SIERRA LEONE CIVIL AVIATION REGULATIONS

PART 6A – OPERATION OF AIRCRAFT

FEBRUARY 2024

PREAMBLE

WHEREAS, The Director-General shall have power to perform such acts, including the conduct of investigations, to issue and amend orders, rules, regulations and procedures pursuant to and in accordance with the Civil Aviation Act, 2023.

WHEREAS, the Director- General shall have power to publish all reports, orders, decisions, rules, and regulations issued under Civil Aviation Act, 2023 in such form and manner as may be best adapted for public information and use;

NOW THEREBY, The Director General under the powers given by Article 17(1) and 17(2)(a) of the Civil Aviation Act, 2023 issue the following regulations which supersedes previous regulations on Operation of Aircraft

SHORT TITLE

This regulation may be cited as Sierra Leone Civil Aviation Regulation "SLCAR Part 6A-Operation of Aircraft"

EFFECTIVE DATE

This Regulation shall come into force as of the 5th day of February 2024.

Ms Musayeroh Barrie
Director General

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GENERAL

In transposing ICAO Annex 6 Volumes I, II and III to develop these regulations, Amendments 1-48, 1-40, 1-24 respectively have been considered.

1.1 Applicability

1.1.1 These Regulations apply to all aircraft, except where superseded by the more stringent requirements put upon entities engaged in commercial air transport and upon AOC holders.

1.1.2 It also prescribes the requirements for:

Operations conducted by flight crewmembers certified in Sierra Leone while operating aircraft registered in Sierra Leone;

Operations of foreign registered aircraft by Sierra Leonean AOC holders;

Operations of aircraft within Sierra Leone by flight crewmember or AOC holders of a foreign State;

International Operations – Helicopters;

International General Aviation Operations – Aeroplanes; and

Corporate Aviation Operations operated by pilots employed for the purpose of flying the aircraft.

For operations outside of Sierra Leone, all pilots and operators licensed or certified by the Authority 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.

For operations outside of Sierra Leone by all Sierra Leonean pilots and operators unless compliance would result in a violation of the foreign State's laws in which the operation is conducted.

1.2 Definitions

For the purpose of Part 6, the following definitions shall apply:

1.2.1. **Accelerate-stop distance available (ASDA).** The length of the take-off run available plus the length of stopway, if provided.

1.2.2. **Acts of unlawful interference**. These are acts or attempted acts such as to jeopardize the safety of civil aviation and air transport, i.e.:

unlawful seizure of aircraft in flight,

unlawful seizure of aircraft on the ground,

hostage-taking on board an aircraft or on aerodromes,

forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility,

introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes,

communication of false information as to jeopardize the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility.

1.2.3. **Advanced aircraft.** An aircraft with equipment in addition to that required for a basic aircraft for a given take-off, approach or landing operation.

1.2.4. **Aerial work.** An aircraft operation in which an aircraft is used for specialized services such as agriculture, construction, photography, surveying, observation and patrol, search and rescue, aerial advertisement, etc.

1.2.5. **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.

1.2.6. **Aerodrome operating minima.** The limits of usability of an aerodrome for:

take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;

landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and

landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the type and/or category of the operation.

1.2.7. **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.

1.2.8. **.Agreement summary.** When an aircraft is operating under an Article 83 *bis* agreement between the State of Registry and another State, the agreement summary is a document transmitted with the Article 83 *bis* Agreement registered with the ICAO Council that identifies succinctly and clearly which functions and duties are transferred by the State of Registry to that other State

1.2.9. **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.

1.2.10. **Aircraft operating manual.** A manual, acceptable to the State of the Operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems and other material relevant to the operation of the aircraft.

1.2.11. **Aircraft tracking.** A process, established by the operator, that maintains and updates, at standardized intervals, a ground-based record of the four dimensional position of individual aircraft in flight.

1.2.12. **Air operator certificate (AOC).** A certificate authorizing an operator to carry out specified commercial air transport operations.

1.2.13. **Air traffic service (ATS).** A generic term meaning variously, flight information service, alerting service, air traffic advisory service, air traffic control service (area control service, approach control service or aerodrome control service).

1.2.14. **Airworthy.** The status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation.

1.2.15. **Alternate aerodrome.** An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or to land at the aerodrome of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate aerodromes include the following:

Take-off alternate. An alternate aerodrome at which an aircraft would be able to land should this become necessary shortly after take-off and it is not possible to use the aerodrome of departure.

En-route alternate. An alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en route.

Destination alternate. An alternate aerodrome at which an aircraft would be able to land should it become either impossible or inadvisable to land at the aerodrome of intended landing.

1.2.16. **Alternate heliport**. A heliport to which a helicopter may proceed when it becomes either impossible or inadvisable to proceed to or to land at the heliport of intended landing where the necessary services and facilities are available, where aircraft performance requirements can be met and which is operational at the expected time of use. Alternate heliports include the following:

Take-off alternate. An alternate heliport at which a helicopter would be able to land should this become necessary shortly after take-off and it is not possible to use the heliport of departure.

En-route alternate. An alternate heliport at which a helicopter would be able to land in the event that a diversion becomes necessary while en-route.

Destination alternate. An alternate heliport at which a helicopter would be able to land should it become either impossible or inadvisable to land at the heliport of intended landing.

1.2.17. **Altimetry system error (ASE).** The difference between the altitude indicated by the altimeter display, assuming a correct altimeter barometric setting, and the pressure altitude corresponding to the undisturbed ambient pressure.

1.2.18. **Approach and landing phase — helicopters**. That part of the flight from 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or from the commencement of the descent in the other cases, to landing or to the balked landing point.

1.2.19. **Appropriate airworthiness requirements.** The comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration.

1.2.20. **Area navigation (RNAV).** A method of navigation which permits aircraft operation on any desired flight path within the coverage of ground- or space-based navigation aids or within the limits of the capability of self-contained aids, or a combination of these.

1.2.21. **Basic aircraft.** An aircraft which has the minimum equipment required to perform the intended take-off, approach or landing operation.

1.2.22. **Cabin crew member.** A crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft, but who shall not act as a flight crew member.

1.2.23. **COMAT.** Operator material carried on an operator's aircraft for the operator's own purposes.

1.2.24. **Combined vision system** (CVS). A system to display images from a combination of an enhanced vision system (EVS) and a synthetic vision system (SVS).

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

1.2.26. **Configuration deviation list (CDL).** A list established by the organization responsible for the type design with the approval of the State of Design which identifies any external parts of an aircraft type which may be missing at the commencement of a flight, and which contains, where necessary, any information on associated operating limitations and performance correction.

1.2.27. **Congested area.** In relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes.

1.2.28. **Congested hostile environment**. A hostile environment within a congested area.

1.2.29. **Contaminated runway.** A runway is contaminated when a significant portion of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by one or more of the substances listed in the runway surface condition descriptors.

1.2.30. **Continuing airworthiness.** The set of processes by which an aircraft, engine, propeller or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life.

1.2.31. **Continuing airworthiness records.** Records which are related to the continuing airworthiness status of an aircraft, engine, propeller or associated part.

1.2.32. **Continuous descent final approach (CDFA).** A technique, consistent with stabilized approach procedures, for flying the final approach segment (FAS) of an instrument non-precision approach (NPA) procedure as a continuous descent, without leveloff, from an altitude/height at or above the final approach fix altitude/height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre begins for the type of aircraft flown; for the FAS of an NPA procedure followed by a circling approach, the CDFA technique applies until circling approach minima (circling OCA/H) or visual flight manoeuvre altitude/height are reached.

1.2.33. **Corporate aviation operation**. The non-commercial operation or use of aircraft by a company for the carriage of passengers or goods as an aid to the conduct of company business, flown by a professional pilot(s) employed to fly the aircraft.

1.2.34. **Crew member.** A person assigned by an operator to duty on an aircraft during a flight duty period.

1.2.35. **Cruise relief pilot.** A flight crew member who is assigned to perform pilot tasks during cruise flight, to allow the pilot-incommand or a co-pilot to obtain planned rest.

1.2.36. **Cruising level.** A level maintained during a significant portion of a flight.

1.2.37. **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.

1.2.38. **Decision altitude (DA) or decision height (DH).** A specified altitude or height in a 3D instrument approach operation at which a missed approach must be initiated if the required visual reference to continue the approach has not been established

1.2.39. **Defined point after take-off (DPATO**). The point, within the take-off and initial climb phase, before which the helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

1.2.40. **Defined point before landing (DPBL).** The point, within the approach and landing phase, after which the helicopter's ability to continue the flight safely, with one engine inoperative, is not assured and a forced landing may be required.

1.2.41. **Dry runway.** A runway is considered dry if its surface is free of visible moisture and not contaminated within the area intended to be used.

1.2.42. **Duty.** Any task that flight or cabin crew members are required by the operator to perform, including, for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue.

1.2.43. **Duty period.** A period which starts when a flight or cabin crew member is required by an operator to report for or to commence a duty and ends when that person is free from all duties.

1.2.44. **EDTO critical fuel.** The fuel quantity necessary to fly to an en-route alternate aerodrome considering, at the most critical point on the route, the most limiting system failure.

1.2.45. **EDTO significant system.** An aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an EDTO diversion.

1.2.46. **Electronic flight bag (EFB).** An electronic information system, comprised of equipment and applications for flight crew, which allows for the storing, updating, displaying and processing of EFB functions to support flight operations or duties.

1.2.47. **Elevated heliport.** A heliport located on a raised structure on land.

1.2.48. **Emergency locator transmitter (ELT).** A generic term describing equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated. An ELT may be any of the following:

( ) ( ) **Automatic fixed ELT (ELT(AF)).** An automatically activated ELT which is permanently attached to an aircraft.

( ) ( ) **Automatic portable ELT (ELT(AP)).** An automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.

( ) ( ) **Automatic deployable ELT (ELT(AD)).** An ELT which is rigidly attached to an aircraft and which is automatically deployed and activated by impact, and, in some cases, also by hydrostatic sensors. Manual deployment is also provided.

( ) ( ) **Survival ELT (ELT(S)).** An ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

1.2.49. **Engine.** A unit used or intended to be used for aircraft propulsion. It consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors (if applicable).

1.2.50. **Enhanced vision system (EVS).** A system to display electronic real-time images of the external scene achieved through the use of image sensors.

1.2.51. **En-route phase.** That part of the flight from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.

1.2.52. **Extended diversion time operations (EDTO).** Any operation by an aeroplane with two or more turbine engines where the diversion time to an en-route alternate aerodrome is greater than the threshold time established by the State of the Operator.

1.2.53. Extended flight over water. A flight operated over water at a distance of more than 93 km (50 NM), or 30 minutes at normal cruising speed, whichever is the lesser, away from land suitable for making an emergency landing.

1.2.54. **Fatigue.** A physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, and/or workload (mental and/or physical activity) that can impair a person's alertness and ability to perform safety-related operational duties.

1.2.55. **Fatigue Risk Management System (FRMS).** A data-driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness.

1.2.56. **Final approach and take-off area (FATO).** A defined area over which the final phase of the approach manoeuvre to hover or landing is completed and from which the take-off manoeuvre is commenced. Where the FATO is to be used by helicopters operating in performance Class 1, the defined area includes the rejected take-off area available.

1.2.57. **Final approach segment (FAS).** That segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

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

1.2.59. **Flight data analysis.** A process of analysing recorded flight data in order to improve the safety of flight operations.

1.2.60. **Flight duty period.** A period which commences when a flight or cabin crew member is required to report for duty that includes a flight or a series of flights and which finishes when the aircraft finally comes to rest and the engines are shut down at the end of the last flight on which he/she is a crew member.

1.2.61. **Flight manual.** A manual, associated with the certificate of airworthiness, containing limitations within which the aircraft is to be considered airworthy, and instructions and information necessary to the flight crew members for the safe operation of the aircraft.

1.2.62. **Flight operations officer/flight dispatcher.** A person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with Annex 1, who supports, briefs and/or assists the pilot-in-command in the safe conduct of the flight.

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

1.2.64. **Flight recorder.** Any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation.

1.2.65. **Automatic deployable flight recorder (ADFR).** A combination flight recorder installed on the aircraft which is capable of automatically deploying from the aircraft.

1.2.66. **Flight safety documents system.** A set of interrelated documentation established by the operator, compiling and organizing information necessary for flight and ground operations, and comprising, as a minimum, the operations manual and the operator's maintenance control manual.

1.2.67. **Flight simulation training device.** 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.

1.2.68. **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.

1.2.69. **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.

1.2.70. **General aviation operation.** An aircraft operation other than a commercial air transport operation or an aerial work operation.

1.2.71. **Ground handling.** Services necessary for an aircraft's arrival at, and departure from, an airport, other than air traffic services.

1.2.72. **Head-up display (HUD).** A display system that presents flight information into the pilot's forward external field of view.

1.2.73. **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.

1.2.74. **Helideck.** A heliport located on a floating or fixed offshore structure.

1.2.75. **Heliport.** An aerodrome or a defined area on a structure intended to be used wholly or in part for the arrival, departure and surface movement of helicopters.

1.2.76. **Heliport operating minima**. The limits of usability of a heliport for:

take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;

landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude/height (MDA/H) and, if necessary, cloud conditions; and

landing in 3D instrument approach operations, expressed in terms of visibility and/or runway visual range and decision altitude/height (DA/H) as appropriate to the type and/or category of the operation.

1.2.77. **Hostile environment.** An environment in which:

a safe forced landing cannot be accomplished because the surface and surrounding environment are inadequate; or

the helicopter occupants cannot be adequately protected from the elements; or

search and rescue response/capability is not provided consistent with anticipated exposure; or

there is an unacceptable risk of endangering persons or property on the ground.

1.2.78. **Human Factors principles.** Principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance.

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

1.2.80. **Industry codes of practice**. Guidance material developed by an industry body, for a particular sector of the aviation industry to comply with the requirements of the International Civil Aviation Organization's Standards and Recommended Practices, other aviation safety requirements and the best practices deemed appropriate

1.2.81. **Instrument approach operations.** An approach and landing using instruments for navigation guidance based on an instrument approach procedure. There are two methods for executing instrument approach operations:

a two-dimensional (2D) instrument approach operation, using lateral navigation guidance only; and

a three-dimensional (3D) instrument approach operation, using both lateral and vertical navigation guidance.

1.2.82. **Instrument approach procedure (IAP).** A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en-route obstacle clearance criteria apply. Instrument approach procedures are classified as follows:

Non-precision approach (NPA) procedure. An instrument approach procedure designed for 2D instrument approach operations Type A.

1.2.83. **Instrument meteorological conditions (IMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions.

1.2.84. **Integrated survival suit**. A survival suit which meets the combined requirements of the survival suit and life jacket.

1.2.85. **Isolated aerodrome.** A destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type.

1.2.86. **Landing decision point (LDP).** 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.

1.2.87. **Landing distance available (LDA).** The length of runway which is declared available and suitable for the ground run of an aeroplane landing.

1.2.88. **Large aeroplane.** An aeroplane of a maximum certificated take-off mass of over 5 700 kg.

1.2.89. **Low-visibility operations (LVO).** Approach operations in RVRs less than 550 m and/or with a DH less than 60 m (200 ft) or take-off operations in RVRs less than 400 m.

1.2.90. **Maintenance.** The performance of tasks on an aircraft, engine, propeller or associated part required to ensure the continuing airworthiness of an aircraft, engine, propeller or associated part including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair.

1.2.91. **Maintenance organization's procedures manual.** A document endorsed by the head of the maintenance organization which details the maintenance organization's structure and management responsibilities, scope of work, description of facilities, maintenance procedures and quality assurance or inspection systems.

1.2.92. **Maintenance programme.** A document which describes the specific scheduled maintenance tasks and their frequency of completion and related procedures, such as a reliability programme, necessary for the safe operation of those aircraft to which it applies.

1.2.93. **Maintenance release.** A document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner in accordance with appropriate airworthiness requirements.

1.2.94. **Master minimum equipment list (MMEL).** A list established for a particular aircraft type by the organization responsible for the type design with the approval of the State of Design 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.

1.2.95. **Maximum diversion time.** Maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome.

1.2.96. **Maximum mass.** Maximum certificated take-off mass.

1.2.97. **Meteorological information.** Meteorological report, analysis, forecast, and any other statement relating to existing or expected meteorological conditions.

1.2.98. **Minimum descent altitude (MDA) or minimum descent height (MDH).** A specified altitude or height in a 2D instrument approach operation or circling approach operation below which descent must not be made without the required visual reference.

1.2.99. **Minimum equipment list (MEL).** A list 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 MMEL established for the aircraft type.

1.2.100. **Modification.** A change to the type design of an aircraft, engine or propeller.

1.2.101. **Navigation specification.** A set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace. There are two kinds of navigation specifications:

Required navigation performance (RNP) specification. A navigation specification based on area navigation that includes the requirement for performance monitoring and alerting, designated by the prefix RNP, e.g. RNP 4, RNP APCH.

Area navigation (RNAV) specification. A navigation specification based on area navigation that does not include the requirement for performance monitoring and alerting, designated by the prefix RNAV, e.g. RNAV 5, RNAV 1.

1.2.102. **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, as may be prescribed by the appropriate authority

1.2.103. **Non-congested hostile environment**. A hostile environment outside a congested area.

1.2.104. **Non-hostile environment**. An environment in which:

(a) a safe forced landing can be accomplished because the surface and surrounding environment are adequate;

(b) the helicopter occupants can be adequately protected from the elements;

(c) search and rescue response/capability is provided consistent with anticipated exposure; and

(d) the assessed risk of endangering persons or property on the ground is acceptable.

1.2.105. **Obstacle clearance altitude (OCA) or obstacle clearance height (OCH).** The lowest altitude or the lowest height above the elevation of the relevant runway threshold or the

aerodrome elevation as applicable, used in establishing compliance with appropriate obstacle clearance criteria.

1.2.106. **Offshore operations**. Operations which routinely have a substantial proportion of the flight conducted over sea areas to or from offshore locations. Such operations include, but are not limited to, support of offshore oil, gas and mineral exploitation and sea-pilot transfer.

1.2.107. **Operation.** An activity or group of activities which are subject to the same or similar hazards and which require a set of equipment to be specified, or the achievement and maintenance of a set of pilot competencies, to eliminate or mitigate the risk of such hazards.

1.2.108. **Operating base**. The location from which operational control is exercised.

1.2.109. **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.

1.2.110. **Operational credit.** A credit authorized for operations with an advanced aircraft enabling a lower aerodrome operating minimum than would normally be authorized for a basic aircraft, based upon the performance of advanced aircraft systems utilizing the available external infrastructure.

1.2.111. **Operational flight plan.** The operator's plan for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned.

1.2.112. **Operations in performance Class 1.** Operations with performance such that, in the event of a critical engine failure, performance is available to enable the helicopter to safely continue the flight to an appropriate landing area, unless the failure occurs prior to reaching the take-off decision point (TDP) or after passing the landing decision point (LDP), in which cases the helicopter must be able to land within the rejected take-off or landing area.

1.2.113. **Operations in performance Class 2**. Operations with performance such that, in the event of critical engine failure, performance is available to enable the helicopter to safely continue the flight to an appropriate landing area, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which cases a forced landing may be required.

1.2.114. **Operations in performance Class 3**. Operations with performance such that, in the event of an engine failure at any time during the flight, a forced landing will be required.

1.2.115. **Operations manual.** A manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties.

1.2.116. **Operations specifications.** The authorizations including specific approvals, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual.

1.2.117. **Operator.** The person, organization or enterprise engaged in or offering to engage in an aircraft operation.

1.2.118. **Operator's maintenance control manual.** A document which describes the operator's procedures necessary to ensure that all scheduled and unscheduled maintenance is performed on the operator's aircraft on time and in a controlled and satisfactory manner.

1.2.119. **Performance-based aerodrome operating minimum (PBAOM).** A lower aerodrome operating minimum, for a given take-off, approach or landing operation, than is available when using a basic aircraft.

1.2.120. **Performance-based communication (PBC).** Communication based on performance specifications applied to the provision of air traffic services.

1.2.121. **Performance-based navigation (PBN).** Area navigation based on performance requirements for aircraft operating along an ATS route, on an instrument approach procedure or in a designated airspace.

1.2.122. **Performance-based surveillance (PBS).** Surveillance based on performance specifications applied to the provision of air traffic services.

1.2.123. **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.

1.2.124. **Point of no return.** The last possible geographic point at which an aircraft can proceed to the destination aerodrome as well as to an available en-route alternate aerodrome for a given flight.

1.2.125. **Pressure-altitude.** An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.

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

1.2.127. **Repair.** The restoration of an aircraft, engine, propeller or associated part to an airworthy condition in accordance with the appropriate airworthiness requirements, after it has been damaged or subjected to wear.

1.2.128. **Required communication performance (RCP) specification.** A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication.

1.2.129. **Required surveillance performance (RSP) specification.** A set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance.

1.2.130. **Rest period.** A continuous and defined period of time, subsequent to and/or prior to duty, during which flight or cabin crew members are free of all duties.

1.2.131. **Runway visual range (RVR).** The range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line.

1.2.132. **Safe forced landing.** Unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface.

1.2.133. **Safety management system (SMS).** A systematic approach to managing safety, including the necessary organizational structures, accountability, responsibilities, policies and procedures.

1.2.134. **Series of flights**. Series of flights are consecutive flights that:

begin and end within a period of 24 hours; and

are all conducted by the same pilot-in-command.

1.2.135. **Small aeroplane.** An aeroplane of a maximum certificated take-off mass of 5 700 kg or less.

1.2.136. **Specific approval.** An approval which is documented in the operations specifications for commercial air transport operations or in the list of specific approvals for general aviation operations.

1.2.137. **State of Registry.** The State on whose register the aircraft is entered.

1.2.138. **State of the Aerodrome.** The State in whose territory the aerodrome is located.

1.2.139. **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.

1.2.140. **State of the principal location of a general aviation operator**. The State in which the operator of a general aviation aircraft has its principal place of business or, if there is no such place of business, its permanent residence

1.2.141. **Synthetic vision system (SVS).** A system to display data-derived synthetic images of the external scene from the perspective of the flight deck.

1.2.142. **Take-off and initial climb phase.** That part of the flight from the start of take-off to 300 m (1 000 ft) above the elevation of the FATO, if the flight is planned to exceed this height, or to the end of the climb in the other cases.

1.2.143. **Take-off decision point (TDP).** The point used in determining take-off performance from which, an engine failure occurring at this point, either a rejected take-off may be made or a take-off safely continued.

1.2.144. **Target level of safety (TLS).** A generic term representing the level of risk which is considered acceptable in particular circumstances.

1.2.145. **Threshold time.** The range, expressed in time, established by the State of the Operator, to an en-route alternate aerodrome, whereby any time beyond requires a specific approval for EDTO from the State of the Operator.

1.2.146. **Total vertical error (TVE).** The vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude (flight level).

1.2.147. **Visual meteorological conditions (VMC).** Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

1.2.148. **V**TOSS. The minimum speed at which climb shall be achieved with the critical engine inoperative, the remaining engines operating within approved operating limits.

1.2.149. **Wet runway.** The runway surface is covered by any visible dampness or water up to and including 3 mm deep within the intended area of use.

1.3 Abbreviations

The following abbreviations are used in Part 6A:

AC – Alternating current
ACAS – Airborne collision avoidance system
AD – Airworthiness Directive
ADRS – Aircraft data recording system
ADS – Automatic dependent surveillance
ADS - C – Automatic dependent surveillance — contract
AEO – All engines operative
AFCS – Automatic flight control system
AGA – Aerodromes, air routes and ground aids
AIG – Accident investigation and prevention
AIR – Airborne image recorder
AIRS – Airborne image recording system
AOC – Air operator certificate
APCH – Approach
APU – Auxiliary power unit
AR – Authorization required
ARINC – Aeronautical Radio, Incorporated
ASDA – Accelerate stop distance available
ASE – Altimetry system error
ASIA/PAC – Asia/Pacific
ATC – Air traffic control
ATM – Air traffic management
ATN – Aeronautical telecommunication network
ATS – Air traffic services
CARS – Cockpit audio recording system

CAS – Calibrated airspeed
CAT I – Category I
CAT II – Category II
CAT III – Category III
CDL – Configuration deviation list
CFIT – Controlled flight into terrain
cm – Centimetre
COMAT – Operator material
CPDLC – Controller-pilot data link communications
CVR – Cockpit voice recorder
CVS – Combined vision system
DA – Decision altitude
DA/H – Decision altitude/height
DC – Direct current
DH – Decision height
DLR – Data link recorder
DLRS – Data link recording system
DME – Distance measuring equipment
DSTRK – Desired track
EDTO – Extended diversion time operations
EFB – Electronic flight bag
EFIS – Electronic flight instrument system
EGT – Exhaust gas temperature
ELT – Emergency locator transmitter
ELT(AD) – Automatic deployable ELT
ELT(AF) – Automatic fixed ELT
ELT(AP) – Automatic portable ELT
ELT(S) – Survival ELT
EPR – Engine pressure ratio
EUROCAE – European Organisation for Civil Aviation Equipment
EVS – Enhanced vision system
FANS – Future air navigation system
FDAP – Flight data analysis programmes
FDR – Flight data recorder
FL – Flight level
FM – Frequency modulation
ft – Foot
ft/min – Feet per minute
g – Normal acceleration
GCAS – Ground collision avoidance system
GNSS – Global navigation satellite system
GPWS – Ground proximity warning system
hPa – Hectopascal
HUD – Head-up display
IFR – Instrument flight rules
ILS – Instrument landing system
IMC – Instrument meteorological conditions
inHg – Inch of mercury
INS – Inertial navigation system
ISA – International standard atmosphere
kg – Kilogram
kg/m2 – Kilogram per metre squared

km – Kilometre
km/h – Kilometre per hour
kt – Knot
kt/s – Knots per second
lb – Pound
lbf – Pound-force
LDA – Landing distance available
LED – Light emitting diode
m – Metre
mb – Millibar
MDA – Minimum descent altitude
MDA/H – Minimum descent altitude/height
MDH – Minimum descent height
MEL – Minimum equipment list
MHz – Megahertz
MLS – Microwave landing system
MMEL – Master minimum equipment list
MNPS – Minimum navigation performance specification
MOPS – Minimum operational performance specification **m/s** – Metres per second
m/s2 – Metres per second squared
N – Newton
N_1 – Low pressure compressor speed (two-stage compressor); fan speed (three-stage compressor) **N_2** – High pressure compressor speed (two-stage compressor); intermediate pressure compressor speed (three-stage compressor)
N_3 – High pressure compressor speed (three stage compressor)
NAV – Navigation
NM – Nautical mile
NVIS – Night vision imaging systems
OCA – Obstacle clearance altitude
OCA/H – Obstacle clearance altitude/height
OCH – Obstacle clearance height
OEI – One-engine-inoperative
PANS – Procedures for Air Navigation Services
PBC – Performance-based communication
PBN – Performance-based navigation
PBS – Performance-based surveillance
RCP – Required communication performance
RNAV – Area navigation
RNP – Required navigation performance
RSP – Required surveillance performance
RTCA – Radio Technical Commission for Aeronautics **RVR** – Runway visual range
RVSM – Reduced vertical separation minima
SOP – Standard operating procedure
SST – Supersonic transport
STOL – Short take-off and landing
SVS – Synthetic vision system
TAS – True airspeed
TAWS – Terrain awareness warning system
TCAS – Traffic alert and collision avoidance system **TLA** – Thrust lever angle

TLS – Target level of safety
TVE – Total vertical error
UTC – Coordinated universal time
VD – Design diving speed
VFR – Visual flight rules
VMC – Visual meteorological conditions
VMC – Minimum control speed with the critical engine inoperative **VOR –** VHF omnidirectional radio range
V_{S_0} – Stalling speed or the minimum steady flight speed in the landing configuration
V_{S_1} – Stalling speed or the minimum steady flight speed in a specified configuration
VTOL – Vertical take-off and landing
WXR – Weather

Symbols
°C – Degrees Celsius
% – Per cent

GENERAL OPERATIONS REQUIREMENTS

2.1Aircraft Requirements

No person may operate a Sierra Leone registered aircraft unless it displays the proper markings prescribed in SLCAR Part 7.

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o person may operate a civil aircraft unless it is in an airworthy condition.

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ach PIC shall determine whether an aircraft is in a condition for safe flight.

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he PIC shall discontinue a flight as soon as practicable when an unairworthy mechanical, electrical or structural condition occurs.

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.

No person may operate an aircraft unless it is equipped with the required instruments and navigation equipment appropriate to the type of flight operation conducted and the route being flown.

No person may takeoff an aircraft with inoperative instruments or equipment installed, except as authorised by the Authority.

An AOC holder shall not operate a multi-engine aircraft with inoperative instruments and equipment installed unless the following conditions are met:

An approved Minimum Equipment List exists for that aircraft.

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.

The approved Minimum Equipment List shall:

Be prepared in accordance with the limitations specified in paragraph (f) of this section.

Provide for the operation of the aircraft with certain instruments and equipment in inoperative condition.

Records identifying the inoperative instruments and equipment and the information required by paragraph (c) (ii) of this section must be available to the pilot.

The aircraft is operated under all applicable conditions and limitations contained in the Minimum Equipment List and the operations specifications authorizing use of the Minimum Equipment List.

The Following instruments and equipment may not be included in the Minimum Equipment List:

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.

Instruments and equipment required by an airworthiness directive to be in operable condition unless the airworthiness directive provides otherwise.

(iii) Instruments and equipment required for specific operations under SLCAR Part 25, Part 6A and or Part 26 of these Directives.

Notwithstanding paragraphs (f) (i) and (iii) of this section, an aircraft with inoperative instruments or equipment may be operated under a special flight permit under SLCAR 8A.3.1.7

2.1.6 Civil Aircraft Flight Manual, Marking and Placard Requirements

No person may operate a Sierra Leone-registered civil aircraft unless there is available in the aircraft:

A current, approved AFM or RFM; or

An AOM approved by the Authority for the AOC holder;

(iii) 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.

No person may operate a civil aircraft within or over Sierra Leone 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

Each AFM or RFM shall be updated by implementing changes made mandatory by the State of Registry.

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.

Unless otherwise authorised by the Authority, no person may operate a Sierra Leone civil aircraft unless it has had the following inspections-

An annual inspection within the past 12 calendar months;

For remuneration or hire operations, a 100-hour inspection;

(iii) For IFR operations, an altimeter and pitot-static system inspection in the past 24 calendar months;

For transponder equipped aircraft, a transponder check within the past 12 calendar months; and

For ELT equipped aircraft, an ELT check within the past 12 calendar months.

Aircraft maintained under an alternate maintenance and inspection program approved by the Authority, may not have current annual or 100-hour inspections in their maintenance records.

2.1.8 Documents to be carried on Aircraft: All Operations

Except as provided in 2.1.6, no person may operate a civil aircraft **in commercial air transport operations** unless it has within it the following current and approved documents:

Registration Certificate issued to the owner.

Airworthiness Certificate.

Aircraft Radio Licence

List of passenger names and points of embarkation and destination, if applicable. (Passenger manifest)

Cargo manifest including special loads information.

Aircraft Technical Log.

Certified True Copy of Air Operator Certificate

Noise Certificate, if required, and translated in English if any other language.

AFM or RFM.

Part(s) of the Operations Manual relevant to operation(s) conducted, if required.

MEL.

Category II or III Manual, as applicable.

Operational Flight Plan.

Filed ATC flight plan.

NOTAMS briefing documentation.

(xvii) Meteorological information.

Mass and balance documentation.

Roster of special situation passengers.

Maps and charts for routes of proposed flight or possibly diverted flights.

Forms for complying with the reporting requirements of the Authority and the AOC holder.

(xxii) For international flights, a general declaration for customs.

