing the oral briefing and containing—

(1) Diagrams and methods of operating the emergency exits;

(2) Other instructions necessary for use of the emergency equipment, and

(3) Information regarding the restrictions and requirements associated with sitting in an exit seat row.

(b) Each AOC holder shall ensure that each card contains information that is pertinent only to the type and variant of aircraft used for that flight.

*Implementing Standard: See IS: 9.3.1.18 for specific information to be included on passenger information cards.*
9.3.1.19 AERONAUTICAL DATA CONTROL SYSTEM

Each AOC holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current aeronautical data for each route and airport that it uses.

*Implementing Standard: See IS: 9.3.1.19 for the specific airport information to be contained in the aeronautical data control system.*

9.3.1.20 ROUTE GUIDE

(a) Each AOC holder shall provide for the use of the flight crewmembers and persons assigned operational control functions during the performance of their duties, a route guide and aeronautical charts approved by the Authority.

(b) The route guide and aeronautical charts shall be current and appropriate for the proposed types and areas of operations to be conducted by the AOC holder.

9.3.1.21 WEATHER REPORTING SOURCES

(a) Each AOC holder shall use sources approved the Authority for the weather reports and forecasts used for decisions regarding flight preparation, routing and terminal operations.

(b) For passenger carrying operations on a published schedule, the AOC holder shall have an approved system for obtaining forecasts and reports of adverse weather phenomena that may affect safety of flight on each route to be flown and airport to be used.

*Implementing Standard: See IS: 9.3.1.21 for sources of weather reports satisfactory for flight planning or controlling flight movement.*

9.3.1.22 DE-ICING AND ANTI-ICING PROGRAMME

(a) Each AOC holder planning to operate an aircraft in conditions where frost, ice, or snow may reasonably be expected to adhere to the aircraft shall—

1. Use only aircraft adequately equipped for such conditions;
2. Ensure flight crew is adequately trained for such conditions; and
3. Have an approved ground de-icing and anti-icing programme.

*Implementing Standard: See IS: 9.3.1.22 for detailed requirements pertaining to the AOC holder's de-icing programme.*

9.3.1.23 FLIGHT SUPERVISION AND MONITORING SYSTEM

(a) For operations on a published schedule, each AOC holder shall have an adequate system approved by the Authority for proper dispatch and monitoring of the progress of the scheduled flights.

(b) The dispatch and monitoring system shall have enough dispatch centres, adequate for the operations to be conducted, located at points necessary to ensure adequate flight preparation, dispatch and in-flight contact with the scheduled flight operations.

(c) For scheduled operations, each AOC holder shall provide enough qualified flight operations officers at each dispatch centre to ensure proper operational control of each flight.
9.3.1.24 **Flight Following System**

(a) For charter flight operations, each AOC holder shall have a system for providing flight preparation documents and determining the departure and arrival times of its flights at all airports approved by the Authority.

(b) The system described in paragraph (a) shall have a means of communication by private or available public facilities to monitor the departure and arrival at all airports, including flight diversions.

(c) For aircraft under 5700 kg, an AOC holder is not required to have a flight following system for each flight in which an ATC flight plan is filed and remains active until arrival at destination.

9.3.1.25 **Communications Facilities**

(a) Each AOC holder’s flights shall be able to have two-way radio communications with all ATC facilities along the routes and alternate routes to be used.

(b) For passenger carrying operations on a published schedule, each AOC holder shall be able to have rapid and reliable radio communications with all flights over the AOC’s entire route structure under normal operating conditions.

9.3.1.26 **Routes and Areas of Operation**

(a) An AOC holder may conduct operations only along such routes and within such areas for which—

1. Ground facilities and services, including meteorological services, are provided which are adequate for the planned operation;
2. The performance of the aircraft intended to be used is adequate to comply with minimum flight altitude requirements;
3. The equipment of the aircraft intended to be used meets the minimum requirements for the planned operation;
4. Appropriate and current maps and charts are available;
5. If two-engine aircraft are used, adequate airports are available with the time/distance limitations; and
6. If single-engine aircraft are used, surfaces are available which permit a safe forced landing to be executed.

(b) No person may conduct commercial air transport operations on any route or area of operation unless those operations are in accordance with any restrictions imposed by the Authority.
9.3.1.27 NAVIGATIONAL ACCURACY

(a) Each AOC holder shall ensure that, for each proposed route or area, that the navigational systems and facilities it uses are capable of navigating the aircraft—

(1) Within the degree of accuracy required for ATC; and
(2) To the airports in the operational flight plan within the degree of accuracy necessary for the operation involved.

(b) In situations without adequate navigation systems reference, the Authority may authorise day VFR operations that can be conducted safely by pilotage because of the characteristics of the terrain.

(c) Except for those navigational aids required for routes to alternate airports, the Authority will list in the AOC holder’s operations specifications non-visual ground aids required for approval of routes outside of controlled airspace.

(d) Non-visual ground aids are not required for night VFR operations on routes that the certificate holder shows have reliably lighted landmarks adequate for safe operation.

(e) Operations on route segments where the use of celestial or other specialised means of navigation shall be approved by the Authority.

9.3.1.28 Minimum Safe Altitudes

(a) The AOC holder shall specify the method by which it intends to determine minimum flight altitudes for operations conducted over routes for which minimum flight altitudes have not been established by the responsible State.

(b) The Authority will approve such method only after careful consideration of the probable effects of the following factors on the safety of the operation in question –

(1) The accuracy and reliability with which the position of the aircraft can be determined;
(2) The inaccuracies in the indications of the altimeters used;
(3) The characteristics of the terrain (e.g. sudden changes in elevation);
(4) The probability of encountering unfavourable meteorological conditions (e.g. severe turbulence and descending air currents);
(5) Possible in accuracies in the aeronautical charts;
(6) Airspace restrictions; and
(7) ICAO Annex 2.

9.3.1.29 Aerodrome Operating Minima

(a) The AOC holder shall establish the aerodrome operating minima for each aerodrome to be used for commercial air transport operations involving takeoff, approach to landing in accordance with a method of determination approved by the Authority.

(b) The method determined shall take full account of – Method of Determination

(1) The type, performance and handling characteristics of the aircraft;
(2) The composition of the flight crew, their competence and experience;
(3) The dimensions and characteristics of the runways which may be selected for use;
(4) The adequacy and performance of the available visual and non-visual ground aids
(5) The equipment available on the aircraft for the purpose of navigation and/or control of the flight path during the approach to landing and the missed approach;
(6) The obstacles in the approach and missed approach areas and the obstacle clearance altitude/height for the instrument approach procedures;

(7) The means used to determine and report meteorological conditions; and

(8) The obstacles in the climb-out areas and necessary clearance margins.

9.3.1.30 Flight Safety and Accident Prevention Programme

(a) The AOC holder shall have a programme of flight safety and accident prevention.

(b) This programme shall include primary duties for –

   (1) Standardization of crewmember guidance and standard operating procedures, including –
       (i) Expanded and condensed normal checklists;
       (ii) Acceptable flight manoeuvres profiles;
       (iii) Acceptable safety procedures; e.g. standard call-outs, checklist usage and philosophy, etc.;

   (2) Route standardization of crewmember and line check pilots;

   (3) Conduct of safety briefings;

   (4) Issuance of Operations Bulletins regarding safety and standardization matters; and

   (5) Administration of a methodology for reporting, both anonymous and identifiable, and correction of possible safety issues and providing feedback to the operations personnel.

(c) An operator shall establish a flight safety documents system, for the use and guidance of operational personnel.

(d) An AOC holder of an aeroplane of a certificated take-off mass in excess of 27,000kg shall establish and maintain a flight data analysis programme as part of its accident prevention and flight safety programme.

   (1) A flight data analysis programme shall be non-punitive and contain adequate safeguards to protect the source(s) of the data.

   (2) An AOC holder may contract the operation of a flight analysis programme to another party while retaining overall responsibility for the maintenance of such a programme.

See IS 9.3.1.30 for the requirements of a flight safety documents system.
9.4 AOC MAINTENANCE REQUIREMENTS

9.4.1.1 APPLICABILITY

This Subpart provides those certification and maintenance requirements that apply to an AOC holder utilising an AMO or an equivalent system.

9.4.1.2 MAINTENANCE RESPONSIBILITY

(a) Each AOC holder shall ensure the airworthiness of the aircraft and the serviceability of both operational and emergency equipment by—

(1) Assuring the accomplishment of preflight inspections;
(2) Assuring the correction of any defect and/or damage affecting safe operation of an aircraft to an approved standard, taking into account the MEL and CDL if available for the aircraft type;
(3) Assuring the accomplishment of all maintenance in accordance with the approved operator’s aircraft maintenance programme;
(4) The analysis of the effectiveness of the AOC holder's approved aircraft maintenance programme;
(5) Assuring the accomplishment of any operational directive, airworthiness directive and any other continued airworthiness requirement made mandatory by the Authority; and
(6) Assuring the accomplishment of modifications in accordance with an approved standard and, for non-mandatory modifications, the establishment of an embodiment policy.

(b) Each AOC holder shall ensure that the Certificate of Airworthiness for each aircraft operated remains valid in respect to—

(1) The requirements in paragraph (a);
(2) The expiration date of the Certificate; and
(3) Any other maintenance condition specified in the Certificate.

(c) Each AOC holder shall ensure that the requirements specified in paragraph (a) are performed in accordance with procedures approved by or acceptable to the Authority.

(d) Each AOC holder shall ensure that the maintenance, preventive maintenance, and modification of its aircraft/aeronautical products are performed in accordance with its maintenance control manual and/or current instructions for continued airworthiness, and applicable aviation regulations.

(e) Each AOC holder may make an arrangement with another person or entity for the performance of any maintenance, preventive maintenance, or modifications; but shall remain responsible for all work performed under such arrangement.

9.4.1.3 APPROVAL AND ACCEPTANCE OF AOC MAINTENANCE SYSTEMS AND PROGRAMMES

(a) An AOC holder shall not operate an aircraft, except for pre-flight inspections, unless it is maintained and released to service by an AMO or equivalent system of maintenance that is approved by the State of Registry and is acceptable to the Authority.
(b) For aircraft registered in Guyana, an AMO or an equivalent system of maintenance shall be approved by the Authority.

(c) For aircraft not registered in Guyana, an AMO or an equivalent system of maintenance will be approved by the State of Registry of the aircraft, and such approval will be accepted by the Authority.

(d) When the Authority or the State of Registry accepts an equivalent system of maintenance, the persons designated to sign a maintenance release or airworthiness release shall be licensed in accordance with Part 2, as appropriate.

Note: Under JAR-OPS an AOC holder performing its own maintenance is certified as an AMO, while under the FAR the current practice is that an AOC holder is authorised to perform its own maintenance under the AOC certificate without being designated separately as an AMO.

9.4.1.4 Maintenance Control Manual

(a) Each Guyana AOC holder shall provide to the Authority, and to the State of Registry of the aircraft, if different from the Authority, an AOC holder's maintenance control manual and subsequent amendments, for the use and guidance of maintenance and operational personnel concerned, containing details of the organisation’s structure including:

(1) The accountable manager and designated person(s) responsible for the maintenance system as required by 9.2.2.2.

(2) Procedures to be followed to satisfy the maintenance responsibility of 9.4.1.2, except where the AOC holder is an AMO, and the quality functions of 9.4.1.6. Such procedures may be included in the AMO procedures manual.

(3) Procedures for the reporting of failures, malfunctions, and defects in accordance with 5.5.1.4, to the Authority, State of Registry and the State of Design within 72 hours of discovery; in addition, items that warrant immediate notification to the Authority by telephone/telex/fax, with a written follow-on report as soon as possible but no later than within 72 hours of discovery, are—

(i) Primary structural failure,

(ii) Control system failure,

(iii) Fire in the aircraft,

(iv) Engine structure failure, or

(v) Any other condition considered an imminent hazard to safety.

Note: ICAO procedures suggest that service difficulty items not included in the list presented in 5.5.1.4, be reported on a daily basis.

(b) The AOC holder’s maintenance control manual shall contain the following information which may be issued in separate parts—

(1) A description of the administrative agreements between the AOC holder and the AMO, or a description of the maintenance procedures and the procedures for completing and signing a maintenance release when maintenance is based on a system other than that of an AMO;

(2) A description of the procedures to ensure each aeroplane they operate is in an airworthy condition;

(3) A description of the procedures to ensure the operational emergency equipment for each flight is serviceable;
(4) The names and duties of the person or persons required to ensure that all maintenance is carried out in accordance with the maintenance control manual;

(5) A reference to the maintenance programme required in 9.4.1.12;

(6) A description of the methods for completion and retention of the operator's maintenance records required by 9.4.1.8;

(7) A description of the procedures for monitoring, assessing and reporting maintenance and operational experience for all aircraft over 5,700 kg maximum certificated take-off mass;

(8) A description of the procedures for obtaining and assessing continued airworthiness information and implementing any resulting actions for all aircraft over 5,700 kg maximum certificated take-off mass, from the organisation responsible for the type design, and shall implement such actions considered necessary by the State of Registry;

(9) A description of the procedures for implementing mandatory continuing airworthiness information as required in 9.4.1.2(a)(5);

(10) A description of the procedures for establishing and maintaining a system of analysis and continued monitoring of the performance and efficiency of the maintenance programme in order to correct any deficiency in that programme;

(11) A description of aircraft types and models to which the manual applies;

(12) A description of procedures for ensuring that unserviceabilities affecting airworthiness are recorded and rectified; and

(13) A description of the procedures for advising the State of Registry of significant in-service occurrences.

(c) No person may provide for use of its personnel in commercial air transport any Maintenance Control Manual or portion of this manual which has not been reviewed and approved for the AOC holder by the Authority.

Note: See IS: 9.4.1.4 for an outline of specific subjects to be contained as appropriate in the AOC holder's maintenance control manual.

9.4.1.5 MAINTENANCE MANAGEMENT

(a) The AOC holder, approved as an AMO, may carry out the requirements specified in 9.4.1.2 (a)(2),(3),(5)and (6).

(b) If the AOC holder is not an AMO, the AOC holder shall meet its responsibilities under in 9.4.1.2 (a)(2),(3),(5)and (6) by using —

(1) An equivalent system of maintenance approved or accepted by the Authority; or

(2) Through an arrangement with an AMO with a written maintenance contract agreed between the AOC holder and the contracting AMO detailing the required maintenance functions and defining the support of the quality functions approved or accepted by the Authority.

Note: ICAO Doc. 9389, Attachment 6F contains requirements for contractual maintenance agreements.

(c) Each AOC holder shall employ a person or group of persons, acceptable to the Authority, to ensure that all maintenance is carried out to an approved standard such that the maintenance requirements of 9.4.1.2 and requirements of the AOC holder's maintenance control manual are satisfied, and to ensure the functioning of the quality system.

(d) Each AOC holder shall provide suitable office accommodation at appropriate locations for the personnel specified in paragraph (c).
9.4.1.6 QUALITY SYSTEM

(a) For maintenance purposes, each AOC holder’s quality system required by 9.2.2.3 shall additionally include at least the following functions:

1. Monitoring to ensure that the activities of 9.4.1.2 are being performed in accordance with the accepted procedures;
2. Ensure that all contracted maintenance is carried out in accordance with the contract;
3. Monitoring the continued compliance with the requirements of Subpart 9.4; and
4. Monitoring compliance with, and adequacy of, procedures required ensuring safe maintenance practices, airworthy aircraft and aeronautical products.

Note: Compliance monitoring must include a feed-back system to the accountable manager to ensure corrective action as necessary.

(b) For maintenance purposes, each AOC holder’s quality system required by 9.2.2.3 shall include a quality assurance programme that contains procedures designed to verify that all maintenance operations are being conducted in accordance with all applicable requirements, standards and procedures.

(c) Where the AOC holder is also an AMO, the AOC holder's quality management system may be combined with the requirements of an AMO and submitted for approval and acceptance to the Authority, and State of Registry for aircraft not registered in Guyana.

Implementing Standard: See IS: 9.4.1.6 for additional quality system requirements for maintenance activities.

Note: Guidance contained in ICAO Doc. 9642 is applicable for use by AOC holders who have the primary responsibility for maintaining the airworthiness of its aircraft.

9.4.1.7 AIRCRAFT TECHNICAL LOG ENTRIES: AOC HOLDERS

(a) Each person who takes action in the case of a reported or observed failure or malfunction of an aircraft/aeronautical product, that is critical to the safety of flight shall make, or have made, a record of that action in the maintenance section of the aircraft technical log.

(b) Each AOC holder shall have a procedure for keeping adequate copies of required records to be carried aboard, in a place readily accessible to each flight crewmember and shall put that procedure in the AOC holder’s operations manual.
9.4.1.8 **MAINTENANCE RECORDS**

(a) Each AOC holder shall ensure that a system has been established to keep, in a form acceptable to the Authority, the following records:

1. The total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all life-limited components;
2. The current status of compliance with all mandatory continuing airworthiness information;
3. Appropriate details of modifications and repairs to the aircraft and its major components;
4. The time in service (hours, calendar time and cycles, as appropriate) since last overhaul of the aircraft or its components subject to mandatory overhaul life;
5. The current aircraft status of compliance with the maintenance programme; and
6. The detailed maintenance records to show that all requirements for signing of a maintenance release and airworthiness release have been met.

(b) Each AOC holder shall ensure that items in (a)(1-5) shall be kept for a minimum of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records in (a)(6) shall be kept for a minimum of 1 year after the signing of the maintenance release and/or airworthiness release.

*Note: Under JAR, items (a)(1-5) are required to be retained for 12 months and item (a)(6) is required to be retained for 24 months. Under FAR, items (a)(1-5) are required to be retained and transferred with the aircraft when the aircraft is sold, and item (a)(6) is required to be retained for 12 months.*

(c) Each AOC holder shall ensure that in the event of temporary change of operator, the records specified in paragraph (a) shall be made available to the new operator.

(d) Each AOC holder shall ensure that when an aircraft is permanently transferred from one operator to another operator, the records specified in paragraph (a) are also transferred.

9.4.1.9 **AOC HOLDER’S AIRCRAFT TECHNICAL LOG - MAINTENANCE RECORD SECTION**

(a) Each AOC holder shall use an aircraft technical log which includes an aircraft maintenance record section containing the following information for each aircraft: (See 9.3.1.5 for operations section of the aircraft technical log)

1. Information about each previous flight necessary to ensure continued flight safety.
2. The current aircraft maintenance release and/or an airworthiness release.
3. The current inspection status of the aircraft, to include inspections due to be performed on an established schedule and inspections that are due to be performed that are not on an established schedule, except that the Authority may agree to the maintenance statement being kept elsewhere.
4. The current maintenance status of the aircraft, to include maintenance due to be performed on an established schedule and maintenance that is due to be performed that is not on an established schedule except that the Authority may agree to the maintenance statement being kept elsewhere.
5. All deferred defects that affect the operation of the aircraft.

*Note: Defects which are not airworthiness items may be deferred to a later date for rectification. When this is done, there must be a method of recording such a deferral, and normally the aeroplane technical log has a section solely for this purpose. Some operators have a system of classifying deferred defects so as to allow different lengths of time, either in hours flown, number of sectors, or on return to a maintenance base, until a defect must be rectified before further flight.*

(b) The aircraft technical log and any subsequent amendment shall be approved by the Authority.
9.4.1.10 **RELEASE TO SERVICE OR MAINTENANCE SECTION RECORDS OF THE TECHNICAL LOG**

(a) An AOC holder shall not operate an aircraft unless it is maintained and released to service by an organisation approved in accordance with Part 6, or under an equivalent system, either of which shall be acceptable to the State of Registry.

(b) An AOC holder using an AMO shall not operate an aircraft after release under subparagraph (a) unless an appropriate entry is made in accordance with the AOC maintenance control manual procedures acceptable to the Authority.

9.4.1.11 **MODIFICATION AND REPAIRS**

(a) All modifications and repairs shall comply with airworthiness requirements acceptable to the State of Registry. Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained. However, in the case of a major repair or major modification, the work must have been done in accordance with technical data approved by the Authority.

(b) An AOC holder which is authorised to perform maintenance, preventive maintenance, and modifications of any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, in accordance with the approved AOC’s specific operating provisions that wishes to approve, for return to service, major repairs or major modifications to an aircraft registered in Guyana shall use a current and valid licensed Aircraft Maintenance Engineer with an airframe and powerplant rating and shall be qualified in accordance with 2.4.4.

(c) Each AOC holder shall, promptly upon its completion, prepare a report of each major modification or major repair of an airframe, aircraft engine, propeller, or appliance of an aircraft operated by it.

(d) The AOC holder shall submit a copy of each report of a major modification to the Authority, and shall keep a copy of each report of a major repair available for inspection.

9.4.1.12 **AIRCRAFT MAINTENANCE PROGRAMME**

(a) Each AOC holder’s aircraft maintenance programme and any subsequent amendment shall be submitted to the State of Registry for approval; acceptance by the Authority will be conditioned upon prior approval by the State of Registry, or where appropriate, upon the AOC holder complying with recommendations provided by the State of Registry.

(b) The Authority will require an operator to include a reliability programme when the Authority determines that such a reliability programme is necessary. When such a determination is made by the Authority the AOC holder shall provide such procedures and information in the AOC holder’s maintenance control manual

(c) Each AOC holder shall ensure that each aircraft is maintained in accordance with the AOC holder’s aircraft approved maintenance programme as required by 9.4.1.3 which shall include—

(1) Maintenance tasks and the intervals in which these are to be performed, taking into account the anticipated utilisation of the aircraft;

(2) When applicable, a continuing structural integrity programme;

(3) Procedures for changing or deviating from subparagraphs (c)(1) and (c)(2); and

(4) When applicable, condition monitoring and reliability programme, descriptions for aircraft systems, components, and powerplants.

(d) Repetitive maintenance tasks that are specified at mandatory intervals as a condition of approval of the type design shall be identified as such.
Note: The maintenance programme should be based on maintenance programme information made available by the State of Design or by the organisation responsible for the type design, and any additional applicable experience.

(e) No person may provide for use of its personnel in commercial air transport a Maintenance Programme or portion thereof which has not been reviewed and approved for the AOC holder by the Authority.

(f) Approval by the Authority of an AOC holder's maintenance programme and any subsequent amendments shall be noted in the AOC certificate pursuant to 9.1.1.7(b)(6).

(g) Each AOC holder shall have an inspection programme and a programme covering other maintenance, preventive maintenance, and modifications to ensure that—

1. Maintenance, preventive maintenance, and modifications performed by it, or by other persons, are performed in accordance with the AOC holder's maintenance control manual;
2. Each aircraft released to service is airworthy and has been properly maintained for operation.

Note: It is recommended that the format of ICAO Doc. 9389, Attachment 7a & b, be utilised for notation of approval of an AOC holder's maintenance programme by the Authority.

(h) The Authority may amend any specifications issued to an AOC holder to permit deviation from those provisions of this Subpart that would prevent the return to service and use of airframe components, powerplants, appliances, and spare parts thereof because those items have been maintained, altered, or inspected by persons employed outside Guyana who do not hold a Guyana Aircraft Maintenance Engineer's license. Each AOC holder who is granted authority under this deviation shall provide for surveillance of facilities and practices to assure that all work performed on these parts is accomplished in accordance with the AOC holder's maintenance control manual.

9.4.1.13 INTENTIONALLY LEFT BLANK

9.4.1.14 AUTHORITY TO PERFORM AND APPROVE MAINTENANCE, PREVENTIVE MAINTENANCE AND MODIFICATIONS

(a) An AOC holder which is not approved as an AMO may perform and approve maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or a part thereof for return to service, if approved in the specific operating provisions, as provided in its maintenance programme and maintenance control manual.

(b) An AOC holder may make arrangements with an AMO (appropriately rated) for the performance of maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or part thereof as provided in its maintenance programme and maintenance control manual.

(c) An AOC holder which is not approved as an AMO shall use an appropriately licensed and rated individual in accordance with Part 2, as appropriate, to approve maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, or appliance for return to service after performing or supervising in accordance with technical data approved by the Authority.
9.4.1.15 LICENSE REQUIREMENTS FOR A TECHNICIAN - AOC HOLDER USING EQUIVALENT SYSTEM

(a) Each person who is directly in charge of maintenance, preventive maintenance, or modification, of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or part thereof and each person performing required inspections and approving for return to service the maintenance performed, shall be an appropriately licensed and rated Aircraft Maintenance Engineer or repair specialists in accordance with Part 2, as appropriate, and acceptable to the Authority.

(b) A person who is directly in charge shall be on site but need not physically observe and direct each worker constantly, but shall be available for consultation and decision on matters requiring instruction or decision from higher authority than that of the persons performing the work.

Note: A person "directly in charge" is each person assigned to a position in which he is responsible for the work of a shop or station that performs maintenance, preventive maintenance, modifications, or other functions affecting aircraft airworthiness.

9.4.1.16 REST AND DUTY LIMITATIONS FOR PERSONS PERFORMING MAINTENANCE FUNCTIONS ON AOC HOLDER AIRCRAFT

(a) No person may assign, nor shall any person perform maintenance functions for aircraft certified for commercial air transport, unless that person has had a minimum rest period of 8 hours prior to the beginning of duty.

(b) No person may schedule a person performing maintenance functions for aircraft Certified for commercial air transport for more than 12 consecutive hours of duty.

(c) In situations involving unscheduled aircraft unserviceability, persons performing maintenance functions for aircraft Certified for commercial air transport may be continued on duty for—

   (1) Up to 16 consecutive hours; or
   (2) 20 hours in 24 consecutive hours.

(d) Following unscheduled duty periods, the person performing maintenance functions for aircraft shall have a mandatory rest period of 10 hours.

(e) The AOC holder shall relieve the person performing maintenance functions from all duties for 24 consecutive hours during any 7 consecutive day period.
9.5 AOC SECURITY MANAGEMENT

9.5.1.1 APPLICABILITY
Subpart 9.5 provides those certification requirements that apply to the AOC holder's protection of aircraft, facilities and personnel from unlawful interference.

9.5.1.2 SECURITY REQUIREMENTS
Each AOC holder shall ensure that all appropriate personnel are familiar, and comply with, the relevant requirements of the national security programmes of Guyana.

9.5.1.3 SECURITY TRAINING PROGRAMMES
Each AOC holder shall establish, maintain and conduct approved training programmes which enable the operator's personnel to take appropriate action to prevent acts of unlawful interference such as sabotage or unlawful seizure of aircraft and to minimise the consequences of such events should they occur.

9.5.1.4 REPORTING ACTS OF UNLAWFUL INTERFERENCE
Following an act of unlawful interference on board an aircraft the PIC or, in his absence, the AOC holder shall submit, without delay, a report of such an act to the designated local authority and the Authority in the State of the operator.

9.5.1.5 AIRCRAFT SEARCH PROCEDURE CHECKLIST
Each AOC holder shall ensure that all aircraft carry a checklist of the procedures to be followed for that type of aircraft in searching for concealed weapons, explosives, or other dangerous devices.

9.5.1.6 FLIGHT CREW COMPARTMENT SECURITY
If installed, the flight crew compartment door on aircraft operated for the purpose of carrying passengers shall be capable of being locked from within the compartment in order to prevent unauthorised access.
9.6 AO C DANGEROUS GOODS MANAGEMENT

9.6.1 APPLICABILITY
Subpart 9.6 provides those certification requirements that apply to management of flight operations personnel and their functions.

9.6.1.2 APPROVAL TO TRANSPORT DANGEROUS GOODS
No AOC holder may transport dangerous goods unless approved to do so by the Authority.

9.6.1.3 SCOPE
(a) Each AOC holder shall comply with the provisions contained in the ICAO Technical Instructions for the Safe Transport of Dangerous Goods By Air, ICAO Doc. 9284 (Technical Instructions) on all occasions when dangerous goods are carried, irrespective of whether the flight is wholly or partly within or wholly outside the territory of Guyana. Where dangerous goods are to be transported outside the territory of Guyana, the AOC holder shall review and comply with the appropriate variations noted by contracting states contained in Attachment 3 to the Technical Instructions.

(b) Articles and substances which would otherwise be classed as dangerous goods are excluded from the provisions of Subpart 9.6, to the extent specified in the Technical Instructions, provided they are—
(1) Required to be aboard the aircraft for operating reasons;
(2) Carried as catering or cabin service supplies;
(3) Carried for use in flight as veterinary aid or as a humane killer for an animal; or
(4) Carried for use in flight for medical aid for a patient, provided that—
   (i) Gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas;
   (ii) Drugs, medicines and other medical matter are under the control of trained personnel during the time when they are in use in the aircraft;
   (iii) Equipment containing wet cell batteries is kept and, when necessary secured, in an upright position to prevent spillage of the electrolyte; and
   (iv) Proper provision is made to stow and secure all the equipment during take-off and landing and at all other times when deemed necessary by the PIC in the interests of safety; or
   (v) They are carried by passengers or crewmembers.

(c) Articles and substances intended as replacements for those in paragraph (b)(1) may be transported on an aircraft as specified in the Technical Instructions.

9.6.1.4 LIMITATIONS ON THE TRANSPORT OF DANGEROUS GOODS
(a) Each AOC holder shall take all reasonable measures to ensure that articles and substances that are specifically identified by name or generic description in the Technical Instructions as being forbidden for transport under any circumstances are not carried on any aircraft.

(b) Each AOC holder shall take all reasonable measures to ensure that articles and substances or other goods that are identified in the Technical Instructions as being forbidden for transport in normal circumstances are transported only when—
(1) They are exempted by the States concerned under the provisions of the Technical Instructions; or
(2) The Technical Instructions indicate they may be transported under an approval issued by the State of Origin.

9.6.1.5 **CLASSIFICATION**
Each AOC holder shall take all reasonable measures to ensure that articles and substances are classified as dangerous goods as specified in the Technical Instructions.

9.6.1.6 **PACKING**
Each AOC holder shall take all reasonable measures to ensure that dangerous goods are packed as specified in the Technical Instructions.

9.6.1.7 **LABELLING AND MARKING**
(a) Each AOC holder shall take all reasonable measures to ensure that packages, overpacks and freight containers are labelled and marked as specified in the Technical Instructions.
(b) Where dangerous goods are carried on a flight which takes place wholly or partly outside the territory of Guyana, the AOC holder shall ensure that labelling and marking are in the English language in addition to any other language requirements.

9.6.1.8 **DANGEROUS GOODS TRANSPORT DOCUMENT**
(a) Each AOC holder shall ensure that, except when otherwise specified in the Technical Instructions, dangerous goods are accompanied by a dangerous goods transport document.
(b) Where dangerous goods are carried on a flight which takes place wholly or partly outside the territory of Guyana, the AOC holder shall ensure that the English language is used for the dangerous goods transport document in addition to any other language requirements.

9.6.1.9 **ACCEPTANCE OF DANGEROUS GOODS**
(a) No AOC holder may accept dangerous goods for transport until the package, overpack or freight container has been inspected in accordance with the acceptance procedures in the Technical Instructions.
(b) Each AOC holder, or its handling agent, shall use an acceptance check list which—
(1) Shall allow for all relevant details to be checked; and
(2) Shall be in such form as will allow for the recording of the results of the acceptance check by manual, mechanical or computerised means.
9.6.1.10 **INSPECTION FOR DAMAGE, LEAKAGE OR CONTAMINATION**

(a) Each AOC holder shall ensure that:

(1) Packages, overpacks and freight containers are inspected for evidence of leakage or damage immediately prior to loading on an aircraft or into a unit load device, as specified in the Technical Instructions;

(2) A unit load device is not loaded on an aircraft unless it has been inspected as required by the Technical Instructions and found free from any evidence of leakage from, or damage to, the dangerous goods contained therein;

(3) Leaking or damaged packages, overpacks or freight containers are not loaded on an aircraft;

(4) Any package of dangerous goods found on an aircraft and which appears to be damaged or leaking is removed or arrangements made for its removal by an appropriate authority or organisation.

(5) After removal of any leaking or damaged goods, the remainder of the consignment is inspected to ensure it is in a proper condition for transport and that no damage or contamination has occurred to the aircraft or its load; and

(6) Packages, overpacks and freight containers are inspected for signs of damage or leakage upon unloading from an aircraft or from a unit load device and, if there is evidence of damage or leakage, the area where the dangerous goods were stowed is inspected for damage or contamination.

9.6.1.11 **REMOVAL OF CONTAMINATION**

(a) Each AOC holder shall ensure that—

(1) Any contamination found as a result of the leakage or damage of dangerous goods is removed without delay; and

(2) An aircraft which has been contaminated by radioactive materials is immediately taken out of service and not returned until the radiation level at any accessible surface and the non-fixed contamination are not more than the values specified in the Technical Instructions.

9.6.1.12 **LOADING RESTRICTIONS**

(a) **Passenger Cabin and Flight Deck.** Each AOC holder shall ensure that dangerous goods are not carried in an aircraft cabin occupied by passengers or on the flight deck, unless otherwise specified in the Technical Instructions.

(b) **Cargo Compartments.** Each AOC holder shall ensure that dangerous goods are loaded, segregated, stowed and secured on an aircraft as specified in the Technical Instructions.

(c) **Dangerous Goods Designated for Carriage Only on Cargo Aircraft.** Each AOC holder shall ensure that packages of dangerous goods bearing the “Cargo Aircraft Only” label are carried on a cargo aircraft and loaded as specified in the Technical Instructions.
9.6.1.13 **PROVISION OF INFORMATION**

(a) *Information to Ground Staff.* Each AOC holder shall ensure that:

1. Information is provided to enable ground staff to carry out their duties with regard to the transport of dangerous goods, including the actions to be taken in the event of incidents and accidents involving dangerous goods; and
2. Where applicable, the information referred to in paragraph (a)(1) is also provided to the handling agent.

(b) *Information to Passengers.* Each AOC holder shall ensure that information is promulgated as required by the Technical Instructions so that passengers are warned as to the types of goods which they are forbidden from transporting aboard an aircraft.