Appropriate licences for each member of the flight crew;

Copy of the release to service, if any, in force with respect to the aircraft;

Search and rescue information, for international flights

A certified true copy of the agreement summary of the Article 83 bis agreement entered into between the State of Registry and the State of the Operator, in either an electronic or hard copy format. When the summary is issued in a language other than English, an English translation shall be included; and

Any documentation which may be required by the Authority or States concerned with a proposed flight. (e.g. Insurance Certificate).

Checklist compliance as prescribed in 5.9

Except as provided in 2.1.6, no person may operate a civil aircraft in general aviation operations or aerial work operations unless it has within it the following current and approved documents:

Certificate of Aircraft Registration issued to the owner.

Certificate of Airworthiness.

Aircraft Radio License, for international flights.

List of passenger names and points of embarkation and destination, if applicable.

Cargo manifest including special loads information.

The appropriate licences for each member of the flight crew.

Copy of the release to service, if any, in force with respect to the aircraft, or technical log, as applicable.

Noise certificate, if required.

AFM or RFM, for aeroplanes or helicopters.

Category II or III Manual, as applicable.

Operational Flight Plan, for all international flights.

NOTAMS briefing documentation.

Maps and charts for routes of proposed flight or possibly diverted flights.

Forms for complying with the reporting requirements of the Authority.

For international flights, a general declaration for customs.

Aerial work certificate for aerial work operators.

Search and rescue information, for international flights.

Any documentation that may be required by the Authority or States concerned with a proposed flight.

3. AIRCRAFT CONTINUING AIRWORTHINESS AND INSPECTION REQUIREMENTS

3.1 Applicability

This subpart prescribes the rules governing the maintenance and inspection of Sierra Leone registered civil aircraft operating within or outside Sierra Leone.

Where any aircraft, not registered in Sierra Leone and operating under an inspection programme approved or accepted by the State of Registry, does not have the equipment required by the Authority for operations within Sierra Leone the owner or operator shall ensure that such equipment is installed and inspected in accordance with the requirements of the State of Registry, acceptable to the Authority before operation of that aircraft in Sierra Leone.

Annual inspections and annual inspections plus 100-hour inspections in 3.4 of this part do not apply to:

An aircraft that carries a special flight permit, a current experimental certificate, or a provisional certificate of airworthiness;

An aircraft subject to the requirements of progressive inspections in 3.5 of this part;

(iii) An aircraft subject to the requirements of continuing airworthiness maintenance inspections in 3.6 of this part; and

(iv) A large aeroplane, a turbine-powered multi-engine aeroplane, or a turbine-powered rotorcraft when the operator elects to inspect that rotorcraft in accordance with continuing airworthiness maintenance inspections in 3.6 of this part.

3.2 General

The registered owner or operator of an aircraft shall maintain that aircraft in an airworthy condition, including compliance with all ADs.

No person may perform maintenance, overhaul, modifications, repairs, or inspections on an aircraft except as prescribed in this subpart and other applicable regulations, including SLCAR Part 8A

No person may operate an aircraft for which a manufacturer's Aircraft Maintenance Manual or instructions for continuing airworthiness have been issued that contain an airworthiness limitations section unless the mandatory replacement times, inspection intervals, and related procedures set forth in operations specifications approved by the Authority under SLCAR Part 26 for AOC holders, or in accordance with an inspection programme approved under this subsection, are complied with.

the operational and emergency equipment necessary for an intended flight is serviceable

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he certificate of airworthiness of each aircraft they operate remains valid.

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he owner or operator shall use one of the following inspection programmes, as appropriate for the aircraft and the type of operation as approved by the Authority:

Annual;

Annual/100-hour;

(iii)Progressive; or

Continuous airworthiness maintenance programme.

No aircraft shall be approved for return to service after inspection unless the replacement times for life-limited parts specified in the aircraft specification type certificate data sheets are complied with and the aircraft, including aeronautical products and survival and emergency equipment, is inspected in accordance with the selected inspection programme.

Each person wishing to establish or change an approved inspection programme shall submit the programme for approval by the Authority and shall include in writing:

Instructions and procedures for the conduct of inspection for the particular make and model of 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

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.

When an owner or operator changes from one inspection programme to another, the owner or operator shall, in determining when the inspection is due under the new programme, apply the time in service, calendar times, or cycles of operation accumulated under the previous programme.

The design and application of the operator's maintenance programme shall observe Human Factors principles.

No person shall operate an aircraft unless maintenance on the aeroplane, including any associated engine, propeller and part, is carried out:

by an organization complying with SLCAR Part 8A that is either approved by the Authority of the aircraft or is approved by another Contracting State and is accepted by the Authority; or

by a person or organization in accordance with procedures that are authorized by the Authority;

3.3 Annual Inspections

An annual inspection programme may be used for non-complex aircraft with a maximum certificated take-off mass of 5 700 kg (12 566 lb) or less that are not used for compensation or hire.

An annual inspection under this subsection may be performed by an AMT holding an IA in accordance with SLCAR Part 1A or by an AMO.

No person may operate an aircraft unless, within the preceding 12 calendar months, the aircraft has had:

An annual inspection in accordance with SLCAR Part 8A and has been approved for return to service by an AMT holding an IA issued in accordance with SLCAR Part 1A or by an AMO certificated in accordance with SLCAR Part 8B; or

An inspection for the issuance of a certificate of airworthiness completed by the Authority in accordance with SLCAR Part 8A

3.4 Annual/100-Hour Inspections

No person may operate a non-complex aircraft with a maximum certificated take-off mass of 5 700 kg (12 566 lb) or less carrying any person (other than a crew member) for compensation or hire, and no person may give flight instruction for compensation or hire in an aircraft provided by that person, unless:

Within the preceding 100 hours of time in service, the aircraft has received an annual or a 100-hour inspection; and

The aircraft has been approved for return to service in accordance with SLCAR Part 8A

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 performed. The excess time used to reach a place where the inspection can be performed shall be included in computing the next 100 hours of time in service.

An annual inspection under this subsection may be performed and the aircraft may be returned to service by an AMT holding an IA issued in accordance with SLCAR Part 1A or by an AMO certificated in accordance with SLCAR Part 8B

A 100-hour inspection under this subsection may be performed and the aircraft may be returned to service by an AMT holding an IA issued in accordance with SLCAR Part 1A or by an AMO certificated in accordance with SLCAR Part 8B

3.5 Progressive Inspections

A progressive inspection programme may be used for aircraft with a maximum certificated take-off mass of 5 700 kg (12 566 lb) or less.

Aircraft inspected under a progressive inspection programme may be used for compensation or hire.

Each registered owner or operator of an aircraft desiring to use a progressive inspection programme shall submit a written request to the Authority and shall provide:

An AMT holding an IA in accordance with SLCAR Part 1A, an AMO appropriately rated in accordance with Part SLCAR 8B, or the manufacturer of the aircraft to supervise or conduct the progressive inspection;

A current inspection procedures manual that is available and readily understandable to pilot and maintenance personnel and contains, in detail:

(1) 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;

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;

Sample routine and detailed inspection forms and instructions for their use; and

Sample reports and records and instructions for their use;

Enough housing and equipment for necessary disassembly and proper inspection of the aircraft; and

Appropriate current technical information for the aircraft.

(iii) The frequency and detail of the progressive inspection shall provide for the complete inspection of the aircraft within each 12 calendar months and shall be consistent with the current manufacturer's recommendations, field service experience, and the type of operation in which the aircraft is engaged.

The progressive inspection schedule shall ensure that the aircraft, at all times, is airworthy and conforms to all applicable aircraft specifications, type certificate data sheets, ADs, and other approved data acceptable to the Authority.

Each owner/operator shall include in the inspection programme the name and address of the person responsible for the scheduling of the inspections required by the programme and shall provide a copy of the programme to the person performing inspection on the aircraft.

If the progressive inspection programme is discontinued, the owner or operator shall immediately notify the Authority, in writing, of the discontinuance.

After the discontinuance, the first annual inspection under SLCAR Part 6A is due within 12 calendar months after the last complete inspection of the aircraft under the progressive inspection programme.

The 100-hour inspection is due within 100 hours after the last complete inspection under the progressive inspection programme.

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 programme.

A routine inspection of the aircraft and a detailed inspection of several components are not considered to be a complete inspection.

3.6 Continuing Airworthiness Maintenance Inspection

The registered owner or operator of each large aeroplane with a maximum certificated take-off mass of over 5 700 kg (12 566 lb), turbine-powered multi-engine aeroplane, or turbine-powered rotorcraft shall select, identify in the aircraft maintenance records, and use one of the following continuing airworthiness maintenance inspection programmes for the inspection of the aircraft:

A current inspection programme recommended by the manufacturer;

A continuing airworthiness maintenance programme for that make and model of aircraft currently approved by the Authority for use by an AOC holder; or

(iii) Any other inspection programme established by the registered owner or operator of that aircraft and approved by the Authority.

Each owner/operator shall include in the selected inspection programme the name and address of the person responsible for the scheduling of the inspections required by the programme and shall provide a copy of the programme to the person performing inspection on the aircraft.

3.7 Changes to Aircraft Inspection Programmes

Whenever the Authority finds that revisions to an approved inspection programme are necessary for the continued adequacy of the programme, the owner or operator shall, after notification by the Authority, make any changes in the programme found to be necessary.

Within 30 days after receiving the notice from the Authority, the owner or operator may petition the Authority to reconsider the notice.

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.

3.8 Required Maintenance

Each owner or operator of an aircraft shall:

Have that aircraft inspected as prescribed in 8.3 of this part and shall have discrepancies repaired as prescribed in the performance rules of Part 8 of these regulations;

Repair, replace, remove, or inspect any inoperative instruments or items of equipment at the next required inspection, except when permitted to be deferred under the provisions of an MEL;

Ensure that a placard has been installed on the aircraft when listed discrepancies include inoperative instruments or equipment; and

Ensure that maintenance personnel make appropriate entries in the aircraft maintenance records indicating the aircraft has been approved for return to service.

3.9 Maintenance and Inspection Records Retention

Except for records maintained by an AOC holder, each registered owner or operator shall retain the following maintenance and inspection records until the work is repeated or superseded by other work of equivalent scope and detail:

Records of the maintenance, overhaul, modifications, repairs, and inspections 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:

A description (or reference to data acceptable to the Authority) of the work performed;

The date of completion of the work performed; and

The signature and certificate number of the person approving the aircraft for return to service; and

Records containing the following information:

The total time in service of the airframe, each engine, each propeller, and each rotor;

The current status of all life-limited aeronautical products;

The time since the last overhaul of all items installed on the aircraft that are required to be overhauled on a specified time basis;

The current inspection status of the aircraft, including the time since the last inspection required by the inspection programme under which the aircraft and aeronautical products are maintained;

The current status of applicable ADs, including, for each, the method of compliance, the AD number, and the revision date. If the AD involves a recurring action, include the time and date when the next action is required; and

Copies of the forms prescribed by this part for each major modification to the airframe and currently installed engines, rotors, propellers, and appliances.

The records specified in paragraph 3.9(a) of this subsection shall be retained and transferred with the aircraft at the time the aircraft is sold or leased.

A list of defects shall be retained until the defects are repaired and the aircraft is approved for return to service.

The owner or operator shall make all maintenance and inspection records required by this subsection available for inspection by the Authority.

The records in 3.9(a) shall be kept for a minimum period of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records in 3.9(c) for a minimum period of one year after the signing of the maintenance release.

The lessee of a helicopter shall comply with the requirements of 3.9(a) and 3.9(e), as applicable, while the helicopter is leased.

3.10 Lease or Sale of Aircraft – Transfer of Maintenance Records

Any owner or operator who sells or leases a Sierra Leone registered aircraft shall transfer to the purchaser/lessor, at the time of sale or lease, the records identified in 3.9 of that aircraft, shall be maintained in a form and format that ensures readability, security, and integrity of the records at all times 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.

3.11 Safety Management

3.11.1 The operator of an aeroplane of a certificated take-off mass in excess of 20 000 kg should establish and maintain a flight data analysis programme as part of its safety management system.

3.11.2 The operator of an aeroplane of a maximum certificated take-off mass in excess of 27 000 kg shall establish and maintain a flight data analysis programme as part of its safety management system.

3.11.3 A flight data analysis programme shall contain adequate safeguards to protect the source(s) of the data in accordance with SLCAR Part 19 IS 5.3.

3.11.4 The Authority shall not allow the use of recordings or transcripts of CVR, CARS, Class A AIR and Class A AIRS for purposes other than the investigation of an accident or incident as per SLCAR Part 13, except where the recordings or transcripts are:

related to a safety-related event identified in the context of a safety management system; are restricted to the relevant portions of a de-identified transcript of the recording; and are subject to the protections accorded by SLCAR Part 19;sought for use in criminal proceedings not related to an event involving an accident or incident investigation and are subject to the protections accorded by SLCAR Part 19; or

used for inspections of flight recorder systems as provided in SLCAR Part 25.

3.11.5 The Authority shall not allow the use of recordings or transcripts of FDR, ADRS as well as Class B and Class C AIR and AIRS for purposes other than the investigation of an accident or incident as per SLCAR Part 13, except where the recordings or transcripts are subject to the protections accorded by SLCAR Part 19 and are:

used by the operator for airworthiness or maintenance purposes;

used by the operator in the operation of a flight data analysis programme required in this regulation;

sought for use in proceedings not related to an event involving an accident or incident investigation;

de-identified; or

disclosed under secure procedures.

3.11.6 The operator shall establish and maintain a flight safety documents system, for the use and guidance of operational personnel, as part of its safety management system.

3.11.7 The operator of a helicopter of a certified take-off mass in excess of 7 000 kg, or having a passenger seating configuration of more than 9, and fitted with a flight data recorder should establish and maintain a flight data analysis programme as part of its safety management system.

3.12 APPROVED MAINTENANCE ORGANIZATION

An approved maintenance organization shall comply with SLCAR Part 1B– Maintenance Organization Approval

FLIGHT CREW REQUIREMENTS

4.1Composition of the Flight Crew

The number and composition of the flight crew shall not be less than that specified in the flight manual or other documents associated with the airworthiness certificate.

Where radio equipment is installed in the aircraft, the flight crew shall include at least one member who holds a valid radio licence authorizing operation of the type of radio transmitting equipment to be used.

When navigation necessary for the safe operation of the aeroplane cannot be accomplished from the pilot's station the flight crew shall include a member who holds a flight navigator licence.

A co-pilot (CP) is required for IFR commercial air transport operations, unless the Authority has issued an exemption in accordance with the exemption process in SLCAR Part 22 of these Regulations, for the use of an autopilot in lieu of a co-pilot. This

exemption shall be for domestic operations only and aeroplanes weighing less than 5700 kg (12566 lb.) or helicopters weighing less than 3,175 kg.

When a separate flight engineer's station is incorporated in the design of an aeroplane and the flight engineer function cannot be accomplished from the pilot's station by a pilot who holds a flight engineer licence without interference with regular duties, the flight crew shall include at least one crewmember who holds a flight engineer licence especially assigned to that station.

4.2 Flight Crew Qualifications

The PIC shall ensure that the licences of each flight crew member have been issued or rendered valid by the State of Registry, contain the proper ratings, and that all the flight crew members have maintained Recency of experience.

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.

The owner or operator of an aircraft shall ensure that the flight crewmembers demonstrate the ability to speak and understand English language which is used for radiotelephony communications and for international operations.

4.3 Authorisation In Lieu of a Type Rating

The Authority may Authorize a pilot to operate an aircraft requiring a type rating without a type rating for up to 60 days, provided-

The Authority has determined that an equivalent level of safety can be achieved through the operating limitations on the authorisation;

The applicant shows that compliance with this subsection is impracticable for the flight or series of flights;

(iii)The operations:

Involve only a ferry flight, training flight, test flight, or skills test for a pilot licence or rating;

Are within Sierra Leone, unless, by previous agreement with the Authority, the aircraft is flown to an adjacent contracting State for maintenance;

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

Involve only the carriage of flight crewmembers considered essential for the flight.

If

the purpose of the Authorisation provided by this paragraph cannot be accomplished within the time limit of the authorisation, the Authority may authorize an additional period of up to 60 days.

4.4 Licences Required

Except as provided in 4.3, no person may act as PIC or in any other capacity as a required flight crewmember of a civil aircraft of:

Sierra Leone 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, a radio telephony licence and a valid medical certificate.

Foreign registry, unless he or she carries in their personal possession a valid and current licence for that type of aircraft, a radio telephony licence and a valid medical certificate issued to them by the State in which the aircraft is registered.

(c) be satisfied that flight crew members are competent to carry out assigned duties.

4.5 Rating Required for IFR Operations

No person may act as pilot of a civil aircraft under IFR or in weather conditions less than the minimums prescribed for VFR flight unless:

The pilot holds an instrument rating or an ATP licence with an appropriate aircraft category, class, and type rating (if required) for the aircraft being flown;

In the case of helicopter, the pilot holds a helicopter instrument rating

4.6 Special Authorisation Required for Category II and III Operations

Except as shown in paragraph (2), no person may act as a pilot crew member of a civil aircraft in a Category II/III operation unless:

In the case of a PIC, he holds a current Category II or III pilot authorization issued by the State of Registry for that aircraft type.

In the case of a CP, he/she is authorized by the State of Registry to act as CP in that aircraft type in Category II/III.

An authorisation is not required for individual pilots of an AOC holder that has operations specifications approving Category II or III operations.

4.7 Pilot Logbooks

Each pilot shall provide evidence of the aeronautical training and experience used to meet the requirements for a licence or rating, or Recency of experience, by a reliable record.

Each PIC shall carry his logbook on all general aviation international flights.

A student pilot shall carry his logbook, including the proper flight instructor endorsements, on all solo cross-country flights.

4.8 Pilot Recency and Proficiency – General Aviation Operations

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 has passed a proficiency check in an aircraft requiring more than one pilot with an authorised representative of the Authority.

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 has passed a proficiency check in the type of aircraft to be operated.

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.

The person conducting the proficiency checks shall ensure that each check duplicates the manoeuvres of the type rating practical test.

No person may act as CP of an aircraft type certified for more than one pilot unless, since the beginning of the 12 calendar months, he or she has-

Become familiar with the aircraft systems, performance, normal and emergency procedures; and

Logged 3 takeoff and landings as the sole manipulator of the controls.

4.9 Flightcrew – Limitations on use of Services for Commercial Air Transport

No person may serve as a flight crewmember, nor may any AOC holder use a flight crewmember in commercial air transport unless that person is otherwise qualified for the operations for which he/she is to be used.

The qualifications, training and proficiency checking for flight crewmembers engaged in commercial air transport operations are provided in Subpart 10 of this Part.

The recency and proficiency requirements for flight crewmembers engaged in commercial air transport operations are specified in 4.10 and 4.14 of this part

4.10 Pilot Recency – Takeoff and Landings, Commercial Air Transport Operations

No person may act as PIC or co-pilot of an aircraft carrying passengers unless, within the preceding 90 days that pilot has:

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 or in a flight simulation training device approved for the purpose.

For a tail wheel aeroplane, made the 3 takeoffs and landings in a tail wheel aeroplane with each takeoff and landing to a full stop.

(iii)For night operations, made the 3 takeoffs and landings required by paragraph (a) (i) at night with each takeoff and landing to a full stop.

A pilot who has not met the recency of experience for takeoffs and landings shall satisfactorily complete a requalification curriculum acceptable to the Authority.

Requirements of paragraphs (a) and (b) may be satisfied in a flight simulator approved by the Authority.

4.11 Pilot Recency – IFR Operations

No person may act as a pilot under IFR, nor in IMC, unless he has, within the past 6 calendar-months:

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ogged at least 6 hours of instrument flight time including at least 3 hours in flight in the category of aircraft; and

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ompleted at least 6 instrument approaches.

A pilot who has completed an instrument proficiency check with an authorised representative of the Authority retains currency for IFR operations for 6 calendar-months following that check.

4.12 Pilot Recency - Cruise Relief Pilot

No person may act as a cruise relief pilot in commercial air transport unless within the preceding 90 days, that pilot has either:

Operated as pilot-in-command, co-pilot or cruise relief pilot on the same type of aircraft; or

Carried out flying skill refresher training including normal, abnormal and emergency procedures specific to cruise flight on the same type of aircraft or in a flight simulator approved for the purpose, and has practiced approach and landing procedures, where the approach and landing procedure practice may be performed as the pilot who is not flying the aircraft.

When a cruise relief pilot is flying several variants of the same type of aircraft or different types of aircraft with similar characteristics in terms of operating procedures, systems, and handling, the recency or refresher training may be combined, if approved by the Authority.

4.13 Pilot Recency – Night Vision Goggles

No person may act as PIC in a night vision goggle operation unless that pilot has completed the required training in SLCAR Part 1A 3.2.9 and has performed and logged the following tasks as the sole manipulator of the controls on a flight during a night vision goggle operation, within the preceding 60 days to carry passengers on board, or within the preceding 120 days to act as PIC without passengers on board:

3 takeoffs and landings, with each takeoff and landing including a climb out, cruise, descent, and approach phase of flight, if the pilot intends to use night visions goggles during the takeoff and landing phase of flight;

3 hovering tasks, if the pilot intends to use night vision goggles when operating helicopters or powered- lifts during the hovering phase;

(iii) 3 area departure and area arrival tasks;

3 tasks of transitioning from aided night flight to unaided night flight and back to aided night flight.

3-night vision goggle operations, or when operating helicopters or powered-lifts, 6-night vision goggle operations, or

Successfully completed the night vision goggles proficiency check required in Part 2 of these Flight Standards Regulations, with the Authority.

4.14 Pilot Proficiency – Commercial Air Transport Operations

The qualification, training and proficiency checking requirements for flight crewmembers engaged in commercial air transport are specified in Subpart 10. Additionally, the following requirements in (b) – (c) shall be met, as applicable.

All pilots. No person shall act as a pilot of an aircraft unless he has successfully passed two proficiency checks within the 12 months, conducted by an authorised representative of Authority. The proficiency check requirement -

Shall ensure that piloting technique and the ability to execute emergency procedures is checked in such a way as to demonstrate the pilot's competence on each type or variant of a type of aircraft, including where the operations may be conducted under IFR;

Shall not be satisfied by the conduct of two checks that are similar and which occur within a period of four consecutive months;

(iii) May be combined for several variants of the same type of aircraft or different types of aircraft with similar characteristics in terms of operating procedures, systems and handling, if approved by the Authority.

The aircraft pilot proficiency check and the instrument proficiency check must be accomplished by the Authority or an authorised representative of the Authority in the category, class and type of aircraft to be operated, or in a flight simulation training device approved for the purpose, to the requirements specified in 10.19 and IS: 10.19 and the applicable skill test in SLCAR Part 1A.

Night vision goggles operation. No person may act as PIC in a night vision goggle operation unless, the pilot has completed the required training specified in SLCAR Part 1A, 2.3.2.9 and meets either the:

Currency requirements in subpart 4.13(a) above, or

Passes the night vision goggles proficiency check required by subpart 4.13(b) above with the Authority or an authorised representative of the Authority.

4.15 Pilot Privileges and Limitations

A pilot may conduct operations only within the general privileges and limitations of each licence, rating or authorisation as specified in SLCAR Part 1A.

4.16 Specific Approvals – General Aviation Operations

The pilot-in-command shall not conduct operations for which a specific approval is required unless such approval has been issued by the State of Registry. Specific approvals shall follow the layout and contain at least the information specified in IS 4.16

CREW MEMBER DUTIES AND RESPONSIBILITIES

5.1Authority and Responsibility of the PIC

The PIC shall be responsible for the operations, safety and security of the aircraft and for the safety of all persons and cargo on board, from the moment the doors are closed and aircraft is ready to move for the purpose of taking off until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion units are shut down.

The PIC of an aircraft shall have final authority as to the operation of the aircraft while he or she is in command.

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 interest of safety.

The PIC shall determine that aeroplane performance will permit the take-off and departure to be carried out safely

5.2 Compliance with Local Legislation

The operator shall ensure that all pilots are familiar with the laws, regulations and procedures, pertinent to the performance of their duties, prescribed for the areas to be traversed, the aircraft to be used and the air navigation facilities relating thereto. The operator shall ensure that other members of the flight crew are familiar with such of these laws, regulations and procedures as are pertinent to the performance of their respective duties in the operation of the aircraft.

The PIC shall comply with the relevant laws, Regulations and procedures of the States in which the aircraft is operated.

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-

Notify the appropriate local authority without delay;

Submit a report of the circumstances, if required by the State in which the incident occurs; and

Submit a copy of this report to the State of Registry.

Each PIC shall submit reports specified in paragraph (b) to the Authority within 10 days in the form prescribed.

The operator shall ensure that all employees know that they must comply with the laws, regulations and procedures of those States in which operations are conducted.

5.3 Negligent 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.

5.4 Fitness of Flight Crew Members

No person may act as PIC or in any other capacity as a required flight crewmember 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.

The PIC shall be responsible for ensuring that a flight is not:

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

Continued beyond the nearest suitable aerodrome if a flight crew member's capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness or lack of oxygen.

5.5 Prohibition on use of Psychoactive Substances, Including Narcotics, Drugs or Alcohol

No person may act or attempt to act as a crew member of a civil aircraft-

Within 6 hours after the consumption of any alcoholic beverage,

while under the influence of alcohol, or

while using any drug that affects the person's faculties in any way contrary to safety.

A crewmember shall, up to 6 hours before or immediately after acting or attempting to act as a crewmember, 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.

Whenever there is a reasonable basis to believe that a person may not be in compliance with this paragraph 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 6 hours before or immediately after acting or attempting to act as a crewmember.

Any test information provided to the Authority under the provisions of this section may be used as evidence in any legal proceedings.

5.6 Flight Crewmember use of Seat Belts and Shoulder Harnesses

Each flight crewmember shall have his or her seat belts fastened during takeoff and landing and all other times when seated at his or her station and whenever the pilot-in-command so directs.

Each flight crewmember 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.

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 the takeoff and landing and be able to properly perform assigned duties.

At each unoccupied seat, the safety belt and shoulder harness, if installed, shall be secured so as not to interfere with crewmembers in the performance of their duties or with the rapid egress of occupants in an emergency.

5.7 Flight Crewmembers at Duty Stations

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ach required flight crewmember shall remain at the assigned duty station during take-off and landing and critical phases of flight.

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ach flight crew member shall remain at his station during all phases of flight unless-

Absence is necessary for the performance of his duties in connection with the operation;

Absence is necessary for physiological needs, provided one qualified pilot remains at the controls at all times; or

(iii)The crewmember is taking a rest period and a qualified relief crew member replaces him at the duty station:

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 CP, and is qualified as PIC of that aircraft during the en route cruise portion of the flight; and

In the case of the assigned CP, by a pilot qualified to act as PIC or Co- Pilot of that aircraft during en route operations.

5.8 Required Crewmember Equipment

Each crewmember involved in night operations shall have a flashlight at his or her station.

Each pilot crewmember shall have at his or her station an aircraft checklist containing the normal, abnormal and emergency procedures relating to the operation of the aircraft for that type.

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.

Each flight crew member assessed as fit to exercise the privileges of a licence 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.

Each member of the crew shall have a survival suit if such suit is required by Part 25 of the SLCAR to be carried.

5.9 Compliance with Checklists

The PIC shall ensure that the flight crew follows the approved checklist procedures when operating the aircraft.

The checklists provided in Aircraft Operating Manual shall be used by flight crews prior to, during and after all phases of operations and in emergency to ensure compliance with the operating procedures contained therein and the Aircraft Flight Manual or other documents associated with the Certificate of Airworthiness and otherwise in the Operations Manual are followed.

(c) The design and utilization of checklists shall observe Human Factors principles.

5.10 Search and Rescue Information

The operator shall ensure that the PIC has available on board the aircraft all the essential information concerning the search and rescue services in the areas over which the aircraft will be flown.

5.11 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.

5.12 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.

From the time all external doors are closed following embarkation; until

Any such door is opened for disembarkation; except

(iii)When necessary to permit access and egress by authorised persons

No person may operate a passenger carrying aeroplane having a maximum certificated takeoff mass in excess of 45 000 kg or with a passenger capacity greater than sixty (60) unless the flight crew compartment door is closed and locked –

5.13 Admission to the Flight Deck: Commercial Air Transport

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-

An operating crew member;

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

(iii)Permitted by and carried out in accordance with instructions contained in the Operations Manual.

The PIC shall ensure that:

In the interest of safety, admission to the flight deck does not cause distraction and or interference with the flight's operations; and

All persons carried on the flight deck are made familiar with the relevant safety procedures.

5.14 Admission of Inspector to the Flight Deck

Whenever, in performing the duties of conducting an inspection, an inspector from the Authority presents Aviation Safety Inspector's Credential to the PIC, the PIC shall give the inspector free and uninterrupted access to the flight deck of the aircraft.

5.15 Duties during Critical Phases of Flight: Commercial Air Transport

No flight crew member may perform any duties during a critical phase of flight except those required for the safe operation of the aircraft.

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.

5.16 Manipulation of the Controls: Commercial Air Transport

No PIC may allow an unqualified person to manipulate the controls of an aircraft during commercial air transport operations.

No person may manipulate the controls of an aircraft during commercial air transport operations unless he is qualified to perform the applicable crew member functions and is authorised by the AOC holder.

5.17 Simulated Abnormal Situations in Flight – Commercial Air Transport

An Operator shall ensure that when passengers or cargo are being carried, no emergency or abnormal situations shall be simulated.

5.18 Completion of the Technical Logbook: Commercial Air Transport and Aerial Work

The PIC shall ensure that all portions of the technical logbook are completed at the appropriate points before, during and after flight operations, including:

the journey logbook

the aircraft maintenance records section

5.19 Reporting Mechanical Irregularities

The PIC shall ensure that all mechanical irregularities occurring during flight time are:

For general aviation operations, entered in the aircraft logbook and disposed of in accordance with the MEL or other approved or prescribed procedure.

For commercial air transport operations and aerial work operations, entered in the aircraft maintenance records section of the technical log for the aircraft at the appropriate points before, during and at the end of that flight time.

Each PIC shall be responsible for reporting to the operator, at the termination of the flight, all known or suspected defects in the aeroplane.

Each PIC shall be responsible for reporting to the operator, at the termination of the flight, all known or suspected defects in the helicopter.

5.20 Reporting of Facility and Navigation Aid Inadequacies

Each crewmember 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.

5.21 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.

) The PIC shall report the runway braking action special air-report (AIREP) when the runway braking action encountered is not as good as reported.

5.22 Reporting of Incidents

Air Traffic report. The PIC shall submit, without delay, an air traffic incident report whenever an aircraft in flight has been endangered by-

A near collision with another aircraft or object;

Faulty air traffic procedures or lack of compliance with applicable procedures by ATC or by the flight crew; or

(iii)A failure of ATC facilities.

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irds. In the event a bird constitutes an in-flight hazard or an actual bird strike the PIC shall, without delay-

Inform the appropriate ground station whenever a potential bird hazard is observed; and

Submit a written bird strike report after landing to the oversight Authority in the State of registry.

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angerous Goods. The PIC shall inform the appropriate ATC facility, if the situation permits, when an in-flight emergency occurs involving dangerous goods on board.

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nlawful 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.

5.23 Accident Notification

The PIC shall notify the nearest appropriate authority, by the quickest available means, of any accident involving his aircraft that results in serious injury or death of any person, or substantial damage to the aircraft or property. In the event that the pilot-in-command is incapacitated the operator shall take the forgoing action.

The PIC shall submit a report to the Authority of any accident which occurred while he was responsible for the flight.

5.24 Operation of Cockpit Voice and Flight Data Recorders

The PIC shall ensure that whenever an aircraft has flight recorders installed, those recorders are operationally checked and operated continuously from the instant-

For a flight data recorder, the aircraft begins its takeoff roll until it has completed the landing roll; and

For a cockpit voice recorder, the initiation of the pre-start checklist until the end of the securing aircraft checklist.