(c) *Information to Acceptance Points Personnel.* Each AOC holder and, where applicable, the handling agent shall ensure that notices are provided at acceptance points for cargo giving information about the transport of dangerous goods.

(d) *Information to Crew Members.* Each AOC holder shall ensure that information is provided in the Operations Manual to enable crew members to carry out their responsibilities in regard to the transport of dangerous goods, including the actions to be taken in the event of emergencies arising involving dangerous goods.

(e) *Information to the PIC.* Each AOC holder shall ensure that the PIC is provided with written information, as specified in the Technical Instructions.

(f) *Information in the Event of an Aircraft Incident or Accident.* Each AOC holder which is involved in an aircraft incident shall—

1. As soon as possible, inform the appropriate authority of the State in which the aircraft accident occurred of any dangerous goods carried; and
2. On request, provide any information required to minimise the hazards created by any dangerous goods carried.

9.6.1.14 **TRAINING PROGRAMMES**

(a) Each AOC holder shall establish, maintain, and have approved by the Authority, staff training programmes, as required by the Technical Instructions.

(b) Each AOC holder not holding a permanent approval to carry dangerous goods shall ensure that—

1. Staff who are engaged in general cargo handling have received training to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column I of Table I to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how to identify such goods.

2. Crew members, passenger handling staff, and security staff employed by the AOC holder who deal with the screening of a passengers and their baggage, have received training which covers as a minimum, the areas identified in Column 2 of Table I to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify them and what requirements apply to the carriage of such goods by passengers.
TABLE 1

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<td>X</td>
</tr>
<tr>
<td>Limitations on dangerous goods</td>
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</tr>
<tr>
<td>Package marking and labelling</td>
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<tr>
<td>Dangerous goods in passengers</td>
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<td></td>
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<tr>
<td>baggage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emergency procedures</td>
<td>X</td>
<td>X</td>
</tr>
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</table>

Note: ‘X’ indicates an area to be covered.

(c) Each AOC holder holding a permanent approval to carry dangerous goods shall ensure that:

(1) Staff who are engaged in the acceptance of dangerous goods have received training and are qualified to carry out their duties which covers as a minimum, the areas identified in Column 1 of Table 2 to a depth sufficient to ensure the staff can make decisions on the acceptance or refusal of dangerous goods offered for carriage by air.

(2) Staff who are engaged in ground handling, storage and loading of dangerous goods have received training to enable them to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column 2 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them.

(3) Staff who are engaged in general cargo handling have received training to enable them to carry out their duties in respect of dangerous goods which covers as a minimum, the areas identified in Column 3 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods, how to identify such goods and how to handle and load them.

(4) Flight crew members have received training which covers as a minimum, the areas identified in Column 4 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and how they should be carried on an aircraft.

(5) Passenger handling staff, security staff employed by the operator who deal with the screening of passengers and their baggage; and crew members other than flight crew members, have received training which covers as a minimum, the areas identified in Column 5 of Table 2 to a depth sufficient to ensure that an awareness is gained of the hazards associated with dangerous goods and what requirements apply to the carriage of such goods by passengers or, more generally, their carriage on an aircraft.

(d) Each AOC holder shall ensure that all staff who require dangerous goods training receive recurrent training at intervals of not longer than 2 years.

(e) Each AOC holder shall ensure that records of dangerous goods training are maintained for all staff trained in accordance with paragraph (d).

(f) Each AOC holder shall ensure that its handling agent’s staff are trained in accordance with the applicable column of Table 1 or Table 2.
### Table 2

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<thead>
<tr>
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<td>General packing requirements and packing instructions</td>
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<td>Loading, restrictions on loading and segregation</td>
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<td>X</td>
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</table>

Note: X indicates an area to be covered.

### 9.6.1.15 Dangerous Goods Incident and Accident Reports

Each AOC holder shall report dangerous goods incidents and accidents to the Authority within 72 hours of the event, unless exceptional circumstances prevent this.
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PART 10 - COMMERCIAL AIR TRANSPORT BY FOREIGN AIR CARRIERS WITHIN GUYANA
PART 10 - COMMERCIAL AIR TRANSPORT BY FOREIGN AIR CARRIERS WITHIN GUYANA

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10.1 GENERAL

10.1.1 APPLICABILITY

This regulation prescribes requirements applicable to the operation of any civil aeroplane or helicopter for the purpose of commercial air transportation operations by any air carrier whose Air Operator Certificate is issued and controlled by a civil aviation authority other than Guyana. Part 10 does not apply to aeroplanes and helicopters when used by military, customs, and police services, which are not used for compensation or hire.

10.1.1.2 DEFINITIONS

(a) For the purpose of Part 10, the following definitions shall apply:

(1) **Foreign air operator.** Any operator, not being an air operator holding an Air Operator Certificate issued by Guyana under the provisions of ICAO Annex 6, Part 1, which undertakes, whether directly or indirectly or by lease or any other arrangement, to engage in commercial air transport operations within borders or airspace of Guyana, whether on a scheduled or charter basis.

(2) **Foreign Authority.** The civil aviation authority that issues and oversees the Air Operator Certificate of the foreign operator.

10.1.1.3 COMPLIANCE

(a) A foreign air operator may not operate an aeroplane or helicopter in commercial air transportation operations contrary to the requirements of—

(1) Part 10; 
(2) Applicable paragraphs of Parts 7 and 8; and
(3) Standards contained in ICAO Annex 6, Parts I and III.

(b) Part (a) applies also to any person who engages in an operation governed by this Part of these regulations without the appropriate certificate and operations specification or similar document required as part of the certification.

10.1.1.4 AUTHORITY TO INSPECT

A foreign air operator shall ensure that any person authorized by the Authority, will be permitted at any time, without prior notice, to board any aeroplane or helicopter operated for commercial air transportation to Guyana to inspect the documents and manuals required by 10.1.2.1 and 10.1.2.3.
10.1.1.5 **OPERATIONS SPECIFICATIONS**

(a) Operations Specifications issued shall specify which specific operations are authorized, prohibited, limited, or subject to certain conditions, in the interest of public safety.

(b) Operations Specifications issued under this section shall contain details of the following:

1. The purpose of issuance;
2. Application and duration;
3. Limitations to, or actions required by, the operator;
4. General provisions;
5. En-route authorization and limitations;
6. Aerodrome authorizations and limitations;
7. Maintenance;
8. Mass and balance;
9. Interchange of equipment operations; and
10. Aircraft leasing operations.

(c) The Operations Specification issued to a foreign air operator by the Authority shall be supplementary to these Regulations.

10.1.1.6 **GENERAL REQUIREMENTS FOR APPLICATION FOR FOREIGN AIR OPERATOR OPERATIONS SPECIFICATIONS**

(a) A foreign air operator shall not operate an aircraft in Guyana unless it holds Operations Specifications issued to it by the Authority.

(b) Where a foreign air operator wishes to apply to operate in Guyana it shall—

1. make such application to the Authority in the form and manner prescribed; and
2. pay the prescribed fee.

(c) An application for Operations Specifications, shall be accompanied by—

1. a copy of a valid air operator certificate or equivalent document issued by the foreign authority;
2. a copy of the Operations Specifications or equivalent document issued by the foreign authority;
3. a copy of the licence or authorization granted to the foreign air operator by the appropriate authority of the State of the air operator to operate an air transport service to and from Guyana;
4. a copy of the approval page for a Minimum Equipment List for each aircraft type intended to be operated by the foreign air operator in Guyana;
5. a representative copy of a Certificate of Registration issued for the aircraft types proposed to be operated by the foreign air operator in Guyana;
6. a copy of a document identifying the maintenance checks that are required to be carried out for aircraft of the foreign air operator while they are operated in Guyana;
(7) a copy of the maintenance contract between the foreign air operator and the Approved Maintenance Organization, where the maintenance under subparagraph (c)(6), is carried out by an Approved Maintenance Organization approved by the foreign authority;

(8) a copy of the lease agreement for any aircraft operated by the foreign air operator which is not registered by the foreign authority;

(9) a copy of any equivalent Operations Specifications issued by the foreign authority for any specialized flight operations specifications requested by the foreign air operator for operations in Guyana;

(10) a proposed Airline Security Programme for the foreign air operator which meets the requirements of the Guyana Civil Aviation (Security) Regulations 2004, for the acceptance and subsequent approval of the Authority; and

(11) any other document the Authority considers necessary to ensure that the intended operations will be conducted safely.

(d) An applicant under these Regulations shall apply for the initial issue of a foreign air operator Operations Specifications at least ninety days before the date of commencement of intended operation.

10.1.1.7 CONDITIONS FOR THE ISSUANCE OF FOREIGN AIR OPERATOR OPERATIONS SPECIFICATIONS

(a) The Authority may issue Operations Specifications to a foreign air operator to conduct commercial air operations in Guyana where it is satisfied that such foreign air operator—

(1) has a valid Air Operator Certificate issued by a foreign authority;

(2) has had its Airline Security Programme approved under the Guyana Civil Aviation (Security) Regulations 2004;

(3) meets the applicable provisions of the Guyana Aviation Requirements (GARs) Parts 6, 7 & 8;

(4) meets the standards contained in Annex 6, Parts I and III and Annex 8 of the Chicago Convention;

(5) has sufficient financial resources to conduct safe operations; and

(6) meets the provisions of these Requirements.

(b) Where the Operations Specifications are issued under this requirement to a foreign air operator, such foreign air operator may commence commercial air transport operations to, from and in Guyana.
10.1.1.8 **OPERATIONS SPECIFICATIONS**
(a) Operations Specifications issued shall specify which specific operations are authorized, prohibited, limited or subject to certain conditions, in the interest of public safety.

(b) Operations Specifications issued under this section shall contain details of the following:
   1. the purpose of issuance;
   2. application and duration;
   3. limitations to, or actions required by, the operator;
   4. general provisions;
   5. en-route authorization and limitations;
   6. aerodrome authorizations and limitations;
   7. maintenance;
   8. mass and balance;
   9. interchange of equipment operations; and
   10. aircraft leasing operations.

(c) The Operations Specification issued to a foreign air operator by the Authority shall be supplementary to these Requirements.

10.1.1.9 **CONTINUED VALIDITY of OPERATIONS SPECIFICATIONS**
(a) A foreign air operator shall, when conducting operations in and to Guyana, ensure that it complies at all times with the requirements of—
   1. its Operations Specifications;
   2. its approved Airline Security Programme; and
   3. the security requirements for aircraft operators under the Guyana Civil Aviation Security Regulations 2004.
10.1.2 **Documents**

10.1.2.1 **FOREIGN AIR OPERATOR’S AEROPLANE/HELICOPTER TECHNICAL LOG**

(a) A foreign air operator shall use an aeroplane or helicopter technical log system containing the following information for each aircraft—

1. Information about each flight necessary to ensure continued flight safety;
2. The current aeroplane/helicopter certificate of release to service;
3. The current maintenance statement giving the aeroplane/helicopter maintenance status of what scheduled and out of phase maintenance is next due, unless the Authority agrees to the maintenance statement being kept elsewhere;
4. All outstanding deferred defects that affect the operation of the aeroplane/helicopter, and
5. Any necessary guidance instructions on maintenance support.

10.1.2.2 **AIR OPERATOR MANUALS AND DOCUMENTS TO BE CARRIED**

(a) A foreign air operator shall ensure that the following are carried on each flight:

1. The current parts of the Operations Manual relevant to the duties of the crew (the parts of the Operations Manual which are required for the conduct of a flight must be easily accessible to the crew on board the aircraft);
2. The current approved AFM, RFM, or AOM relevant to the aircraft. This manual shall be updated by implementing changes made mandatory by the State of Registry.
3. The current certificate of registration, and airworthiness certificate in respect of that aircraft;
4. The appropriate licences of the members of the flight crew;
5. The mass and balance document for the aircraft certifying that the load carried is properly distributed and safely secured; and
6. Appropriate approval/licence of crewmembers for aircraft radio operation.

10.1.2.3 **ADDITIONAL INFORMATION AND FORMS TO BE CARRIED**

(a) A foreign air operator shall ensure that, in addition to the documents and manuals prescribed 10.1.2.1 and 10.1.2.2, the following information and forms, relevant to the type and area of operation, are carried on each flight—

1. Operational Flight Plan;
2. Aircraft Technical Log containing at least the information required in 10.1.2.1(a);
3. Appropriate NOTAM/AIS briefing documentation;
4. Appropriate meteorological information;
5. Mass and balance documentation;
6. Copy of applicable operations specifications required under Part 10;
7. Notification of special loads including any dangerous goods; and
8. Current maps and charts for the area of operation.

(b) The Authority may authorize the information detailed in subparagraph (a) above, or parts thereof, to be presented in a form other than on printed paper provided the information is accessible for inspection.
10.1.2.4 PRODUCTION OF DOCUMENTATION, MANUALS AND RECORDS

(a) A foreign air operator shall—
   (1) Give any person authorized by the Authority access to any documents, manuals and records which are related to flight operations and maintenance; and
   (2) Produce all such documents, manuals and records, when requested to do so by the Authority, within a reasonable period of time.

(b) The pilot in command shall, within a reasonable time of being requested to do so by a person authorized by the Authority, produce to that person the documentation, manuals and records required to be carried on board.

10.1.2.5 PRESERVATION, PRODUCTION AND USE OF FLIGHT RECORDER RECORDINGS

Following an accident, incident, or when the Authority so directs, the operator of an aeroplane or helicopter on which a flight recorder is carried shall preserve the original recorded data for a period of 60 days unless otherwise directed by the investigating authority.
10.1.3 \textbf{Performance}

10.1.3.1 \textbf{Computation of Passenger and Baggage Weights}

(a) A foreign air operator shall compute the mass of passengers and checked baggage using—
   (1) The actual weighed mass of each person and the actual weighed mass of baggage; or
   (2) The standard mass values specified by the foreign authority.

(b) The authority may require a foreign air operator to produce evidence validating any standard mass values used.

10.1.3.2 \textbf{Single-Engine Aeroplanes at Night or in IMC}

(c) A foreign air operator may not operate a single-engine, non-turbine aircraft—
   (1) At night; or
   (2) In Instrument Meteorological Conditions except under Special Visual Flight Rules.

(d) A foreign air operator may operate a single-engine turbine aircraft at night and in IMC conditions provided that:
   (1) The State of the Operator has ensured the reliability of the turbine engine through appropriate operator maintenance procedures, operating practices, flight dispatch procedures and crew training programmes;
   (2) The aeroplane is appropriately equipped for flight at night and in IMC;
   (3) The aeroplane shall have an engine trend monitoring system, and for an aeroplane for which the individual certificate of airworthiness is first issued on or after January 1st 2005, the system shall be automatic.

10.1.3.3 \textbf{Single Pilot Operations under IFR or at Night}

(a) A foreign air operator shall not operate an aeroplane under IFR or at night by a single pilot unless approved by the State of the Operator and the aeroplane meets the following conditions—
   (1) The flight manual does not require a flight crew of more than one pilot;
   (2) The aeroplane is propeller-driven;
   (3) The maximum approved passenger seating configuration is not more than nine;
   (4) The maximum certificated take-off mass does not exceed 5,700 kg;
(5) The aeroplane is equipped with:

   (i) A serviceable autopilot that has at least altitude hold and heading select modes;

   (ii) A headset with a boom microphone or equivalent; and

   (iii) Means of displaying charts that enables them to be readable in all ambient light conditions.

(6) The PIC has satisfied the requirements of experience, training, checking and recency.

10.1.4 Operations

10.1.4.1 Flight rules within Guyana

(a) Within the territorial boundaries of Guyana foreign air carriers shall comply with the flight rules and limitations contained in Part 8.

(b) Foreign air carriers shall ensure that their flight crew have available and have become familiar with the flight rules in Part 8 of this regulation.

Note: The flight rules are contained in Part 8: 8.8.
10.1.5 Flight Crew Member Qualifications

10.1.5.1 GENERAL
(a) Foreign air carriers shall ensure that their flight crew have the appropriate licences and ratings for the operations to be conducted in Guyana.

10.1.5.2 AGE LIMITATIONS
(a) Foreign air carriers shall ensure that the required PIC engaged in single pilot operations on aircraft operating in Guyana shall be less than 60 years of age.
(b) Foreign air carriers shall ensure, for aircraft engaged in operations in Guyana requiring more than one pilot as flight crew members, that if one pilot is up to age 65 the other pilot is less than age 60.

10.1.5.3 LANGUAGE PROFICIENCY
(a) As of March 5, 2008, foreign air carriers shall ensure that flight crew operating aircraft in Guyana meet the language proficiency requirement of least the operational level 4 as contained in ICAO Annex 1 for the English language and that such proficiency is endorsed on the licence.
10.2 SECURITY

10.2.1 AIRCRAFT SECURITY

(a) A foreign air operator shall—

(1) Ensure that all appropriate personnel are familiar, and comply, with the relevant requirements of
the national security programs of the State of the operator;
(2) Establish, maintain and conduct approved training programs which enable the operator’s
personnel to take appropriate action to prevent acts of unlawful interference such as sabotage or
unlawful seizure of aircraft and to minimize the consequences of such events should they occur;
(3) Following an act of unlawful interference on board an aircraft the commander or, in their absence
the operator, shall submit, without delay, a report of such an act to the designated local authority
and the Authority in the State of the operator;
(4) Ensure that all aircraft carry a checklist of the procedures’ to be followed for that type in searching
for concealed weapons, explosives or other dangerous devices; and
(5) If installed, the flight crew compartment door on all aircraft operated for the purpose of carrying
passengers shall be capable of being locked from within the compartment in order to prevent
unauthorized access.

10.2.1.2 UNAUTHORIZED CARRIAGE

A foreign air operator shall take measures to ensure that no persons conceal themselves or cargo on board
an aeroplane or helicopter.
10.3 DANGEROUS GOODS

10.3.1.1 OFFERING DANGEROUS GOODS FOR TRANSPORT BY AIR

(a) No foreign air operator may accept dangerous goods for transport by air in Guyana unless the foreign air operator—
   (1) Has been authorized to do so by the foreign Authority; and
   (2) Has conducted the required personnel training.

(b) The foreign air operator shall properly classify, document, certify, describe, package, mark, label and put in a fit condition for transport, dangerous goods as required by the operator’s dangerous goods program as approved by the foreign Authority.

(c) The foreign air operator shall state in the operations specifications required in 10.1.1.5 whether or not that operator has been authorised to accept dangerous goods by the foreign Authority.

(d) Where the foreign operator has been granted authority to accept dangerous goods, and has an approved dangerous goods program authorised by the foreign Authority, the foreign operator may shall a copy of its dangerous goods program with the Authority.

10.3.1.2 CARRIAGE OF WEAPONS OF WAR AND MUNITIONS OF WAR

(a) A foreign air operator conducting commercial air transportation operations to Guyana shall:
   (1) Not transport weapons of war and munitions of war by air unless an approval to do so has been granted by all States concerned.
   (2) Ensure that weapons of war and munitions of war are:
      (i) Stowed in the aeroplane or helicopter in a place which is inaccessible to passengers during flight; and
      (ii) In the case of firearms, unloaded, unless, before the commencement of the flight, an approval has been granted by all States concerned that such weapons of war and munitions of war may be carried in circumstances that differ in part or in total from those indicated in this subparagraph.
   (3) Ensure that the pilot in command is notified before the flight begins of the details and location on board the aeroplane or helicopter of any weapons of war and munitions of war that are intended to be carried.

10.3.1.3 CARRIAGE OF SPORTING WEAPONS AND AMMUNITION

(a) A foreign air operator conducting commercial air transportation operations to Guyana shall take all measures necessary to ensure that any sporting weapons intended to be carried by air are reported.

(b) A foreign air operator accepting the carriage of sporting weapons shall ensure that they are—
   (1) Stowed in the aeroplane or helicopter in a place which is inaccessible to passengers during flight unless the Authority has determined that compliance is impracticable and has approved other procedures, and
   (2) In the case of firearms or other weapons that can contain ammunition, unloaded.

(c) A foreign air operator may allow a passenger to carry ammunition for sporting weapons in passenger’s checked baggage, as approved by the Authority.
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June 1st 2007

Part 11
11.1 GENERAL

11.1.1 APPLICABILITY

Part 11 applies to commercial aircraft operations used for specialised services.

11.1.2 DEFINITIONS

(a) For the purpose of Part 11, the following definitions shall apply:

(1) **Aerial work.** An aircraft operation in which an aircraft is used for specialised services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

(2) **Aerobatic flight.** An intentional manoeuvre involving an abrupt change in an aircraft's attitude, an abnormal attitude, or abnormal acceleration, not necessary for normal flight.

(3) **Agricultural aircraft operation.** The operation of an aircraft for the purpose of—

   (i) Dispensing any economic poison,

   (ii) Dispensing any other substance intended for plant nourishment, soil treatment, propagation of plant life, or pest control, or

   (iii) Engaging in dispensing activities directly affecting agriculture, horticulture, or forest preservation, but not including the dispensing of live insects.

(4) **Banner.** An advertising medium supported by a temporary framework attached externally to the aircraft and towed behind the aircraft.

(5) **Economic poison.** Any substance or mixture of substances intended for—

   (i) Preventing, destroying, repelling, or mitigating any insects, rodents, nematodes, fungi, weeds, and other forms of plant or animal life or viruses, except viruses on or in living human beings or other animals, which the Guyana may declare to be a pest, and

   (ii) Use as a plant regulator, defoliant or desiccant.

(6) **Rotorcraft load combinations.** Configurations for external loads carried by rotorcraft—

   (i) Class A – external load fixed to the rotorcraft, cannot be jettisoned, and does not extend below the landing gear, used to transport cargo.

   (ii) Class B – external load suspended from the rotorcraft, which can be jettisoned, and is transported free of land or water during rotorcraft operations.

   (iii) Class C – external load suspended from the rotorcraft, which can be jettisoned, but remains in contact with land or water during rotorcraft operation.

   (iv) Class D - external load suspended from the rotorcraft for the carriage of persons.

11.1.3 ACRONYMS

(a) The following acronyms are used in Part 11:

   (1) AGL - Above Ground Level

   (2) PIC - Pilot In Command (Part 1)

   (3) IFR – Instrument Flight Rules
11.2 AGRICULTURAL AIRCRAFT OPERATIONS

11.2.1 General

11.2.1.1 Applicability

(a) Part 11 prescribes rules governing—
   (1) Agricultural aircraft operations within Guyana; and
   (2) The issue of commercial and private agricultural aircraft operator certificates for those operations.

(b) In a public emergency, a person conducting agricultural aircraft operations under Part 11 may, to the extent necessary, deviate from the operating rules of Part 11 for relief and welfare activities approved by an agency of the National or a local government.

(c) Each person who, under the authority of this section, deviates from a rule of Part 11 shall, within 10 days after the deviation send to the Authority a complete report of the aircraft operation involved, including a description of the operation and the reasons for it.
11.2.2 Certification Rules

11.2.2.1 Certificate Required
(a) Except as provided in paragraphs (c) and (d) of this section, no person may conduct agricultural aircraft operations without, or in violation of, an agricultural aircraft operator certificate issued under Part 11.
(b) An operator may, if it complies with this Subpart, conduct agricultural aircraft operations with a rotorcraft with external dispensing equipment in place without a rotorcraft external-load operator certificate.
(c) A local or national government conducting agricultural aircraft operations with public aircraft need not comply with this Subpart.
(d) The holder of a rotorcraft external-load operator certificate under Part 11 may conduct an agricultural aircraft operation, involving only the dispensing of water on forest fires by rotorcraft external-load means.

11.2.2.2 Application for Certificate
An applicant for an agricultural aircraft operator certificate shall apply on a form and in a manner prescribed by the Authority.

11.2.2.3 Amendment of Certificate
(a) An agricultural aircraft operator certificate may be amended—
   (1) On the Authority’s own initiative, under applicable laws and regulations; or
   (2) Upon application by the holder of that certificate.
(b) A certificate holder shall submit any application to amend an agricultural aircraft operator certificate on a form and in a manner prescribed by the Authority. The applicant shall file the application at least 15 days before the date that it proposes the amendment become effective, unless the Authority approves a shorter filing period.
(c) The Authority will grant a request to amend a certificate if it determines that safety in air commerce and the public interest so allow.
(d) Within 30 days after receiving a refusal to amend, the holder may petition the Authority to reconsider the refusal.

11.2.2.4 Certification Requirements
(a) General. Except as provided by paragraph (a)(3) of this section—
   (1) The Authority will issue a private agricultural aircraft operator certificate to an applicant who meets the requirements of this Subpart for that certificate.
   (2) The Authority will issue a commercial agricultural aircraft operator certificate to an applicant who meets the requirements of this Subpart for that certificate.
   (3) An applicant who applies for an agricultural aircraft operator certificate containing a prohibition against the dispensing of economic poisons is not required to demonstrate knowledge specific to economic poisons.
(b) Pilots.
   (1) A private operator-pilot applicant shall hold a current Guyana private, commercial, or airline transport pilot certificate and be properly rated for the aircraft to be used.
(2) A commercial operator-pilot applicant shall hold, or have available the services of at least one pilot who holds a current commercial or airline transport pilot certificate issued by the Authority and who is properly rated for the aircraft to be used.

(c) Aircraft. The applicant shall have at least one certified and airworthy aircraft, equipped for agricultural operation.

(d) Knowledge and skill tests. The applicant shall show that it has satisfactory knowledge and skill of the following agricultural aircraft operations.

(1) Knowledge:
   (i) Steps to be taken before starting operations, including a survey of the area to be worked.
   (ii) Safe handling of economic poisons and the proper disposal of used containers for those poisons.
   (iii) The general effects of economic poisons and agricultural chemicals on plants, animals, and persons, and the precautions to be observed in using poisons and chemicals.
   (iv) Primary symptoms of poisoning of persons from economic poisons, the appropriate emergency measures to be taken, and the location of poison control centres.
   (v) Performance capabilities and operating limitations of the aircraft to be used.
   (vi) Safe flight and application procedures.

(2) Skill in the following manoeuvres, demonstrated at the aircraft's maximum certified take-off weight, or the maximum weight established for the special purpose load, whichever is greater:
   (i) Short-field and soft-field takeoffs (aeroplanes and gyroplanes only).
   (ii) Approaches to the working area.
   (iii) Flare-outs.
   (iv) Swath runs.
   (v) Pullups and turnarounds.
   (vi) Rapid deceleration (quick stops) in helicopters only.

11.2.2.5 DURATION OF CERTIFICATE

An agricultural aircraft operator certificate is effective until it is surrendered, suspended, or revoked.
11.2.3 Operating Rules

11.2.3.1 General

(a) Except as provided in paragraph (c) of this section, this section prescribes rules that apply to persons and aircraft used in agricultural aircraft operations conducted under Part 11.

(b) The holder of an agricultural aircraft operator certificate may deviate from the provisions of Part 9 without a certificate of waiver when conducting aerial work operations related to agriculture, horticulture, or forest preservation in accordance with the operating rules of this section.

(c) The operating rules of this Subpart apply to Rotorcraft External load certificate holders conducting agricultural aircraft operations involving only the dispensing of water on forest fires by rotorcraft external-load means.

11.2.3.2 Carrying of Certificate

(a) No person may operate an aircraft unless a facsimile of the agricultural aircraft operator certificate is carried on that aircraft.

(b) The registration and airworthiness certificates issued for the aircraft need not be carried in the aircraft provided that those certificates not carried in the aircraft shall be kept available for inspection at the base from which the dispensing operation is conducted.

11.2.3.3 Limitations on Private Agricultural Aircraft Operator

(a) No person may conduct an agricultural aircraft operation under the authority of a private agricultural aircraft operator certificate—

(1) For compensation or hire;

(2) Over a congested area; or

(3) Over any property unless he or she is the owner or lessee of the property, or has ownership or other property interest in the crop located on that property.
11.2.3.4 MANNER OF DISPENSING

No persons may dispense, or cause to be dispensed, any material or substance in a manner that creates a hazard to persons or property on the surface.

11.2.3.5 ECONOMIC POISON DISPENSING

(a) Except as provided in paragraph (b) of this section, no person may dispense or cause to be dispensed, any economic poison that is registered with Guyana—
(1) For a use other than that for which it is registered;
(2) Contrary to any safety instructions or use limitations on its label; or
(3) In violation of any law or regulation of Guyana.

(b) This section does not apply to any person dispensing economic poisons for experimental purposes under—
(1) The supervision of a Guyana agency authorised by law to conduct research in the field of economic poisons; or
(2) A permit from Guyana.

11.2.3.6 PERSONNEL

(a) Information. The holder of an agricultural aircraft operator certificate shall insure that each person used in the holder's agricultural aircraft operation is informed of that person's duties and responsibilities.

(b) Supervisors. No person may supervise an agricultural aircraft operation unless he or she has met the knowledge and skill requirements of this Subpart.

(c) Pilot in command. No person may act as pilot in command of an aircraft operated under this Subpart unless that pilot—
(1) Holds a pilot certificate and rating prescribed by this Subpart as appropriate to the type of operation conducted; or
(2) Has demonstrated to the holder of the Agricultural Aircraft Operator Certificate conducting the operation, or to a supervisor designated by that certificate holder, that he or she possesses the knowledge and skill requirements of this Subpart.

11.2.3.7 OPERATIONS IN CONTROLLED AIRSPACE DESIGNATED FOR AN AIRPORT

(a) Except for flights to and from a dispensing area, no person may operate an aircraft within the lateral boundaries of the surface area of Class D airspace designated for an airport unless authorisation for that operation has been obtained from the ATC facility having jurisdiction over that area.

(b) No person may operate an aircraft in weather conditions below VFR minimums within the lateral boundaries of a Class E airspace area that extends upward from the surface unless authorisation for that operation has been obtained from the ATC facility having jurisdiction over that area.

(c) A certificate holder may operate an aircraft under special VFR weather minimums without meeting the requirements prescribed in Part 9.
11.2.3.8 **OPERATION OVER CONGESTED AREAS: GENERAL**

(a) A certificate holder may operate or cause the operation of an aircraft over a congested area at altitudes required if the operation is conducted with—

(1) The maximum safety to persons and property on the surface, consistent with the operation; and

(2) A plan for each operation, submitted and have approved by the Authority, which includes—

(i) Obstructions to flight;

(ii) Emergency landing capabilities of the aircraft to be used; and

(iii) Any necessary co-ordination with air traffic control.

(b) Each certificate holder shall ensure that all aircraft operations are conducted in compliance with IS: 11.2.3.8.

*Implementing Standard: See IS: 11.2.3.8 for specific restrictions when operating over congested areas.*

11.2.3.9 **OPERATION OVER CONGESTED AREAS: PILOTS AND AIRCRAFT**

(a) Pilots. Each pilot in command must have at least—

(1) 25 hours of pilot-in-command flight time in the make and basic model of the aircraft, including at least 10 hours within the preceding 12 calendar months; and

(2) 100 hours of flight experience as pilot in command in dispensing agricultural materials or chemicals.

(b) Aircraft.

(1) Except for helicopters, each aircraft shall be capable of jettisoning at least one-half of the aircraft's maximum authorised load of agricultural material within 45 seconds. If the aircraft is equipped to release the tank or hopper as a unit, there shall be a means to prevent inadvertent release by the pilot or other crewmember.

11.2.3.10 **AVAILABILITY OF CERTIFICATE**

Each holder of an agricultural aircraft operator certificate shall keep that certificate at its home base and shall present it for inspection on the request of the Authority or any government law enforcement officer.
11.2.4 Records and Reports

11.2.4.1 Records: Commercial Agricultural Aircraft Operator

(a) Each holder of a commercial agricultural aircraft operator certificate shall maintain and keep current, at the home base designated in its application, the following records—

(1) The name and address of each person for whom agricultural aircraft services were provided;
(2) The date of the service;
(3) The name and quantity of the material dispensed for each operation conducted; and
(4) The name, address, and certificate number of each pilot used in agricultural aircraft operations and the date that pilot met the knowledge and skill requirements of this Subpart.

(b) The records required by this section must be kept for at least 12 months.

11.2.4.2 Change of Address

Each holder of an agricultural aircraft operator certificate shall notify the Authority in writing in advance of any change in the address of its home base of operations.

11.2.4.3 Termination of Operations

Whenever a certificate holder ceases operations under Part 11, it shall surrender that certificate to the designated office of the Authority.
11.3 HELICOPTER EXTERNAL LOADS

11.3.1.1 APPLICABILITY

(a) This Subpart prescribes—
   (1) Airworthiness certification rules for rotorcraft used in external-load operations; and
   (2) Operating and certification rules governing the conduct of rotorcraft external-load operations in Guyana.

(b) The certification rules of Part 11 do not apply to—
   (1) Rotorcraft manufacturers when developing external-load attaching means;
   (2) Operations conducted by a person demonstrating compliance for the issuance of a certificate or authorisation under Part 11;
   (3) Training flights conducted in preparation for the demonstration of compliance with Part 11; or
   (4) A local or national government conducting operations with public aircraft.

(c) For the purpose of Part 11, a person other than a crewmember or a person who is essential and directly connected with the external-load operation may be carried only in approved Class D rotorcraft-load combinations.
11.3.2 Certification Rules

11.3.2.1 Certificate Required

No person subject to Part 11 may conduct rotorcraft external-load operations without, or in violation of the terms of, a Rotorcraft External-Load Operator Certificate or equivalent authorisation issued by the Authority.

11.3.2.2 Limitations on Private Agricultural Aircraft Operator

(a) No person may conduct an agricultural aircraft operation under the authority of a private agricultural aircraft operator certificate—
   (1) For compensation or hire;
   (2) Over a congested area; or
   (3) Over any property unless he or she is the owner or lessee of the property, or has ownership or other property interest in the crop located on that property.

11.3.2.3 Duration of Certificate

Unless sooner surrendered, suspended, or revoked, a Rotorcraft External-Load Operator Certificate expires at the end of the twenty-fourth month after the month in which it is issued or renewed.