The PIC may not permit a flight data recorder or cockpit voice recorder to be disabled, switched off or erased during flight, so as to preserve the data for an accident or incident investigation.

In event of an accident or incident, the PIC shall act to preserve the recorded data for subsequent investigation

5.25 Crew Member Oxygen: Minimum Supply and Use

The PIC shall ensure that breathing oxygen and masks are available to crew members in sufficient quantities for all flights at such altitude where a lack of oxygen might result in impairment of the faculties of crew members.

In no case shall the minimum supply of oxygen on board the aircraft be less than that prescribed by the Authority.

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. (3000 m) for a period in excess of 30 minutes and whenever the cabin altitude exceeds 13,000 ft.(4000 m).

One pilot at the control of a pressurized aircraft in flight shall wear and use an oxygen mask-

For general aviation operations, at flight levels above 350, if there is no other pilot at their duty station; and

For commercial air transport operations, at flight levels above 250, if there is no other pilot at their duty station.

5.26 Portable Electronic Devices

No PIC or SCCM 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-

For IFR operations other than commercial air transport, the PIC allows such a device prior to its use; or

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 member's use; and

The PIC informs passengers of the permitted use.

5.27 Operational Management

Where an operator has an operating base in a State other than the State of Registry, the operator shall notify the State in which the operating base is located.

Safety and security oversight shall be coordinated between the State in which the operating base is located and the State of Registry.

5.28 Carriage of Dangerous Goods

No person shall carry dangerous goods in an aircraft registered in Sierra Leone or operated in Sierra Leone except:

With the written permission of the Authority, subject to any condition the Authority may impose in granting such permission; and

In accordance with ICAO Doc 9284, Technical Instructions for the Safe Transport of Dangerous Goods by Air issued by the Council of International Civil Aviation Organisation and with any variations to those instructions that the Authority may from time to time mandate and provide notification of to ICAO.

5.29 Microphones

No required flight crewmember of an AOC holder operating aircraft, shall communicate with another flight crewmember and air traffic service below the transition level or altitude without using a boom or throat microphone.

No required flight crewmember of a general aviation operator in an aeroplane, helicopter or powered lift aircraft, shall communicate with another flight crewmember and air traffic service below the transition level or altitude without using a boom or throat microphone.

No required flight crewmember of an aerial work operation, shall communicate with another flight crewmember and air traffic service below the transition level or altitude, as applicable to the mission without using a boom or throat microphone.

5.30 Flight Crew Member Emergency Duties

The operator shall, for each type of aircraft, assign to all flight crew members the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation. Annual training in accomplishing these functions shall be contained in the operator's training programme and shall include instruction in the use of all emergency and life-saving equipment required to be carried, and drills in the emergency evacuation of the aeroplane.

5.31 Flight Crew Member Training Programmes

5.31.1 The operator shall establish and maintain a ground and flight training programme, approved by the Authority, which ensures that all flight crew members are adequately trained to perform their assigned duties. The training programme shall:

include ground and flight training facilities and properly qualified instructors as determined by the Authority;

consist of ground and flight training in the type(s) of aeroplane on which the flight crew member serves;

include proper flight crew coordination and training in all types of emergency and abnormal situations or procedures caused by engine, airframe or systems malfunctions, fire or other abnormalities;

include upset prevention and recovery training;

include training in knowledge and skills related to visual and instrument flight procedures for the intended area of operation, charting, human performance including threat and error management and in the transport of dangerous goods;

ensure that all flight crew members know the functions for which they are responsible and the relation of these functions to the functions of other crew members, particularly in regard to abnormal or emergency procedures; and

be given on a recurrent basis, as determined by the State of the Operator and shall include an assessment of competence.

The training programme shall include training to competency for all equipment installed.

when serving on helicopters operated above 3 000 m (10 000 ft), knowledgeable as regards the effect of lack of oxygen and, in the case of pressurized helicopters, as regards physiological phenomena accompanying a loss of pressurization;

knowledgeable about human performance as related to passenger cabin safety duties including flight crew-cabin crew coordination

5.31.2 The requirement for recurrent flight training program annually in a particular type of aircraft shall be considered fulfilled by:

the use, to the extent deemed feasible by the Authority, of flight simulation training devices approved by that State for that purpose; or

the completion within the appropriate period of the proficiency check required by chapter four(4) of this part in that type of aeroplane.

FLIGHT PLANNING AND SUPERVISON

6.1 Flight Plans

6.1.1 Submission of a Flight Plan

Prior to operating one of the following, a pilot shall file a VFR or IFR flight plan, as applicable, for:

Any flight (or portion thereof) to be provided with air traffic control service;

Any IFR flight within advisory airspace;

(iii) 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;

(iv) 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

Any flight across international borders.

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.

Unless otherwise prescribed by the appropriate ATC authority, a pilot should submit a flight plan to the appropriate ATC facility-

At least sixty minutes before departure; or

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-

The intended point of entry into a control area or advisory area; or

The point of crossing an airway or advisory route.

6.1.2 Air Traffic Control Flight Plan: Commercial Air Transport

No person may take off an aircraft in commercial air transport operations, if an ATC flight plan has not been filed, except as authorized by the Authority.

6.1.3 Contents of a Flight Plan

Each person filing an IFR or VFR flight plan shall include in it the following information –

Aircraft identification;

Flight rules and type of flight;

Number and type(s) of aircraft and wake turbulence category;

Equipment

Departure aerodrome and alternate (if required);

Estimated off-block time;

Cruising speed(s);

Cruising level(s);

Enroute alternate aerodrome (if required);

Route to be followed;

The number, colour and type of life rafts and pyrotechnics;

Details of emergency medical supplies, water supplies;

The type and frequencies of the emergency portable radio equipment;

Destination aerodrome and alternate (if required);

Fuel endurance;

Total number of persons on board;

Emergency and survival equipment; and

Other information.

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.

6.1.5 Changes to a Flight Plan

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.

In-flight operational instructions.

Operational instructions involving a change in the ATS flight plan shall, when practicable, be coordinated with the appropriate ATS unit before transmission to the aircraft.

For VFR flights other than those operated as controlled flights, the PIC shall report significant changes to a flight plan as soon as practicable to the appropriate ATC facility.

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.

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.

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.

Pilots shall include the following elements of information in their arrival reports-

Aircraft identification;

Departure aerodrome;

(iii)Destination aerodrome (only in the case of a diversionary landing);

Arrival aerodrome; and

Time of arrival

6.2 Flight Planning and Preparation

6.2.1 Aircraft Airworthiness and Safety Precautions

The operator shall develop procedures to ensure that a flight is not commenced unless:

The aircraft is airworthy, duly registered and that appropriate certificates are aboard the aircraft;

The instruments and equipment installed in the aircraft are appropriate, taking into account the expected flight conditions;

(iii)Any necessary maintenance has been performed and a maintenance release if applicable, has been issued in respect to the aircraft;

The mass of the aircraft and center of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;

Any load carried is properly distributed and safely secured;

(vi) A check has been completed indicating that the operating limitations of subpart 7 of this regulation can be complied with for the flight to be undertaken; and

The standards of 6.2.20 relating to operational flight planning have been complied with.

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 meet for particular flight.

Completed flight preparation forms shall be kept by an operator for a period of three months.

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 and protection of the passengers, are adequate for the type of operation under which the flight is to be conducted and are adequately operated for this purpose.

The operator shall ensure that a flight will not commence or continue as planned unless it has been ascertained by every reasonable means available that the airspace containing the intended route from aerodrome of departure to aerodrome of arrival, including the intended take-off, destination and en-route alternate aerodromes, can be safely used for the planned operation. When intending to operate over or near conflict zones, a risk assessment shall be conducted and appropriate risk mitigation measures taken to ensure a safe flight.

An operator shall ensure that any inadequacy of facilities observed in the course of operations is reported to the Authority responsible for them, without undue delay.

Subject to their published conditions of use, aerodromes and their facilities shall be kept continuously available for flight operations during their published hours of operations, irrespective of meteorological conditions.

An operator shall, as part of its safety management system, assess the level of rescue and firefighting service (RFFS) protection available at any aerodrome intended to be specified in the operational flight plan in order to ensure that an acceptable level of protection is available for the aeroplane intended to be used.

Information related to the level of RFFS protection that is deemed acceptable by the operator shall be contained in the operations manual.

The pilot-in-command shall ensure that a flight will not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aeroplane, are adequate for the type of operation under which the flight is to be conducted.

Before commencing a flight, the PIC shall be familiar with all available meteorological information appropriate to the intended flight.

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-

A study of available current meteorological reports and forecasts; and

The planning of an alternative course of action to provide for the eventuality that the flight cannot be completed as planned because of weather condition.

6.2.4 Meteorological Limitations for VFR Flights

A flight, except one of purely local character in visual meteorological conditions, to be conducted in accordance with VFR shall not be commenced unless current meteorological reports, or a combination of current reports and forecast, indicate that the meteorological conditions along the route, or that part of the route to be flown under VFR, will, at the appropriate time, such as to enable compliance with these rules.

6.2.5 IFR Destination Aerodromes

No person may conduct an IFR flight unless:

At the time of take-off, the meteorological conditions at the departure aerodrome are at or above the operator's established aerodrome operating minima for that operation; and

At the time of take-off or point of in-flight re-planning, current meteorological reports or a combination of current reports and forecasts indicate that the meteorological conditions will be, at the estimated time of use, at or above the operator's established aerodrome operating minima for that operation.

The operator has been approved to specify appropriate incremental values for height of cloud base and visibility to be added to the operator's established heliport or landing location operating minima.

6.2.6 IFR Destination Alternate Requirement

No person may commence an IFR flight in an aeroplane without at least one destination alternate aerodrome listed in the flight plan unless:

The duration of the flight and the meteorological conditions prevailing are such that there is reasonable certainty that, at the ETA at the aerodrome of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under visual meteorological conditions; or

The aerodrome of intended landing is isolated and there is no suitable destination alternate aerodrome, and

(iii) There is a standard instrument approach procedure prescribed for the aerodrome of intended landing by the jurisdictional authorities; and

Available current meteorological information indicates that the following meteorological conditions will exist from two hours before to two hours after the ETA:

A cloud base of at least 600 m (2000 ft.) above the airport elevation; and

Visibility will be at least 3 km.

No person may commence an IFR flight :

without at least one destination alternate aerodrome listed in the flight plan unless:

the duration of the flight from the departure aerodrome, or from the point of in-flight re-planning to the destination aerodrome is such that, taking into account all meteorological conditions and operational information relevant to the flight, at the estimated time of use there is a reasonable certainty that

the approach and landing may be made under visual meteorological condition; and

separate runways are usable at the estimated time of use of the destination aerodrome with at least one runway having an operational instrument approach procedure, or

the aerodrome is isolated, and

for each flight into an isolated aerodrome a point of no return shall be determined; and

a flight to be conducted to an isolated aerodrome shall not be continued past the point of no return unless a current assessment of meteorological conditions, traffic, and other operational conditions indicate that a safe landing can be made at the estimated time of use.

The fuel requirements of Subpart 6.2.15(b) (iv) (4) are met.

without at least two destination alternate aerodromes listed in the operational and ATC flight plan when, for the destination aerodrome:

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eteorological condition as at the estimated time of use will be below the operator's established aerodrome operating minima for that operation; or

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eteorological information is not available.

No person may commence an IFR flight in a helicopter,

where no alternate aerodrome is required unless,

The operation is conducted as general aviation: and

Available current meteorological information indicates that the following meteorological conditions will exist from two hours before to two hours after the ETA:

A cloud base of at least 300 m (1000 ft.) above the aerodrome elevation, or at least 120 m (400 ft.) above the lowest applicable approach minimum, whichever is higher; and

Visibility will be of at least 3 km.

without at least one destination alternate heliport listed in the flight plan unless the available information indicates that conditions, at the heliport of intended landing and at least one alternate heliport will, at the ETA, be at or above the heliport operating minima.

No person may commence an IFR flight in a helicopter

without at least one destination alternate heliport listed in the flight plan unless the available information indicates that conditions, at the heliport of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under visual meteorological conditions as prescribed, or

without at least two destination alternate heliports, forecast to be at or above the helicopter operating minima, listed in the operational and ATC flight plan when, at the time of flight departure, the intended heliport destination is forecast to be below the helicopter operating minima; or

(iii) If the heliport of intended landing is isolated and no suitable alternate is available, in which case a point of no return shall be determined.

The ceiling and visibility requirements for operations conducted in accordance with paragraphs (a) – (d) may be reduced upon approval of the Authority:

(i) Other categories of aircraft, such as powered-lift and airships; and

(ii) Commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, that contains the following:

Capabilities of the operator;

Overall capability of the aeroplane and its systems;

Available aerodrome technologies, capabilities, and infrastructure;

Quality and reliability of meteorological information;

Identified hazards and safety risks associated with each alternate aerodrome variation; and

Specific mitigation measures.

6.2.7 IFR Alternate Aerodrome Selection Criteria

If alternate minimums are published, no PIC shall 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:

[**AAC**] will be at or above those published alternate minimums upon take-off from the departing aerodrome, or

[**AOC**] will be at or above the operators established minima for that operation upon take-off from the departing aerodrome, or
the point of in-flight re-planning.

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:

For aeroplanes:

For a precision approach procedure, a ceiling of at least 16 0 m (600 ft.) and visibility of not less than 3 km (2 statute miles); or

For a non-precision approach procedure, a ceiling of at least 240 m (6 00 ft.) and visibility of not less than 5 km (3 statute miles).

For helicopters:

Ceiling 60 m (200 ft.) above the minimum for the approach to be flown, and visibility at least 1 statute mile but never less than the minimum visibility for the approach to be flown: or

If no instrument approach procedure has been published and no special instrument approach procedure has been issued by the Authority to the operator, for the alternate airport, the ceiling and visibility minima are those allowing descent from the MEA, approach, and landing under basic VFR.

The Planning Minima Table will be used in selecting IFR alternate aerodromes.

Planning Minima *(Ceiling & RVR/visibility required, if applicable)*		
Type of Approach	**Aerodrome With**	
	At least two separate approach procedures based on two separate aids serving two separate runways *(see note below)*	At least two separate approach procedures based on two separate aids serving one runway or at least one approach procedure based on one aid serving one runway
PrecisionApproach CAT I, III (ILS, MLS)	PA CAT I minima	NPA minima

PrecisionApproach CAT I (ILS, MLS)	NPA minima	Circling minima or, if not available, NPA minima plus 60 m (200 ft)/1 000 m (3 300 ft)
Non-Precision Approach	The lower of NPA minima plus 60 m (200 ft)/1 000 m (3 300 ft) or circling minima	The higher of NPA minima plus 60 m (200 ft)/1 000 m (3 300 ft) or circling minima
Circling Approach	Circling minima	Circling minima

Note: 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.

To ensure that an adequate margin of safety is observed in determining whether or not an approach and landing can be safely carried out at each alternate aerodrome, the operator shall specify appropriate incremental values for height of cloud base and visibility, acceptable to the Authority, to be added to the operator's established aerodrome operating minima.

The Authority shall approve a margin of time established by the operator for the estimated time of use of an aerodrome.

6.2.8 Off-Shore Alternates for Helicopter Operations (AOC)

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, or when the environment around the offshore alternate is hostile.

Each person selecting an off-shore alternate landing site shall consider the following:

Until the point of no return, using an on-shore alternate. The offshore alternate may be used only after a point of no return.

Attaining one engine inoperative performance capability before arrival at the alternate. (iii)Guaranteeing helideck availability.

The meteorological information at the helideck shall be available from a source approved by the Authority.

For IFR operations, an instrument approach procedure shall be prescribed and available.

Attaining mechanical reliability of critical control systems and critical components when determining the suitability of the alternate.

6.2.8.1 **Offshore destination alternate heliport**

The State of the Operator shall issue a specific approval for the operational use of offshore destination alternate heliports.

A helideck may be specified as an offshore destination alternate heliport when the closest onshore destination alternate is not within achievable range of the helicopter. Specification is subject to the following conditions:

a helideck shall only be used as an offshore destination alternate heliport after the PNR and when an onshore aerodrome is not geographically available. Prior to the PNR, an onshore destination alternate aerodrome shall be used;

the operator shall have a risk assessment process detailed in the operations manual for the utilization of helidecks as offshore destination alternate heliports and conduct such an assessment prior to their selection and use;

the operator has established specific procedures and appropriate training programmes in the operations manual for offshore destination alternate heliport operations;

the operator shall have pre-surveyed, and assessed for suitability, any helideck intended to be used as an offshore destination alternate heliport and have the information published in an appropriate form in the operations manual (including the orientation of the helideck);

the helicopter shall have a one-engine-inoperative (OEI) landing capability at the offshore destination alternate heliport; and

f) the MEL shall contain specific provisions for this type of operation.

The operator's risk assessment process shall take into consideration at least the following:

the type and circumstances of the operation;

the area over which the operation is being conducted, including sea conditions, survivability and search and rescue facilities;

the availability and suitability of the helideck for use as an offshore destination alternate heliport, including the physical characteristics, dimensions, configuration and obstacle clearance, the effect of wind direction and strength, and turbulence;

the type of helicopter(s) being used;

mecha nical reliability of the helicopter engines and critical control systems and components;

the training and operational procedures, including mitigation of the consequences of helicopter technical failures;

specifi c mitigation measures;

helico pter equipment;

spare payload capacity for the carriage of additional fuel;

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r minima, taking into account the accuracy and reliability of meteorological information; and

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unications and aircraft tracking facilities.

The heliport operating minima for the offshore destination and offshore destination alternate heliport required under 2.2.8.2 shall make due allowance for the availability and reliability of weather information and the geographic environment.

The operator shall specify cloud ceiling and visibility criteria relevant to the helideck elevation and location.

To use an offshore destination alternate helideck, it shall be ensured that, within 60 NM of the destination helideck and alternate helideck, fog is not present nor forecasted during the period commencing one hour before and ending one hour after the expected time of arrival at the offshore destination or offshore destination alternate helideck.

The operator shall ensure that, before passing the PNR, the following actions have been completed:

confirmation that navigation to the offshore destination and offshore destination alternate heliport is assured;

radio contact with the offshore destination and offshore destination alternate heliport (or master station) is established;

the landing forecast at the offshore destination and offshore destination alternate heliport are obtained and confirmed to be at or above the required minima;

the requirements for OEI landing are verified against the latest reported weather conditions to ensure that they can be met; and

to the extent possible, having considered information on current and forecast use of the offshore destination alternate heliport, and on conditions prevailing, the availability of the offshore destination alternate heliport will be guaranteed by the helideck provider until the landing at the offshore destination, or the offshore destination alternate heliport, is achieved.

No person may release or takeoff an aircraft without a suitable takeoff alternate specified in the flight plan if either –

it would not be possible to return to the aerodrome of departure, or

meteorological conditions at the aerodrome of departure are below the operator's established aerodrome landing minima for that operation.

Each operator shall ensure that each takeoff alternate specified shall be located within the following flight time from the aerodrome of departure:

For two-engine aeroplane, one-hour flight time at a one-engine-inoperative cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or

For three or more - engine aeroplane, two hours' flight time at an all engine operating cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or

(iii) For aeroplanes engaged in extended diversion time operations where an alternate aerodrome meeting the distance criteria of (b)(i) or (ii) above is not available, the first available alternate aerodrome located within the distance of the operator's approved maximum diversion time considering the actual take-off mass.

The ceiling and visibility requirements for operations conducted in accordance with paragraphs (a) and (b) may be reduced upon approval of the Authority for:

Commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, which contains the following:

Capabilities of the operator;

Overall capability of the aeroplane and its systems;

Available aerodrome technologies, capabilities and infrastructure;

Quality and reliability of meteorological information;

Identified hazards and safety risks associated with each alternate aerodrome variation;

Specific mitigation measures.

For an aerodrome to be selected as a take-off alternate the available information shall indicate that, at the estimated time of use, the conditions will be at or above the operator's established aerodrome operating minima for that operation.

6.2.10 Maximum Distance from an Adequate Aerodrome for Twin-Engined Aeroplanes without an EDTO Approval - AOC

Unless specifically approved by the Authority (EDTO Approval), an AOC holder shall not operate an aeroplane with two engines or more over a route which contains a point further from an adequate aerodrome than, in the case of:

Turbine-powered aeroplanes the distance flown in 60 minutes at the one-engine-inoperative cruise speed determined in accordance with paragraph (b).

Piston-engined aeroplanes:

The distance flown in 120 minutes at the one-engine-inoperative cruise speed determined in accordance with paragraph (b); or

555 km (300 nautical miles), whichever is less

An AOC holder shall determine a speed for the calculation of the maximum distance to an adequate aerodrome for each aeroplane with two or more engines type or variant operated, not exceeding VMO based upon the true airspeed that the aeroplane can maintain with one-engine-inoperative under the following conditions:

International Standard Atmosphere;

Level Flight:

For turbine engine powered aeroplanes at:

FL 170; or

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 AFM, whichever is less.

For piston - powered aeroplanes:

FL 6 0; or

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.

Maximum continuous thrust or power on the remaining operating engine;

An aeroplane mass not less than that resulting from:

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);

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)(i); and

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).

An AOC holder shall ensure that the following data, specific to each type or variant, is included in the Operations Manual:

The one-engine- inoperative cruise speed determined in accordance with paragraph (b); and

The maximum distance from an adequate aerodrome determined in accordance with paragraph (a) and (b).

6.2.11 Requirements for Extended Diversion Time Operations – Aeroplane (AOC)

An AOC holder shall not conduct operations beyond the threshold distance determined in accordance with Subpart 6.2.10 of this part unless approved to do so by the Authority. The specific approval shall identify the applicable threshold time established for each particular aeroplane and engine combination.

In requesting EDTO approval, each AOC holder shall show to the satisfaction of the Authority that:

For aeroplanes:

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or all aeroplanes,

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he most limiting EDTO significant system time limitation, if any indicated in the Aeroplane Flight Manual (directly or by reference) and relevant to that particular operation is not exceeded; and

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he additional fuel required by Subpart 6.2.15 shall include the fuel necessary to comply with the EDTO critical fuel scenario as established by the Authority.

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or aeroplanes with two turbine engines, the aeroplane is EDTO certified and has verified the:

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aturity and reliability of the propulsion system;

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irworthiness certification for EDTO of the aeroplane type; and

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DTO maintenance programme.

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t has conducted a safety risk assessment which demonstrates how an equivalent level of safety will be maintained, taking into account the following:

Capabilities of the operator;

Overall reliability of the aeroplane;

Reliability of each time limited system;

Relevant information from the aeroplane manufacturer; and

Specific mitigation measures

Before conducting an EDTO flight, an AOC holder shall ensure that a suitable EDTO en-route 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.

No AOC holder shall commence a flight unless, during the possible period of arrival, the required en-route alternate aerodrome will be available and the available information indicates that conditions at the aerodrome will be at or above the unapproved for the operation.

No AOC holder shall conduct operations beyond 60 minutes, from a point on a route to an en-route alternate aerodrome unless it ensures that:

For all aeroplanes;

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n-route alternate aerodromes are identified; and

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he most up-to-date information is provided to the flight crew on identified en-route alternate aerodromes, including operational status and meteorological conditions;

For aeroplanes with two turbine engines, the most up-to-date information provided to the flight crew indicates that conditions at identified en-route alternate aerodromes

will be at or above the operator's established aerodrome operating minima for the operation at the estimated time of use.

(iii) these requirements are incorporated into the operators:

operational control and flight dispatch procedures;

operating procedures; and

training programmes.

No AOC Holder shall proceed beyond the threshold time approved by the Authority unless:

the identified en-route alternate aerodromes have been re-evaluated for availability; and

the most up to date information indicates that, during the estimated time of use, conditions at those aerodromes will be at or above the operator's established aerodrome operating minima for that operation; or

(iii) conditions are identified that would preclude a safe approach and landing at that aerodrome during the estimated time of use and an alternative course of action has been determined.

6.2.12 En-Route Alternate Aerodromes: EDTO Operations

The PIC shall ensure that the required en route alternates for EDTO are selected and specified in ATC flight plans in accordance with the EDTO diversion time approved by the Authority.

No person shall select an aerodrome as an EDTO 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 EDTO approval.

The ceiling and visibility requirements for operations conducted in accordance with paragraphs (a) and (b) may be reduced upon approval of the Authority for:

( ) Commercial air transport where the Authority has approved alternate minima as an equivalent level of safety based on the results of a specific safety risk assessment demonstrated by the operator, which contains the following:

Capabilities of the operator;

Overall capability of the aeroplane and its systems;

Available aerodrome technologies, capabilities and infrastructure;

Quality and reliability of meteorological information;

Identified hazards and safety risks associated with each alternate aerodrome variation;

Specific mitigation measures.

Type of Approach	**Planning Minima**	
(RVR/visibility required & ceiling if applicable)		
	Aerodrome with	
	At least 2 separate approach procedures based on 2	At least 2 separate approach procedures based on 2 separate

	separate aids serving 2 separate runways (See note 1)	aids serving 1 runway or, at least 1 approach procedure based on 1 aid serving 1 runway
Precision Approach CAT II, III (ILS, MLS)	Precision Approach CAT 1 Minima	Non – Precision Approach Minima
Precision Approach CAT I (ILS, MLS)	Non-Precision Approach Minima	Circling minima or, if not available, non-precision approach minima plus 200 ft./1000m
Non Precision Approach	lower of non-precision approach minima plus 200 ft. /1000m or circling minima	The higher of circling minima or non – precision approach minima plus 200 ft. /1000m
Circling Approach	Circling Minima	

Note: *Runways on the same aerodrome and 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.*

6.2.13 Fuel, Oil, and Oxygen Planning and Contingency Factors

No person may commence a flight unless he 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.

For aeroplanes in AOC operations, the amount of usable fuel to be carried shall, as a minimum, be based on:

The following data:

Current aeroplane-specific data derived from a fuel consumption monitoring system, if available; or

If current aeroplane-specific data are not available, data provided by the aeroplane manufacturer, and

The operating conditions for the planned flight including:

Anticipated aeroplane mass;

Notices to Airmen;

Current meteorological reports or a combination of current reports and forecasts;

ATC procedures, restrictions and anticipated delays; and

The effects of deferred maintenance items and or configuration deviations.

Any other conditions that may delay the landing of the aeroplane or increase fuel, oil and or oxygen consumption.

The pre-flight calculation of usable fuel required shall include:

TAXI FUEL. Which shall be the amount of fuel expected to be consumed before take-off, taking into account local conditions at the departure aerodrome and APU fuel consumption;

TRIP FUEL. Which shall be the amount of fuel required to enable the aeroplane to fly from take-off until landing at the destination aerodrome, taking into account the operating conditions in paragraph 8.6.2.13(b)(2) of this subsection;

(iii) CONTINGENCY FUEL. Which shall be the amount of fuel required to compensate for unforeseen factors. It shall not be less than 5 per cent of the planned trip fuel or of the fuel required from the point of in-flight re-planning based on the consumption rate used to plan the trip fuel but, in any case, shall not be lower than the amount required to fly for 5 minutes at holding speed at 450 m (1 500 ft) above the destination aerodrome in standard conditions;

(iv) DESTINATION ALTERNATE FUEL. Which shall be:

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Perform a missed approach at the destination aerodrome;

Climb to the expected cruising altitude;

Fly the expected routing;

Descend to the point where the expected approach is initiated; and

Conduct the approach and landing at the destination alternate aerodrome; or

` Ā↠Ā □ Ā □ Ā □ here two destination alternate aerodromes are required, the amount of fuel, as calculated in 8.6.2.13(c)(4)(i), required to enable the aeroplane to proceed to the destination alternate aerodrome which requires the greater amount of alternate fuel; or

` Ā↠Ā □ Ā □ Ā □ here a flight is operated without a destination alternate aerodrome, the amount of fuel required to enable the aeroplane to fly for 15 minutes at holding speed at 450 m (1 500 ft) above destination aerodrome elevation in standard conditions; or

` Ā↠Ā □ Ā □ Ā □ here the aerodrome of intended landing is an isolated aerodrome:

For a reciprocating-engine aeroplane, the amount of fuel required to fly for 45 minutes plus 15 per cent of the flight time planned to be spent at cruising level, including final reserve fuel, or 2 hours, whichever is less; or

For a turbine-engined aeroplane, the amount of fuel required to fly for 2 hours at normal cruise consumption above the destination aerodrome, including final reserve fuel;

FINAL RESERVE FUEL. Which shall be the amount of fuel on arrival at the destination alternate aerodrome, or the destination aerodrome when no destination alternate aerodrome is required

For a reciprocating-engine aeroplane, the amount of fuel required to fly for 45 minutes; or

For a turbine-engined aeroplane, the amount of fuel required to fly for 30 minutes at holding speed at 450 m (1 500 ft) above aerodrome elevation in standard conditions;

(vi) ADDITIONAL FUEL. Which shall be the supplementary amount of fuel required to enable the aeroplane to descend as necessary and proceed to land at an alternate

aerodrome in the event of engine failure or loss of pressurisation based on the assumption that such a failure occurs at the most critical point along the route; and

DISCRETIONARY FUEL. Which shall be the extra amount of fuel to be carried at the discretion of the PIC.

Operators shall determine one final reserve fuel value for each aeroplane type and variant in their fleet rounded up to an easily recalled figure.

The use of fuel after flight commencement for purposes other than originally intended during pre-flight planning shall require a re-analysis and, if applicable, an adjustment of the planned operation.

All helicopters,

A flight shall not be commenced unless, taking into account both the meteorological conditions and any delays that are expected in flight, the helicopter carries sufficient fuel and oil to ensure that it can safely complete the flight. In addition, a reserve shall be carried to provide for contingencies.

each person computing the required minimum fuel and oil supply shall ensure that additional fuel and oil are carried to provide for the increased consumption that would result from any additional operating conditions in (ii)(2) as applied to helicopters, and any of the following contingencies:

Expected winds or other meteorological conditions;

Possible variations in ATC routings;

Anticipated traffic delays;

A complete instrument approach procedure and possible missed approach at destination;

Loss of pressurization en route, if applicable;

Loss of one power-unit en route; and

Any other conditions that may delay the landing of the helicopter or increase fuel and oil consumption and or oxygen consumption (if applicable).

In-flight fuel management.

The operator shall establish policies and procedures, approved by the State of the Operator, to ensure that inflight fuel checks and fuel management are performed.

The PIC shall:

Continually ensure that the amount of usable fuel remaining on board is not less than the fuel required to proceed to an aerodrome or heliport where a safe landing can be made with the planned final reserve fuel remaining upon landing.

Request delay information from ATC when unanticipated circumstances may result in landing at the destination aerodrome or heliport with less than the final reserve fuel plus any fuel required to proceed to an alternate aerodrome or the fuel required to operate to an isolated aerodrome or heliport.

(iii)Advise ATC of a minimum fuel state by declaring "**MINIMUM FUEL**" when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome or heliport may result in landing with less than planned final reserve fuel.

Declare a situation of fuel emergency by broadcasting "**MAYDAY MAYDAY MAYDAY FUEL**", when the calculated usable fuel predicted to be available upon

landing at the nearest aerodrome or heliport where a safe landing can be made is less than the planned final reserve fuel.

6.2.14 Minimum Fuel Supply for VFR Flights

Aeroplane. 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:

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or flights during the day, for at least 30 minutes thereafter; and

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or flights during the night, for at least 45 minutes thereafter.

Helicopter. 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:

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or 20 minutes thereafter; and

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o have an additional amount of fuel sufficient to provide for the increased consumption on the occurrence of any of the potential contingencies specified by the operator to the satisfaction of the Authority.

6.2.15 Minimum Fuel Supply for IFR Flights

Aeroplanes. No person may commence a flight under IFR unless there is enough fuel supply, considering meteorological conditions and any delays that are expected in flight, to:

When a destination alternate aerodrome is required, fly from the aerodrome of intended landing to an alternate aerodrome, and after that, for at least 45 minutes at normal cruising altitude;

When a destination alternate aerodrome is not required, fly to the aerodrome of intended landing and after that for at least 45 minutes at normal cruising altitude.