11.3.2.4 Application for Certificate Issuance or Renewal

Application for an original certificate or renewal of a certificate issued under Part 11 is made on a form, and in a manner, prescribed by the Authority.

11.3.2.5 Requirements for Issuance of a Rotorcraft External-Load Operator Certificate

(a) If an applicant shows that it complies with this Subpart, the Authority will issue a Rotorcraft External-Load Operator Certificate to it.

(b) The Authority will issue authorisation to operate specified rotorcraft with those classes of rotorcraft-load combinations for which the applicant or certificate holder qualifies under the applicable provisions of this Subpart.

11.3.2.6 Rotorcraft

(a) An applicant must have the exclusive use of at least one rotorcraft that—
   (1) Was type certified under, and meets the requirements of, the several parts of these regulations which prescribe requirements for rotorcraft external-load operations;
   (2) Complies with the certification provisions in this Subpart that apply to the rotorcraft-load combinations for which authorisation is requested; and
   (3) Has a valid standard or restricted category airworthiness certificate.

11.3.2.7 Personnel

(a) An applicant shall hold, or have available the services of at least one person who holds a current commercial or airline transport pilot certificate issued by the Authority with a rating appropriate for the rotorcraft to be used.
(b) An applicant shall designate one pilot, who may be the applicant, as chief pilot for rotorcraft external-load operations.

(c) An applicant may designate qualified pilots as assistant chief pilots to perform the functions of the chief pilot when the chief pilot is not readily available.

(d) The chief pilot and assistant chief pilots must be acceptable to the Authority and each must hold a current Commercial or Airline Transport Pilot Certificate, with a rating appropriate for the rotorcraft to be used.

(e) The holder of a Rotorcraft External-Load Operator Certificate shall report any change in designation of chief pilot or assistant chief pilot immediately to the Authority.

(f) A newly designated chief pilot shall comply with the knowledge and skill requirements of this Subpart within 30 days or the operator may not conduct further operations under the Rotorcraft External-Load Operator Certificate, unless otherwise authorised by the Authority.

11.3.2.8 AMENDMENT OF CERTIFICATE

(a) The holder of a Rotorcraft External-Load Certificate may apply to the Authority for an amendment of its certificate, to add or delete a rotorcraft-load combination authorisation.

(b) The holder of a rotorcraft external-load certificate may apply for an amendment to add or delete a rotorcraft authorisation by submitting to the Authority a new list of rotorcraft, by registration number, with the classes of rotorcraft-load combinations for which authorisation is requested.
11.3.2.9 **Availability, Transfer, and Surrender of Certificate**

(a) Each person conducting a rotorcraft external-load operation shall carry a facsimile of the Rotorcraft External-Load Operator Certificate in each rotorcraft used in the operation.

(b) A certificate holder shall return its certificate to the Authority—

1. If the Authority suspends or revokes its Rotorcraft External-Load Operator Certificate; or
2. If the certificate holder discontinues operations and does not resume operations within two years.
11.3.3 Operating Rules and Related Requirements

11.3.3.1 OPERATING RULES

(a) No person may conduct a rotorcraft external load operation without, or contrary to, the Rotorcraft/Load Combination Flight Manual prescribed in 11.3.4.4.

(b) No person may conduct a rotorcraft external load operation unless -

1. The rotorcraft complies with 11.3.2.6; and
2. The rotorcraft and rotorcraft/load combination is authorised under the Rotorcraft External Load Operator Certificate.

(c) Before a person may operate a rotorcraft with an external load configuration that differs substantially from any that person has previously carried with that type of rotorcraft (whether or not the rotorcraft/load combination is of the same class), that person shall conduct, in a manner that will not endanger persons or property on the surface, such of the following flight operational checks as the Authority determines are appropriate to the rotorcraft/load combination:

1. A determination that the weight of the rotorcraft/load combination and the location of its centre of gravity are within approved limits, that the external load is securely fastened, and that the external load does not interfere with devices provided for its emergency release.
2. Make an initial liftoff and verify that controllability is satisfactory.
3. While hovering, verify that directional control is adequate.
4. Accelerate into forward flight to verify that no attitude (whether of the rotorcraft or of the external load) is encountered in which the rotorcraft is uncontrollable or which is otherwise hazardous.
5. In forward flight, check for hazardous oscillations of the external load, but if the external load is not visible to the pilot, other crewmembers or ground personnel may make this check and signal the pilot.
6. Increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation or hazardous aerodynamic turbulence is encountered.

(d) Notwithstanding the provisions of Part 8, the holder of a Rotorcraft External Load Operator Certificate may conduct rotorcraft external load operations over congested areas if those operations are conducted without hazard to persons or property on the surface and comply with the following:

1. The operator shall develop a plan for each complete operation and obtain approval for the operation from the Authority.

   Note: The plan must include an agreement with the appropriate political subdivision that local officials will exclude unauthorised persons from the area in which the operation will be conducted, coordination with air traffic control, if necessary, and a detailed chart depicting the flight routes and altitudes.

2. Each flight shall be conducted at an altitude, and on a route, that will allow a jettisonable external load to be released, and the rotorcraft landed, in an emergency without hazard to persons or property on the surface.

(e) Notwithstanding the provisions of Part 8, and except as provided in 11.3.4.3(a)(4), the holder of a Rotorcraft External Load Operator Certificate may conduct external load operations, including approaches, departures, and load positioning manoeuvres necessary for the operation, below 500 feet above the surface and closer than 500 feet to persons, vessels, vehicles, and structures, if the operations are conducted without creating a hazard to persons or property on the surface.

(f) No person may conduct rotorcraft external load operations under IFR unless specifically approved by the Authority.
11.3.3.2 **CARRIAGE OF PERSONS**

(a) No AOC holder may allow a person to be carried during rotorcraft external load operations unless that person—

(1) Is a flight crewmember;
(2) Is a flight crewmember trainee;
(3) Performs an essential function in connection with the external load operation; or
(4) Is necessary to accomplish the work activity directly associated with that operation.

(b) The PIC shall ensure that all persons are briefed before takeoff on all pertinent procedures to be followed (including normal, abnormal, and emergency procedures) and equipment to be used during the external load operation.

11.3.3.3 **CREWMEMBER TRAINING, CURRENCY, AND TESTING REQUIREMENTS**

(a) No certificate holder may use, nor may any person serve, as a pilot in helicopter external load operations unless that person—

(1) Has successfully demonstrated to the Authority the knowledge and skill with respect to the rotorcraft/load combination; and
(2) Has in his or her personal possession a letter of competency or an appropriate logbook entry indicating compliance with paragraph (a)(1) of this section.

(b) No AOC holder may use, nor may any person serve as, a crewmember or other operations personnel in Class D operations unless, within the preceding 12 calendar months, that person has successfully completed either an approved initial or a recurrent training program.

(c) Notwithstanding the provisions of paragraph (b) of this section, a person who has performed a rotorcraft external load operation of the same class and in an aircraft of the same type within the past 12 calendar months need not undergo recurrent training.
11.3.4 Airworthiness Requirements

11.3.4.1 Flight Characteristics Requirements

(a) The applicant must demonstrate to the Authority, by performing the following operational flight checks, that the rotorcraft-load combination has satisfactory flight characteristics, unless these operational flight checks have been demonstrated previously and the rotorcraft-load combination flight characteristics were satisfactory. For the purposes of this demonstration, the external-load weight (including the external-load attaching means) is the maximum weight for which authorisation is requested.

(b) Class A rotorcraft-load combinations: The operational flight check must consist of at least the following manoeuvres:

1. Take off and landing.
2. Demonstration of adequate directional control while hovering.
3. Acceleration from a hover.
4. Horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested.

(c) Class B and D rotorcraft-load combinations: The operational flight check must consist of at least the following manoeuvres:

1. Pickup of the external load.
2. Demonstration of adequate directional control while hovering.
3. Acceleration from a hover.
4. Horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested.
5. Demonstrating appropriate lifting device operation.
6. Manoeuvring of the external load into release position and its release, under probable flight operation conditions, by means of each of the quick-release controls installed on the rotorcraft.

(d) Class C rotorcraft-load combinations: For Class C rotorcraft-load combinations used in wire-stringing, cable-laying, or similar operations, the operational flight check must consist of the manoeuvres, as applicable, prescribed in paragraph (c) of this section.

11.3.4.2 Structures and Design

(a) External-load attaching means. Each external-load attaching means shall be approved by the Authority.

(b) Quick release devices. Each quick release device means shall be approved by the Authority.

(c) Weight and centre of gravity:

1. Weight. The total weight of the rotorcraft-load combination must not exceed the total weight approved for the rotorcraft during its type certification.

2. Centre of gravity. The location of the centre of gravity must, for all loading conditions, be within the range established for the rotorcraft during its type certification. For Class C rotorcraft-load combinations, the magnitude and direction of the loading force must be established at those values for which the effective location of the centre of gravity remains within its established range.
11.3.4.3 OPERATING LIMITATIONS

(a) In addition to the operating limitations set forth in the approved Rotorcraft Flight Manual, and to any other limitations the Authority may prescribe, the operator shall establish at least the following limitations and set them forth in the Rotorcraft-Load Combination Flight Manual for rotorcraft-load combination operations:

1. The rotorcraft-load combination may be operated only within the weight and centre of gravity limitations established in accordance with this Subpart.

2. The rotorcraft-load combination may not be operated with an external load weight exceeding that used in showing compliance with this Subpart.

3. The rotorcraft-load combination may not be operated at airspeeds greater than those established in accordance with this Subpart.

4. No person may conduct an external-load operation under Part 11 with a rotorcraft type certified in the restricted category over a densely populated area, in a congested airway, or near a busy airport where passenger transport operations are conducted.

5. The rotorcraft-load combination of Class D may be conducted only in accordance with the following:
   (i) The rotorcraft to be used must have been type certified under transport Category A for the operating weight and provide hover capability with one engine inoperative at that operating weight and altitude.
   (ii) The rotorcraft must be equipped to allow direct radio intercommunication among required crewmembers.
   (iii) The personnel lifting device must be approved by the Authority.
   (iv) The lifting device must have an emergency release requiring two distinct actions.

11.3.4.4 Rotorcraft-Load Combination Flight Manual

(a) The applicant must prepare a Rotorcraft-Load Combination Flight Manual and submit it for approval by the Authority. The limiting height-speed envelope data need not be listed as operating limitations. The manual shall set forth—

1. Operating limitations, procedures (normal and emergency), performance, and other information established under this Subpart;

2. The class of rotorcraft-load combinations for which the airworthiness of the rotorcraft has been demonstrated in accordance with this Subpart; and

3. In the information section of the Rotorcraft-Load Combination Flight Manual—
   (i) Information on any peculiarities discovered when operating particular rotorcraft-load combinations;
   (ii) Precautionary advice regarding static electricity discharges for Class B, Class C, and Class D rotorcraft-load combinations; and
   (iii) Any other information essential for safe operation with external loads.
11.3.4.5 **MARKINGS AND PLACARDS**

(a) The following markings and placards must be displayed conspicuously and must be such that they cannot be easily erased, disfigured, or obscured:

1. A placard (displayed in the cockpit or cabin) stating the class of rotorcraft-load combination and the occupancy limitation for which the rotorcraft has been approved.
2. A placard, marking, or instruction (displayed next to the external-load attaching means) stating the maximum external load approved.

11.3.4.6 **AIRWORTHINESS CERTIFICATION**

A Rotorcraft External-Load Operator Certificate is a current and valid airworthiness certificate for each rotorcraft type and listed by registration number on a list attached to the certificate, when the rotorcraft is being used in operations conducted under Part 11.
11.4 GLIDER TOWING

11.4.1 APPLICABILITY
This Subpart applies to those operations involving towing gliders by aircraft.

11.4.2 CERTIFICATE REQUIRED
No person may act as a tow pilot for a glider unless that person has at least a private pilot certificate with a category rating for the tow aircraft.

11.4.3 AIRCRAFT REQUIREMENTS
No person may operate an aircraft that is towing a glider unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.

11.4.4 EXPERIENCE AND TRAINING REQUIREMENTS
(a) No person may act as a tow pilot for a glider unless that person has—
   (1) Logged at least 100 hours of pilot-in-command time in same aircraft category, class, and type, if applicable, as the tow aircraft;
   (2) Received training in and instructor endorsement for—
      (i) The techniques and procedures essential to the safe towing of gliders, including airspeed limitations;
      (ii) Emergency procedures;
      (iii) Signals used; and
      (iv) Maximum angles of bank.
   (3) Except as provided in paragraph (b) of this section, has completed and had endorsed at least three flights as the sole manipulator of the controls of an aircraft towing a glider or simulating glider-towing flight procedures while accompanied by a pilot who meets the requirements of this section; and
   (4) Within the preceding 12 months has—
      (i) Made at least three actual glider tows; or
      (ii) Made at least three flights as pilot in command of a glider towed by an aircraft.

(b) Any person who before [date to be determined by the Authority], made and logged 10 or more flights as PIC of an aircraft towing a glider in accordance with authorisation of the Authority need not comply with paragraphs (a)(3) and (a)(4) of this section.
11.5 BANNER TOWING

11.5.1 APPLICABILITY
This Subpart applies to those operations involving towing by aircraft banners or other signs, lit or unlit.

11.5.2 CERTIFICATE OR AUTHORIZATION REQUIRED
(a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate or equivalent authorisation.
(b) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this Subpart.
(c) A helicopter operating under the provision of Subpart 11.3 may tow a banner using an external-load attaching means without a certificate only if the operator has at least a Class B authorisation on the operating certificate.

11.5.3 AIRCRAFT REQUIREMENTS
(a) No person may operate an aircraft that is towing a banner unless the aircraft is equipped with a tow hook and release control system that meet the applicable standards of airworthiness.
(b) No person may operate a helicopter that is towing a banner unless the helicopter has a means to prevent the banner from becoming entangled in the helicopter's tailrotor during all phases of flight, including autorotations.

Note: The only way to prevent the banner from tangling in the tailrotor during autorotation may be to jettison the banner.

11.5.4 EXPERIENCE AND TRAINING REQUIREMENTS
(a) For nonrevenue flights, the pilot of the tow aircraft shall hold at least a valid private pilot certificate and have a minimum of 200 hours PIC time.
(b) When banner tow operations are conducted for compensation or hire, the pilot shall have at least a commercial pilot certificate (instrument rating not required) and at least a valid second class medical certificate.
(c) All pilots engaged in banner towing operations shall demonstrate competence to the Authority by performing at least one pickup and drop of the maximum number of letters (panels) to be used by the certificate holder.

Note: This demonstration should be observed from the ground to allow the inspector to evaluate the competence of any essential ground personnel as well as the flight operation.
11.5.5 OPERATING RULES

(a) All banner tow operations shall be conducted only—
   (1) In VFR weather conditions; and
   (2) Between the hours of official sunrise and official sunset.

(b) No person may conduct banner towing operations—
   (1) Over congested areas or open air assemblies of persons lower than 1,000 feet; and
   (2) Elsewhere lower than the minimum safe altitude requirements of Part 8.

   Note: Helicopters may be operated at less than the minimums prescribed in paragraph (b) if the operation is conducted without hazard to persons or property on the surface.

(c) The certificate holder shall obtain the airport manager's approval to conduct banner tow operations.

(d) If banner towing operations take place at an airport with a control tower, the certificate holder shall inform that control tower of the time of the banner tow operation.

(e) The certificate holder shall notify the appropriate airport officials in advance when banner tow operations will be in close proximity to an uncontrolled airport.

(f) Only essential crewmembers shall be carried when conducting banner tow operations.

(g) When banner tow operations are conducted around congested areas, the pilot shall exercise due care so that, in the event of emergency release of the banner and/or towrope, it will not cause undue hazard to persons or property on the surface.

(h) Each pilot shall drop the towrope in a predesignated area at least 500 feet from persons, buildings, parked automobiles, and aircraft.

   Note: If the tow plane lands with the rope attached, due care will be exercised to avoid trailing the rope and endangering other aircraft in the air, or persons, property or aircraft on the surface.

(i) Each pilot conducting banner towing operations shall carry onboard the aircraft a current copy of the following certificate of Waiver or Authorisation allowing banner towing operations.
11.6 TV AND MOVIE OPERATIONS

11.6.1 APPLICABILITY
(a) This Subpart applies to those operations involving movie filming, appearance in flight in movies, and airborne direction or production of such filming when those operations are conducted as part of a business enterprise or for compensation or hire.
(b) For purposes of this Subpart, “movie” shall include film, videos, and live broadcast in any format, and the preparation and rehearsal for those operations.

11.6.2 CERTIFICATE OR AUTHORISATION REQUIRED
(a) The Authority shall require each person conducting operations covered by this Subpart to hold a certificate or equivalent authorisation.
(b) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this Subpart.

11.6.3 AIRCRAFT REQUIREMENT
In order to be used in motion picture and television filming operations, aircraft in the experimental category shall have an airworthiness certificate issued for the purpose of exhibition.

11.6.4 EXPERIENCE AND TRAINING REQUIREMENTS
(a) No pilot may conduct television and movie operations unless he or she has:
   (1) A commercial license with ratings appropriate to the category and class aircraft to be used under the terms of the waiver.
   (2) At least 500 hours as PIC.
   (3) A minimum of 100 hours in the category and class of aircraft to be used.
   (4) A minimum of five hours in the make and model aircraft to be used under the waiver.
   (5) If the pilot intends to perform aerobatics below 1,500 AGL, a Statement of Aerobatics Competency for the operations to be performed.

11.6.5 WAIVER REQUIREMENTS
(a) A waiver shall be obtained if filming sequences require an aircraft to be flown—
   (1) In aerobatic flight below 1,500 AGL,
   (2) Over a congested area, or
   (3) In controlled airspace.

   Note: When conducting any filming operation requiring a waiver, the certificate holder shall ensure that all reasonable efforts are made to confine spectators to designated areas. If reasonable efforts have been taken and unauthorised persons or vehicles enter the airspace where manoeuvres are being performed during the filming production event, efforts must be made to remove them.

(b) The holder of the waiver shall provide a schedule of events that lists the—
   (1) Identification of the aircraft; and
   (2) Performers in the sequence of their appearance.

(c) Any manoeuvres added or time changes to the schedule of events shall be approved by the Authority.
The waiver holder shall develop, have approved by the Authority, and adhere to a Motion Picture and Television Flight Operations Manual.

11.6.6 CONTENTS OF A MOTION PICTURE AND TELEVISION FLIGHT OPERATIONS MANUAL

(a) Each Motion Picture and Television Flight Operations Manual shall contain at least the following:

   (i) Business name, address, and telephone number of applicant.
   (ii) List of pilots to be used during the filming, including their pilot certificate numbers, grade, and class and date of medical.
   (iii) List of aircraft by make and model.

2. Distribution and Revision. Procedures for revising the manual to ensure that all manuals are kept current.

3. Persons Authorised. Procedures to ensure that no persons, except those persons consenting to be involved and necessary for the filming production, are allowed within 500 feet of the filming production area.

4. Area of Operations. The area that will be used during the term of the waiver.

5. Plan of Activities. Procedures for the submission, within three days of scheduled filming, a written plan of activities to the Authority containing at least the following:
   (i) Dates and times for all flights.
   (ii) Name and phone number of person responsible for the filming production event.
   (iii) Make and model of aircraft to be used and type of airworthiness certificate, including category
   (iv) Name of pilots involved in the filming production event.
   (v) A statement that permission has been obtained from property owners and/or local officials to conduct the filming production event.
   (vi) Signature of waiver holder or a designated representative.
   (vii) A general outline, or summary, of the production schedule, to include maps or diagrams of the specific filming location, if necessary.

6. Permission to Operate. Requirements and procedures that the waiver holder will use to obtain permission from property owners and/or local officials (e.g., police, fire departments, etc.) as appropriate for the conduct of all filming operations when using the waiver.

7. Security. Method of security that will be used to exclude all persons not directly involved with the operation from the location.

   Note: This should also include the provision that will be used to stop activities when unauthorised persons, vehicles, or aircraft enter the operations area, or for any other reason, in the interest of safety.

8. Briefing of Pilot/Production Personnel. Procedures to brief personnel of the risks involved, emergency procedures, and safeguards to be followed during the filming production event.

9. Certification/Airworthiness. Procedures to ensure that required inspections will be conducted.

10. Communications. Procedures to provide communications capability with all participants during the actual operation and filming.

   Note: The applicant can use oral, visual, or radio communications as along as it keeps the participants continuously apprised of the current status of the operation.

11.7 SIGHT-SEEING FLIGHTS

11.7.1 APPLICABILITY
This Subpart applies to those operations involving the carriage of persons for viewing natural formations or manmade objects on the ground when those operations are conducted as part of a business enterprise or for compensation or hire.

11.7.2 CERTIFICATE OR AUTHORISATION REQUIRED
(a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate or equivalent authorisation.
(b) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this Subpart.
(c) Each operator under this Subpart shall hold an operating certificate issued under the provisions of Part 9.

11.7.3 EXPERIENCE AND TRAINING REQUIREMENTS
The requirements of Part 9 apply to all operations described by this Subpart.

11.7.4 OPERATING RULES
The requirements of Part 9 apply to all operations described by this Subpart.
11.8 FISH SPOTTING

11.8.1 APPLICABILITY

This Subpart applies to those operations involving location, tracking, and reporting on the location of fish and fish schools, when those operations are conducted as part of a business enterprise or for compensation or hire.

11.8.2 CERTIFICATE OR AUTHORISATION REQUIRED

(a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate or equivalent authorisation.

(b) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this Subpart.

11.8.3 OPERATING RULES

(a) Each operator shall conduct operations so as not to endanger persons or property on the surface nor aircraft in flight.

(b) Minimum cloud clearance requirements and minimum altitude requirements of Part 9 do not apply to those persons to whom the Authority has specifically approved different minimums as a part of an authorisation under this Subpart.
11.9 TRAFFIC REPORTING

11.9.1 APPLICABILITY

This Subpart applies to those operations involving the observation of, and reporting on, vehicular traffic conditions on the highways and streets when conducted by aircraft or airmen, or both, not designated as solely public use.

11.9.2 CERTIFICATE OR AUTHORIZATION REQUIRED

(a) The Authority will require each person conducting operations covered by this Subpart to hold a certificate or equivalent authorisation.

(b) The Authority will issue a certificate or authorisation to each applicant who qualifies for it under the provisions of this Subpart.
IS: 11.2.3.8 OPERATION OVER CONGESTED AREAS: GENERAL

(a) Each certificate holder shall ensure that all single engine aircraft while in an congested area operate:

(1) Except for helicopters, during take offs and turnarounds, with no load.

(2) Not below the altitudes prescribed in Part 9 except during the actual dispensing operation, including the approaches and departures necessary for that operation.

(3) During the actual dispensing operation, including the approaches and departures for that operation, not below the altitudes prescribed in Part 9 unless it is in an area and at such an altitude that the aircraft can make an emergency landing without endangering persons or property on the surface.

(b) Each certificate holder shall ensure that all multiengine aircraft while in an congested area operate:

(1) During take off, under conditions that will allow the aeroplane to be brought to a safe stop within the effective length of the runway from any point on takeoff up to the time of attaining, with all engines operating at normal takeoff power, 105 percent of the minimum control speed with the critical engine inoperative in the takeoff configuration or 115 percent of the power-off stall speed in the takeoff configuration, whichever is greater.

Note: Assume still-air conditions, and no correction for any uphill gradient of 1 percent or less when the percentage is measured as the difference between elevation at the end points of the runway divided by the total length. For uphill gradients greater than 1 percent, the effective takeoff length of the runway is reduced 20 percent for each 1-percent grade.

(2) At a weight greater than the weight that, with the critical engine inoperative, would permit a rate of climb of at least 50 feet per minute at an altitude of at least 1,000 feet above the elevation of the highest ground or obstruction within the area to be worked or at an altitude of 5,000 feet, whichever is higher. Assume that the propeller of the inoperative engine is in the minimum drag position; that the wing flaps and landing gear are in the most favourable positions; and that the remaining engine or engines are operating at the maximum continuous power available.

Below the altitudes prescribed in Part 9 except during the actual dispensing operation, including the approaches, departures, and turnarounds necessary for that operation.
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12.1  GENERAL

12.1.1. Application

These regulations prescribe the rules that apply to certification and operation of land aerodromes that serve scheduled or unscheduled passenger operations conducted with an aircraft with a Maximum Take Off Weight (MTOW) exceeding 2955 kg.

Where the interpretation of any of these requirements necessitates interpretation or the exercise of discretion, the responsibility for whatever determination or action is necessary shall rest with the appropriate authority.

Where the Term “appropriate authority” is used this shall refer to the Director General of the Guyana Civil Aviation Authority or his designated representative. This is also applicable in cases where the term does not actually appear but is implied.

12.1.2. Definitions

The terms described in this subsection have the following meanings whenever they appear in these regulations: Technical terms not listed below shall have the same meaning as in Annex 14 to the Chicago Convention and Certification of Aerodromes Document 9774.

- Accuracy: A degree of conformance between the estimated or measured value and the true value.
- Aerodrome: A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft.
- Aerodrome Beacon: An aeronautical beacon used to indicate the position of an aerodrome from the air.
- Aerodrome Certificate: The certificate to operate an aerodrome issued by the appropriate authority under the national regulations subsequent to the acceptance/approval of the aerodrome manual.
- Aerodrome Elevation: The elevation of the highest point of the landing area.
<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>Aerodrome facilities And equipment</td>
<td>Facilities and equipment, inside or outside the boundaries of an aerodrome that are constructed or installed and maintained for the arrival, departure a surface movement of aircraft.</td>
</tr>
<tr>
<td>Aerodrome Identification Sign</td>
<td>A sign placed on an aerodrome to aid in identifying the aerodrome from the air.</td>
</tr>
<tr>
<td>Aerodrome Manual</td>
<td>The manual that forms part of the application for an aerodrome certificate pursuant to these regulations, including any amendments thereto accepted/approved by the GCAA.</td>
</tr>
<tr>
<td>Aerodrome Operator</td>
<td>In relation to a certificated aerodrome, means the aerodrome certificate holder.</td>
</tr>
<tr>
<td>Aerodrome Reference Point</td>
<td>The designated geographical location of an aerodrome.</td>
</tr>
<tr>
<td>Aerodrome Traffic Density</td>
<td>The number of aircraft movements at an aerodrome classified as light, medium or heavy.</td>
</tr>
<tr>
<td>(a) Light</td>
<td>Where the number of movements in the mean busy hour is not greater that 15 per runway or typically less than 20 total aerodrome movements.</td>
</tr>
<tr>
<td>(b) Medium</td>
<td>Where the number of movements in the mean busy hour is not greater that 16 to 25 per runway or typically between 20 to 35 total aerodrome movements.</td>
</tr>
<tr>
<td>(c) Heavy</td>
<td>Where the number of movements in the mean busy hour is in the order of 26 or more per runway or typically more than 35 total aerodrome movements.</td>
</tr>
<tr>
<td>Note 1</td>
<td>The number of movements in the mean busiest hour is the arithmetic mean over the year of the number of movements in the daily busiest hour.</td>
</tr>
<tr>
<td>Note 2</td>
<td>Either a take off or a landing constitutes a movement.</td>
</tr>
<tr>
<td>Aeronautical Beacon</td>
<td>An aeronautical ground light visible at all azimuths, either continuously or intermittently, to designate a particular point on the surface of the earth.</td>
</tr>
<tr>
<td>Aeronautical Ground Light</td>
<td>Any light specially provided as an aid to air navigation, other than a light displayed on an aircraft.</td>
</tr>
</tbody>
</table>
The minimum field length required for take-off at maximum certificated take-off mass, sea-level, standard atmospheric conditions, still air, zero runway slope, as shown in the appropriate aeroplane flight manual prescribed by the certificating authority or equivalent data from the aircraft manufacturer. Field length means balanced field length for aeroplanes, if applicable, or take-off distance in other cases.

A number expressing the relative effect of an aircraft on a pavement for a specified standard sub grade category.

The aircraft classification number is calculated with respect to the center of gravity (CG) position which yields the critical loading on the critical gear. Normally the aft most CG position appropriate to the maximum gross apron (ramp) mass is used to calculate the ACN. In exceptional cases the forward most CG position may result in the nose gear loading being more critical.

A designated area on an apron intended to be used for parking aircraft.

A defined area, on a land aerodrome, intended to accommodate aircraft for purposes of loading or unloading of passengers, mail or cargo, fueling, parking or maintenance.

A service provided to regulate the activities and the movement of aircraft and vehicles on an apron.

Three or more aeronautical ground lights closely spaced in a transverse line so that from a distance they appear as a short bar of light.

An aerodrome whose operator has been granted an aerodrome certificate.

A defined rectangular area on the ground under the control of the aerodrome authority selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height.

(a) Take-off run available. (TORA). The length of the runway declared available and suitable for the ground run of an aeroplane taking off.

(b) Take-off distance available (TODA). The length of the take-off run available plus the length of the clearway, if provided.

(c) Accelerate-stop distance available (ASDA). The length of the take-off run available plus the length of the stopway, if provided.
(d) Landing distance available (LDA). The length of the runway which is declared available and suitable for the ground run of an aeroplane landing.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displaced Threshold</td>
<td>A threshold not located at the extremity of a runway.</td>
</tr>
<tr>
<td>Frangible Object</td>
<td>An object of low mass designed to break, distort or yield on impact so as to present the minimum impact to aircraft.</td>
</tr>
<tr>
<td>Hazard Beacon</td>
<td>An aeronautical beacon used to designate a danger to air navigation.</td>
</tr>
<tr>
<td>Identification Beacon</td>
<td>An aeronautical beacon emitting a coded signal by means of which a particular point of reference can be identified.</td>
</tr>
<tr>
<td>Limited Aerodrome Certificate</td>
<td>The certificate issued by the appropriate Authority under Section 12.2 of these regulations for the operation of an aerodrome serving unscheduled aircraft operations.</td>
</tr>
<tr>
<td>Manoeuvring Area</td>
<td>That part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons.</td>
</tr>
<tr>
<td>Marker</td>
<td>An object displayed above ground level in order to indicate an obstacle or delineate a boundary.</td>
</tr>
<tr>
<td>Marking</td>
<td>A symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information.</td>
</tr>
<tr>
<td>Maximum Carrying Capacity</td>
<td>In relation to an aircraft means the maximum passenger-seating capacity, or the maximum payload, permitted under the aircraft’s certificate of type approval.</td>
</tr>
<tr>
<td>Maximum Passenger-Seating Capacity</td>
<td>In relation to an aircraft means the maximum number of seats for passengers permitted under the aircraft’s certificate of type approval.</td>
</tr>
<tr>
<td>Movement Area</td>
<td>That part of the aerodrome to be used for the take-off, landing and taxiing of aircraft, consisting of the manoeuvring area and the apron(s).</td>
</tr>
<tr>
<td>Obstacle</td>
<td>All fixed (whether temporary or permanent) and mobile objects, or parts thereof, that are located on an area intended for the surface movement of aircraft or that extend above a defined surface intended to protect aircraft in flight.</td>
</tr>
<tr>
<td>Obstacle Free Zone (OFZ)</td>
<td>The airspace above the inner approach surface, inner transitional surface, and balked landing surface and that portion of the strip bounded by these surfaces, which is not penetrated by any fixed obstacle other that a low-mass and frangibly mounted one required for air navigation purposes.</td>
</tr>
</tbody>
</table>
### Obstacle Limitation Surfaces
A series of surfaces that define the volume of airspace at and around an aerodrome to be kept free of obstacles in order to permit the intended aeroplane operations to be conducted safely and prevent the aerodrome from becoming unstable by the growth of obstacles around the aerodrome.

### Runway Strip
A defined area including the runway and stopway, if provided, intended:

(a) to reduce the risk of damage to aircraft running off a runway: and

(b) to protect aircraft flying over it during take-off or landing operations.

### Safety Management System
A system for the management of safety at aerodromes including the organizational structure, responsibilities, procedures, processes and provisions for the implementation of aerodrome safety policies by an aerodrome operator, which provides for the control of safety at, and the safe use of, the aerodrome.

### Taxiway Strip
An area including a taxiway intended to protect an aircraft operating on a taxiway and to reduce the risk of damage to an aircraft accidentally running off the taxiway.

### Unserviceable Area
A part of the movement area that is unfit and unavailable for use by aircraft.

### Wild life Hazard
A potential for a damaging aircraft collision with wild life on or near an aerodrome. This includes domestic animals while out of the control of their owners.

### Work Area
A part of an aerodrome in which maintenance or construction works are in progress.

### 12.1.3 Standards and practices
Any reference in these regulations to aerodrome standards and practices is a reference to the Standards and Recommended Practices (SARPs) in the latest version of Volume I to Annex 14 to the Convention on International Civil Aviation, and the national regulations and practices as amended from time to time.
12.2. AERODROME CERTIFICATION

12.2.1. Requirement for an Aerodrome Certificate

The operator of an aerodrome intended for public use shall, in accordance with the national requirements, be in possession of an aerodrome certificate.

An aerodrome certificate is required if the maximum take-off mass of the aircraft exceeds **2 955 kg or if the aerodrome is intended for use at night**.

The operator of an aerodrome for which an aerodrome certificate is not required may nevertheless apply for an aerodrome certificate, for which a fee will be charged.

12.2.2. APPLICATION FOR AN AERODROME CERTIFICATE

An applicant for an aerodrome certificate or a limited aerodrome certificate shall submit to the Authority for approval an application in the form prescribed by the Authority. The application shall include two copies of the aerodrome manual for the aerodrome.

*As of November 24, 2005 all certified aerodromes shall have in operation a Safety Management System.*

12.2.3 GRANT OF AN AERODROME CERTIFICATE

Subject to the provisions in regulations 12.2.3.2 and 12.2.3.3, the Authority may approve the application and accept/approve the aerodrome manual submitted under regulation 12.2.2 and grant an aerodrome certificate to the applicant.