[AOC] Aeroplanes. No person may commence a flight under IFR, or continue past the point of in-flight re-planning, unless there is enough fuel supply, considering meteorological conditions and any delays that are expected in flight, to include the following:

Taxi fuel – which shall be the amount of fuel expected to be consumed before take-off;

Trip fuel – which shall be the amount of fuel required to enable the aeroplane to fly from take-off, or the point of in-flight re-planning, until landing at the destination aerodrome taking into account the operating conditions in the data provided by the manufacturer;

(iii) **Contingency fuel** – which shall be the amount of fuel required to compensate for unforeseen factors. It shall be five percent of the planned trip fuel or of the fuel required from the point of in-flight re-planning based on the consumption rate used to plan the trip fuel, but in any case, shall not be lower than the amount required to fly for five minutes at holding speed at 450 m (1500 ft.) above the destination aerodrome in standard conditions;

Destination alternate fuel – which shall be:

Where a destination alternate aerodrome is required, the amount of fuel required to enable the aeroplane to:

Perform a missed approach at the destination aerodrome;

Climb to the expected cruising altitude;

Fly the expecting routing;

Descend to the point where the expected approach is initiated; and

Conduct the approach and landing at the destination alternate aerodrome; or

Where two destination alternate aerodromes are required, the amount of fuel, as calculated in (iv)(1) above, required to enable the aeroplane to proceed to the destination alternate aerodrome which requires the greater amount of alternate fuel; or

Where a flight is operated without a destination alternate aerodrome, the amount of fuel required to enable the aeroplane to fly for 15 minutes at holding speed at 450 m (1500 ft.) above destination aerodrome elevation in standard conditions; or

Where the aerodrome of intended landing is an isolated aerodrome:

For a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes plus 15 percent of the flight time planned to be spent at cruising level, including final reserve fuel, or two hours, whichever is less; or

For a turbine-engined aeroplane, the amount of fuel required to fly for two hours at normal cruise consumption above the destination aerodrome, including final reserve fuel;

Final reserve fuel – which shall be the amount of fuel calculated using the estimated mass on arrival at the destination alternate aerodrome, or the destination aerodrome when no destination alternate aerodrome is required, or a pre-calculated value for each aeroplane type and variant in the fleet rounded up to an easily recalled figure:

For a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes, under speed and altitude conditions specified by the Authority; or

For a turbine-engined aeroplane, the amount of fuel required to fly for 30 minutes at holding speed at 450 m (1500 ft.) above aerodrome elevation in standard conditions;

Additional fuel – which shall be the supplementary amount of fuel required if the minimum fuel calculated in accordance with trip fuel, contingency fuel, destination alternate fuel and final reserve fuel above is not sufficient to:

Allow the aeroplane to descend as necessary and proceed to an alternate aerodrome in the event of engine failure or loss or pressurization, whichever requires the greater amount of fuel based on the assumption that such a failure occurs at the most critical point along the route;

To fly for 15 minutes at holding speed at 450 m (1500 ft.) above the aerodrome elevation in standard conditions; and

Make an approach and landing;

Allow an aeroplane engaged in EDTO to comply with the EDTO critical fuel scenario as established by the Authority;

Meet additional requirements not covered above.

Discretionary fuel – shall be the extra amount of fuel to be carried at the discretion of the PIC, or

Notwithstanding the provisions in (b)(i)–(vi) above, the Authority may approve a variation to these requirements provided the operator can demonstrate an equivalent level of safety will be maintained through a safety risk assessment that includes at least the following:

Flight fuel calculations;

Capabilities of the operator to include:

A data-driven method that includes a fuel consumption monitoring programme; and or

The advanced use of alternate aerodromes; and

Specific mitigation measures.

[AOC]/Helicopters. No person may commence a flight under IFR unless there is enough fuel supply, considering meteorological conditions and any delays that are expected in flight, to:

When a destination alternate is required to fly to and execute an approach, and a missed approach, at the heliport to which the flight is planned, and thereafter;

fly to and execute an approach at the alternate specified in the flight plan; and then fly for 30 minutes at a holding speed at 450 m (1500 ft.) above the alternate under standard temperature conditions, and approach and land; and

have a reserve for contingencies specified by the operator and approved by the Authority.

When a destination alternate is not required, to fly to the heliport to which the flight is planned and thereafter:

fly for 30 minutes at a holding speed at 450 m (1500 ft.) above the alternate under standard temperature conditions, and approach and land; and

have a reserve for contingencies specified by the operator and approved by the Authority.

(iii)The use of fuel after flight commencement for purposes other than originally intended during pre-flight planning shall require a re-analysis and, if applicable, adjustment of the planned operation.

(iv) When no alternate heliport or landing location is available, in terms of 6.2.6 (e.g. the destination is isolated), sufficient fuel shall be carried to enable the helicopter to fly to the destination to which the flight is planned and thereafter for a period that will, based on geographic and environmental considerations, enable a safe landing to be made.

6.2.16 Flight Planning Document Distribution and Retention: Commercial Air Transport

For commercial air transport operations, the PIC shall prior to departure approve and sign the following flight preparation documents and where applicable these documents shall be signed by the flight operations officer or flight dispatcher and a copy filed with the operator or a designated agent, or, if these procedures are not possible it shall be left with the aerodrome or heliport authority or on record in a suitable place at the point of departure:

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.

A load manifest, showing the distribution of the load, center of gravity, takeoff and landing mass and compliance with maximum operating mass limitations, and performance analysis.

(iii)An applicable technical log page, showing acceptance of the aircraft.

No person may takeoff an aircraft in commercial air transport unless all flight release documents, signed by the PIC, and are retained and available at the point of departure.

The PIC shall carry a copy of the documents specified in paragraph (a) on the aircraft to the destination aerodrome.

Fuel and oil records shall be retained by the operator for a period of three (3) months to ascertain that trends for oil consumption are such that an aeroplane has sufficient oil to complete each flight.

Completed flight preparation forms shall be kept by an operator for a period of three (3) months.

The operator shall maintain fuel records to enable the State of the Operator to ascertain that, for each flight, the requirements of 6.2.13 have been complied with.

No person may operate an aircraft unless all loads carried are properly distributed and safely secured.

No person may operate an aircraft unless the calculations for the mass of the aircraft and centre of gravity location indicate that the flight can be conducted safely, taking into account the flight conditions expected.

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.

6.2.18 Maximum Allowable Mass to be Considered on all Load Manifests

The PIC shall ensure that the maximum allowable mass for a flight does not exceed the maximum allowable takeoff mass:

For the specific runway and conditions existing at the takeoff time; and

Considering anticipated fuel and oil consumption that allows compliance with applicable en route performance, landing mass, and landing distance limitations for destination and alternate aerodromes or heliports.

6.2.19 Flight Release Required: Commercial Air Transport

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.

No person may commence a passenger-carrying flight in commercial air transport for which there is a published schedule, unless that person is licensed or approved in accordance with the relevant Sierra Leone Civil Aviation Regulations and authorised by the AOC holder to perform operational control functions to issue a flight release for that specific operation or series of operations.

No person may commence a flight unless the operational flight plan has been signed by the PIC.

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.

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.

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.

The operator shall specify flight planning procedures to provide for the safe conduct of the flight based on considerations of aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned. These procedures shall be included in the operations manual.

6.2.20.1 Aircraft Tracking: Commercial Air Transport

The operator shall establish an aircraft tracking capability to track aeroplanes throughout its area of operations.

The operator shall track the position of an aeroplane through automated reporting at least every 15 minutes for the portion(s) of the in-flight operation(s) under the following conditions:

the aeroplane has a maximum certificated take-off mass of over 27 000 kg and a seating capacity greater than 19; and

where an ATS unit obtains aeroplane position information at greater than 15 minute intervals.

The operator shall track the position of an aeroplane through automated reporting at least every 15 minutes for the portion(s) of the in-flight operation(s) that is planned in an oceanic area(s) under the following conditions:

the aeroplane has a maximum certificated take-off mass of over 45 500 kg and a seating capacity greater than 19; and

where an ATS unit obtains aeroplane position information at greater than 15 minute intervals.

The Authority, may approve variations to subpart 6.2.20.1 (b) and (c) if the operator can demonstrate how risks to the operation resulting from such variations can be managed and shall include at least the following:

capability of the operator's operational control systems and processes, including those for contacting ATS units;

overall capability of the aeroplane and its systems;

(iii)available means to determine the position of, and communicate with, the aeroplane;

frequency and duration of gaps in automated reporting;

human factors consequences resulting from changes to flight crew procedures; and

Specific mitigation measures and contingency procedures.

The operator shall establish procedures, approved by the Authority, for the retention of aircraft tracking data to assist Search and Rescue in determining the last known position of the aircraft.

6.2.21 Time Capability of Cargo Compartment Fire Suppression System

No person may plan a flight if the diversion time to an aerodrome where a safe landing could be made exceeds the cargo compartment fire suppression time capability of the aeroplane, when one is identified in the relevant aeroplane documentation, unless the Authority specifies a reduction of the operational safety margin.

AIRCRAFT OPERATING AND PERFORMANCE LIMITATIONS

7.1All Aircraft

7.1.1 Applicability

Aircraft shall be operated in accordance with a comprehensive and detailed code of performance established by the State of Registry in compliance with the applicable Standards of this chapter

Except as provided in 7.1.5, single-engine aeroplanes shall only be operated in conditions of weather and light, and over such routes and diversions therefrom, that permit a safe forced landing to be executed in the event of engine failure.

In conditions where the safe continuation of flight is not ensured in the event of a critical engine failure, helicopter operations shall be conducted in conditions of weather and light, and over such routes and diversions, that permit a safe forced landing to be executed.

7.1.2 General

No person may operate an aircraft that:

Exceeds its designed performance limitations for any operation, as established by the State of Registry; or

Exceeds operating limitations contained in the Aircraft Flight Manual, or its equivalent;

(iii)Exceeds the terms of its certificate of airworthiness;

Exceeds the mass limitations, if applicable, imposed by the terms of its noise certification standards, as contained in the applicable part of ICAO Annex 16, Volume I, unless otherwise approved by the Authority.

The Authority, when also the State of Registry of an aircraft shall take such precautions as are reasonably possible to ensure that the general level of safety contemplated by these provisions is maintained under all expected operating conditions, including those not covered specifically by the provisions of this sub-Part.

Where helicopters are operating to or from heliports in a congested hostile environment, the competent authority of the State in which the heliport is situated shall take such precautions as are necessary to control the risk associated with an engine failure.

Each operator shall ensure that the performance data contained in the AFM, RFM, or other authorised sources used to determine compliance with the appropriate requirements of Subpart 7 of this Regulation.

When applying performance data, each person performing calculations shall account for all factors that significantly affect the performance of the aircraft configuration, including, but not limited to:

mass of the aeroplane,

the operating procedures,

(iii)the pressure-altitude appropriate to the elevation of the aerodrome,

the runway slopes

the ambient temperature,

the wind,

surface conditions of the runway i.e., environmental conditions, snow, slush, water, ice, for landplanes, water surface condition for seaplanes, and

the operation of any system or systems that may have an adverse effect on performance.

The factors described in subpart (b) of the aircraft performance calculations shall be taken into account directly as operations parameters or indirectly by means of allowances or

margins, which may be provided in the design performance limits or in the terms of the AOC in accordance with which the aeroplane is being operated.

7.1.4 Mass and Obstruction Clearance Limitations

No person may takeoff an aircraft without ensuring that the maximum allowable mass for a flight does not exceed:

the mass at which 5.2.8 is complied with, or the mass at which 5.2.9, 5.2.10 and 5.2.11 are complied with, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is envisaged in applying 5.2.9 and 5.2.10 and, in respect of alternate aerodromes, 5.2.7 c) and 5.2.11.

the maximum take-off mass specified in the flight manual for the pressure-altitude appropriate to the elevation of the aerodrome, and, if used as a parameter to determine the maximum take-off mass, any other local atmospheric condition.

the maximum landing mass specified in the flight manual for the pressure-altitude appropriate to the elevation of those aerodromes, and if used as a parameter to determine the maximum landing mass, any other local atmospheric condition.

the relevant maximum masses at which compliance has been demonstrated with the applicable noise certification Standards in Annex 16, Volume I, unless otherwise authorized in exceptional circumstances for a certain aerodrome or a runway where there is no noise disturbance problem, by the competent authority of the State in which the aerodrome is situated.

Take-off. The aeroplane shall be able, in the event of a critical engine failing, or for other reasons, at any point in the take-off, either to discontinue the take-off and stop within the accelerate-stop distance available, or to continue the take-off and clear all obstacles along the flight path by an adequate vertical or horizontal distance until the aeroplane is in a position to comply with 5.2.9. When determining the resulting take-off obstacle accountability area, the operating conditions, such as the crosswind component and navigation accuracy, must be taken into account.

In determining the length of the runway available, account shall be taken of the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

En route — one-engine-inoperative. The aeroplane shall be able, in the event of the critical engine becoming inoperative at any point along the route or planned diversions therefrom, to continue the flight to an aerodrome at which the Standard of 5.2.11 can be met, without flying below the minimum flight altitude at any point.

En route — two engines inoperative. In the case of aeroplanes having three or more engines, on any part of a route where the location of en-route alternate aerodromes and the total duration of the flight are such that the probability of a second engine becoming inoperative must be allowed for if the general level of safety implied by the Standards of this chapter is to be maintained, the aeroplane shall be able, in the event of any two engines becoming inoperative, to continue the flight to an enroute alternate aerodrome and land.

Landing. The aeroplane shall, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance has not been made in the scheduling of performance data.

7.1.4 **OBSTACLE CLEARANCE**

Obstacle data shall be provided to enable the operator to develop procedures to comply with 5.2.9

The operator shall take account of charting accuracy when assessing compliance with 5.2.8.

7.1.5 Additional Requirements for Operations of Single-Engine Turbine-Powered Aeroplanes at Night and/or in Instrument Meteorological Conditions (IMC)

In approving operations by single-engine turbine-powered aeroplanes at night and/or in IMC, the State of the Operator shall ensure that the airworthiness certification of the aeroplane is appropriate and that the overall level of safety intended by the provisions of Annexes 6 and 8 is provided by:

the reliability of the turbine engine;

the operator's maintenance procedures, operating practices, flight dispatch procedures and crew training programmes;

engine trend monitoring system, redundant electrical generating systems, radio altimeter, airborne weather radar, and

equipment and other requirements provided in accordance with this Part

7.2 Aircraft used in Commercial Air Transport

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.

7.2.2 General

Each person operating an aircraft engaged in commercial air transport shall comply with the provisions of Subpart 7.2.

Each person operating a rotorcraft identified as Class 1, 2, or 3 in international commercial air transport shall comply with the code of performance in IS: 7.2.2(b).

The Authority may grant exemptions in accordance with Part 1 of these Regulations, from the requirements of Subpart 7.2 if special circumstances make a literal observance of a requirement unnecessary for safety.

Where full compliance with the requirements of Subpart 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 Subpart.

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 Subparts 7.2.5 through 7.2.9 unless that aircraft is continually operated:

In daylight;

In VFR, excluding over the top operations; and

(iii) At a mass that will allow it to climb, with the critical engine inoperative, at least 15 m (50 ft.) a minute when operating at the MEAs of the intended route or any planned diversion, or at 1500 m (5,000 ft.) MSL, whichever is higher.

Multi-engine aircraft that are unable to comply with paragraph (e) (iii) are, for the purpose of this Subpart, considered to be a single engine aircraft and shall comply with the requirements of paragraph (d).

7.2.3 Aircraft Performance Calculations

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.

All single-engine turbine-powered aeroplanes operated at night and or in IMC shall have an engine trend monitoring system, and those aeroplanes for which the individual certificates of airworthiness has been issued shall have an automatic trend monitoring system.

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-

Any reasonably expected adverse operating conditions that may affect aircraft performance;

One engine failure for aircraft having two engines, if applicable; and

(iii)Two engine failure for aircraft having three or more engines, if applicable.

When calculating the performance and limitation requirements of 7.2.4 to 7.2.6 , each person performing the calculation shall, for all engines operating and for inoperative engines, accurately account for:

In all phases of flight:

The effect of fuel and oil consumption on aircraft mass;

The effect of fuel consumption on fuel reserves resulting from changes in flight path, winds and aircraft configuration;

The effect of fuel jettisoning on aircraft mass and fuel reserves, if applicable and approved;

the effect of any ice protection system, if applicable and weather conditions require its use;

ambient temperatures and winds along intended route and any planned diversion; and Flight paths and minimum altitudes required to remain clear of obstacles.

During takeoff and landing:

The condition of the takeoff runway of area to be used, including any contaminates (e.g., water, slush, snow, ice);

The gradient of runway to be used;

The runway length including clearways and stopways, if applicable;

Pressure altitudes at takeoff and landing sites;

Current ambient temperatures and winds at takeoff;

Forecast ambient temperatures and winds at each destination and planned alternate landing site;

The ground handling characteristics (e.g. braking action) of the type of aircraft; and

Landing aids and terrain that may affect the takeoff path, landing path, and landing roll.

7.2.4 Take off Limitations

Aeroplanes. No person may takeoff an aeroplane unless the following requirements are met when determining the maximum permitted take-off mass:

The takeoff run shall not be greater than the length of the runway.

For turbine engine powered aeroplanes:

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 ½ the length of the runway; and

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 V1.

(iii)**For reciprocating engine powered aeroplanes**-

The accelerate-stop distance shall not exceed the length of the runway at any time during takeoff until reaching V1.

critical engine fails at any time after the aeroplane reaches V1, to continue the takeoff flight path and clear all obstacles either:

By a height of at least 9m (35 ft.) vertically for turbine engine powered aeroplanes or 15m (50 ft.) for reciprocating engine powered aeroplanes; and

By at least 60m (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.

Helicopters. No person may takeoff a helicopter used in commercial air transport that, in the event of a critical engine failure, cannot:

For Class 1 helicopters:

At or before the takeoff decision point, discontinue the takeoff and stop within the rejected takeoff area; or

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.

For Class 2 helicopters:

Before reaching a defined point after take-off, safely execute a forced landing within the rejected takeoff area; or

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.

(iii)**Class 3 Helicopters**.

Clear the obstacles along its flight path by an adequate margin; or

Maintain minimum flight altitude; or

At engine failure permit a safe, forced landing.

The Authority shall only permit Performance Class 1 Helicopters to operate from elevated heliports in congested areas.

7.2.5 En Route Limitations: all Engines Operating

No person may take off a piston - engined aeroplane used in commercial air transport at a mass that does not allow a rate of climb of a least 6.9 VSO (that is, the number of feet per minute obtained by multiplying the aircraft minimum steady flight speed by 6.9) with all engine operating, at an altitude of at least 300m (1,000 ft.) above all terrain and obstructions within ten miles of each side of the intended track.

Class 3 Helicopters: The helicopter shall be able, with all power- units operating, to continue along its intended route or planned diversions without flying at any point below the appropriate minimum flight altitude. At any point of the flight path, failure of a power-unit will cause the helicopter to force land; therefore the conditions stated in 7.2.4(c) shall apply.

7.2.6 En-Route Limitations: One Engine Inoperative

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:

For piston - engined aeroplanes:

At least a rate of climb of 0.079 – (0.106/number of engines installed) Vso2 (when Vso is expressed in knots) at an altitude of 300m (1,000 ft.) above all terrain and obstructions within 9.3km (5sm), on each side of the intended track; and

A positive slope at 1,500ft above the aerodrome where the aeroplane is assumed to land.

For turbine engine powered transport category aeroplanes:

A positive slope at an altitude of at least 300m (1,000 ft.) above all terrain and obstructions within 9.3km (5sm), on each side of the intended track;

A net flight path from cruising altitude to the intended landing aerodrome that allows at least 600m (2000 ft.) clearance above all terrain and obstructions within 9.3km (5sm) on each side of the intended track; and

A positive slope at an altitude of at least 450m (1,500ft) above the aerodrome where the aeroplane is assumed to land.

Helicopters. 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 at any point in the enroute phase, continue the flight to the destination or alternate landing site without flying below the 1 at any point and clearing all obstacles in the approach path by a safe margin.

7.2.7 En-Route Limitation: Two Engines Inoperative

Aeroplane. No person may takeoff an aeroplane used in commercial air transport having three or more engines at such a mass where there is no suitable landing aerodrome within 90 minutes at any point along the intended route (with all engine 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:

For turbine engine powered aeroplanes

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;

A positive slope at 1,500 ft. (450 metres) above the aerodrome of intended landing; and

Enough fuel to continue to the aerodrome of intended landing, to arrive at an altitude of at least 1,500 ft. (450 metres) directly over the aerodrome, and thereafter to fly for 15 minutes at cruise power.

For reciprocating engine powered aeroplanes:

A rate climb at 0.013 Vso2 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 1000 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, whichever is higher; and

Enough fuel to continue to the aerodrome of intended landing and to arrive at an altitude of at least 300m (1,000 ft.) directly over that aerodrome.

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.

Aeroplane. No person may take off an aeroplane used in commercial operations unless its mass on arrival at either the intended destination aerodrome or any planned alternate aerodrome would allow a full stop landing from a point 50 ft. (15 metres) above the intersection of the obstruction clearance plane and the runway, and within-

For turbine engine powered aeroplanes, 60 percent of the effective length of each runway.

For reciprocating engine powered aeroplanes, 70 percent of the effective length of each runway.

(iii)For the purpose of determining the allowable landing mass at the destination aerodrome, each person determining the landing limits shall ensure that:

The aeroplane is landed on the most favourable runway and in the most favourable direction, in still air; or

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.

(iv) A turbine powered transport category aeroplane that would be prohibited from taking off because it could not meet the requirements of paragraph (a) (i), may take off if an alternate aerodrome is specified that meets all the requirements of paragraph (a).

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.

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 site, can-

For Class 1 helicopters:

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

After the landing decision point, land and stop within the landing distance available.

For Class 2 and Class 3 helicopters-

Before reaching a defined point before landing, safely execute a forced landing within the landing distance available.

7.2.9 Additional Requirements for Class 3 Helicopters Operating in IMC

Except for special VFR flights, no person shall operate a performance Class 3 helicopter in IMC unless:

The surface environment over which the operation is to be performed is acceptable to the Authority;

(ii) The helicopter is certified for flight under IFR;

(iii)The operation is approved by the Authority taking into consideration the overall level of safety provided by:

The reliability of the engines;

The operator's maintenance procedures, operating practices and crew training programmes; and equipment including the operator's vibration health monitoring practices for the tail-rotor drive system.

Except for special VFR flights, no person shall operate a performance Class 3 helicopter in IMC unless the operator has an engine trend monitoring system and uses the instruments, systems and operational or maintenance procedures to monitor the engines that are recommended by the helicopter manufacture.

7.2.10 Time Capability of Cargo Compartment Fire Suppression System

All flights shall be planned so that the diversion time to an aerodrome where a safe landing could be made does not exceed the cargo compartment fire suppression time capability of the aeroplane, when one is identified in the aeroplane documentation, reduced by an operational safety margin specified by the Authority

FLIGHT RULES

8.1All Operations

An operator shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole.

8.1.2 Operation of Aircraft on the Ground

No person may taxi an aircraft on the movement area of an aerodrome unless the person at the controls:

Has been authorised by the owner, the lessee, or a designated agent;

Is fully competent to taxi the aircraft;

(iii)Is qualified to use the radio if radio communications are required; and

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.

No person shall cause a helicopter rotor to be turned under power unless there is a qualified pilot at the controls.

No person shall taxi an aircraft under the guidance of a signalman unless:

(1) The standard marshalling signals to the aircraft are provided in a clear and precise manner using the signals as prescribed by in IS 8.2.11

(2) The signalman is wearing a distinctive fluorescent identification vest to allow the flight crew to identify that he/she is the person responsible for the marshalling operation; and

(3) The signalman and all participating ground personnel are using daylight - to fluorescent wands, table-tennis bats, or gloves for all signaling during daylight hours, and illuminated wands at night or in low visibility.

The operator shall provide appropriately specific training and procedures to be followed for all personnel, other than qualified pilots, who are likely to carry out the turning of a rotor under power for purposes other than flight.

No unqualified person may tow an aircraft.

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

The RVR or visibility in the takeoff direction of the aircraft is equal to or better than the applicable minimum.

8.1.4 Flight into known or expected icing

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 been inspected for icing and, if necessary has been given appropriate de-icing or anti-icing treatment.

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.

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.

Each person operating an aircraft, except a balloon or glider, shall maintain the cruising altitude or flight level by reference to an altimeter setting.

The flight crew shall use the altimeter settings provided by the ATC service of Authority.

Below transition altitude to:

The current reported altimeter setting of a station along the route and within 100 nautical miles of the aircraft;

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

At or above transition level to 29.92” Hg or 1013.2 hPa.

8.1.6Minimum Safe Altitudes: General

Except when necessary for takeoff or landing, no person may operate an aircraft below the following altitudes:

(a) **Anywhere.** 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.

(b) **Over congested areas.** 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.

(c) **Over other than congested areas.** 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.

Helicopters. Pilots of helicopters are not subject to the proximity restrictions provided they operate in a manner that is not hazardous to person and property on the surface. The PIC of a helicopter shall comply with any routes or altitudes for the area that are prescribed for helicopters by the Authority.

Except when necessary for takeoff or landing, no person shall operate an aircraft below the following altitudes:

No person shall operate an aeroplane during the day, under VFR, at an altitude less than 300 m (1000 ft.) above the surface or within 300 m (1000 ft.) of any mountain, hill, or other obstruction to flight.

No person shall operate an aeroplane at night, under VFR, at an altitude less than 300 m (1000 ft.) above the highest obstacle within a horizontal distance of 6 km (5 statute miles) from the centre of the intended course, or, in designated mountainous areas, less than 600 m (2000 ft.) above the highest obstacle within a horizontal distance of 6 km (5 statute miles) from the centre of the intended course.

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 in accordance with the provisions of IS: 8.1.8.

The Authority may approve operational credit(s) for operations with aeroplanes equipped with automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS. Such approvals shall not affect the classification of the instrument approach procedure.

When issuing a specific approval for the operational credit, the Authority shall ensure that the:

aeroplane meets the appropriate airworthiness certification requirements;

information necessary to support effective crew tasks for the operation is appropriately available to both pilots where the number of flight crew members specified in the operations manual is more than one;

operator has carried out a safety risk assessment of the operations supported by the equipment;

operator has established and documented normal and abnormal procedures and MEL;

operator has established a training programme for the flight crew members and relevant personnel involved in the flight preparation;

operator has established a system for data collection, evaluation and trend monitoring for low visibility operations for which there is an operational credit; and

operator has instituted appropriate procedures in respect of continuing airworthiness (maintenance and repair) practices and programmes.

No person may conduct instrument approach operations at an aerodrome below 6 00 m (2600 ft.) visibility unless RVR information is provided.

(iii) Instrument approach operations shall be classified based on the designed lowest operating minima below which an approach operation shall only be continued with the required visual reference as follows:

Type A: a minimum descent height or decision height at or above 75 m (250 ft.); and

Type B: a decision height below 75 m (250 ft.). Type B instrument approach operations are categorized as:

Category I (CAT I): a decision height not lower than 60 m (200 ft.) with either a visibility not less than 6 00 m or a runway visual range not less than 550 m;

Category II (CAT II): a decision height lower than 60 m (200 ft.) but not lower than 30 m (100 ft.) and a runway visual range not less than 300 m;

Category IIIA (CAT IIIA): a decision height lower than 30 m (100 ft.) or no decision height and a runway visual range not less than 175 m;

Category IIIB (CAT IIIB): a decision height lower than 15m (50 ft.) or no decision height and a runway visual range less than 175 m but not less than 50 m; and,

Category IIIC (CAT IIIC): no decision height and no runway visual range limitations.

The operating minima for 2D instrument approach operations using instrument approach procedures shall be determined by establishing a minimum descent altitude (MDA) or minimum descent height (MDH), minimum visibility and, if necessary, cloud conditions.

The operating minima for 3D instrument approach operations using instrument approach procedures shall be determined by establishing a decision altitude (DA) or decision height (DH) and the minimum visibility or RVR.

The Operator shall establish operational procedures designed to ensure that an aeroplane being used to conduct 3D instrument approach operations crosses the threshold by a safe margin, with the aeroplane in the landing configuration and attitude.

(iv) For operations with operational credit with minima above those related to low visibility operations, the State of the Operator shall establish criteria for the safe operation of the aeroplane.

8.1.9 Category II and III Operations: General Operating Rules

No person may operate a civil aircraft in a Category II or III operation unless-

The PIC and CP of the aircraft hold the appropriate authorizations and ratings prescribed in SLCAR Part 1A

Each flight crew member has adequate knowledge of, and familiarity with, the aircraft and the procedures to be used; and

(iii)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 and RVR information is available for the aerodrome.

Unless otherwise authorized 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.

When the approach procedure being used provides for and requires the use of a DH, the authorised DH is the highest of the following:

The DH prescribed by the approach procedure.

The DH prescribed for the PIC.

(iii)The DH for which the aircraft is equipped.

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:

(i) 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.

(ii) At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot:

The approach light system, except that the pilot may not descend below 100 feet (30 m) 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.

The threshold.

The threshold markings.

The threshold lights.

The touchdown zone or touchdown zone markings.

The touchdown zone lights.

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.

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.

No person may conduct Category II or III instrument approaches and landing operations below 800 m (2600 ft.) visibility unless RVR information is provided.

Paragraphs (a) through (g) of this section shall not be applicable to operations conducted by AOC holders issued a certificate under SLCAR Part 26.

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.

The State of the Operator shall issue a specific approval for instrument approach operations in low visibility which shall only be conducted when RVR information is provided.

For take-off in low visibility, the Authority shall issue a specific approval for the minimum take-off RVR.

8.1.10 Category II and Category III Manual

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:

There is available in the aircraft a current and approved Category II or Category III manual, as appropriate, for that aircraft;

The operation is conducted in accordance with the procedures, instructions, and limitations in the appropriate manual; and

(iii)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.

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.

Paragraphs (a) and (b) shall not apply to operations conducted by an AOC holder issued a certificate under Part 9 of these Regulations, which will have approved Category II or III operations included as a part of its operations manual.

8.1.11 Exemption from Certain Category II Operations

The Authority may authorize deviations from the requirements of subparts 8.1.8 and 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.

8.1.12 Diversion Decision – Engine Inoperative

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.

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:

Nature of the malfunction and the possible mechanical difficulties that may occur if flight is continued;

Altitude, mass, and usable fuel at the time of engine stoppage;

(iii)Weather conditions en route and at possible landing points;

Air traffic congestion;

Kind of terrain; and

Familiarity with the aerodrome to be used.

8.1.13 Operating Near Other Aircraft – Including Formation Flights

No person shall operate an aircraft so close to another aircraft as to create a collision hazard.

No person may operate an aircraft in formation flight except -

By arrangement with the PIC of each aircraft in the formation, and

If in controlled airspace, in accordance with conditions prescribed by the air traffic control, which includes that:

The formation operates as a single aircraft with regard to navigation and position reporting;

Separation between aircraft in the flight shall be the responsibility of the flight leader and the PICs of the other aircraft in flight;

Separation between aircraft shall include periods of transition when aircraft are maneuvering to attain their own separation within the formation and during join-up and break-away; and

A distance not exceeding 1 km (1/2 nautical mile) laterally and longitudinally and 30 m (100 ft.) vertically from the flight leader shall be maintained by each aircraft.

No person shall operate an aircraft, carrying passengers for hire, in formation flight.

8.1.14 Right-Of– Way Rules: Except Water Operations

General

Each pilot shall maintain vigilance so as to see and avoid other aircraft; and

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 and taking into account the effect of aircraft wake turbulence.