Before granting an aerodrome certificate, the Authority must be satisfied that:

(a) The applicant and his/her staff have the necessary competence and experience to operate and maintain the aerodrome properly;

(b) The aerodrome manual prepared for the applicant’s aerodrome and submitted with the application contains all the relevant information;

(c) The aerodrome facilities, services and equipment are in accordance with the standards and practices specified by the State;

(d) The aerodrome operating procedures make satisfactory provision for the safety of aircraft; and

(e) An acceptable safety management system is in place at the aerodrome.
12.2.4. REFUSAL TO GRANT AN AERODROME CERTIFICATE
The Authority may refuse to grant an aerodrome certificate to an applicant. In such cases, the Authority must notify the applicant, in writing, of its reasons no later than 21 days after making that decision.

12.2.5. ENDORSEMENT OF CONDITIONS ON AN AERODROME CERTIFICATE
After successful completion of the processing of the application and the inspection of the aerodrome, the Authority when granting the aerodrome certificate, will endorse the conditions for the type of use of the aerodrome and other details as shown in Appendix 3-1.

12.2.6. DURATION OF AN AERODROME CERTIFICATE
An aerodrome certificate shall remain in force until it is suspended or cancelled or, alternatively, an aerodrome certificate shall be valid for one year or until it is suspended or cancelled, whichever is earlier.

12.2.7. SURRENDER OF AN AERODROME CERTIFICATE
An aerodrome certificate holder must give the Authority not less than 90 days’ written notice of the date on which the certificate is to be surrendered in order that suitable promulgation action can be taken.

The Authority will cancel the certificate on the date specified in the notice.

12.2.8. TRANSFER OF AN AERODROME CERTIFICATE
The Authority may give its consent to and issue an instrument of transfer of an aerodrome certificate to a transferee when:

(a) The current holder of the aerodrome certificate notifies the Authority, in writing at least 90 days before ceasing to operate the aerodrome, that the current holder will cease to operate the aerodrome as of the date specified in the notice;

(b) The current holder of the aerodrome certificate notifies the Authority, in writing, of the name of the transferee;

(c) The transferee applies to the Authority, in writing, within 60 days before the current holder of the aerodrome certificate ceases to operate the aerodrome for the aerodrome certificate to be transferred to the transferee; and

(d) The requirements set out in regulation 12.2.3.2 are met in respect of the transferee.

If the Authority does not consent to the transfer of an aerodrome certificate, it shall notify the transferee, in writing, of its reasons no later than 30 days after making that decision.
12.2.9. INTERIM AERODROME CERTIFICATE

The Authority may issue an interim aerodrome certificate to the applicant referred to in regulation 12.2.2 or the proposed transferee of an aerodrome certificate referred to in regulation 12.2.7.1 authorizing the applicant or transferee to operate an aerodrome if the Authority is satisfied that:

(a) An aerodrome certificate in respect of the aerodrome will be issued to the applicant or transferred to the transferee as soon as the application procedure for the grant or transfer of an aerodrome certificate has been completed; and

(b) The grant of the interim certificate is in the public interest and is not detrimental to aviation safety.

An interim aerodrome certificate issued pursuant to regulation 12.2.8.1 shall expire on:

(a) the date on which the aerodrome certificate is issued or transferred; or

(b) the expiry date specified in the interim aerodrome certificate; whichever is earlier.

These regulations apply to an interim aerodrome certificate in the same manner as they apply to an aerodrome certificate.

12.2.10. AMENDMENT OF AN AERODROME CERTIFICATE

The Authority may, provided that the requirements of regulations 12.2.3.2, 12.3.5, and 12.3.6 have been met, amend an aerodrome certificate when:

(a) there is a change in the ownership or management of the aerodrome;

(b) there is a change in the boundaries of the aerodrome; or

(c) the holder of the aerodrome certificate requests an amendment.
12.3. AERODROME MANUAL

12.3.1 Preparation of the aerodrome manual

The operator of a certified aerodrome must have a manual, to be known as the aerodrome manual, for the aerodrome.

The aerodrome manual shall:

(a) be typewritten or printed, and signed by the aerodrome operator;
(b) be in a format that is easy to revise;
(c) have a system for recording the currency of pages and amendments thereto, by dating each page, including a page for logging revisions; and
(d) be organized in a manner that will facilitate the preparation, review and acceptance/approval process.

12.3.2. LOCATION OF THE AERODROME MANUAL

The aerodrome operator must provide the Authority with a complete and current copy of the aerodrome manual.

The aerodrome operator must keep at least one complete and current copy of the aerodrome manual at the aerodrome and one copy at the operator’s principal place of business if other than the aerodrome.

The aerodrome operator must make the copy referred to in regulations 12.3.2.2 available for inspection by authorized personnel of the Authority.

The aerodrome operator must furnish the applicable portions of the approved aerodrome manual to the aerodrome personnel responsible for their implementation.

12.3.3. INFORMATION TO BE INCLUDED IN THE AERODROME MANUAL

The operator of a certified aerodrome must include the following particulars in an aerodrome manual, to the extent that they are applicable to the aerodrome, under the following parts:
Part 1
General information set out in Part 1 of the schedule of these regulations (see Appendix 1) on the purpose and scope of the aerodrome manual; the legal requirement for an aerodrome certificate and an aerodrome manual as prescribed in the national regulations; conditions for use of the aerodrome; the aeronautical information services available and the procedures for their promulgation; the system for recording aircraft movements and the obligations of the aerodrome operator as specified in Section D of these regulations.

Part 2
Particulars of the aerodrome site as set out in Part 2 of the schedule of these regulations.

Part 3
Particulars of the aerodrome that is required to be reported to the aeronautical information service as set out in Part 3 of the schedule of these regulations.

Part 4
The aerodrome operating procedures and safety measures as set out in Part 4 of the schedule of these regulations. This may include references to air traffic procedures such as those relevant to low-visibility operations. Air traffic management procedures are normally published in the air traffic services manual with a cross-reference to the aerodrome manual.

Part 5
Details of the aerodrome administration and the safety management system as set out in part 5 of the schedule of these regulations.

If, under regulations 12.5.1.1, the Authority exempts the aerodrome operator from complying with any requirement set out in regulation 12.2.3.2, the aerodrome manual must show the identifying number given to that exemption by the Authority and the date the exemption came into effect and any conditions or procedures subject to which the exemption was granted.

If a particular, as set out in 12.3.3.1, is not included in the aerodrome manual because it is not applicable to the aerodrome, the aerodrome operator must state in the manual the reason for non-applicability of that particular.

12.3.4 AMENDMENT OF THE AERODROME MANUAL
The operator of a certified aerodrome must alter or amend the aerodrome manual, whenever necessary, in order to maintain the accuracy of the information in the manual.

To maintain the accuracy of the aerodrome manual, the Authority may issue a written directive to an aerodrome operator requiring the operator to alter or amend the manual in accordance with that directive.

12.3.5 NOTIFICATION OF CHANGES TO THE AERODROME MANUAL
An aerodrome operator must notify the Authority, as soon as practicable, of any changes that the operator wishes to make to the aerodrome manual.
12.3.6 AUTHORITY’S ACCEPTANCE/APPROVAL OF THE AERODROME MANUAL

The Authority shall accept/approve the aerodrome manual and amendments thereto, provided these meet the requirements of the preceding regulations in this section.

12.4. OBLIGATIONS OF THE AERODROME OPERATOR

12.4.1 COMPLIANCE WITH STANDARDS AND PRACTICES

The aerodrome operator shall comply with the standards and practices in regulation 12.1.3 and with any conditions endorsed in the certificate pursuant to regulations 12.2.4 and 12.5.1.1.

12.4.2 COMPETENCE OF OPERATIONAL AND MAINTENANCE PERSONNEL

The aerodrome operator shall employ an adequate number of qualified and skilled personnel to perform all critical activities for aerodrome operation and maintenance.

If the Authority or any other competent authority of the government requires competency certification for the personnel referred to in regulation 12.4.2.1, the aerodrome operator shall employ only those persons possessing such certificates.

The aerodrome operator shall implement a programme to upgrade the competency of the personnel referred to in regulation 12.4.2.1.

12.4.3 AERODROME OPERATION AND MAINTENANCE

Subject to any directives that the Authority may issue, the aerodrome operator shall operate and maintain the aerodrome in accordance with the procedures set out in the aerodrome manual.

To ensure the safety of aircraft, the Authority may give written directives to an aerodrome operator to alter the procedures set out in the aerodrome manual.

The aerodrome operator must ensure proper and efficient maintenance of the aerodrome facilities.

The aerodrome certificate holder shall coordinate with the ATS provider in order to be satisfied that appropriate air traffic services are available to ensure the safety of aircraft in the airspace associated with the aerodrome. The coordination shall cover other areas related to safety such as aeronautical information service, air traffic services, designated meteorological authorities, and security.
12.4.4 **AERODROME OPERATOR’S SAFETY MANAGEMENT SYSTEM**

The aerodrome operator shall establish a safety management system for the aerodrome describing the structure of the organization and the duties, powers and responsibilities of the officials in the organizational structure, with a view to ensuring that operations are carried out in a demonstrable controlled way and are improved when necessary.

The aerodrome operator shall oblige all users of the aerodrome, including fixed-base operators, ground handling agencies and other organizations that perform activities independently at the aerodrome in relation to flight or aircraft handling, to comply with the requirements laid down by the aerodrome operator with regard to safety at the aerodrome. The aerodrome operator shall monitor such compliance.

The aerodrome operator shall require all users of the aerodrome, including fixed-base operators, ground-handling agencies and other organizations referred to in regulation 12.4.4.2, to cooperate in the programme to promote safety at, and the safe use of, the aerodrome by immediately informing it of any accidents, incidents, defects and faults which have a bearing on safety.

12.4.5 **AERODROME OPERATOR’S INTERNAL SAFETY AUDITS AND SAFETY REPORTING**

The aerodrome operator shall arrange for an audit of the safety management system, including an inspection of the aerodrome facilities and equipment. The audit shall cover the aerodrome operator’s own functions. The aerodrome operator shall also arrange for an external audit and inspection programme for evaluating other users, including fixed-base operators, ground handling agencies and other organizations working at the aerodrome as referred to in regulation 12.4.4.2.

The audits referred to in regulation 12.4.5.1 shall be carried out every 12 months, or less as agreed with the Authority.

The aerodrome operator shall ensure that the audit reports, including the report on the aerodrome facilities, services and equipment, are prepared by suitably qualified safety experts.

The aerodrome operator shall retain a copy of the report(s) referred to in regulation 12.4.5.3 for a period to be agreed with the Authority. The Authority may request a copy of the report(s) for its review and reference.

The report(s) referred to in regulation 12.5.5.3 must be prepared and signed by the persons who carried out the audits and inspections.
12.4.6 ACCESS TO THE AERODROME

Personnel so authorized by the Authority may inspect and carry out tests on the aerodrome facilities, services and equipment, inspect the aerodrome operator's documents and records and verify the aerodrome operator's safety management system before the aerodrome certificate is granted or renewed and, subsequently, at any other time, not necessarily notifying the aerodrome operator beforehand, for the purpose of ensuring safety at the aerodrome.

An aerodrome operator shall, at the request of the personnel referred to in regulation 12.4.6.1, allow access to any part of the aerodrome or any aerodrome facility, including equipment, records, documents and operator personnel, for the purpose referred to in regulation 12.4.6.1.

The aerodrome operator shall cooperate in conducting the activities referred to in 12.4.6.1.

12.4.7 NOTIFYING AND REPORTING

An aerodrome operator shall adhere to the requirement to notify and report to the Authority, air traffic control and pilots within the specified time limits required by these regulations.

Notification of inaccuracies in aeronautical information service (AIS) publications. An aerodrome operator shall review all Aeronautical Information Publications (AIPs), AIP Supplements, AIP Amendments; Notices to Airmen (NOTAMs), Pre-flight Information Bulletins and Aeronautical Information Circulars issued by AIS on receipt thereof and immediately after such reviews shall notify AIS of any inaccurate information contained therein that pertains to the aerodrome.

Notification of changes to the aerodrome facilities, equipment and level of service planned in advance. An aerodrome operator shall notify AIS and the Authority, in writing, at least 14 days before effecting any change to the aerodrome facility or equipment or the level of service at the aerodrome that has been planned in advance and which is likely to affect the accuracy of the information contained in any AIS publication referred to in regulation 12.4.7.2.

Issues requiring immediate notification. Subject to the requirements of regulation 12.4.7.5, an aerodrome operator shall give AIS and shall arrange for air traffic control and the flight operations unit to receive immediate notice detailing any of the following circumstances of which the operator has knowledge:

(a) Obstacles, obstructions and hazards:

1) any projections by an object through an obstacle limitation surface relating to the aerodrome; and
2) the existence of any obstruction or hazardous conditions affecting aviation safety at or near the aerodrome;

   (a) Level of service:

   reduction in the level of service at the aerodrome as set out in any of the AIS publications referred to in regulations 12.4.7.2;

   (b) movement area:

   closure of any part of the movement area of the aerodrome; and

   (c) any other conditions that could affect aviation safety at the aerodrome and against which precautions are warranted.

Immediate notification to pilots. When it is not feasible for an aerodrome operator to arrange for the air traffic control and the flight operations unit to receive notice of a circumstance referred to in 12.4.7.4 in accordance with that regulation, the operator must give immediate notice direct to the pilots who may be affected by that circumstance.

12.4.8 SPECIAL INSPECTIONS

An aerodrome operator shall inspect an aerodrome, as circumstances require, ensuring aviation safety:

   (a) as soon as practicable after any aircraft accident or incident within the meaning of these terms as defined in Annex 13 to the Convention on International Civil Aviation;

   (b) during any period of construction or repair of the aerodrome facilities or equipment that is critical to the safety of aircraft operations; and

   (c) at any time when there are conditions at the aerodrome that could affect aviation safety.

12.4.9 REMOVAL OF OBSTRUCTIONS FROM THE AERODROME SURFACE

An aerodrome operator shall remove from the aerodrome surface any vehicle or other obstruction that is likely to be hazardous.
12.4.10 WARNING NOTICES

When low flying aircraft, at or near an aerodrome, or taxiing aircraft are likely to be hazardous to people or vehicular traffic, the aerodrome operator shall:

(a) post hazard warning notices on any public way that is adjacent to the maneuvering area; or

(b) if such a public way is not controlled by the aerodrome operator, inform the authority responsible for posting the notices on the public way that there is a hazard.

12.5 EXEMPTIONS

The Authority may exempt, in writing, an aerodrome operator from complying with specific provisions of these regulations.

Before the Authority decides to exempt the aerodrome operator, the Authority must take into account all safety related aspects.

An exemption is subject to the aerodrome operator complying with the conditions and procedures specified by the Authority in the aerodrome certificate as being necessary in the interest of safety.

When an aerodrome does not meet the requirement of a standard or practice specified in regulation 12.1.3, the Authority may determine, after carrying out aeronautical studies, only if and where permitted by the standards and practices, the conditions and procedures that are necessary to ensure a level of safety equivalent to that established by the standards or practice.

Deviation from a standard or practice and the conditions and procedures referred to in regulation 12.2.4 shall be set out in an endorsement on the aerodrome certificate.
Appendix 1

SCHEDULE OF THE AERODROME CERTIFICATION REGULATIONS – PARTICULARS TO BE INCLUDED IN AN AERODROME MANUAL

PART 1

GENERAL

12.1.1 General information, including the following:

(a) purpose and scope of the aerodrome manual;

(b) the legal requirement for an aerodrome certificate and an aerodrome manual as prescribed in the national regulations;

(c) conditions for use of the aerodrome — a statement to indicate that the aerodrome shall at all times, when it is available for the take-off and landing of aircraft, be so available to all persons on equal terms and conditions;

(d) the available aeronautical information system and procedures for its promulgation:

(e) the system for recording aircraft movements; and

(f) obligations of the aerodrome operator.
PART 2

PARTICULARS OF THE AERODROME SITE

12.2.1 General information, including the following:

(a) a plan of the aerodrome showing the main aerodrome facilities for the operation of the aerodrome including, particularly, the location of each wind direction indicator:

(b) a plan of the aerodrome showing the aerodrome boundaries:

(c) a plan showing the distance of the aerodrome from the nearest city, town or other populous area, and the location of any aerodrome facilities and equipment outside the boundaries of the aerodrome: and

(d) particulars of the title of the aerodrome site. if the boundaries of the aerodrome are not defined in the title documents particulars of the title to, or interest in, the property on which the aerodrome is located and a plan showing the boundaries and position of the aerodrome.
PART 3

PARTICULARS OF THE AERODROME REQUIRED TO BE REPORTED TO THE AERONAUTICAL INFORMATION SERVICE (AIS)

12.3.1 GENERAL INFORMATION

(a) the name of the aerodrome:

(b) the location of the aerodrome;

(c) the geographical coordinates of the aerodrome reference point determined in terms of the world geodetic system — 1984 (wgs-84) reference datum;

(d) the aerodrome elevation and geoid undulation:

(e) the elevation of each threshold and geoid undulation, the elevation of the runway end and any significant high and low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway;

(f) the aerodrome reference temperature:

(g) details of the aerodrome beacon: and

(h) the name of the aerodrome operator and the address and telephone numbers at which the aerodrome operator may be contacted at all times.