(iii)Each pilot who has the right-of-way shall maintain his or her heading and speed but is still responsible for taking such action, including collision avoidance manoeuvres based on resolution advisories provided by ACAS equipment, as will best avert collision.

In distress. An aircraft in distress has the right-of-way over all other air traffic.

Converging.

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.

If the converging aircraft are of different categories-

A balloon has the right-of –way over any other category of aircraft;

A glider has the right-of-way over an airship and power driven heavier than air aircraft, and

An airship has the right-of-way over a power driven heavier than air aircraft.

Towing or refueling. An aircraft towing or refueling other aircraft has the right-of-way over all other engine-driven aircraft, except aircraft in distress.

(iii)**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.

Overtaking. Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft, whether climbing, descending or in horizontal flight, shall alter course to the right to pass well clear.

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.

(vi) **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.

The PIC shall not take advantage of the right of way landing rules in items (6) and in this subpart to cut in front of another aircraft that is on final approach to land or to overtake that aircraft.

Emergency landing. Aircraft that are compelled to land have the right-of-way over other aircraft.

Taking off. Aircraft taking off have the right-of-way over aircraft taxiing on the maneuvering area of an aerodrome.

Surface movement of aircraft.

Approaching head-on. When aircraft are approaching each other head-on, or approximately so, each pilot of each aircraft shall stop, or wherever practicable alter course to the right so as to keep well clear.

Converging. When aircraft are converging on a course, the pilot who has the other aircraft on his right shall give way.

Overtaking. Each aircraft that is being overtaken has the right-of-way and each pilot of an overtaking aircraft shall keep well clear.

Aircraft taxiing on the maneuvering area of an aerodrome.

The pilot of an aircraft taxiing on the maneuvering area shall stop and hold at all runway-holding positions unless otherwise authorised by the aerodrome control tower.

The pilot of an aircraft taxiing on the maneuvering area shall stop and hold at all lighted stop bars and may proceed further when the lights are switched off.

The pilot of an aircraft taxiing on the maneuvering area of an aerodrome shall give way to aircraft:

taking off or about to take off;

landing or in the final stages of an approach to landing.

***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.

***Converging or Crossing*.** When aircraft, or an 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.

***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.

***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.

***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.

Landing and taking off. Aircraft, on landing or taking off from the water, shall keep well clear of all vessels and avoid impeding their navigation.

If an aircraft has red rotating beacon lights, or other lights installed to show that the engine is running, the pilot shall switch those lights on before starting engines and display those lights at all times the engines are running.

No person may operate an aircraft between the period from sunset to sunrise unless-

It has lighted navigation lights; and

If anti-collision lights are installed, those lights are lighted.

No person may park or move an aircraft between the period from sunset to sunrise in, or in a dangerous proximity to, a movement area of an aerodrome, unless the aircraft-

Is clearly illuminated;

Has lighted navigation lights;

(iii)Is in an area that is marked by obstruction lights; or

Has lights to indicate when the engine is running.

No person may anchor an aircraft unless that aircraft-

Has lighted anchor lights; or

Is in an area where lights are not required on vessels.

No person may operate an aircraft on water during the period from sunset to sunrise unless:

It displays lights as required by the International Regulations for Preventing Collisions at Sea (most recent edition); or

It shall display lights as similar as possible in characteristics and position to those required by the International Regulations for Preventing Collisions at Sea if it is not practical to display the lights exactly as required.

A pilot is permitted to switch off or reduce the intensity of any flashing lights fitted to meet the requirements of this subpart if they do or are likely to:

Adversely affect the satisfactory performance of duties; or

Subject an outside observer to harmful dazzle.

No person may operate an aircraft in simulated instrument flight unless-

That aircraft has fully functioning dual controls;

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

(iii) 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.

No person may engage in simulated instrument flight conditions during commercial air transport operations.

8.1.18 In-Flight Simulation of Abnormal Situations

No person may simulate an abnormal or emergency situation during commercial air transport operations.

Except under conditions prescribed by the Authority, no pilot may take the following actions-

Dropping, dusting or spraying from an aircraft;

Towing of aircraft or other objects; or

Allowing parachute descents.

No person may operate an aircraft in aerobatic flight:

Over any city, town or settlement;

Over an open air assembly of persons;

(iii)Within the lateral boundaries of the surface areas of Class B, C, D or E airspace designated for an aerodrome;

Below an altitude of 1500 feet (450m) above the surface; or

When the flight visibility is less than 3 statute miles (4.6 kilometres)

unless in compliance with any other conditions prescribed by the Authority.

No person may operate an aircraft in manoeuvres exceeding a bank of 60 degrees or pitch of 30 degrees from level flight altitude unless all occupants of the aircraft are wearing parachutes packed by a qualified parachute rigger licensed in accordance with SLCAR Part 1A in the past 12 calendar months.

8.1.21 Flight Test Areas

No person may flight-test an aircraft except over open water, or sparsely populated areas having light traffic.

8.1.22 Prohibited Areas and Restricted Areas

No person may operate an aircraft in a prohibited area, or in a restricted area, 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.

8.1.23 Operations in MNPS or RVSM Airspace

No person may operate a civil aircraft of Sierra Leone registry in an airspace designated as MNPS airspace or in airspace designated as RVSM without a written authorisation issued by the Authority.

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, and a written authorisation issued by the Authority.

8.1.24 Operations on or in the Vicinity of a Controlled or an Uncontrolled Aerodrome

When approaching to land at an aerodrome without an operating control tower, each pilot of:

An aeroplane shall make all turns of that aeroplane to left or to the right, if appropriately indicated by the authorities having jurisdiction over that aerodrome.

A helicopter shall avoid the flow of aeroplanes.

When departing an aerodrome without an operating control tower, each pilot of an aircraft shall comply with any traffic patterns established by the authority having jurisdiction over that aerodrome.

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.

Each pilot operating an aircraft either on or in the vicinity of an aerodrome shall:

Observe other aerodrome traffic for the purpose of avoiding collision; and

Conform with or avoid the pattern of traffic formed by other aircraft in operation.

Each pilot of an aircraft when operating to, from, or through an aerodrome having an operational control tower shall also comply with the requirements of subpart 8.2.8.

Aerodrome traffic management at controlled and uncontrolled aerodromes may be supplemented or directed by the use of universal aviation signals, such as the light displays and visual markings described in IS: 8.2.11

8.1.25 Aerodrome Traffic Pattern Altitudes: Turbojet, Turbofan, or Large Aircraft

When arriving at an aerodrome, the PIC of a turbojet, turbofan, or large aircraft shall enter the traffic pattern at least 1500 feet AGL (450m) until further descent is required for landing.

When departing, the PIC of a turbojet, turbofan, or large aircraft shall climb to 1500 feet AGL (450m) as rapidly as practicable

8.1.26 Compliance with Visual and Electronic Glide Slopes

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 slope indicator until a lower altitude is necessary for a safe landing.

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.

8.1.27 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.

8.1.28 Continuation of Flight when Destination Aerodrome is Temporarily Restricted: Commercial Air Transport

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-

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

There is no safer procedure.

8.1.29 Interception

When intercepted by a military or government aircraft, each PIC shall comply with the international standards when interpreting and responding to visual signals and communication as specified in IS: 8.1.29.

No pilot shall conduct an international flight unless the procedures and signals relating to interception of aircraft, as specified in IS: 8.1.29, are readily available on the flight deck.

Each AOC holder shall operate its aircraft in accordance with the noise abatement procedures established by the Authority.

Unless otherwise directed by the Authority, the noise abatement procedures specified by an AOC holder for any one aircraft type shall be the same for all aerodromes.

8.1.31 Over–Water Flights (Helicopters)

All helicopters on flights over water, shall be certificated for ditching. Sea state shall be an integral part of ditching information.

8.1.32 Aircraft Operating Procedures for Rates of Climb and Descent

Unless otherwise specified in an air traffic control instruction, to avoid unnecessary Airborne Collision Avoidance System (ACAS II) resolution advisories in aircraft at or approaching adjacent altitudes or flight levels, operators shall specify procedures by which an aircraft climbing or descending to an assigned altitude or flight level, especially with an autopilot engaged, may do so at a rate less than 6 m (26 ft.)/sec or 450 m (1500 ft.)/min (depending on the instrumentation available throughout the last 300 m (1000 ft.) of climb or descent to the assigned level when the pilot is made aware of another aircraft at or approaching an adjacent altitude or flight level.

8.1.33 [AAC] Electronic Flight Bags (EFBs)

Where portable EFBs are used on board an aircraft, the PIC and or the operator or owner shall ensure that they do not affect the performance of the aircraft systems, equipment or the ability to operate the aircraft

Where EFBs are used on board an aircraft the PIC and or the owner or operator shall:

assess the safety risk(s) associated with each EFB function;

establish the procedures for the use of, and training requirements for, the device and each EFB.

In establishing operational criteria for the use of EFBs, the State of Registry shall ensure that:

the EFB equipment and its associated installation hardware, including interaction with aircraft systems if applicable, meet the appropriate airworthiness certification requirements;

the operator or owner has assessed the risks associated with the operations supported by the EFB function(s);

(iii) the operator or owner has established requirements for redundancy of the information (if appropriate) contained in and displayed by the EFB function(s);

the operator or owner has established and documented procedures for the management of the EFB function(s) including any databases it may use; and

the operator or owner has established and documented the procedures for the use of, and training requirements for, the EFB function(s).

No person shall operate an unmanned free balloon in a manner that would cause a hazard to persons, property or other aircraft.

Classification. Unmanned free balloons shall be classified as:

Light. An unmanned free balloon which carries a payload or one or more packages with a combined mass of less than 4 kg (9 lb.), unless qualifying as a heavy balloon below, or

Medium. An unmanned free balloon which carries a payload of two or more packages with a combined mass of 4 kg (9 lb.) or more, but less than 6 kg, unless qualifying as a heavy balloon; or

(iii) **Heavy.** An unmanned free balloon which carries a payload which:

Has a combined mass of 6 kg (13 lb.) or more; or

Includes a package of 3 kg (6 lb.) or more; or

Includes a package of 2 kg (4 lb.) or more with an area density of more than 13 g (26 lb.) per square centimeter; or

(26 lb.) per square centimeter; or

Uses a rope of other device for suspension of the payload that requires an impact force of 230 N or more to separate the suspended payload from the balloon.

Operating Rules. No person may operate an unmanned free balloon --

Unless it has received appropriate authorization from the Authority;

Across the territory of another State without appropriate authorization from the other State concerned prior to the launching of the balloon;

Except in accordance with the conditions specified by the State of Registry and the State(s) to be overflown;

In such a manner that the balloon, or any part thereof, including its payload with the surface of the earth, creates a hazard to persons or property not associated with the operation.

Over the high seas without prior coordination with the appropriate ATS Authority.

Operating Limitations and Equipment Requirements. No person shall operate an unmanned balloon:

Without authorization from the Authority

At or through any level below 16 000 m (60000 ft.) pressure-altitude at which:

There are clouds or obscuring phenomena of more than 4 oktas coverage; or

The horizontal visibility is less than 6 km (5 statute miles).

(iii) By releasing it in a manner that will cause it to fly lower than 300 m (1000 ft.) over the congested areas of cities, towns or settlements or in open-air assembly of persons not associated with the operation.

Unless it is equipped with at least two payload flight-termination devices or systems, whether automatic or operated by telecommand, that operate independently of each other.

That is polyethylene zero-pressure unless is it equipped with at least two methods, systems, devices or combinations thereof, that function independently of each other for terminating the flight of the balloon envelope;

Unless the balloon envelope is equipped with either a radar reflective device(s) or radar reflective material that will present an echo to surface radar operating in the 200 MHz to 2 700 MHz frequency range, and or the balloon is equipped with such other devices as will permit continuous tracking by the operator beyond the range of ground-based radar.

In an area where ground-based SSR equipment is in use, unless it is equipped with a secondary surveillance radar transponder, with pressure-altitude reporting capability, which is continuously operating on an assigned code, or which can be turned on when necessary by the tracking station;

In an area where ground-based ADS-B equipment is in use, unless it is equipped with an ADS-B transmitter, with pressure-altitude reporting capability, which is continuously operated or which can be turned on when necessary by the tracking station;

With a trailing antenna which requires a force of more than 230 N to break it at any point unless the antenna has coloured pennants or streamers that are attached at not more than 15 m intervals;

Below 16 000 m (60000 ft.) pressure-altitude between sunset and sunrise or such other period between sunset and sunrise (corrected to the altitude of operations) as may be prescribed by the appropriate ATS Authority, unless the balloon and its attachments and payload, whether or not they become separated during the operations, are lighted;

That is equipped with a suspension device (other than a highly conspicuously coloured open parachute) more than 15 m (50 ft.) long between sunrise and sunset below 16 000 m (60000 ft.) pressure-altitude unless the suspension device is coloured in alternate bands of high conspicuity colours or has coloured pennants attached.

Termination. The operator of an unmanned free balloon shall activate the appropriate termination device:

When it becomes known that weather conditions are less than those prescribed for the operation;

If a malfunction or any other reason makes further operation hazardous to air traffic or to persons or property on the surface or

Prior to unauthorized entry into the airspace over another State's territory.

Preflight Notification.

(a) No person shall operate a medium or heavy unmanned balloon unless he has made the appropriate notification to the ATS unit;

The preflight notification contained in (b) below at least seven days prior to the flight, and

Any changes in the pre-launch information no later than

six hours before the estimated time of launch, or

in the case of solar or cosmic disturbance investigations involving a critical time element, 30 minutes before the estimated time of launch.

The preflight notification shall contain the following:

Balloon flight identification or project code name;

Balloon classification and description;

(iii)SSR code, aircraft address or NDB frequency as applicable;

Operator's name and telephone number;

Estimated time of launch (or time of commencement and completion of multiple launches);

Number of balloons to be launched and the scheduled interval between launches (if multiple launches);

Expected direction of ascent;

Cruising level(s) (pressure-altitude);

The estimated elapsed time to pass 16 000 m (60000 ft.) pressure-altitude or to reach cruising level if at or below 16 000 m (60000 ft.) together with the estimated location or if the operation consists of continuous launchings, the time to be included is the estimated time at which the first and last in the series will reach the appropriate level;

The estimated date and time of termination of the flight and the planned location of the impact or recovery area.

In the case of balloons carry out flights of long duration, such that the date and time of termination of the flight and the location of impact cannot be forecast with accuracy, the term "long duration" shall be used.

If there is to be more than one location of impact or recover, each location is to be listed together with the appropriate estimated time of impact.

If there is to be a series of continuous impacts, the time to be included is the estimated time of the first and the last in the series.

Notification of launch. The operator of a medium or heavy unmanned free balloon shall, immediately after launch, notify the appropriate ATS unit of the following:

Balloon flight Identification

launch site;

(iii)Actual time of launch;

Estimate time at which 16 000 m (60000 ft.) pressure-altitude will be passed, or the estimated time at which the cruising level will be reached if at or below 16 000 m (60000 ft.) and the estimated location; and

Any changes to the information previously notified in the preflight notification information.

Notification of cancellation. The operator shall notify the ATS until immediately of a cancellation of the launch of a medium or heavy unmanned free balloon for which a preflight plan has been filed.

Position recording and reports.

The operator of a heavy unmanned balloon shall monitor the flight path of the balloon and forward reports of the balloon's position to the ATS unit as follows:

For operations at or below 16 000 m (60000 ft.) – every two hours;

For operations above 16 000 m (60000 ft.) – every 24 hours, or

Immediately if the tracking of the balloon has been lost, providing the balloons last known position, and

the re-establishment of tracking of the balloon.

The operator of a heavy unmanned balloon shall forward to the ATS Section the following information regarding the balloon one hour before the beginning of the planned descent:

The current geographical position;

The current level (pressure-altitude);

The forecast time of penetration of 16 000 m (60000 ft.) pressure-altitude, if applicable;

The forecast time and location of ground impact.

(iii)The Operator of a medium or heavy unmanned free balloon shall notify the appropriate ATS Section when the operation is completed.

8.1.35 Single-Pilot Operations – Aeroplane

An aeroplane shall not be operated under IFR or at night by a single pilot unless approved by the State of the Operator.

An aeroplane shall not be operated under IFR or at night by a single pilot unless:

The Aircraft Flight Manual does not require a flight crew of more than one;

The aeroplane is propeller driven;

The maximum approved passenger seating configuration is not more than nine;

The maximum certificated take-off mass does not exceed 5 700 kg;

The aeroplane is equipped as described in SLCAR Part 26 of these regulations;

The PIC has satisfied the requirements of experience, training, checking, and recency described in 8.10.1.41 of this part.

Notwithstanding paragraphs 8.1.35(b)(2) and (3) of this subsection, the aeroplane shall be operated in compliance with paragraph 8.7.2.2(a) of this part.

Any exemption for single-pilot operations with more than nine passengers shall be authorised by the Authority in the operations specifications, as required by paragraph 8.7.2.2(e)(2) of this part.

If such operations are to be conducted outside the State, the Authority shall have an arrangement with the States where the operations will be conducted.

8.1.36 Aerodrome operating minima

The operator shall establish aerodrome operating minima in accordance with criteria specified by the State of Registry, for each aerodrome to be used in operations. When establishing aerodrome operating minima, any conditions that may be prescribed in the list of specific approvals shall be observed. Such minima shall not be lower than any that may be established for such aerodromes by the State of the Aerodrome, except when specifically approved by that State.

The Authority shall authorize operational credit(s) for operations with advanced aircraft. Where the operational credit relates to low visibility operations, the Authority shall issue a specific approval. Such authorizations shall not affect the classification of the instrument approach procedure.

for the purposes of an approach ban or dispatch considerations, a minimum below the aerodrome operating minima;

reducing or satisfying the visibility requirements; or

requiring fewer ground facilities as compensated for by airborne capabilities.

When issuing a specific approval for the operational credit, the Authority shall ensure that the:

aeroplane meets the appropriate airworthiness certification requirements;

information necessary to support effective crew tasks for the operation is appropriately available to both pilots where the number of flight crew members

specified in the operations manual (or other documents associated with the certificate of airworthiness) is more than one;
operator/owner has carried out a safety risk assessment of the operations supported by the equipment;
operator/owner has established and documented normal and abnormal procedures and MEL;
operator/owner has established a training programme for the flight crew members and relevant personnel involved in the flight preparation;
operator/owner has established a system for data collection, evaluation and trend monitoring for low visibility operations for which there is an operational credit; and
operator/owner has instituted appropriate procedures with respect to continuing airworthiness (maintenance and repair) practices and programmes

For operations with operational credit with minima above those related to low visibility operations, the Authority shall establish criteria for the safe operation of the aeroplane.

The State of the Operator shall require that in establishing the operating minima for each heliport or landing location which will apply to any particular operation, the operator shall take full account of:

the type, performance and handling characteristics of the helicopter and any conditions or limitations stated in the flight manual;
the composition of the flight crew, their competence and experience;
the physical characteristics of the heliport and direction of approach;
the adequacy and performance of the available visual and non-visual ground aids;
the equipment available on the helicopter for the purpose of navigation, acquisition of visual references and/or control of the flight path during the approach, landing and missed approach;
the obstacles in the approach and missed approach areas and the obstacle clearance altitude/height for the instrument approach procedures;
the means used to determine and report meteorological conditions;
the obstacles in the climb-out areas and necessary clearance margins;
the conditions prescribed in the operations specifications; and
any minima that may be promulgated by the State of the Aerodrome.

8.2 Control of Air Traffic

8.2.1 ATC Clearances

Each PIC shall obtain an ATC clearance prior to operating a controlled flight, or a portion of a flight as a controlled flight.

Each PIC shall request an ATC clearance through the submission of a flight plan to an ATC facility including potential re-clearance in flight.

Whenever a PIC 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.

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.

8.2.2 Adherence to ATC Clearances

When an ATC Clearance has been obtained, no PIC may deviate from the clearance, except in an emergency, or unless he or she obtains an amended clearance.

When operating in airspace requiring controlled flight, no PIC may operate contrary to ATC instructions, except in an emergency.

Each PIC who deviates from an ATC Clearance or instructions in an emergency, shall notify ATC of that deviation as soon as possible.

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.

Each person operating an aircraft on a controlled flight shall, except when landing at a controlled aerodrome, advise the appropriate ATC facility as soon as it ceases to be subject to ATC service.

8.2.4 Route to be flown

Unless otherwise authorised or directed by the appropriate ATC facility, the PIC of a controlled flight shall, in so far as practicable:

When on an established ATC route, operate along the defined centre line of that route; or

When on any other route, operate directly between the navigation facilities and or points defining that route.

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.

A PIC shall take the following action in the event that a controlled flight inadvertently deviates from its current flight plan:

***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.

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.

(iii)***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.

(b) When an ADS contract is in place, the air traffic services unit shall be informed automatically via data link whenever changes occur beyond the threshold values stipulated by the ADS event contract.

Requests for flight plan changes shall include the following information:

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.

Change of route:

***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.

***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), and any other pertinent information.

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.

Each pilot of a controlled flight shall make position reports in relation to additional points or intervals when requested by the appropriate ATC facility.

When operating via data link communications providing position information to the appropriate air traffic services unit, each pilot of a controlled flight shall only provide voice position reports when requested by the appropriate ATC facility.

8.2.8 Operations on or in the Vicinity of a Controlled Aerodrome

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.

On arrival, each PIC shall establish communications required by paragraph (a) prior to 4 nautical miles (7.4 kilometres) from the (760 m) aerodrome when operating from the surface up to and including 2,500ft.

On departure, each PIC shall establish communications with the control tower prior to taxi.

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.

***Communications failure*.** If the radio fails or two-way communication is lost, a PIC may continue a VFR flight operation and land if:

The weather conditions are at or above basic VFR minimums; and

Clearance to land from the ATC tower is given in accordance with the universal light signals and acknowledged by the PIC as contained in IS: 8.2.11(e) and (f) for light signals and acknowledgement.

A PIC shall, when and if possible, notify the appropriate ATC facility when an aircraft is being subjected to unlawful interference, including-

Any significant circumstances associated with the unlawful interference; and

Any deviation from the current flight plan necessitated by the circumstances.

8.2.10 Time Checks

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.

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.

Whenever time is used in the application of data link communications, it shall be accurate to within one second of UTC.

8.2.11 Universal Signals

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.

Universal signals shall have only the meanings designated.

Each person using universal signals in the movement of aircraft shall only use them for the purpose indicated.

No person may use signals likely to cause confusion with universal aviation signals.

No person shall guide an aircraft unless trained, qualified and approved by the Authority to carry out the functions of a signal man.

The signal man shall wear a distinctive fluorescent identification vest to allow the flight crew to identify that he or she is the person responsible for the marshalling operation.

8.3 VFR Flight Rules

8.3.1 Visual Meteorological Conditions

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:

Airspace and VMC Minima*			
Airspace Class	**A***B C D E**	**F G**	
		Above 900 m (3 000 ft) AMSL or above 300 m (1 000 ft) above terrain, whichever is the higher	At and below 900 m (3 000 ft) AMSL or 300 m (1 000 ft) above terrain, whichever is the higher
Distance From Cloud	1 500 m (4 920 ft) horizontally 300 m (1 000 ft) vertically		Clear of cloud and in sight of the surface
Flight Visibility	8 km (5 SM) at and above 3 050 m (10 000 ft) AMSL 5 km (3 SM) below 3 050 m (10 000 ft) AMSL		5 km (3 SM) **

*When the height of the transition altitude is lower than 3 050 m (10 000 ft) AMSL, FL 100 shall be used in lieu of 10 000 ft.

**When so prescribed by the appropriate ATC authority, lower flight visibilities to 1 500 m (4 920 ft) may be permitted for flights operating:

- At speeds that, in the prevailing visibility, will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision; or
- In circumstances in which the probability of encounters with other traffic would normally be low (e.g., in areas of low volume traffic and for aerial work at low levels).

Helicopters may be permitted to operate in less than 1 500 m (4 920 ft) flight visibility, if manoeuvred at a speed that will give adequate opportunity to observe other traffic or any obstacles in time to avoid collision.

***The VMC minima in Class A airspace are included for guidance to pilots and do not imply acceptance of VFR flights in Class A airspace.

8.3.2 VFR Weather Minimums for Take-Off and Landing

No person may land or takeoff an aircraft under VFR from an aerodrome located within a control zone, or enter the aerodrome traffic zone or traffic pattern airspace unless the:

Reported ceiling is at least 450 m (1500 ft.); and

Reported ground visibility is at least 5 km (3 statute miles); or,

(iii)except when a clearance is obtained from ATC.

No person shall land or takeoff an aircraft or enter the traffic pattern under VFR from an aerodrome located outside a control zone, unless VMC conditions are at or above those indicated in Subpart 8.3.1.

The only exception to the required weather minimums of this subpart is during a Special VFR operations

No person may conduct a Special VFR flight operation to enter the traffic pattern, land or takeoff an aircraft under Special VFR from an aerodrome located in Class B, Class C, Class D or Class E airspace unless:

Authorised by an ATC clearance;

The aircraft remains clear of clouds; and

(iii)The flight visibility is at least 1 statute mile.(1.6 kilometres)

No person may conduct a Special VFR flight operation in an aircraft between sunset and sunrise unless:

The PIC is current and qualified for IFR operations; and

The aircraft is equipped to be operated in IFR conditions.

Each person operating an aircraft in level cruising flight under VFR at altitudes above 900 m (3000 ft.) from the ground or water, shall maintain a flight level appropriate to the track as specified in the table of cruising levels in IS: 8.4.8:

Subsection (a) does not apply when otherwise authorised by ATC, when operating in a holding pattern, or during maneuvering in turns.

8.3.5 ATC Clearances for VFR Flights

Each pilot of a VFR flight shall obtain and comply with ATC clearances and maintain a listening watch before and during operations-

Within Classes B, C and D airspace;

As part of aerodrome traffic at controlled aerodromes; and

Under Special VFR.

Unless authorised by the Authority, no pilot may operate in VFR flight-

Above FL 200; or

At transonic and supersonic speeds.

ATC authorisation for VFR flights may not be granted in areas where a RVSM of only 300m (1,000 ft.) is applied above FL 290.

No person shall operate in VFR flight between sunset and sunrise unless

Authorised by the Authority, and

Operating in accordance with any conditions prescribed by the Authority.

8.3.7 Weather Deterioration below VMC

Each pilot of a VFR flight operated as a controlled flight shall, when he or she finds that it is not practical or possible to maintain flight in VMC in accordance with the ATC flight plan-

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;

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;

Operating within a control zone, request authorisation to operate as a special VFR flight; or

Request clearance to operate in IFR, if the aircraft is equipped and pilot is currently rated for IFR operations.

8.3.8 Changing From VFR to IFR

If a flight plan was submitted, communicate the necessary changes to be effected to its current flight plan; or

Submit a flight plan to the appropriate ATC facility and obtain a clearance prior to proceeding IFR when in controlled airspace.

Communications Failure: General

In the event of communications failure, the pilot shall attempt to establish communications with the appropriate air traffic control unit using all other available means.

In addition, the pilot shall, when forming part of the aerodrome traffic at a controlled aerodrome, keep a watch for such instructions as may be issued by visual signals.

If radio failure occurs in VMC while under ATC control, or if VMC conditions are encountered after the failure, each pilot shall:

Continue the flight under VMC;

Land at the nearest suitable aerodrome; and

Report arrival to the appropriate ATC services unit by the most expeditious means possible.

8.4 IFR Flight Rules

8.4.1 Applicability

All aircraft operated in accordance with instrument flight procedures shall comply with the instrument flight rules, and the aerodrome instrument approach procedures approved by the Authority where the operation will take place.

8.4.2 IFR in Controlled Airspace

No person may operate an aircraft in controlled airspace under IFR unless that person has:

Filed an IFR flight plan; and

Received an appropriate ATC clearance.

8.4.3 IFR Flights outside Controlled Airspace

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.

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.

8.4.4 IFR Take-Off Minimums for Commercial Air Transport

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-

For aircraft, other than helicopters, having two engines or less – 1 statute mile (1.6 kilometers) visibility.

For aircraft having more than two engines- ½ statute mile (6 00 meters) visibility.

For helicopters – ½ statute mile (6 00 meters) visibility.

8.4.5 Minimum Altitudes for IFR Operations

Operation of aircraft at minimum altitudes.

Except when necessary for takeoff or landing, no person may operate an aircraft under IFR below:

The applicable minimum altitudes prescribed by the authorities having jurisdiction over the airspace being overflown; or

If no applicable minimum altitude is prescribed by the authorities:

Over high terrain or in mountainous areas, at a level which is at least 600 m (2000 ft.) above the highest obstacle located within 6 km (5 statute miles) of the estimated position of the aircraft; and

Elsewhere than as specified in (i), at a level which is at least 300 m (I000 ft.) above the highest obstacle located within 6 km (5 statute miles) of the estimated position of the aircraft.

(iii)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 40.7 km (22 nautical miles) of the VOR concerned.

Climb for obstacle clearance.

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

If ground obstructions intervene, each pilot shall climb to a point beyond which that higher minimum altitude applies, at or above the applicable Minimum Crossing

8.4.6 Minimum Altitudes for use of an Autopilot

For en route operations, no person may use an autopilot at an altitude above the terrain that is less than 500 ft. (152 m).

For instrument approach operations, no person may use an autopilot at an altitude above the terrain that is less than 50 ft. (15m m) below the MDA or DH.

For Category III approaches, the Authority may approve the use of a flight control guidance system with automatic capability to touchdown.

8.4.7 IFR Cruising Altitude or Flight Level in Controlled Airspace

Each person operating an aircraft under IFR in level cruising flight in controlled airspace shall maintain the altitude or flight level assigned to that aircraft by ATC.

If the ATC clearance assigns "VFR conditions on-top," each person shall maintain a VFR cruising altitude in VMC.

Each person operating an aircraft in level cruising flight under IFR, or if authorised to employ cruise climb techniques between two levels, shall maintain a flight level appropriate to the track as specified in the table of cruising levels in IS: 8.4.8 or according to a modified table of cruising levels when so prescribed in accordance with IS: 8.4.8 for flight above FL 410.

Subsection (c) above shall not apply when otherwise authorised by ATC Section or as specified in Aeronautical Information Publications.

8.4.8 IFR Cruising Altitude or Flight Level in Uncontrolled Airspace

Each person operating an aircraft in level cruising flight under IFR, outside of controlled airspace, shall maintain a flight level appropriate to the track as specified in the table of cruising levels in IS: 8.4.8 or according to a modified table of cruising levels when so prescribed in accordance with IS: 8.4.8 for flight above FL 410.

A person may deviate from the cruising altitudes specified in paragraph (b) only when:

Authorised by the ATC Section for flight at or below 900 m (3000 ft.) above MSL; or

When otherwise authorised by the ATC Section.

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:

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;

Any unforecast weather conditions encountered; and

Any other information relating to the safety of flight, such as hazardous weather or abnormal radio station indications.

8.4.10 Operation under IFR in Controlled Airspace: Malfunction Reports

The PIC of each aircraft operated in controlled airspace under IFR shall report as soon as practicable to ATC any malfunctions of navigational, approach, or communication equipment occurring in flight.

In each report specified in paragraph (a), the PIC shall include the-

Aircraft identification;

Equipment affected;

(iii)Degree to which the capability of the pilot to operate under IFR in the ATC system is impaired; and

Nature and extent of assistance desired from ATC.

8.4.11 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/heliport, or at least one destination alternate aerodrome/heliport will, at the expected time of arrival, be at or above the specified instrument approach minima.

8.4.12 Instrument Approach Procedures and IFR Landing Minimums

No person shall make an instrument approach at an aerodrome except in accordance with IFR weather minimums and instrument approach procedures established for that aerodrome as set forth by the Authority.

No AOC holder shall make an instrument approach at an aerodrome except as set forth in the AOC holder's operations specifications.

An instrument approach shall not be continued beyond the outer marker fix in case of precision approach, or below 300 meters (1000 ft.) above the aerodrome in case of non-precision approach, unless the reported visibility or controlling RVR is above the specified minimum, the approach may be continued to DA/H or MDA/H. In any case an aeroplane shall not continue its approach to land at any aerodrome beyond a point at which the limits of the operating minima specified for that aerodrome would be infringed.

One or more instrument approach procedure(s) designed in accordance with the classification of instrument approach and landing operations shall be approved and promulgated by the state in which the aerodrome is located to serve each instrument runway or aerodrome utilized for instrument flight operations.

All aircraft operated in accordance with Instrument Flight Rules shall comply with the instrument flight procedures approved by the state in which the aerodrome is located.

The provisions contained in 4.11 and 4.12 shall also apply to all aircraft and heliports.

A flight shall not be continued towards the aerodrome of intended landing, unless the latest available information indicates that at the expected time of arrival, a landing can be effected at that aerodrome or at least one destination alternate aerodrome, in compliance with the operating minima established in accordance with 8.1.36

No pilot may continue an approach below 300 m (1,000 ft.) above the aerodrome elevation or into the final approach segment unless -

A source approved by the Authority issues a weather report for that aerodrome; and

The latest weather report for that aerodrome reports the visibility or controlling RVR to be equal to or more than the minimums prescribed for that procedure.

A flight shall not be continued towards the heliport of intended landing, unless the latest available information indicates that at the expected time of arrival, a landing can be effected at that heliport, or at least one destination alternate heliport, in compliance with the operating minima established in accordance with

8.1.36 **8.4.14 Instrument Approaches to Civil Aerodromes**

Each person operating a civil aircraft shall use a standard instrument approach procedure prescribed by the authorities having jurisdiction over the aerodrome, unless otherwise authorised by the Authority.

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:

The DH or MDA prescribed by the approach procedure.

The DH or MDA prescribed for the PIC.

(iii)The DH or MDA for which the aircraft is equipped.

8.4.15 Operation below DH or MDA

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:

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;

For commercial air transport operations, a descent rate will allow touchdown to occur within the touchdown zone of the runway of intended landing;

The reported flight visibility is not less than the visibility prescribed in the standard instrument approach being used or the controlling RVR is above the specified minimum; and

At least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot-

The approach light system, except that the pilot may not descend below 100 feet (30 m) above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are distinctly visible and identifiable;

The threshold;

(iii)The threshold markings;

Threshold lights;

The runway end identifier lights;

The visual approach slope indicator;

The touchdown zone or touchdown zone markings;

The touchdown zone lights;

The runway or runway markings; or

The runway lights.

8.4.16 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.

8.4.17 Execution of a Missed Approach Procedure

Each pilot operating a civil aircraft shall immediately execute an appropriate missed approach procedure when either of the following conditions exist:

Whenever the required visual reference criteria is not met in the following situations:

When the aircraft is being operated below MDA; or

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.

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.

8.4.18 Change from IFR Flight to VFR Flight

A 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 current flight plan.

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.

Communications Failure: General

In the event of communication failure, the pilot shall attempt to establish communications with the appropriate air traffic control unit using all other available means.

In addition, the pilot shall, when forming part of the aerodrome traffic at a controlled aerodrome, shall keep a watch for such instructions as may be issued by visual signals.

If radio failure occurs in VMC while under ATC control, or if VMC conditions are encountered after the failure, each pilot shall:

Continue the flight under VMC;

(ii) Land at the nearest suitable aerodrome; and

(iii)Report arrival to the appropriate ATC services unit by the most expeditious means possible.

If two-way radio communication failure occurs in IMC, or when the pilot of an IFR flight considers it inadvisable to continue the flight in VMC, the PIC shall:

unless otherwise prescribed on the basis of regional air navigation agreement, in airspace where radar is not used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 20 minutes following the aircraft's failure to report its position over a compulsory reporting point and thereafter adjust level and speed in accordance with the filed flight plan;

in airspace where radar is used in the provision of air traffic control, maintain the last assigned speed and level, or minimum flight altitude if higher, for a period of 7 minutes following:

The time the last assigned level or minimum flight altitude is reached; or

The time the transponder is set to Code 7600; or

The aircraft's failure to report its position over a compulsory reporting point; whichever is later, and thereafter adjust level and speed in accordance with the filed flight plan;

(iii)when being radar vectored or having been directed by ATC to proceed offset using area navigation (RNAV) without a specified limit, rejoin the current flight plan route no later than the next significant point, taking into consideration the applicable minimum flight altitude;

proceed according to the current flight plan route to the appropriate designated navigation aid or fix serving the destination aerodrome and, when required to ensure compliance with (v) below, hold over this aid or fix until commencement of descent;

commence descent from the navigation aid of fix specified in (iv) at, or as close as possible to, the expected approach time last received and acknowledged; or, if no expected approach time has been received and acknowledged, at, or as close as possible to the estimated time of arrival resulting from the current flight plan;

complete a normal instrument approach procedure as specified for the designated navigation aid or fix; and

land, if possible, within 30 minutes after the estimated time of arrival specified in or the last acknowledged expected approach time, whichever is later.

8.4.20 Threshold Crossing Height for 3D Instrument Approach Operations

An operator shall establish operational procedures designed to ensure that an aeroplane being used to conduct 3D approach operations crosses the threshold by a safe margin with the aeroplane in the landing configuration and attitude.

PASSENGERS AND PASSENGER HANDLING

9.1All Passenger Carrying Operations

No person on board may interfere with a crewmember in the performance of his or her duties.

Each passenger shall fasten his or her seat belt and keep it fastened while the seat belt sign is lighted.

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.

No person may secrete himself or herself nor secrete cargo on board an aircraft.

No person shall smoke while the no-smoking sign is lighted.

No person shall smoke in any aircraft lavatory.

No person shall tamper with, disable or destroy any smoke detector installed in any aeroplane lavatory.

No PIC may allow an aircraft to be refueled when passengers are embarking, on board or disembarking unless:

The aircraft is manned by qualified personnel ready to initiate and direct an evacuation; and

Two-way communication is maintained between the qualified personnel in the aircraft and the ground crew supervising the refueling.

Helicopters. No PIC may allow a helicopter to be refueled when passengers are embarking, on board, or disembarking; or the rotors are turning or when oxygen is being replenished unless:

The helicopter is manned by qualified personnel ready to initiate and direct an evacuation; and

Constant two-way communication is maintained between the qualified personnel in the helicopter and the ground crew supervising the refueling and;

(iii)During an emergency shutdown procedure, the flight crew shall ensure that any personnel or passengers outside the helicopter are clear of the rotor area

The operator shall establish procedures and specify conditions under which such refueling may be carried out

A helicopter shall not be refueled with AVGAS (aviation gasoline) or wide-cut type fuel or a mixture of these types of fuel, when passengers are on board

(vi) A helicopter shall not be defueled at any time when:

passengers remain on board; or

passengers are embarking or disembarking; or

oxygen is being replenished

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 take-off and landing.

Each passenger shall have his seatbelt securely fastened at any other time the PIC determines it is necessary for safety.

A safety belt provided for the occupant of a seat may not be used during take-off and landing by more than one person who has reached his second birthday.

The operator 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:

Seat belts;

Emergency exits;

(iii)Life jackets;

Oxygen dispensing equipment;

Other emergency equipment provided for individual use, including passenger emergency briefing cards.

The operator 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.

are briefed about all subjects for the specific operations conducted by a commercial air transport operation and are included in the pertinent OM, as approved by the Authority.

For helicopter specific - are briefed on the actions to take if an incident occurs when a helicopter is refuelled or replenished with oxygen when passengers are onboard.

During takeoff and landing, and whenever by reason of turbulence or any emergency occurring during flight the precaution is considered necessary, cabin crew shall ensure that all passengers aboard the aeroplane fasten their seat belts so as to be secured in their seats.

For helicopter off-shore operations, the PIC shall ensure that each occupant of the aircraft wear:

A life jacket or integrated survival suit, when operating beyond auto rotational distance from land;

A survival suit, when the sea temperature is less than 10˚C or when the estimated rescue time exceeds the calculated survival time.

In an emergency during flight the operator shall ensure that all persons on board are instructed in such emergency action as may be appropriate to the circumstances.

9.1.6 Passenger Oxygen: Minimum Supply and Use

The PIC shall ensure that breathing oxygen and masks are available to passengers in sufficient quantities for all flights at such altitude where a lack of oxygen might harmfully affect passengers.

The PIC shall ensure that the minimum supply of oxygen prescribed by the Authority is on board the aircraft.

The requirements for Oxygen storage and dispensing apparatus are prescribed in SLCAR Part 25

The PIC shall require all passengers to use oxygen continuously at cabin pressure altitudes above 13,000 ft. (4,000 m).

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).

9.2 Commercial Air Transport Passenger Carrying Operations

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.

9.2.2 Denial of Transportation

An AOC holder may deny transportation because a passenger-

Refuses to comply with the instructions regarding exit seating restrictions prescribed by the Authority; or

Has a handicap that can be physically accommodated only by an exit row seat.

9.2.3 Carriage of Persons without Compliance with these Passenger - Carrying Requirements

The passenger-carrying requirements of paragraph (b) do not apply when carrying:

A crew member not required for the flight;

A representative of the Authority on official duty;

(iii)A person necessary to the safety or security of cargo or animals; or

(iv) Any person authorised by the AOC holder's Operations Manual procedures, as approved by the Authority.

No person may be carried without compliance to the passenger carrying requirements unless:

There is an approved seat with an approved seat belt for that person;

That seat is located so that the occupant is not in any position to interfere with the flight crew members performing their duties;

(iii)There is unobstructed access from their seat to the flight deck or a regular or emergency exit;

There is a means for notifying that person when smoking is prohibited and when seat belts shall be fastened; and

That person has been orally briefed by a crew member on the use of emergency equipment and exits.

During taxi, cabin crewmembers 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.

During takeoff and landing, cabin crewmembers 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 the event of an emergency evacuation.

When passengers are on board a parked aircraft, cabin crewmembers (or another person qualified in emergency evacuation procedures for the aircraft) will be placed in the following manner:

If only one qualified person is required, that person shall be located in accordance with the AOC holder's Operations Manual procedures.

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.

The PIC, SCCM 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.

9.2.6 Arming of Automatic Emergency Exits

No person may cause an aircraft 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.

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.

9.2.8 Stops Where Passengers Remain on Board

At stops where passengers remain on board the aircraft, the PIC, the co-pilot, or both shall ensure that:

All engines are shut down;

At least one floor level exit remains open to provide for the deplaning of passengers; and

(iii)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 passenger safety.

If refueling with passengers on board, the PIC or a designated company representative shall ensure that the AOC holder's Operations Manual procedures are followed.

No person shall allow passenger loading or unloading of a propeller driven aircraft unless all engines are either shut down or the aircraft is using a passenger jetway to load and unload passengers.

9.2.10 Carriage of Persons with Reduced Mobility

No person may allow a person of reduced mobility to occupy seats where their presence could:

Impede the crew in their duties;

Obstruct access to emergency equipment; or

(iii)Impede the emergency evacuation of the aircraft.

(b) No person shall operate an aircraft without complying with the requirements pertaining to persons with disability contained in subpart 9.2.10.

No AOC holder shall allow a passenger to sit in an emergency exit row if the PIC or SCCM 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.

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:

The person lacks sufficient mobility, strength, or dexterity in both arms and hands, and both legs:

To reach upward, sideways, and downward to the location of emergency exit and exit-slide operating mechanisms;

To grasp and push, pull, turn, or otherwise manipulate those mechanisms;

To push, shove, pull, or otherwise open emergency exits;

To lift out, hold, deposit on nearby seats, or manoeuvre over the seatbacks to the next row objects the size and mass of over-wing window exit doors;

To remove obstructions of size and mass similar to over-wing exit doors;

To reach the emergency exit expeditiously;

To maintain balance while removing obstructions;

To exit expeditiously;

To stabilise an escape slide after deployment; or

To assist others in getting off an escape slide.

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.

(iii) 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.

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.

The person lacks sufficient aural capacity to hear and understand instructions shouted by cabin crew members, without assistance beyond a hearing aid.

The person lacks the ability to adequately impart information orally to other passengers.

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.

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 OM.

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.

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.

Each AOC ticket agent shall, before boarding, assign seats consistent with the passenger selection criteria and the emergency exit functions, to the maximum extent feasible.

Each AOC ticket agent shall make available for inspection by the public at all passenger loading gates and ticket counters at each aerodrome where the AOC holder conducts passenger operations, written procedures established for making determinations in regard to exit row seating.

Each cabin crew member shall include in his or her passenger briefings a request that a passenger identify himself or herself to allow reseating if he or she:

Cannot meet the selection criteria;

Has a nondiscernible condition that will prevent him or her from performing the evacuation functions;

(iii) May suffer bodily harm as the result of performing one or more of those functions; or

Does not wish to perform emergency exit functions.

Each cabin crew member shall include in his or her passenger briefings a reference to the passenger information cards and the functions to be performed in an emergency exit.

Each passenger shall comply with instructions given by a crew member or other authorised employee of the AOC holder implementing exit seating restrictions.

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.

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:

Establish procedures that address the requirements of this standard; and

Submit their procedures for preliminary review and approval to the Authority.

9.2.12 Prohibition against Carriage 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.

9.2.13 Oxygen for Medical use by Passengers

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.

No person may smoke, and no crewmember may allow any person to smoke within 10 feet (2 m) of oxygen storage and dispensing equipment carried for the medical use of a passenger.

No crew member may allow any person to connect or disconnect oxygen dispensing equipment to or from an oxygen cylinder while any other passenger is aboard the aircraft.

9.2.14 CARRY-ON BAGGAGE

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 approved Operations Manual procedures.

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.

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 mass limitation.

9.2.15 Carriage of Cargo in Passenger Compartments

No person may allow the carriage of cargo in the passenger compartment of an aircraft except as specified in subpart .9.2.15(b).

Cargo may be carried anywhere in the passenger compartment if it is carried in an approved cargo bin that meets the following requirements:

The bin must withstand the load factors and emergency landing conditions applicable to the passenger seats of the aircraft in which the bin is installed, multiplied by a factor

of 1.15, using the combined mass of the bin and the maximum mass of cargo that may be carried in the bin.

(ii) The maximum mass of cargo that the bin is approved to carry and any instructions necessary to insure proper mass distribution within the bin shall be conspicuously marked on the bin.

9.2.16 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.

9.2.17 Required Passenger Briefing

No person may commence a takeoff unless the passengers are briefed prior to takeoff in accordance with the AOC holder's Operations Manual procedures on:

Smoking limitations and prohibitions;

Emergency exit location and use;

(iii)Use of safety belts;

Emergency floatation means location and use;

Fire extinguisher location and operation;

Placement of seat backs;

If flight is above 10000 ft. MSL, (3050 m) the normal and emergency use of oxygen;

The passenger briefing card; and

Limitations and prohibitions on the use of electronic devices.

Immediately before or immediately after turning the seat belt sign off, the PIC or co-pilot shall ensure that the passengers are briefed to keep their seat belts fastened while seated, even when the seat belt sign is off.

Before each takeoff, the PIC or co-pilot shall ensure that any persons of reduced mobility are personally briefed on:

The route to the most appropriate exit; and

The time to begin moving to the exit in event of an emergency.

9.2.18 Passenger Briefing: Extended Over Water Operations

No person may commence extended overwater operations unless all passengers have been orally briefed on the location and operations of life preservers, life rafts and other floatation means, including a demonstration of the method of donning and inflating a life preserver.

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.

No passenger safety belt may be used by more than one occupant during takeoff and landing.

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.

9.2.20 Passenger Seat Backs

No PIC or co-pilot may allow the takeoff or landing of an aircraft unless each passenger seat back is in the upright position.

9.2.21 Stowage of Food, Beverage and Passenger Service

No PIC, co-pilot or SCCM may allow the movement of an aircraft on the surface, or the takeoff or landing of an aircraft:

When any food, beverage or tableware furnished by the AOC holder is located at any passenger seat; and

Unless each food and beverage tray and seat back tray table is in the stowed position.

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.

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.

CREW MEMBER AND FLIGHT OPERATIONS OFFICER QUALIFICATIONS: COMMERCIAL AIR TRANSPORT

10.1 Limitation of Privileges of Pilots who have attained their 60th Birthday and Curtailment of Privileges of Pilots who have attained their 65th Birthday

No person may serve nor may any AOC holder use a person as a required PIC in single pilot operations on aircraft or engaged in commercial air transport operations if that person has reached his 60th birthday.

For aircraft engaged in commercial air transport operations requiring more than one pilot as flight crewmembers, the AOC holder may use one pilot up to the age of 65 provided that the other pilot is less than the age of 60.

For aircraft engaged in long-range 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.

Check pilots who have reached their 65th birthday or who do not hold an appropriate medical certificate may continue their check pilot 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 unless the other pilot is less than age 60.

10.2 Use of Flight Simulation Training Devices

Each flight simulation training device that is used for flight crewmember qualification shall:

Be specifically approved by the Authority for:

The AOC holder;

The type aircraft, including type variations, for which the training or check is being conducted; and

The particular manoeuvre, procedure, or crewmember function involved.

Maintain the performance, functional, and other characteristics that are required for approval.

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.

Be given a daily functional pre-flight check before use.

Have a daily discrepancy log completed by the appropriate instructor or check pilot at the end of each training or check flight.

The simulation device shall have the same technology for the basic flight instruments (attitude indicator, airspeed, altimeter, and heading reference) as those of the aircraft used by the operator.

Operators that have electronic or glass displays shall use simulators that have electronic or glass displays.

Operators that have standard instruments shall use simulators that have standard instruments.

10.3 Approval of a Flight Simulation Training Device for Credit in Training and Checking

No AOC holder may use a flight simulation training device for training or checking unless that simulator has been specifically approved for the AOC holder in writing by the Authority.

No AOC holder may use a simulator for credit in training, recency and checking other than that specified in the Authority's approval.

10.4 Licence Requirements for PIC

No pilot may act as PIC of an aircraft, certificated for operation with more than one pilot, in commercial air transportation operations unless he holds an Airline Transport Pilot Licence with applicable category, class and type rating for that aircraft.

No pilot may act as PIC of an aircraft, certificated for operation for one pilot, in commercial air transportation operations unless he holds a Commercial Pilot Licence or an Airline Transport Pilot Licence with applicable category, class and type rating for that aircraft.

If instrument privileges are to be exercised, the PIC shall hold an Instrument Rating.

10.5 Licence Requirements for Co-Pilot and Cruise Relief Pilot

No pilot may act as co-pilot of an aircraft in commercial air transport operations unless he holds either a Commercial Pilot Licence with Instrument Rating or an Airline Transport Pilot Licence, each with category, class and type ratings, as applicable, for the aircraft operated.

No pilot may act as a cruise relief pilot in commercial air transport operations unless he holds an Airline Transport Pilot Licence with category, and if applicable, class and type ratings, and has completed all training to serve as PIC with the exception of initial operating experience.

10.6 Flight Engineer License Requirement

No person may act as the flight engineer of an aircraft unless he/she owns a flight engineer license with the appropriate class rating

10.7 One Pilot Qualified to Perform Flight Engineer Functions

The AOC holder shall ensure that, on all flights requiring a flight engineer, there is assigned at least one other flight crewmember qualified to perform the flight engineer duties in the event the flight engineer becomes incapacitated.

10.8 Persons Qualified to Flight Release

No person may act as a flight operations officer in releasing a scheduled passenger-carrying commercial air transport operation unless that person-

Holds a flight operations officer or flight dispatcher licence or an ATP license; and
Is currently qualified with the AOC holder for the operation and type of aircraft used or

(iii)Has completed an AOC holders approved programme that meets the requirements as specified in SLCAR Part 1A for the flight operations officer or flight dispatcher.

A flight operations officer or flight dispatcher shall not be assigned to duty unless that person has:

satisfactorily completed an operator-specific training course that addresses all the specific components of its approved method of control and supervision of flight operations specified in IS 10.14 (d)

made, within the preceding 12 months, at least a one-way qualification flight in the flight crew compartment of an aeroplane over any area for which that individual is authorized to exercise flight supervision. The flight should include landings at as many aerodromes as practicable;

(iii)demonstrated to the operator a knowledge of

the contents of the operations manual
the radio equipment in the aeroplanes used; and
the navigation equipment in the aeroplanes used;

demonstrated to the operator a knowledge of the following details concerning operations for which the officer is responsible and areas in which that individual is authorized to exercise flight supervision:

the seasonal meteorological conditions and the sources of meteorological information;
the effects of meteorological conditions on radio reception in the aeroplanes used;
the peculiarities and limitations of each navigation system which is used by the operation; and
the aeroplane loading instructions;

(v)demonstrated to the operator knowledge and skills related to human performance relevant to dispatch duties; and

(vi) demonstrated to the operator the ability to perform the duties

A flight operations officer or flight dispatcher shall not be assigned to duty after 12 consecutive months of absence from such duty.

A flight operations officer or flight dispatcher assigned to duty shall maintain complete familiarization with all features of the operation which are pertinent to such duties, including knowledge and skills related to human performance.

10.9 Company Procedures Indoctrination

No person may serve nor may any AOC holder use a person as a crewmember or flight operations officer or flight dispatcher unless that person has completed the company procedures indoctrination curriculum approved by the Authority, which shall include a complete review of the applicable Regulations and Operations Manual procedures pertinent to the crewmember or flight operations officer's duties and responsibilities.

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.

The knowledge area topics to be covered are contained in IS: 10.9.

10.10 Initial or Recurrent Dangerous Goods Training

No person may serve nor may any AOC holder use operational personnel unless he/she has completed the appropriate initial dangerous goods curriculum approved by the Authority.

Recurrent training shall be satisfactorily completed every 24 months.

Dangerous goods training programmes required for the operator shall be approved by the Authority.

10.11 Initial and Recurrent Security Training

No person may serve nor may any AOC holder use operational personnel unless he or she has completed the initial security curriculum approved by the Authority.

No person may serve nor may any AOC holder use operational personnel unless they have completed the recurrent training security curriculum approved by the Authority within 12 calendar months.

The operator shall establish and maintain an approved security training programme which ensures crew members act in the most appropriate manner to minimize the consequences of acts of unlawful interference. As a minimum, this programme shall include the following elements:

Determination of the seriousness of any occurrence;

Crew communication and coordination;

(iii)Appropriate self-defense responses;

Use of non-lethal protective devices assigned to crew members whose use is authorised by the State of the Operator;

Understanding of behaviour of terrorists so as to facilitate the ability of crew members to cope with hijacker behaviour and passenger responses;

Live situational training exercises regarding various threat conditions;

Flight crew compartment procedures to protect the aeroplane; and

Aeroplane search procedures and guidance on least-risk bomb locations where practicable.

The operator shall also establish and maintain a training programme to acquaint appropriate employees with preventive measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aeroplane so that they contribute to the prevention of acts of sabotage or other forms of unlawful interference.

10.12 Initial Crew Resource Management

No person may serve nor may any AOC holder use a person as a flight operations officer or crew member unless that person has completed the initial CRM curriculum approved by the Authority.

10.13 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.

10.14 Initial Aircraft Ground Training

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.

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 to be used.

For cabin crew, 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.

For flight operations officers, aircraft initial ground training shall include the pertinent portions of the operations manuals relating to aircraft-specific flight preparation and monitoring procedures, performance, mass and balance, systems, limitations for the aircraft types within the fleet MEL, CDL, Navigation.

10.15 Initial Aircraft Flight Training

No person may serve nor may any AOC holder use a person as a flight crewmember unless he or she has completed the initial flight training approved by the Authority for the aircraft type.

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.

An AOC holder may have separate initial flight training curriculum, which recognize the experience levels of flight crewmembers approved by the Authority.

10.16 Initial Specialized Operations Training

The pilot-in-command of an aeroplane equipped with an airborne collision avoidance system (ACAS II) shall ensure that each flight crew member has been appropriately trained to competency in the use of ACAS II equipment and the avoidance of collision.

No person may serve nor may any AOC holder use a person as a flight crew member unless he has completed the appropriate initial specialized operations training curriculum approved by the Authority.

Specialized operations for which initial training curricula shall be developed include-

Low minimums operations, including low visibility takeoffs and Category II and III operations;

Extended range operations;

(iii)Specialized navigation;

PIC right seat qualification;

RVSM;

RNP;

PBN; and
ACAS I/II/III.

10.17 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.

10.18 Introduction of New Equipment and Procedures

No person may serve nor may any AOC holder use a person as a flight crewmember 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 programme, unless that person has satisfactorily completed that curriculum, with respect to both the crewmember position and the particular variant of that aircraft.

10.19 Pilot Proficiency - Aircraft and Instrument Proficiency Checks

No person may serve nor may any AOC holder use a person as a pilot flight crewmember unless, since the beginning of the 12th calendar month before that service, that person has passed the aircraft pilot proficiency check prescribed by the Authority in the make and model of the aircraft on which their services are required.

No person may serve nor may any AOC holder use a person as a pilot in IFR operations unless, since the beginning of the 6th calendar month before that service, that pilot has passed the instrument proficiency check prescribed by the Authority.

When an operator schedules flight crew on several variants of the same type of aircraft or different types of aircraft with similar characteristics in terms of operating procedures, systems and handling, the provisions of IS:10.19 shall be used in determining the types of aircraft that may be combined for the purposes of (a) above.

The Authority shall prescribe requirements of experience, recency and training applicable to single pilot operations intended to be carried out under the IFR or at night.

The pilot-in-command should:

for operations under the IFR or at night, have accumulated at least 50 hours flight time on the class of aircraft, of which at least 10 hours shall be as pilot-in-command;

for operations under the IFR, have accumulated at least 25 hours flight time under the IFR on the class of aircraft, which may form part of the 50 hours flight time in sub-paragraph (i);

(iii) for operations at night, have accumulated at least 15 hours flight time at night, which may form part of the 50 hours flight time in Sub-paragraph (i);

for operations under the IFR, have acquired recent experience as a pilot engaged in a single pilot operation under the IFR of:

at least five IFR flights, including three instrument approaches carried out during the preceding 90 days on the class of aircraft in the single pilot role; or

an IFR instrument approach check carried out on such an aircraft during the preceding 90 days;

for operations at night, have made at least three takeoffs and landings at night on the class of aircraft in the single pilot role in the preceding 90 days; and

have successfully completed training programmes that include, in addition to the requirements of Flight Crew Member Training Programmes in these Flight Standards Regulations, passenger briefing with respect to emergency evacuation, autopilot management, and the use of simplified in-flight documentation.

The initial and recurrent flight training and proficiency checks indicated in the Flight Crew Member Training Programmes in these Regulations and Pilot Proficiency Checks shall be performed by the pilot-in-command in the single pilot role on the class of aircraft in an environment representative of the operation.

A pilot may complete the requirements of paragraphs (a) and (b) in a specific aircraft type or an approved flight simulator.

10.20 Re-Establishing Recency of Experience: Flightcrew

Pilots:

In addition to meeting all applicable training and checking requirements, a required pilot flight crewmember who, in the preceding 90 days has not made at least three takeoffs and landings in the aircraft in which that person is to serve, shall, under the supervision of a check pilot, re-establish recency of experience as follows:

Make at least three takeoffs and landings in the aircraft in which that person is to serve or in a qualified simulator.

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.

When using a simulator to accomplish any of the takeoff and landing training requirements necessary to re-establish recency of experience, each required flight crewmember 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.

(iii) A check pilot who observes the takeoffs and landings of a pilot flight crewmember 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

10.21 Pairing of Low Experience Pilots

If a CP has fewer than 100 hours of flight time in the type of aircraft 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 in IS: 10.21.

No PIC or CP may conduct operations for a type of aircraft in commercial air transport unless either pilot has at least 75 hours of line operating flight time, either as PIC or Co-Pilot.

The Authority may, upon application by the AOC holder, authorise exemptions from paragraph (b) by an appropriate amendment to the operations specifications in any of the circumstances identified in IS: 10.21.

10.22 Flight Engineer and Flight Navigator Proficiency Checks

No person may serve nor may any AOC holder use a person as a flight engineer or a flight navigator on an aeroplane unless within the preceding 6 calendar months he/she has had a proficiency check in accordance with the requirements prescribed by the Authority in IS 10.22.

10.23 Competency Checks: Cabin Crew

No person may serve nor may any AOC holder use a person as a cabin crewmember unless since the beginning of the 12th calendar month before that service, that person has passed the competency check prescribed by the Authority in IS 10.23 performing the emergency duties appropriate to that person's assignment.

10.24 Competency Checks: Flight Operations Officers or Flight Dispatcher

No person may serve nor may any AOC holder use a person as a flight operations officer or flight dispatcher unless, since the beginning of the 12th calendar month before that service, that person has passed the competency check, prescribed by the Authority in IS 10.24, performing the flight preparation and subsequent duties appropriate to that person's assignment.

10.25 Supervised Line Flying: Pilot

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 pilot.

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 pilot.

Each pilot qualifying for duties other than PIC shall complete a minimum of 5 flights performing those duties under the supervision of a check pilot.

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.

In the case of 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 aircraft used, and has satisfactorily demonstrated to the check pilot that he is qualified to perform the duties of a PIC for that type of aircraft.

10.26 Supervised Line Flying: Flight Engineers

Each person qualifying as a flight engineer for each aircraft class -- piston-engined; turbo propeller powered, or turbojet powered --shall perform those functions for a minimum of 5 flights under the supervision of a check flight engineer approved by the Authority

10.27 Supervised Line Experience: Cabin Crewmembers

Each person qualifying as a cabin crewmember shall perform those functions on the following aircraft under the supervision of a check cabin crewmember before qualifying as a required crewmember:

Piston-engined or turbopropeller powered aircraft—for a minimum of 2 flights that must include at least 5 hours flown.

Turbojet powered aircraft—for a minimum of 2 flights

10.28 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, comprising at least 5 total hours, over routes representative of those for which that person is assigned duties..

10.29 Line (Route and Area Checks): Pilot Qualification

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 aircraft they are to fly.

No person may perform PIC duties over a designated special operational area that requires a special navigation system or procedures or in EDTO operations unless their competency with the system and procedures has been demonstrated to the AOC holder within the past 12 calendar months.

Each PIC shall demonstrate operational competency by navigation over the route and area to be flown and the aerodromes to be used as PIC under the supervision of a check pilot and, on a continuing basis, by flights performing PIC duties. This, at a minimum, shall include a PIC demonstration of knowledge in the following:

The terrain and minimum safe altitudes.

The seasonal meteorological conditions.

(iii)The search and rescue procedures.

The navigational facilities and procedures, including any long-range navigation procedures, associated with the route along which the flight is to take place.

Procedures applicable to:

Flight paths over heavily populated areas or high air traffic density;

Obstructions;

Physical layout;

Lighting, approach aids;

Arrival, departure, holding and instrument approach procedures; and

Applicable operating minima.

The operator shall maintain a record, sufficient to satisfy the Authority of the qualification of the pilot and of the manner in which such qualification has been achieved.

A pilot-in-command shall have made an actual approach into each aerodrome or heliport of landing on the route, accompanied by a pilot who is qualified for the aerodrome or heliport, as a member of the flight crew or as an observer on the flight deck, unless:

the approach to the aerodrome or heliport is not over difficult terrain and the instrument approach procedures and aids available are similar to those with which the pilot is familiar, and a margin to be approved by the Authority is added to the normal operating minima, or there is reasonable certainty that approach and landing can be made in visual meteorological conditions; or

the descent from the initial approach altitude can be made by day in visual meteorological conditions; or

(iii)the operator qualifies the pilot-in-command to land at the aerodrome/heliport concerned by means of an adequate pictorial presentation; or

The aerodrome/heliport concerned is adjacent to another aerodrome/heliport at which the pilot-in-command is currently qualified to land.