12.3.2 AERODROME DIMENSIONS AND RELATED INFORMATION

General information, including the following:

(a) runway — true bearing, designation number, length, width, displaced threshold location, slope, surface type, type of runway and, for a precision approach runway, the existence of an obstacle free zone:

(b) length, width and surface type of strip, runway end safety areas, stopways;

(c) length, width and surface type of taxiways;

(d) apron surface type and aircraft stands:

(e) clearway length and ground profile:
(f) Visual aids for approach procedures. viz; approach lighting type and visual approach slope indicator system (PAPI/APAPI and T-VASIS/AT-VASIS); marking and lighting of runways, taxiways, and aprons; other visual guidance and control aids on taxiways (including runway holding positions, intermediate holding positions and stop bars) and aprons, location and type of visual docking guidance system; availability of standby power for lighting;

(g) the location and radio frequency of vor aerodrome checkpoints;

(h) the location and designation of standard taxi routes;

(i) the geographical coordinates of each threshold;

(j) the geographical coordinates of appropriate taxiway centre line points;

(k) the geographical coordinates of each aircraft stand;

(l) the geographical coordinates and the top elevation of significant obstacles in the approach and take-off areas, in the circling area and in the vicinity of the aerodrome. (This information may best be shown in the form of charts such as those required for the preparation of aeronautical information publications, as specified in Annexes 4 and 15 to the Convention);

(m) pavement surface type and bearing strength using the Aircraft Classification Number — Pavement Classification Number (ACN-PCN) method;

(n) one or more pre-flight altimeter check locations established on an apron and their elevation:

(o) declared distances: take-off run available (TORA), take-off distance available (TODA), accelerate-stop distance available (ASDA), landing distance available (LDA);

(p) disabled aircraft removal plan: the telephone/telex/facsimile numbers and e-mail address of the aerodrome coordinator for the removal of a disabled aircraft on or adjacent to the movement area, information on the capability to remove a disabled aircraft, expressed in terms of the largest type of aircraft which the aerodrome is equipped to remove; and

(q) rescue and fire-fighting: the level of protection provided, expressed in terms of the category of the rescue and fire-lighting services, which should be in accordance with the longest aeroplane normally using the aerodrome and the type and amounts of extinguishing agents normally available at the aerodrome.

Note: — the accuracy of the information in Part 3 is critical to aircraft safety. information requiring engineering survey and assessment must be gathered or verified by qualified technical persons.
PART 4

PARTICULARS OF THE AERODROME OPERATING PROCEDURES
AND SAFETY MEASURES

12.4.1 AERODROME REPORTING

Particulars of the procedures for reporting any changes to the aerodrome information set out in the AIP and procedures for requesting the issue of NOTAMs, including the following:

(a) arrangements for reporting any changes to the Authority and recording the reporting of changes during and outside the normal hours of aerodrome operations; and

(b) the names and roles of persons responsible for notifying the changes, and their telephone numbers during and outside the normal hours of aerodrome operations; and

(c) the address and telephone numbers, as provided by the Authority, of the place where changes are to be reported to the Authority.

12.4.2 ACCESS TO THE AERODROME MOVEMENT AREA

Particulars of the procedures that have been developed and are to be followed in coordination with the agency responsible for preventing unlawful interference in civil aviation at the aerodrome and for preventing unauthorized entry of persons, vehicles, equipment, animals or other things into the movement area, including the following:

(a) the role of the aerodrome operator, the aircraft operator, aerodrome fixed-base operators, the aerodrome security entity, the Authority and other government departments, as applicable; and

(b) the names and roles of the personnel responsible for controlling access to the aerodrome, and the telephone numbers for contracting them during and after working hours.
12.4.3 AERODROME EMERGENCY PLAN

Particulars of the aerodrome emergency plan, including the following:

(a) plans for dealing with emergencies occurring at the aerodrome or in its vicinity, including the malfunction of aircraft in flight; structural fires; sabotage, including bomb threats (aircraft or structure); unlawful seizure of aircraft; and incidents on the airport covering “during the emergency” and “after the emergency” considerations;

(b) details of tests for aerodrome facilities and equipment to be used in emergencies, including the frequency of those tests;

(c) details of exercises to test emergency plans, including the frequency of those exercises;

(d) a list of organizations, agencies and persons of authority, both on – and off-airport, for site roles; their telephone and facsimile numbers, e-mail and SITA addresses and the radio frequencies of their offices;

(e) the establishment of an aerodrome emergency committee to organize training and other preparations for dealing with emergencies; and

(f) the appointment of an on-scene commander for the overall emergency operation.

12.4.4 RESCUE AND FIRE-FIGHTING

Particulars of the facilities, equipment, personnel and procedures for meeting the rescue and fire-fighting requirements, including the names and roles of the persons responsible for dealing with rescue and fire-fighting services at the aerodrome.

Note: - This subject should also be covered in appropriate detail in the aerodrome emergency plan.

12.4.5 INSPECTION OF THE AERODROME MOVEMENT AREA AND OBSTACLE LIMITATION SURFACE BY THE AERODROME OPERATOR

Particulars of the procedures for the inspection of the aerodrome movement area and obstacles limitation surfaces, including the following:

(a) arrangements for carrying out inspections, including runway friction and water-depth measurements on runways and taxiways, during and outside the normal hours of aerodrome operations;

(b) arrangements and means of communicating with air traffic control during an inspection;

(c) arrangements for keeping an inspection logbook, and the location of the logbook;
(d) details of inspection intervals and times;

(e) inspection checklist;

(f) arrangements for reporting the results of inspections and for taking prompt follow-up actions to ensure correction of unsafe conditions; and

(g) the names and roles of persons responsible for carrying out inspections, and their telephone numbers during and after working hours.

12.4.6 VISUAL AIDS AND AERODROME ELECTRICAL SYSTEMS

Particulars of the procedures for the inspection and maintenance of aeronautical lights (including obstacle lighting), signs, markers and aerodrome electrical systems, including the following:

(a) arrangements for carrying out inspections during and outside the normal hours of aerodrome operation, and the checklist for such inspections;

(b) arrangements for recording the result of inspections and for taking follow-up action to correct deficiencies;

(c) arrangements for carrying out routine maintenance and emergency maintenance;

(d) arrangements for secondary power supplies, if any, and, if applicable, the particulars of any other method of dealing with partial or total system failure; and

(e) the names and roles of the persons responsible for the inspection and maintenance of the lighting, and the telephone numbers for contacting those persons during and after working hours.

12.4.7 MAINTENANCE OF THE MOVEMENT AREA

Particulars of the facilities and procedures for the maintenance of the movement area, including:

(a) arrangements for maintaining the paved areas;

(b) arrangements for maintaining the unpaved runways and taxiways;

(c) arrangements for maintaining the runway and taxiway strips; and

(d) arrangements for the maintenance of aerodrome drainage.
12.4.8 ARODROME WORKS — SAFETY

Particulars of the procedures for planning and carrying out construction and maintenance work safely (including work that may have to be carried out at short notice) on or in the vicinity of the movement area, which may extend above an obstacle limitation surface, including the following:

(a) arrangements for communicating with air traffic control during the progress of such work;

(b) the names, telephone numbers and roles of the persons and organizations responsible for planning and carrying out the work, and arrangements for contacting those persons and organizations at all times;

(c) the names and telephone numbers, during and after working hours, of the aerodrome fixed-base operators, ground handling agents and aircraft operators who are to be notified of the work;

(d) a distribution list for work plans, if required.

12.4.9 APRON MANAGEMENT

Particulars of the apron management procedures, including the following:

(a) arrangements between air traffic control and the apron management unit;

(b) arrangements for allocating aircraft parking positions;

(c) arrangements for initiating engine start and ensuring clearance of aircraft push-back;

(d) marshalling service; and

(e) leader (van) service

12.4.10 APRON SAFETY MANAGEMENT

Procedures to ensure apron safety, including:

(a) protection from jet blasts;

(b) enforcement of safety precautions during aircraft refuelling operations;

(c) apron sweeping;

(d) apron cleaning;
(e) arrangements for reporting incidents and accidents on an apron; and

(f) arrangements for auditing the safety compliance of all personnel working on the apron.

12.4.11 AIRSIDE VEHICLE CONTROL

Particulars of the procedure for the control of surface vehicles operating on or in the vicinity of the movement area, including the following:

(a) details of the applicable traffic rules (including speed limits and the means of enforcing the rules); and

(b) the method of issuing driving permits for operating vehicles in the movement area.

12.4.12 WILDLIFE HAZARD MANAGEMENT

Particulars of the procedures to deal with the danger posed to aircraft operations by the presence of birds or mammals in the aerodrome flight pattern or movement area, including the following;

(a) arrangements for assessing wildlife hazards;

(b) arrangements for implementing wildlife control programmes; and

(c) the names and roles of the persons responsible for dealing with wildlife hazards, and their telephone numbers during and after working hours.

12.4.13 OBSTACLE CONTROL

Particulars setting out the procedures for:

(a) monitoring the obstacle limitation surfaces and Type A Chart for obstacles in the take-off surface;

(b) controlling obstacles within the authority of the operator;

(c) monitoring the height of buildings or structures within the boundaries of the obstacle limitation surfaces;

(d) controlling new developments in the vicinity of aerodromes; and

(e) notifying the Authority of the nature and location of obstacles and any subsequent addition or removal of obstacles for action as necessary, including amendment of the AIS publications.
12.4.14 REMOVAL OF DISABLED AIRCRAFT

Particulars of the procedures for removing a disabled aircraft on or adjacent to the movement area, including the following:

(a) the roles of the aerodrome operator and the holder of the aircraft certificate of registration;
(b) arrangements for notifying the holder of the aircraft certificate of registration;
(c) arrangements for liaising with the air traffic control unit;
(d) arrangements for obtaining equipment and personnel to remove the disabled aircraft; and
(e) the names, role and telephone numbers of persons responsible for arranging for the removal of disable aircraft.

12.4.15 HANDLING OF HAZARDOUS MATERIALS

Particulars of the procedures for the safe handling and storage of hazardous materials on the aerodrome, including the following:

(a) arrangements for special areas on the aerodrome to be set up for the storage of inflammable liquids (including aviation fuels) and any other hazardous materials; and
(b) the method to be followed for the delivery, storage, dispensing and handling of hazardous materials.

Note: - Hazardous materials include inflammable liquids and solids, corrosive liquids, compressed gases and magnetized or radioactive materials. Arrangements for dealing with the accidental spillage of hazardous materials should be included in the aerodrome emergency plan.

12.4.16 LOW-VISIBILITY OPERATIONS

Particulars of procedures to be introduced for low-visibility operations, including the measurement and reporting of runway visual range as and when required, and the names and telephone numbers, during and after working hours, of the persons responsible for measuring the runway visual range.
12.4.17 PROTECTION OF SITES FOR RADAR AND NAVIGATIONAL AIDS

Particulars of the procedures for the protection of sites for radar and radio navigational aids located on the aerodrome to ensure that their performance will not be degraded, including the following:

(a) arrangements for the control of activities in the vicinity of radar and navaids installations;

(b) arrangements for ground maintenance in the vicinity of these installations; and

(c) arrangements for the supply and installation of signs warning of hazardous microwave radiation.

Note 1. – In writing the procedures for each category, clear and precise information should be included on:

(d) when, or in what circumstances, an operating procedure is to be activated;

(e) how an operating procedure is to be activated;

(f) actions to be taken;

(g) the persons who are to carry out the actions; and

(h) the equipment necessary for carrying out actions, and access to such equipment.

Note 2. – If any of the procedures specified above are not relevant or applicable, the reason should be given.
PART 5

AERODROME ADMINISTRATION AND SAFETY MANAGEMENT SYSTEM

12.5.1 Aerodrome Administration

Particulars of the aerodrome administration, including the following:

(a) an aerodrome organizational chart showing the names and positions of key personnel, including their responsibilities;

(b) the name, position and telephone number of the person who has overall responsibility for aerodrome safety; and airport committees

12.5.2 Safety Management System (SMS)

Particulars of the safety management system established for ensuring compliance with all safety requirements and achieving continuous improvement in safety performance, the essential features being:

(a) the safety policy, insofar as applicable, on the safety management process and its relations to the operational and maintenance process;

(b) the structure or organization of the SMS, including staffing and the assignment of individual and group responsibilities for safety issues;

(c) SMS strategy and planning, such as setting safety performance targets, allocating priorities for implementing safety initiatives and providing a framework for controlling the risks to as low a level as is reasonably practicable keeping always in view the requirements of the Standards and Recommended Practices in Volume I of Annex 14 to the Convention on International Civil Aviation, and the national regulations, standards, rules or orders;

(d) SMS implementation, including facilities, methods and procedures for the effective communication of safety messages and the enforcement of safety requirements;

(e) a system for the implementation of, and action on, critical safety areas which require a higher level of safety management integrity (safety measures programme);

(f) measures for safety promotion and accident prevention and a system for risk control involving analysis and handling of accidents, incidents, complaints, defects, faults, discrepancies and failures, and continuing safety monitoring;
(g) the internal safety audit and review system detailing the systems and programmes for quality control of safety;

(h) the system for documenting all safety-related airport facilities as well as airport operational and maintenance records, including information on the design and construction of aircraft pavements and aerodrome lighting. The system should enable easy retrieval of records including charts;

(i) staff training and competency, including the review and evaluation of the adequacy of training provided to staff on safety-related duties and of the certification system for testing their competency; and

(j) the incorporation and enforcement of safety-related clauses in the contracts for construction work at the aerodrome.
### SAMPLE AERODROME CERTIFICATE

<table>
<thead>
<tr>
<th>GUYANA CIVIL AVIATION AUTHORITY</th>
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<tr>
<td>CIVIL AERODROME LICENCE</td>
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<td>CERTIFICATE NUMBER</td>
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<tr>
<td>NAME OF AERODROME</td>
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<td>NAME OF OPERATOR</td>
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This Aerodrome Licence is issued by the Director General pursuant to Part………. Of the Guyana Civil Aviation Act, Air Navigation Regulations …….. and authorises the named operator to operate this aerodrome subject to the following special procedures and conditions.

1) The aerodrome will be maintained and operated in accordance with the --------------------------------------- Aerodrome Operations Manual dated --------------------- unless otherwise approved by the Authority

2) The Authority may suspend or cancel this Licence at any time where the Aerodrome Operator fails to comply with the provisions set forth in the Act, the Regulations, or for other grounds as set out in the Act.

3) This Aerodrome Licence is not Transferable and shall remain in effect until suspended or cancelled.

Issued under the Authority of the Director General
Guyana Civil Aviation Authority

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<tr>
<th>DATE OF ISSUE</th>
<th>SIGNATURE</th>
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GUYANA CIVIL AVIATION AUTHORITY
82 PREMNIRANJAN PLACE, PRASHAD NAGAR,
GEORGETOWN. GUYANA
# AERODROME CERTIFICATE APPLICATION FORM

<table>
<thead>
<tr>
<th>FULL NAME OF APPLICANT</th>
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<tr>
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<th>DIRECTION AND DISTANCE FROM NEAREST COMMUNITY OR WELL DEFINED LAND MARK</th>
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## PROPOSALS FOR AERODROME

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<th>USE (TYPE OF AIRCRAFT)</th>
<th>ELEVATION</th>
<th>HOURS OF OPERATION</th>
<th>CERTIFICATE FEE ENCLOSED</th>
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## CLASSIFICATION OF AERODROME

- Private Use
- Public Use
- Day
- Night
- VFR
- Land
- Heliport
- Water
- Stolport
- Permanent
- Temporary

## AERODROME PROPERTY TITLE

<table>
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<th>DETAILS OF RIGHTS YOU HOLD ON TITLE</th>
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<th>PERIOD FOR WHICH YOU HOLD THOSE RIGHTS</th>
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<tr>
<th>NAME AND ADDRESS OF OWNER WHO HAS PERMITTED THIS SITE TO BE USED AS AN AERODROME</th>
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<td><strong>GCAA FORM No.</strong></td>
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<tr>
<td><strong>LOCAL NOTICE</strong></td>
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<tr>
<td>HAVE LOCAL LAND USE AUTHORITY BEEN NOTIFIED OF PROPOSALS TO USE THIS SITE AS AN AERODROME?</td>
</tr>
<tr>
<td>HAVE OBJECTIONS BEEN RAISED TO THE PROPOSED USE OF THIS SITE AS AN AERODROME?</td>
</tr>
<tr>
<td>NAME AND ADDRESS OF AUTHORITIES ADVISED:</td>
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**ADDITIONAL COMMENTS**


**HONOUR CERTIFICATE**

I HEREBY CERTIFY THAT THE INFORMATION IN THIS APPLICATION IS CORRECT AND NO RELEVANT INFORMATION HAS BEEN WITHHELD.

<table>
<thead>
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<th>DATE</th>
<th>SIGNATURE OF APPLICANT</th>
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**OFFICIAL USE/INSPECTOR’S COMMENTS**


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<tr>
<th>DATE</th>
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Made this **day of February, 2007**

Minister of Transport and Hydraulics