In the event that more than 12 months elapse in which a pilot-in-command has not made such a trip on a route in close proximity and over similar terrain, within such a specified area, route or aerodrome/heliport, and has not practiced such procedures in a training device which is adequate for this purpose, prior to again serving as a pilot-in-command within that area or on that route, that pilot must re-qualify in accordance with IS: 10.29.

10.30 PIC Low Minimums Authorisation

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 (1.6 km).

Until a PIC has 20 flights performing PIC duties in the aircraft type (which included 5 approaches and landings 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.

10.31 Designated Special Aerodromes and Heliports: PIC Qualification

The Authority may determine that certain aerodromes, due to items such as surrounding terrain, obstructions, or complex approach or departure procedures, are special aerodromes requiring special aerodrome qualifications and that certain areas or routes, or both, require a special type of navigation qualifications.

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 unless

The PIC has been qualified by the AOC holder through a pictorial means acceptable to the Authority for that aerodrome; or

The PIC or the assigned CP has made a takeoff and landing at that aerodrome while serving as a flight crewmember for the AOC holder.

If the 12 months qualification period required in (b) above has expired, the PIC must re-qualify in accordance with the requirements in item (b).

Designated special aerodrome and heliport limitations are not applicable if the operation will occur:

During daylight hours;

When the visibility is at least 5 km (3 miles); and

(iii)When the ceiling at that aerodrome is at least 300 m (1000 ft.) above the lowest initial approach altitude prescribed for an instrument approach procedure.

10.32 Recurrent Training: Flight Crew Members

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 the Authority.

The recurrent ground training shall include training on-

Aircraft systems and limitations and normal, abnormal and emergency procedures;

Emergency equipment and drills;

Crew resource management (human performance);
Recognition or transportation of dangerous goods; and
Security training.

The recurrent flight training curriculum shall include-

(i) Manoeuvring and safe operation of the aircraft in accordance with the AOC holder's normal, abnormal and emergency procedures;

(ii) Manoeuvres and procedures necessary for avoidance of in-flight hazards; and

(iii)For authorized 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.

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.

10.33 Recurrent Training and Re-Establishment of Qualifications: Cabin Crewmembers

No person may serve nor may any AOC holder use a person as a cabin crewmember unless within the preceding 12 calendar months that person has completed the recurrent ground curricula approved by the Authority relevant to the type(s) and or variant(s) of aircraft and operations to which he is assigned.

The recurrent ground training shall include training on:

Aircraft-specific configuration, equipment and procedures;
Emergency and first aid equipment and drills;

(iii)Crew resource management (human performance);
Recognition or transportation of dangerous goods; and
Security training.

Specific normal and emergency Programme training requirements for cabin crewmembers are contained in IS: 10.33.

A required cabin crewmember who, due to a period of:

13 to 24 months inactivity, has not met the recurrent training requirements in paragraphs (a) through (c) shall complete the Requalification training and Annual training.

24 to 36 months inactivity, has not met the recurrent training requirements in paragraphs (a) through (c) shall complete the Requalification training, Annual training and Line Indoctrination.

(iii)more than 36 months of inactivity, since the last required annual training with the Air Operator, shall complete initial training and line indoctrination.

10.34 Recurrent Training and Re-Establishment of Qualification: Flight Operations Officers

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 relevant to the type(s) and or variant(s) of aircraft and positions to which he is assigned.

A required flight operations officer who, due to a period of inactivity, has not met the recurrent training requirements in paragraph (a) shall complete the initial AOC training programme and competency check specified in subpart 10.25.

10.35 Instructor Qualifications – Flight Crew, Cabin Crew, Flight Operations Officer and Dangerous Goods

Flight Crew. No AOC holder may use a person nor may any person serve as a flight instructor in an established flight training programme unless, with respect to the aircraft type involved, that person:

Holds the personnel licences and ratings required to serve as a PIC, a flight engineer, or a flight navigator, as applicable;

Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable;

(iii)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;

Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check; and

Holds the appropriate medical certificate for service as a required crewmember.

Flight Instructor - Flight Simulation Training. No person may serve nor may any AOC holder use a person as a Flight Instructor in a flight simulation training device, unless, since the beginning of the 12th calendar month before that service, that person has:

Flown at least 5 flights as a required crewmember for the type of aircraft involved; or

Observed, on the flight deck, the conduct of 2 complete flights in the aircraft type to which the person is assigned.

Cabin Crew. No AOC holder may use a person nor may any person serve as an instructor in an established cabin crew training programme unless, with respect to the aircraft type or position involved, that person:

Holds the qualification required to serve as a cabin crewmember;

Has satisfactorily completed the appropriate training phases for the aircraft and position involved, including recurrent training, refresher training and differences training, that are required to serve as a cabin crewmember;

(iii)Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a cabin crewmember;

Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check;

Holds the appropriate medical certificate for service as a required cabin crewmember.

Flight Operations Officer. No AOC holder may use a person nor may any person serve as an instructor in an established flight operations officer training programme unless, with respect to the aircraft type and position involved, that person--

Holds the licence required to serve as a flight operations officer;

Has satisfactorily completed the appropriate training phases for the aircraft or position involved, including recurrent training and differences training, that are required to serve as a flight operations officer;

(iii)Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a flight operations officer; and

Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check.

DANGEROUS GOODS. No AOC holder may use a person nor may any person serve as an instructor in an established dangerous goods training programme unless:

they have adequate instructional skills and

have successfully completed a dangerous goods training programme and in an applicable category to be taught

10.36 Instructor Training

No person may serve nor may any AOC holder use a person as an instructor for flight crew, cabin crew or flight operations officers, unless he has completed the curricula approved by the Authority for those functions for which they are to serve.

10.37 Personnel Approved to Conduct Checks

The Authority may approve the following AOC holder personnel to conduct checks when such personnel meet the requirements for the authorised responsibilities, and may be approved for either aircraft or simulator, or both, as applicable, for checking of flight crew:

Check pilot.

Check flight engineer.

(iii)Check flight navigator.

Check cabin crewmember; and.

Check flight operations officer.

The authorized duties of check personnel are to—

Conduct initial and recurrent proficiency checks for flight crew and competency checks for cabin crew and flight operations officers,

Certify as satisfactory, the knowledge and proficiency of the flight crew, and the knowledge and competency of the cabin crew and flight operations officers; and

(iii)For all check personnel, supervise operating experience (OE).

No person may serve nor may any AOC holder use a person as a check personnel under the AOC holder's crewmember checking and standardization programme in SLCAR Part 26 unless that person has:

been identified by name and function and approved in writing by the Authority; and

successfully completed the AOC holder's curricula approved by the Authority for those functions for which he or she is to serve.

Once approved, no person may serve nor may any AOC holder use a person as a check personnel for any flight crew, cabin crew or flight operations officer checks unless that person has demonstrated, initially and at least biennially to an inspector of the Authority, the ability to conduct a check for which he/she is approved.

10.38 Check Personnel Qualifications

Check personnel for flight crew.

No AOC holder may use a person, nor may any person serve as a check personnel in an established flight crew training programme unless, with respect to the aircraft type involved, that person:

Holds the personnel licences and ratings required to serve as a PIC, a flight engineer, or a flight navigator, as applicable;

Has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as a PIC, flight engineer, or flight navigator, as applicable;

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;

Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check for check personnel duties;

Holds the appropriate medical certificate if serving as a required flight crewmember; and

Has been approved by the Authority for the check personnel duties involved.

Check Personnel - Simulator.

Additional requirements. No person may serve nor may any AOC holder use a person as a check personnel in a flight simulation training device, unless, since the beginning of the 12th calendar month before that service, that person has:

Flown at least 5 flights as a required crewmember for the type of aircraft involved; or

Observed, on the flight deck, the conduct of 2 complete flights in the aircraft type to which the person is assigned.

Check Personnel for Cabin Crew.

No AOC holder may use a person, nor may any person serve as a check cabin crewmember in an established cabin crew training programme unless, with respect to the aircraft type or position involved, that person:

Holds the qualifications required to serve as a cabin crewmember;

Has acted at least 5 years as SCCM for the type of aircraft involved; or

(iii)Has satisfactorily completed the appropriate training phases for the aircraft type including recurrent training required to serve as a check cabin crew;

Has satisfactorily completed the appropriate competency and on board experience check observed by the Authority;

Holds a valid cabin crew medical certificate; and

Has been approved by the Authority for the check cabin crewmember duties involved.

Check Personnel for Flight Operations Officers.

No AOC holder may use a person, nor may any person serve as a check flight operations officer in an established flight operations officer training programme unless, with respect to the aircraft type or position involved, that person:

Holds the licence required to serve as a flight operations officer;

Has satisfactorily completed the appropriate training phases for the aircraft and or position, including recurrent training and differences training, that are required to serve as a flight operations officer;

(iii)Has satisfactorily completed the appropriate competency and recency of experience checks that are required to serve as a flight operations officer;

Has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed competency check for the check flight operations officer duties involved.

Has been approved by the Authority for the check flight operations officer duties involved.

10.39 Check Personnel Training

No person may serve nor may any AOC holder use a person for checks unless he has completed the curricula approved by the Authority for those functions for which they are to serve.

10.40 Monitoring of Training and Checking Activities

To enable adequate supervision of its training and checking activities, the AOC holder shall forward to the Authority at least 24 hours before the scheduled activity the dates, report times and report location of all:

Training for which a curriculum is approved in the AOC holder's training programme; and

Proficiency, competency and line checks.

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.

10.41 Termination of a Proficiency, Competency or Line Check

Where it is necessary to terminate a check for any reason, the AOC holder may not use the crewmember or flight operations officer in commercial air transport operations until the completion of a satisfactory recheck.

10.42 Recording of Crewmember and Flight Operations Officer Qualification

The AOC holder shall record in its records maintained for each crewmember and flight operations officer, the completion of each of the qualifications required by this Part.

A crewmember or flight operations officer may complete the curricula required by this Part concurrently or intermixed with other required curricula, but completion of each of these curricula shall be recorded separately

10.43 Eligibility Period

Crewmembers required to take a proficiency check, 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

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.

Completion of the requirement at any time during the period shall be considered as completion in the month-due for calculation of the next due date.

10.44 Reductions in Requirements

The Authority may authorize reductions in, or waive, certain portions of the training requirements of this subpart, taking into account the previous experience of the crew members.

Any AOC holder request for reduction or waiver shall be made in writing and outline the basis under which the request is made.

If the request was for a specific crew member, the correspondence from the Authority authorizing the reduction and the basis for it shall be filed in the record the AOC holder maintains for that crew member.

If approved by the Authority, a person need not complete the programmed hours of flight training for the particular aircraft if he/she:

progresses successfully through flight training

is recommended by their instructor, and

(iii)Successfully completes the appropriate flight check with a check person.

If approved by the Authority, a person need not complete the programmed hours of cabin crew or flight operations officer training if he/she:

progresses successfully through cabin crew or flight operations officer training,

is recommended by their instructor, and

(iii)successfully completes the appropriate competency check with a check person.

Whenever the Authority finds that 20 percent of the flight checks given at a particular training base during the previous 6 months are unsuccessful, the 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.

10.45 Records of Cosmic Radiation

For each flight of an aeroplane above 49000 ft., each AOC holder shall maintain records so that the total cosmic radiation dose received by each crewmember over a period of 12 consecutive months can be determined.

FATIGUE MANAGEMENT 11.1

Applicability

This section is applicable to the management of fatigue-related safety risks of crewmembers and flight operations officers or flight dispatchers engaged in commercial air transport flight operations and is based upon scientific principles, knowledge and operational experience with the aim of ensuring that flight and cabin crew members are performing at an adequate level of alertness.

11.2 Managing Fatigue-Related Safety Risks

For the purpose of managing fatigue-related safety risks, an AOC holder shall establish flight time, flight duty period, duty period limitations and rest period requirements that are within the prescriptive fatigue management limits prescribed in this sub part

The limits referred to in sub part shall include the following:

limits on the aggregate of all that persons flight times during every period of twenty eight (28) consecutive days;

limits on that person flight duty period; and

minimum rest periods which that person is to have immediately before any duty period in the course of which he makes any flight.

Where the operator adopts prescriptive fatigue management as prescribed in these Regulations for part or all of its operations, the Authority may approve, in exceptional circumstances, variations to these Regulations on the basis of a risk assessment provided by the operator. Approved variations shall provide a level of safety equivalent to, or better than that achieved through the prescriptive fatigue management Regulations described therein.

The matters which an operator shall take into account in establishing the limits and minimum rest periods referred to in sub part are; the nature of the work and other duties

which those persons will carry out, and all the circumstances arising out of the carrying out of that work and those duties, which may affect the degree of fatigue from which those persons may suffer while they are making a flight in an aircraft to which this regulation applies in any such capacity as is mentioned in this sub part including:

the area in which the flight will be made;

the number of landings which will be made during the course of each flight duty period;

the amount of night flying during each flight duty period; and

the number of consecutive occasions on which each crew member will be required to fly for the maximum period permitted under this sub part.

No limits or minimum rest periods may be established under this sub part which would require or permit any person to fly in any aircraft at a time when such flying would constitute a contravention of any of the provisions of these Regulations, or would require or permit any person to fly in any aircraft as a crew member thereof within the period of one hour immediately preceding the end of the specified time referred to in 12.2(b) or, when the specified time is twenty-four hours (24), within the period of two (2) hours immediately preceding the end of the specified time.

An operator of an aircraft holder to which this regulation applies shall not permit that aircraft to make a flight unless limits and minimum rest periods have been established in accordance with the provisions of this regulation so as to apply to every crew member.

An operator of an aircraft to which this regulation applies shall take all such steps as are reasonably practicable to ensure that all limits for the time being established by that operator in accordance with the provisions of this regulation are observed, and that no person for whom minimum rest periods are for the time being so established makes any flight in an aircraft to which this regulation applies, unless immediately before the duty period in the course of which that person makes the flight, the person has had the appropriate rest period so established.

Notwithstanding anything contained in this regulation, an operator of an aircraft to which this regulation applies may confer upon the pilot in command (PIC) a discretion to make, or authorize any person to make, a flight in that aircraft in such circumstances that the PIC or that other person will not observe the limits or will not have had the minimum rest periods established by that operator under this regulation and applicable to the PIC or that other person.

The discretion set out (g) shall not be exercisable unless:

it appears to the PIC that:

arrangements had been made for the flight to be made with such a crew and so as to begin and end at such times that if the flight had been made in accordance with those arrangements each member of the crew would have observed the limits and have had the minimum rest periods established by the operator and applicable to them, and that since those arrangements were made the flight has been or will be prevented from being made in accordance with those arrangements by reason of circumstances which were not foreseen, as likely to prevent that flight from being so made; or

the flight is one which ought to be carried out in the interests of the safety or health of any person; and

the PIC is satisfied that the safety of the aircraft on that flight will not be endangered if the PIC or that other person makes that flight.

An AOC holder shall include in the operations manual required under the SLCAR Part 26 (Air Operator Certificate and Administration), for the use and guidance to crew members and flight dispatchers the full particulars of all limits and minimum rest periods required under sub part (a) which may affect any of those members, and of any discretion conferred upon the PIC of that aircraft

11.3 Duty and Rest Periods

Duty and rest periods for flight crew and cabin crew are contained in IS 11.3

FLIGHT TIME, FLIGHT DUTY PERIODS, DUTY PERIODS AND REST PERIODS FOR FATIGUE MANAGEMENT

12.1 Applicability

This section shall be applicable to the rest, duty and flight time limitations of crewmembers and flight operations officers or flight dispatchers engaged in commercial air transport flight operations.

12.2 Duty and Rest Periods – all Crewmembers and Flight Operations Officers

With respect to duty periods:

Persons are considered to be on duty if they are performing any tasks on behalf of the AOC holder, whether scheduled, requested or self-initiated.

If an AOC holder requires a flight crewmember 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.

(iii)No AOC holder may schedule:

A flight crew member for more than 14 hours of duty, except as prescribed by the Authority.

A cabin crew member for more than 14 consecutive hours of duty, except as prescribed by the Authority.

A flight operations officer or aircraft dispatcher for more than 10 consecutive hours of duty within a 24 consecutive hour period, unless that person is given an intervening rest period of at least 6 hours at or before the end of the 10 hours duty, except in cases where circumstances or emergency conditions beyond the control of the AOC holder require otherwise.

Each AOC holder shall establish the daily duty period for a flight operations officer or aircraft dispatcher so that it begins at a time that allows him or her to become thoroughly familiar with existing and anticipated weather conditions along the route before he or she dispatches any aircraft.

He or she shall remain on duty until each aircraft dispatched by him or her has completed its flight or has gone beyond his or her jurisdiction or until he or she is relieved by another qualified dispatcher.

With respect to rest periods:

The minimum rest period is considered to be 6 consecutive hours.

The minimum rest period for flight crewmembers shall be 9 consecutive hours, unless otherwise prescribed by the Authority.

(iii)The AOC holder may exercise the option to reduce a crewmember's rest period within the limitations prescribed under IS: 11.3.

The AOC holder shall relieve the flight crewmember, flight operations officer or flight dispatcher, or cabin crewmember from all duties for 24 consecutive hours during any 7 consecutive day periods.

Time spent in transportation, not local in character, which is required by the AOC holder to position crewmembers to or from flights is not considered part of a rest period.

Time spent in transportation on aircraft (at the insistence of the AOC holder) to or from a crewmember's home station is not considered part of a rest period.

No AOC holder may assign, nor may any person:

Perform duties in commercial air transportation unless that person has had at least the minimum rest period applicable to those duties as prescribed by the Authority; or

Accept an assignment to any duty with the AOC holder during any required rest period.

12.3 Duty Aloft – Flight Crew

The Authority shall consider all time spent on an aircraft as an assigned flight crewmember or relief flight crewmember, whether resting or performing tasks, to be duty aloft.

The Authority shall consider a flight crewmember to be on continuous duty aloft unless the flight crewmember receives a rest period of 8 consecutive hours on the ground.

Each AOC holder shall provide adequate sleeping quarters, including a berth on the aircraft whenever a flight crewmember is scheduled to be aloft for more than 12 hours during any 24 consecutive hours.

12.4 Maximum Number of Flight Time Hours – Flight Crew

No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 8 hours in any 24 consecutive hours.

No person may schedule any flight crewmember and no flight crewmember may accept an assignment as a required crewmember for more than 7 flights in commercial air transportation during any period of 18 consecutive hours, whichever comes first.

No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 30 hours in any 7-day period.

No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 100 hours in any 30-day period.

No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time, total flights or duty aloft in commercial flying will exceed the limitations prescribed by the Authority.

No person may schedule any flight crewmember and no flight crewmember may accept an assignment for flight time in commercial air transportation, if that flight crewmember's total flight time will exceed 1000 hours in any 12-calendar month period.

12.5 Compliance with Scheduling Requirements

The Authority may consider a person in compliance with prescribed standards if that person exceeds flight and or duty limitations when—

The flight is scheduled and normally terminates within the prescribed limitations; but 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 may consider a person in compliance with prescribed duty limitations, if that person exceeds applicable limitations during emergency or adverse situations beyond the control of the AOC holder.

12.6 Special Flight Duty Schemes

The Authority may approve a special flight duty scheme for an AOC holder.

An AOC holder may elect to apply the flight crewmember flight duty and rest requirements to the cabin crewmembers.

12.7 Flight Time, Duty and Rest Period Records

Each AOC holder shall maintain records for each crew member and flight operations officer or flight dispatcher of flight time, flight duty periods, duty periods, and rest periods for a period of 24 months.

FLIGHT RELEASE: COMMERCIAL AIR TRANSPORT

13.1 Applicability

This Subpart is applicable to an AOC holder and the person designated by the AOC holder to issue a flight release.

13.2 Qualified Persons Required for Operational Control Functions

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.

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.

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.

For all flights, the PIC shares in the responsibilities for operational control of the aircraft and has the situational authority to make decisions regarding operational control issues in-flight.

Where a decision of the PIC differs from that recommended, the person making the recommendation shall make a record of the associated facts.

13.3 Functions Associated with Operational Control

The person exercising responsibility for operational control for an AOC holder shall-

Authorise the specific flight operations;

Ensure that an airworthy aircraft properly equipped for the flight is available;

Ensure that qualified personnel and adequate facilities are available to support and conduct the flight;

Ensure that proper flight planning and preparation is made;

Ensure that flight locating and flight following procedures are followed; and

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.

13.4 Operational Control Duties

For all flight the qualified person performing the duties of a flight operations officer or flight dispatcher shall:

Assist the PIC in flight preparation and provide the relevant information required;

Assist the PIC in preparing the operational and ATC flight plans, sign when applicable and file the appropriate flight plan with the appropriate ATS unit;

(iii)Sign the dispatch copy of the flight release;

Furnish the PIC while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight; and

In the event of an emergency situation which endangers the safety of the aircraft or persons becoming known first to the flight operations officer or flight dispatcher, action by that persons shall be in accordance with such procedures as outlined in the operations manual.

Where necessary, immediately notify the appropriate authorities on the nature of the situation, and if required, a request for assistance.

Convey safety-related information to the pilot-in-command that may be necessary for the safe conduct of the flight, including information related to any amendments to the flight plan that become necessary in the course of the flight.

13.5 Contents of a Flight Release or Operational Flight Plan

The flight release or operational flight plan must contain at least the following information concerning each flight:

Company or organization name.

Make, model, and registration number of the aircraft being used.

(iii)Flight or trip number, and date of flight.

(iv) Name of each flight crew member, cabin crew, and PIC.

Departure aerodromes, destination aerodromes, alternate aerodromes, and route.

Minimum fuel supply (in gallons, pounds, litres or kg);

A statement of the type of operation (e.g., IFR, VFR).

The latest available weather reports, and forecasts for the destination aerodrome and alternate aerodromes.

Any additional available weather information that the PIC considers necessary.

The Operations Manual must describe the content and use of the operational flight Plan.

The dispatch or flight release or operational flight plan shall be signed by the PIC and, when applicable, the flight operations officer, and a copy shall be filed with the Operator or a designated agent. If these procedures are not possible, it shall be left with the aerodrome authority or on record at a suitable place at the point of departure.

13.6 Flight Release: Aircraft Requirements

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.

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 of aircraft.

No person may issue a flight release for a commercial air transport operation using an aircraft unless a maintenance release has been issued for that aircraft.

No person may issue a flight release for a commercial air transport operation unless the requirements of subpart 13.5 for operational flight planning have been met.

Completed flight preparation forms shall be kept by an operator for a period of 3 months.

13.7 Flight Release: Facilities and NOTAMs

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.

The flight operations officer shall ensure that the PIC is provided with all available current reports or information on aerodrome conditions and irregularities of navigational facilities that may affect the safety of the flight.

No person may issue a flight release for a commercial air transport operation unless the requirements of Subpart 13.5 for operational flight planning have been met.

Completed flight preparation forms shall be kept by an operator for a period of 3 months.

13.8 Flight Release: Weather Reports and Forecasts

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.

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.

No person may issue a flight release for a commercial air transport operation unless the requirements of Subpart 13.5 for operational flight planning have been met.

Completed flight preparation forms shall be kept by an operator for a period of 3 months.

13.9 Flight Release in Icing Conditions

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.

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 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.

No person may issue a flight release for a commercial air transport operation unless the requirements of Subpart 13.5 for operational flight planning have been met.

Completed flight preparation forms shall be kept by an operator for a period of 3 months.

13.10 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.

13.11 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.

No person may issue a flight release for a commercial air transport operation unless the requirements of Subpart 13.5 for operational flight planning have been met.

Completed flight preparation forms shall be kept by an operator for a period of 3 months.

13.12 Flight Release: Aircraft Loading and Performance

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:

Centre of gravity limits;

Aircraft operating limitations; and

(iii)Minimum performance requirements.

No person may issue a flight release for a commercial air transport operation unless the requirements of Subpart 13.5 for operational flight planning have been met.

Completed flight preparation forms shall be kept by an operator for a period of 3 months.

13.13 Flight Release: Amendment or Re-Release En-Route

Each person who amends a flight release while the flight is enroute shall record that amendment.

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.

No person may allow a flight to continue to an aerodrome to which it has been released if the weather reports and forecast indicate changes which would render that aerodrome unsuitable for the original flight release.

No person may issue a flight release for a commercial air transport operation unless the requirements of Subpart 13.5 for operational flight planning have been met.

Completed flight preparation forms shall be kept by an operator for a period of 3 months.

13.14 Flight Release with Airborne Weather Radar Equipment

No person may release a large aircraft carrying passengers under IFR or night VFR conditions when current weather reports indicate that thunderstorms, or other potentially hazardous weather conditions that can be detected with airborne weather radar may reasonably be expected along the route to be flown unless the airborne weather radar equipment is in satisfactory operating condition.

No person may issue a flight release for a commercial air transport operation unless the requirements of Subpart 13.5 for operational flight planning have been met.

Completed flight preparation forms shall be kept by an operator for a period of 3 months.

All Aeroplanes Complying with the Noise Certification Standards

An aeroplane shall carry a document attesting noise certification. When the document, or a suitable statement attesting noise certification as contained in another document approved by the State of Registry, is issued in a language other than English, it shall include an English translation.

14.1 Mach Number Indicator

All aeroplanes with speed limitations expressed in terms of Mach number shall be equipped with a Mach number indicator.

Dangerous Goods Management

15.1 Applicability

Dangerous Goods transportation by air requirements apply to shippers, operators and users by which articles and substances with hazardous properties can be safely transported by air on all commercial air transport as specified in SLCAR Part 18.

15.2 Operators with no Specific Approval for the Transport of Dangerous Goods as Cargo

15.2.1 The State of the Operator shall ensure that operators with no specific approval to transport dangerous goods have:

established a dangerous goods training programme that meets the requirements of Annex 18, the applicable requirements of the Technical Instructions, Part 1, Chapter 4, and the requirements of the State's regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals;

established dangerous goods policies and procedures in its operations manual to meet, at a minimum, the requirements of Annex 18, the Technical Instructions and the State's regulations to allow operator personnel to:

identify and reject undeclared dangerous goods, including COMAT classified as dangerous goods; and

report to the appropriate authorities of the State of the Operator and the State in which it occurred any:

occasions when undeclared dangerous goods are discovered in cargo or mail; and

dangerous goods accidents and incidents.

15.3 Operators with a Specific Approval for the Transport of Dangerous Goods as Cargo

15.3.1 The State of the Operator shall issue a specific approval for the transport of dangerous goods and ensure that the operator:

establishes a dangerous goods training programme that meets the requirements in the Technical Instructions, Part 1, Chapter 4, Table 1-4, and the requirements of the State regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals;

establishes dangerous goods policies and procedures in its operations manual to meet, at a minimum, the requirements of Annex 18, the Technical Instructions and the State's regulations to enable operator personnel to:

identify and reject undeclared or misdeclared dangerous goods, including COMAT classified as dangerous goods;

report to the appropriate authorities of the State of the Operator and the State in which it occurred any:

occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail; and

dangerous goods accidents and incidents;

report to the appropriate authorities of the State of the Operator and the State of Origin any occasions when dangerous goods are discovered to have been carried;

when not loaded, segregated, separated or secured in accordance with the Technical Instructions, Part 7, Chapter 2; and

without information having been provided to the pilot-in-command;

accept, handle, store, transport, load and unload dangerous goods, including COMAT classified as dangerous goods as cargo on board an aircraft; and

provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo.

for helicopter operations, with the approval of the State of the Operator, the information provided to the pilot-in-command may be abbreviated or briefed by other means (e.g. radio communication, as part of the working flight documentation such as a journey log or operational flight plan) where circumstances make it impractical to produce written or printed information or a dedicated form (see the Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284SU), Part S-7;4.8).

15.4 Provision of Information

The operator shall ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo are informed of the operator's specific approval and limitations with regard to the transport of dangerous goods.

15.5 Cargo Compartment Safety

15.5.1 **Transport of Items in the Cargo Compartment.**

The State of the Operator shall ensure that the operator establishes policies and procedures for the transport of items in the cargo compartment, which include the conduct of a specific safety risk assessment. The risk assessment shall include at least the:

hazards associated with the properties of the items to be transported;

capabilities of the operator;

operational considerations (e.g. area of operations, diversion time);

capabilities of the aeroplane and its systems (e.g. cargo compartment fire suppression capabilities); e) containment characteristics of unit load devices; f) packing and packaging;

safety of the supply chain for items to be transported; and

quantity and distribution of dangerous goods items to be transported.

The elements of the cargo compartment(s) fire protection system, as approved by the State of Design or State of Registry, and a summary of the demonstrated cargo compartment fire protection certification standards, shall be provided in the aeroplane flight manual or other documentation supporting the operation of the aeroplane.

The Operator shall establish policies and procedures that address the items to be transported in the cargo compartment. These shall ensure, to a reasonable certainty, that in the event of a fire involving those items, it can be detected and sufficiently suppressed or contained by the elements of the aeroplane design associated with cargo compartment fire protection, until the aeroplane makes a safe landing.

15.6 Classification

Each person involved in handling dangerous goods shall take all reasonable measures to ensure that articles and substances are classified as dangerous goods as specified in the Technical Instructions.

15.7 Packing

Each person involved in handling dangerous goods shall take all reasonable measures to ensure that dangerous goods are packed as specified in the Technical Instructions.

15.8 Labelling and Marking

Each person involved in handling dangerous goods shall take all reasonable measures to ensure that packages, overpacks and freight containers are labeled and marked as specified in the Technical Instructions.

Where dangerous goods are carried on a flight which takes place wholly or partly outside the territory of Sierra Leone the shipper and operator shall ensure that labeling and marking are in the English language in addition to any other language requirements.

15.9 Dangerous Goods Transport Document

Each operator shall ensure that, except when otherwise specified in the Technical Instructions dangerous goods are accompanied by a dangerous goods transport document Where dangerous goods are carried on a flight, which takes place wholly, or partly outside the territory of a State, the AOC holder shall ensure that the English language is used for the dangerous goods transport document in addition to any other language requirements.

15.10 Acceptance of Dangerous Goods

No operator 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.

Each operator, or its handling agent, shall use an acceptance check list which-

Shall allow for all relevant details to be checked; and

Shall be in such form as will allow for the recording of the results of the acceptance check by manual, mechanical or computerised means.

15.11 Inspection for Damage, Leakage or Contamination

Each operator, shipper or handling agent shall ensure that:

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;

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;

Leaking or damaged packages, overpacks or freight containers are not loaded on an aircraft;

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;

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

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.

15.12 Removal of Contamination

Each operator shall ensure that-

Any contamination found as a result of the leakage or damage of dangerous goods is removed without delay; and

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.

15.13 Loading Restrictions

Passenger Cabin and Flight Deck. Each operator 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.

Cargo Compartments. Each operator shall ensure that dangerous goods are loaded, segregated, stowed and secured on an aircraft as specified in the Technical Instructions.

Dangerous Goods Designated for Carriage Only on Cargo Aircraft. Each operator 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.

15.14 Provision of Information

Information to Ground Staff. Each operator shall ensure that;

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

Where applicable, the information referred to in paragraph (a) is also provided to the handling agent.

Information to Passengers. Each operator 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.

Information to Acceptance Points Personnel. Each operator, 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.

Information to Crew Members. Each operator 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.

Information to the PIC. Each operator shall ensure that the PIC is provided with written information, as specified in the Technical Instructions;

Information in the Event of an Aircraft Incident or Accident. Each operator which is involved in an aircraft incident shall-

As soon as possible, inform the appropriate authority of the State in which the aircraft accident occurred of dangerous goods carried; and

On request, provide any information required to minimize the hazards created by any dangerous goods carried.

15.15 Training Programmes

Each shipper, operator and agencies who handles or conduct operations in the transportation of Dangerous Goods By Air shall establish, maintain and conduct SLCAA approved training programmes which enables the operator's personnel to qualify for the function or in the area assigned to the personnel as follows:

15.15.1 Initial Dangerous Goods Training

Each operator holding a permanent approval to carry dangerous goods shall ensure that-

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

Aircraft crew members, passenger handling staff, and security staff employed by the operator or handling agents who deal with the screening of 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 1

Areas of Dangerous Goods Training	**1**	**2**
General Philosophy	x	x
Limitations on Dangerous Goods in Air Transport	x	x
Package Marking and Labelling	x	x
Dangerous Goods in Passengers' Baggage		x
Emergency Procedures		x

Note: x indicates an area to be covered

Each operator holding a permanent approval to carry dangerous goods shall ensure that:

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;

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;

(iii) 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;

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 aircraft; and

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 aircraft.

Each shipper, operator and handling agent shall ensure that all personnel who require dangerous goods recurrent training at intervals of not longer than 2 years.

Each AOC holder shall ensure that records of dangerous training are maintained for all personnel required for such training and that these records are maintained at the location where the personnel perform such duties.

Each AOC holder shall ensure that its handling agent's staff (shippers) are trained in accordance with the applicable column of Table 1 or Table 2.

Table 2

Areas of Training		**1**	**2**	**3**	**4**	**5**
S/N	General Philosophy	x	x	x	x	x
	Limitations on Dangerous Goods in Air Transport	x	x	x	x	x
	Classification and list of Dangerous Goods	x	x		x	
	General Packing Requirements and Packing Instructions	x				
	Packaging Specifications Marking	x				
	Package Marking and Labelling	x	x	x	x	x
	Documentation from the Shipper	x				
	Acceptance of Dangerous Goods, including the use of a checklist	x				
	Loading, Restrictions on Loading and Segregation	x	x	x	x	
	Inspections for Damage or Leakage and Decontamination Procedures	x	x			
	Provision of information to Commander	x	x		x	
	Dangerous Goods in Passengers' Baggage	x			x	
	Emergency Procedures	x	x		x	

Note: x indicates an area to be covered.

An AOC holder shall provide dangerous goods training manual which contains adequate procedures and information to assist personnel in identifying packages marked or labeled as containing hazardous materials including:

Instructions on the acceptance, handling, and carriage of hazardous materials;

Instruments governing the determination of proper shipping names and hazard classes; (iii)Packaging, labelling, and marking requirements;

Requirements for shipping papers, compatibility requirements, loading, storage and handling requirements; and

Restrictions.

15.16 Carriage of Weapons and of Munitions of War

An aircraft shall not carry any munitions of war unless:

such munitions of war are carried with the written permission of the Authority and in accordance with any condition relating thereto; and

the commander of the aircraft is informed in writing by the operator before the flight commences of the type, weight, quality and location of any such munitions of war on board or suspended beneath the aircraft and any condition of the permission of the Authority.

Notwithstanding subparagraph 15.14 (a) (i) it shall be unlawful to permit an aircraft to carry any weapon or munitions of war in any compartment or apparatus to which passengers have access.

It shall be unlawful for a person to carry or have in his possession or take or cause to be taken on board an aircraft, to suspend or cause to be suspended beneath an aircraft or to deliver or cause to be delivered for carriage any weapon or munitions of war unless:

the weapon or munitions of war:

is either part of the baggage of a passenger on the aircraft or consigned as cargo to be carried.

is carried in a part of the aircraft, or in any apparatus attached to the aircraft inaccessible to passengers; and

in case of a firearm, is unloaded;

Particulars of the weapon or munitions of war have been furnished by that passenger or by the consignor to the operator before the flight commences; and

(iii)without prejudice to sub-regulation (i) the operator consents to the carriage of such weapon or munitions of war by the aircraft.

Nothing in this regulation shall apply to any weapon or munitions of war taken or carried on board an aircraft if the weapon or munitions of war, may under the law of the country in which the aircraft is registered be lawfully taken or carried on board for the purpose of ensuring the safety of the aircraft or of persons on board.

For the purpose of this regulation “munitions of war” means any weapon, ammunition or article containing an explosive or any noxious liquid, gas or other thing which is designed or made for use in warfare or against persons including parts, whether components or accessories for such weapon, ammunition or article.

IMPLEMENTING STANDARDS

IS: 2.1.5 INOPERATIVE INSTRUMENTS AND EQUIPMENT

This implementing standard authorizes 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.

The inoperative instruments and equipment may not be-

Part of the VFR-day instruments and equipment prescribed in Part 25;

Required on the aircraft's equipment list or the operations equipment list for the kind of flight operation being conducted;

(iii)Required by Part 25 for the specific kind of flight operation being conducted; or

Required to be operational by an airworthiness Regulation;

To be eligible for these provisions, the inoperative instruments and equipment shall be:

Determined by the PIC not to be a hazard to safe operation;

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.*

Removed from the aircraft, the flight deck control placarded and the maintenance recorded in accordance with Part 5.

The following instruments and equipment may not be included in the MEL:

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.

Instruments and equipment required for operable condition by an airworthiness Regulation, unless the airworthiness Regulation provides otherwise.

(iii)Instruments and equipment required for specific operations.

IS: 2.1.8 ARTICLE 83 bis AGREEMENT SUMMARY

ARTICLE 83 bis AGREEMENT SUMMARY		
Title of the Agreement:		
State of Registry:		Focal point:
State of the Operator:		Focal point:
Date of signature:	By State of Registry1:	
	By State of the Operator1:	
Duration:	Start Date1:	End Date (if applicable)2
Languages of the Agreement:		
ICAO Registration No.:		
Umbrella Agreement (if any) with ICAO Registration number:		

Convention on International Civil Aviation	ICAO Annexes affected by the transfer of responsibility in respect of certain functions and duties to the State of the Operator			
Article 12: Rules of the air	Annex 2, all chapters	Yes	□	
		No	□	
Article 30 a): Aircraft radio equipment	Radio Station Licence	Yes	□	
		No	□	
Articles 30 b) and 32 a): Licenses of personnel	Annex 1, Chapters 1, 2, 3 and 6; and Annex 6, Part I, Radio Operator; or Annex 6, Part II (qualifications and/or flight crew member licensing); or Annex 6, Part III, Section II (composition of the flight crew) (radio operator); or Annex 6, Part III, Section III (qualifications)	Yes	□	Annex 6: [Specify Part and paragraph]3
		No	□	
Article 31: Certificates of airworthiness	Annex 6 Part I or Part III, Section II	Yes	□	[Specify Part and chapters]
		No	□	
	Annex 6 Part II or Part III, Section III	Yes	□	Specify Part and chapters]3
		No	□	
	Annex 8 Part II, Chapters 3 and 4	Yes	□	[Specify chapters]3
		No	□	

Aircraft affected by the transfer of responsibilities to the State of the Operator					
Aircraft make, model, series	Nationality and registration marks	Serial No	AOC No. (Commercial air transport)	Dates of transfer of responsibilities	
				From[1]	To (if applicable)[2]

IS: 4.16 GENERAL AVIATION SPECIFIC APPROVALS

Specific approvals shall have a standardized format which contains the minimum information required in the specific approval template.

Note.— When the operations to be conducted require a specific approval, a copy of the document(s) needs to be carried on board

SPECIFIC APPROVAL				
ISSUING AUTHORITY and CONTACT DETAILS[1] Issuing Authority[1] Address Signature: Date[2]: Telephone: Fax: Email:				
OWNER/OPERATOR Name[3]: Address: Telephone: Fax: Email:				
Aircraft model[4] and registration marks:				
SPECIFIC APPROVAL	**YES**	**NO**	**DESCRIPTION[5]**	**REMARKS**
LVO				
Approach and landing	☐	☐	CAT[6]: RVR: m DH: ft	
Take-off	☐	☐	RVR[7]: m	
Operational credit(s)	☐	☐	[8]	
RVSM	☐	☐		
AR navigation specifications for PBN operations	☐	☐	[9]	
Other [10]	☐	☐		

Notes

The Sierra Leone Civil Aviation Authority and its contact details, including the telephone country code and email if available.

Issuance date of the specific approval (dd-mm-yyyy) and signature of the authority representative.

Owner or operator's name and address.

Insert the aeroplane make, model and series, or master series, if a series has been designated. The CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org/.

List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).

Insert the applicable precision approach category (CAT II, IIIA, IIIB or IIIC). Insert the minimum RVR in metres and decision height in feet. One line is used per listed approach category.

Insert the approved minimum take-off RVR in metres. One line per approval may be used if different approvals are granted.

List the airborne capabilities (i.e. automatic landing, HUD, EVS, SVS, CVS) and associated operational credit(s) granted.

Performance-based navigation (PBN): one line is used for each PBN AR navigation specification approval (e.g. RNP AR APCH), with appropriate limitations listed in the "Description" column.

Other specific approvals or data can be entered here, using one line (or one multi-line block) per approval (e.g. specific approach operations approval, MNP)

IS: 7.2.2 (b) GENERAL – ROTORCRAFT CLASS 1, 2, AND 3 CODE OF PERFORMANCE

The following guidance material is the basis of the code of helicopter performance referenced in Subpart 7.2 - Aircraft Used in Commercial Air Transport.

Definitions:

Category A. With respect to helicopters, means a multi-engined helicopter designed with engine and system isolation features and capable of operations using take-off and landing data scheduled under a critical engine failure concept which assures adequate designated surface area and adequate performance capability for continued safe flight or safe rejected take-off.

Category B. With respect to helicopters, means a single engine or multi-engined helicopter which does not meet Category A standards. Category B helicopters have no guaranteed capability to continue safe flight in the event of an engine failure, and a forced landing is assumed

General guidance:

Helicopters operating in performance Classes 1 and 2 should be certificated in Category A

Helicopters operating in performance Class 3 should be certificated in either Category A or Category B (or equivalent)

(iii)Except as permitted by the Authority:

Take-off or landing from/to heliports in a congested hostile environment should only be conducted in performance Class 1

Operations in performance Class 2 should only be conducted with a safe forced landing capability during take-off and landing.

Operations in performance Class 3 should only be conducted in a non-hostile environment

The Authority may grant a waiver from the provisions of (c) (i) (ii) & (iii) upon receiving a commercial air transport operator's application for waiver and undertaking a risk assessment of the operational conditions proposed, including:

The type of operation and the circumstances of the flight;

The area/terrain over which the flight is being conducted;

The probability of a critical power-unit failure and the consequence of such an event;

The procedures to maintain the reliability of the power-unit(s);

The training and operational procedures to mitigate the consequences of the critical power-unit failure; and

(vi)Installation and utilisation of a usage monitoring system.

(vii)Helicopter equipment

IS: 8.1.5 ALTIMETER SETTING PROCEDURES

General. The altimeter setting procedures in use conform to those contained in ICAO Doc 6 166 -OPS/611, Volume 1 without exception.

Transition altitudes are given on the instrument approach charts.

QNH reports and temperature information for use in determining adequate terrain clearance are available on request from Air Traffic Service Units (ATSU). QNH values given are rounded down to the nearest whole hPa.

Note: *Refer to General Rules and Procedures in Aeronautical Information Publication (AIP) ENR 1.7)*

Cruising Levels. When complying with the cruising levels in Annex 2, Appendix C, aircraft shall fly at Flight Levels corresponding to the magnetic track as shown in the following table.

The lowest usable flight level is determined by the atmospheric pressure in the area of operation as shown in the following table.

Current Altimeter Setting	**Lowest Usable Flight Level**
29.92 (or higher)	160
29.91 through 29.42	165
29.41 through 26.92	190
26.91 through 26.42	195
26.41 through 27.92	200
27.91 through 27.42	205
27.41 through 26.92	210

IS: 8.1.8 INSTRUMENT APPROACH OPERATING MINIMA

Each operator establishing aerodrome-operating minima shall have its method for determining such minima approved by the Authority.

Each operator's method for determining aerodrome-operating minima shall accurately account for:

The type, performance and handling characteristics of the aircraft;

The composition and experience of the flight crew;

(iii)The dimensions and characteristics of the runways selected for use;

Aircraft equipment used for navigation and aircraft control during the approach to landing and the missed approach;

Obstacles in the approach and missed approach areas and the obstacle clearance altitude/height for the intended instrument approach procedures;

The means used to determine and report meteorological conditions; and

The obstacles in the climb out areas and the necessary clearance margins.

The adequacy and performance of the available visual and non-visual ground aids.

The declared distances, for helicopters.

IS: 8.1.10 CATEGORY II AND III MANUAL

Application for approval. An applicant for approval of a Category II manual or an amendment to an approved Category II or III manual shall submit the proposed manual or amendment to the Authority. If the application requests an evaluation program, it shall include the following:

The location of the aircraft and the place where the demonstrations are to be conducted; and

The date the demonstrations are to commence (at least 10 days after filing the application).

Contents**:** Each Category II or III manual must contain:

The registration number, make, and model of the aircraft to which it applies;

A maintenance program; and

(iii)The procedures and instructions related to recognition of DH, use of runway visual range (RVR) 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. *Note 1: Category II approval is required to prior to obtaining Category III approval.*

IS: 8.1.29 INTERCEPTION OF CIVIL AIRCRAFT.

The State of Sierra Leone shall observe the following principles regarding the interception of civil aircraft.

Interception of civil aircraft will be undertaken only as a last resort.

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.

(iii) Practice interception of civil aircraft will not be undertaken.

Navigational guidance and related information will be given to an intercepted aircraft by radiotelephony, whenever radio contact can be established.

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 ICA0 Assembly on 10 May 1964 of Article 3 bis 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."

The State of Sierra Leone shall ensure that:

A standard method has been established and made available to the public for the manoeuvring of aircraft intercepting a civil aircraft that is designed to avoid any hazard for the intercepted aircraft.

Provision is made for the use of secondary surveillance radar or ADS-B, where available, to identify civil aircraft in areas where they may be subject to interception.

The PIC of an aircraft that is intercepted by another aircraft shall immediately:

Follow the instructions given by the intercepting aircraft, interpreting and responding to visual signals in accordance with the specifications in item (e) below.

Notify, if possible, the appropriate air traffic services unit.

(iii) 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.

If equipped with SSR transponder, select Mode A, Code 7700, unless otherwise instructed by the appropriate air traffic services unit.

If equipped with ADS-B or ADS-C, select the appropriate emergency functionality, if available, unless otherwise instructed by the appropriate air traffic services unit.

If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by visual signals, the PIC of the intercepted aircraft shall request immediate clarification while continuing to comply with the visual instructions given by the intercepting aircraft.

If any instructions received by radio from any sources conflict with those given by the intercepting aircraft by radio, the PIC of the intercepted aircraft shall request immediate clarification while continuing to comply with the radio instructions given by the intercepting aircraft.

Radio communication during interception. If radio contact is established during interception but communication in a common language is not possible, the PIC of each involved aircraft shall attempt to convey instructions, acknowledgement of instructions and essential at information by using the phrases and pronunciations in Table 1 below and transmitting each phrase twice:

Table 1

Phrases for use by INTERCEPTING Aircraft			**Phrases for use by INTERCEPTED Aircraft**		
Phrase	**Pronunciation [1]**	**Meaning**	**Phrase**	**Pronunciation [1]**	**Meaning**
CALL SIGN	KOL SA-IN	What is your call sign?	CALL SIGN (call sign)[2]	KOL SA-IN (call sign)	My call sign is (call sign)
FOLLOW	FOL-LO	Follow me	WILCO	VILL-KO	Understood Will comply
DESCEND	DEE-SEND	Descend for landing	CAN NOT	KANN NOTT	Unable to comply
YOU LAND	YOU LAAND	Land at this aerodrome	REPEAT	REE-PEET	Repeat your instruction
PROCEED	PRO-SEED	You may proceed	AM LOST	AM LOSST	Position unknown
			MAYDAY	MAYDAY	I am in distress
			HIJACK[3]	HI-JACK	I have been hijacked
			LAND (place name)	LAAND (place name)	I request to land at (place name)
			DESCEND	DEE-SEND	I require descent

Notes:

In the second column, syllables to be emphasised are underlined.

The call sign required to be given is that used in radiotelephone communications with ATS units and corresponding to the aircraft identification in the flight plan.

Circumstances may not always permit, nor make desirable, the use of the phrase "HIJACK."

The signals in Table 2 of this IS shall be used by the pilots of each involved aircraft in the event of interception. Signals initiated by intercepting aircraft and responses by intercepted aircraft.

Table 2. Signals Initiated by Intercepting Aircraft and Responses by Intercepted Aircraft

Series	**INTERCEPTING Aircraft Signals**	**Meaning**	**INTERCEPTED Aircraft Responds**	**Meaning**
1	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	You have been intercepted. Follow me.	DAY or NIGHT – Rocking aircraft, flashing navigational lights at irregular intervals, and following.	Understood, will comply.

Series	INTERCEPTING Aircraft Signals	Meaning	INTERCEPTED Aircraft Responds	Meaning
	helicopter) on the desired heading. *Note 1: Meteorological conditions or terrain may require the intercepting aircraft to reverse the positions and direction of turn given above in Series 1.* *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 racetrack patterns and to rock the aircraft each time it passes the intercepted aircraft.*			
2	DAY or NIGHT – An abrupt breakaway 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.	You may proceed.	DAY or NIGHT – Rocking the aircraft.	Understood, will comply.
3	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 hear to the landing area.	Land at this aerodrome.	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 the helicopter landing area, landing is considered safe, proceeding to land.	Understood, will comply.

Table 3. Signals Initiated by Intercepted Aircraft and Responses by Intercepting Aircraft

Series	INTERCEPTED Aircraft Signales	Meaning	INTERCEPTING Aircraft Response	Meaning
4	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.	Aerodrome you have designated is inadequate.	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 the Series 1 signals prescribed for intercepting aircraft. If it is decided to release the intercepted aircraft, the intercepting aircraft uses the Series 2 signals prescribed for intercepting aircraft.	Understood, follow me. Understood, you may proceed.
5	DAY or NIGHT – Regular switching on and off of all available lights, but in such a manner as to be distinct from flashing lights.	Cannot comply.	DAY or NIGHT – Use Series 2 signals prescribed for intercepting aircraft.	Understood.
6	DAY or NIGHT – Irregular flashing of all available lights.	In distress.	DAY or NIGHT – Use Series 2 signals prescribed for intercepting aircraft.	Understood.

IS: 8.2.11 UNIVERSAL AVIATION SIGNALS

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, Vol II Chapter 5.

Note: For details of the search and rescue visual signals, see ICAO Annex 12.

A signal made by radiotelegraphy or by any other signaling method consisting of the group SOS (…_ _ _… in the Morse Code);

A signal sent by radiotelephony consisting of the spoken word MAYDAY;

(iii)Rockets or shells throwing red lights, fired one at a time at short intervals;

A parachute flare showing a red light.

Note: Article 41 of the ITU Radio Regulations (Nos. 3266 , 3270 and 3271 refer) provides information on the alarm signals for actuating radiotelegraph and radiotelephone auto-alarm systems: 3266 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 2200 Hz and the other a frequency of 1300 Hz, the duration of each tone being 250 milliseconds. 3271 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.

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:

The repeated switching on and off of the landing lights; or

The repeated switching on and off of the navigation lights in such manner as to be distinct from flashing navigation lights.

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:

A signal made by radiotelegraphy or by any other signaling method consisting of the group XXX.

A signal sent by radiotelephony consisting of the spoken words PAN, PAN.

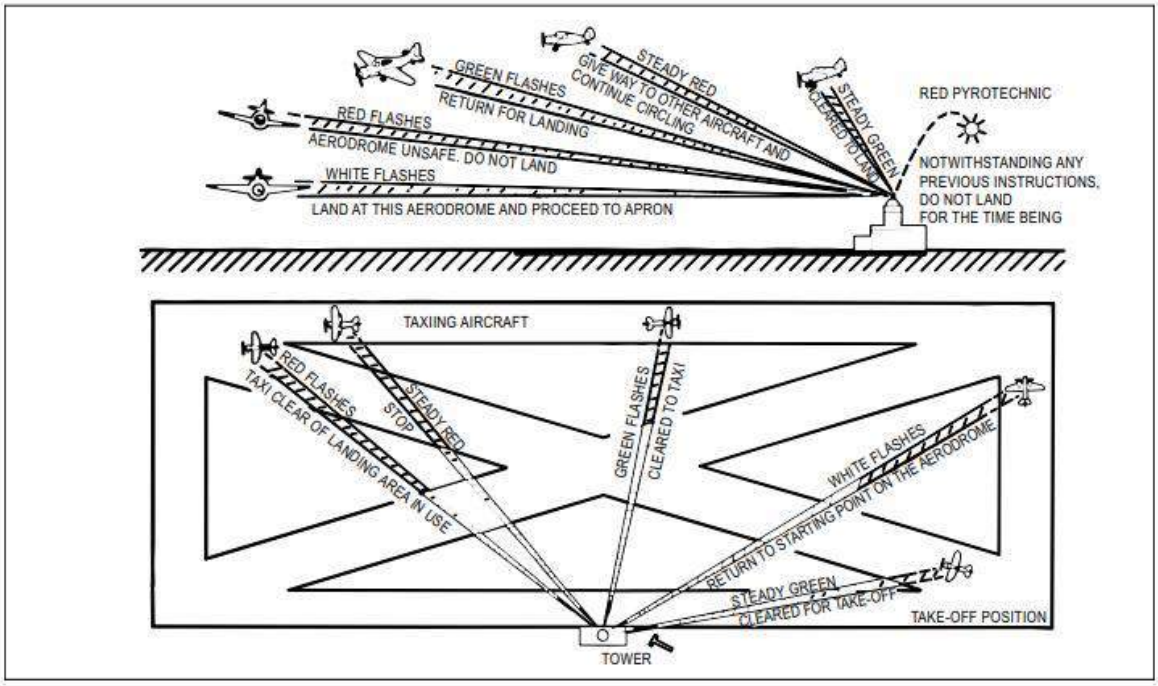
Visual signals used to warn an unauthorised aircraft. By day and by night, a series of projectiles discharged from the ground at intervals of 10 seconds, each showing, on bursting, red and green lights or stars will indicate to an unauthorised aircraft that it is flying in or about to enter a restricted, prohibited, or danger area, and that the aircraft is to take such remedial action as may be necessary.

Signals for aerodrome traffic. Aerodrome controllers shall use and pilots shall obey the following light and pyrotechnic signals:

Light	From Aerodrome Control to:

		Aircraft in Flight	Aircraft on the Ground
Directed towards aircraft concerned	Steady green	Cleared to land	Cleared for take-off
(See Figure 1)	Steady red	Give way to other aircraft and continue circling	Stop
	Series of green flashes	Return for landing*	Cleared to taxi
	Series of red flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use
	Series of white flashes	Land at this aerodrome and proceed to ramp*	Return to starting point on the aerodrome
	Red pyrotechnic	Notwithstanding any previous instructions, do not land for the time being	

* Clearances to land and to taxi will be given in due course.



Pilots shall acknowledge aerodrome controller signals as follows:

When in flight:

During the hours of daylight by rocking the aircraft's wings;

Note. - *This signal should not be expected on the base and final legs of the approach.*

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.

When on the ground:

During the hours of daylight by moving the aircraft's ailerons or rudder;

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

Aerodrome authorities shall use the following visual ground signals shall be use during the following situations:

A horizontal red square panel with yellow diagonals (Figure 2) when displayed in a signal area indicates that landings are prohibited and that the prohibition is liable to be prolonged.

Figure 2

Need for special precautions while approaching or landing

A horizontal red square panel with one yellow diagonal (Figure 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.

Figure 3

(iii)Use of runways and taxiways

A horizontal white dumb-bell (Figure 4) when displayed in a signal area indicates that aircraft are required to land, take off and taxi on runways and taxiways only.

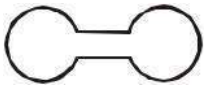


Figure 4

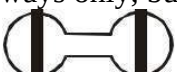
The same horizontal white dumb-bell as in Figure 4 but with a black bar placed perpendicular to the shaft across each circular portion of the dumb-bell (Figure 5) when displayed in a signal area indicates that aircraft are required to land and take off on runways only, but other manoeuvres need not be confined to runways and taxiways. 

Figure 5

Closed runways or taxiways

Crosses of a single contrasting colour, yellow or white (Figure 6), displayed horizontally on runways and taxiways or parts thereof indicate an area unfit for movement of aircraft.

Figure 6

Directions for landing or take-off

A horizontal white or orange landing T (Figure 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.

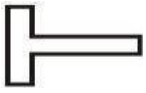


Figure 7

A set of two digits (Figure 8) displayed vertically at or near the aerodrome control tower indicates to aircraft on the manoeuvring area the direction for take-off, expressed in units of 10 degrees to the nearest 10 degrees of the magnetic compass.

Figure 8

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 9) indicates that turns are to be made to the right before landing and after take-off.

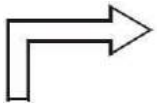


Figure 9

(vii) Air traffic services reporting office

The letter C displayed vertically in black against a yellow background (Figure 10) indicates the location of the air traffic services reporting office.

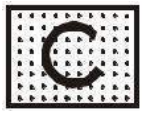


Figure 10

(viii) Glider flights in operation

A double white cross displayed horizontally (Figure 11) in the signal area indicates that the aerodrome is being used by gliders and that glider flights are being performed.

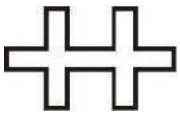


Figure 11

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:*

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. I engine being the port outer engine).*

Note: *Signals marked with an asterisk are designed for use to hovering helicopters.*

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.*

Signals from the pilot of an aircraft to a signalman. The PIC or CP 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 (ie. No.1 engine being the port outer engine).

Brakes engaged: raise arm and hand, with fingers extended, horizontally in front of face, then clench fist.

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.*

Insert chocks: arms extended, palms outwards, move hands inwards to cross in front of face.

Remove chocks: hands crossed in front of face, palms outwards, move arms outwards.

Ready to start engine(s): Raise the appropriate number of fingers on one hand indicating the number of the engine to be started

	**Wingwalker/guide** Raise right hand above head level with wand pointing up; move left-hand wand pointing down toward body. *Note: This signal provides an indication by a person positioned at the aircraft wing tip to the pilot/marshaller/push-back operator that the aircraft movement on/off a parking position would be unobstructed.*
	**Identify gate** Raise fully extended arms straight above head with wands pointing up.
	**Proceed to next signalman or as directed by tower/ground control** Point both arms upward; move and extend arms outward to sides of body and point with wands to direction of next signalman or taxi area.
	**Straight ahead** Bend extended arms at elbows and move wands up and down from chest height to head.

5 a). Turn left (from pilot's point of view)

With right arm and wand extended at a 90-degree angle to body, make "come ahead" signal with left hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

5 b). Turn right (from pilot's point of view)

With left arm and wand extended at a 90-degree angle to body, make "come ahead" signal with right hand. The rate of signal motion indicates to pilot the rate of aircraft turn.

6 a). Normal stop

Fully extend arms and wands at a 90-degree angle to sides and slowly move to above head until wands cross.

6 b). Emergency stop

Abruptly extend arms and wands to top of head, crossing wands.

7 a). Set brakes

Raise hand just above shoulder height with open palm. Ensuring eye contact with flight crew, close hand into a fist. Do not move until receipt of "thumbs up" acknowledgement from flight crew.

7 b). Release brakes

Raise hand just above shoulder height with hand closed in a fist. Ensuring eye contact with flight crew, open palm. Do not move until receipt of "thumbs up" acknowledgement from flight crew.

8 a). Chocks inserted

With arms and wands fully extended above head, move wands inward in a "jabbing" motion until wands touch. Ensure acknowledgement is received from flight crew.

8 b). Chocks removed

With arms and wands fully extended above head, move wands outward in a "jabbing" motion. Do not remove chocks until authorised by flight crew.

Start engine(s)

Raise right arm to head level with wand pointing up and start a circular motion with hand; at the same time, with left arm raised above head level, point to engine to be started.

10. Cut engines

Extend arm with wand forward of body at shoulder level; move hand and wand to top of left shoulder and draw wand to top of right shoulder in a slicing motion across throat.

11. Slow down

Move extended arms downward in a "patting" gesture, moving wands up and down from waist to knees.

12. Slow down engine(s) on indicated side

With arms down and wands toward ground, wave either right or left wand up and down indicating engine(s) on left or right side respectively should be slowed down.

13. Move back

With arms in front of body at waist height, rotate arms in a forward motion. To stop rearward movement, use signal 6 a) or 6 b).

14 a). Turns while backing (for tail to starboard)

Point left arm with wand down and bring right arm from overhead vertical position to horizontal forward position, repeating right-arm movement.

14 b). Turns while backing (for tail to port)

Point right arm with wand down and bring left arm from overhead vertical position to horizontal forward position, repeating left-arm movement.

15. Affirmative/all clear

Raise right arm to head level with wand pointing up or display hand with "thumbs up"; left arm remains at side by knee.

Note: This signal is also used as a technical/servicing communication signal.

***16. Hover**

Fully extend arms and wands at a 90-degree angle to sides.

***17. Move upward**

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned up, move hands upward. Speed of movement indicates rate of ascent.

***18. Move downward**

Fully extend arms and wands at a 90-degree angle to sides and, with palms turned down, move hands downward. Speed of movement indicates rate of descent.

***19 a). Move horizontally left (from pilot's point of view)**

Extend arm horizontally at a 90-degree angle to right side of body. Move other arm in same direction in a sweeping motion.

***19 b). Move horizontally right (from pilot's point of view)**

Extend arm horizontally at a 90-degree angle to left side of body. Move other arm in same direction in a sweeping motion.

***20. Land**

Cross arms with wands downward and in front of body.

21. Fire

Move right-hand wand in a "fanning" motion from shoulder to knee, while at the same time pointing with left-hand wand to area of fire.

22. Hold position/stand by

Fully extend arms and wands downward at a 45-degree angle to sides. Hold position until aircraft is clear for next manoeuvre.

23. Dispatch aircraft

Perform a standard salute with right hand and/or wand to dispatch the aircraft. Maintain eye contact with flight crew until aircraft has begun to taxi.

Do not touch controls (technical/servicing communication signal)

Extend right arm fully above head and close fist or hold wand in horizontal position; left arm remains at side by knee.

Connect ground power (technical/servicing communication signal)

Hold arms fully extended above head; open left hand horizontally and move fingertips of right hand into and touch open palm of left hand (forming a “T”). At night, illuminated wands can also be used to form the “T” above head.

26. Disconnect power (technical/servicing communication signal)

Hold arms fully extended above head with fingertips of right hand touching open horizontal palm of left hand (forming a “T”); then move right hand away from the left. Do not disconnect power until authorised by flight crew. At night, illuminated wands can also be used to form the “T” above head.

Negative (technical/servicing communication signal)

Hold right arm straight out at 90 degrees from shoulder and point wand down to ground or display hand with “thumbs down”; left hand remains at side by knee.

28. Establish communication via interphone (technical/servicing communication signal)

Extend both arms at 90 degrees from body and move hands to cup both ears.

29. Open/close stairs (technical/servicing communication signal)

With right arm at side and left arm raised above head at a 45-degree angle, move right arm in a sweeping motion towards top of left shoulder.

Note: This signal is intended mainly for aircraft with the set of integral stairs at the front.

IS: 9.2.11 EXIT ROW SEATING

No cabin crew 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:

The person lacks sufficient mobility, strength, or dexterity in both arms and hands, and both legs-

To reach upward, sideways, and downward to the location of emergency exit and exit-slide operating mechanisms;

To grasp and push, pull, turn, or otherwise manipulate those mechanisms;

To push, shove, pull, or otherwise open emergency exits;

To lift out, hold, deposit on nearby seats, or manoeuvre over the seatbacks to the next row objects the size and mass of over-wing window exit doors;

To remove obstructions of size and mass similar to over-wing exit doors;

To reach the emergency exit expeditiously;

To maintain balance while removing obstructions;

To exit expeditiously;

To stabilise an escape slide after deployment; or

To assist others in getting off an escape slide;

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;

(iii) 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;

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;

The person lacks sufficient aural capacity to hear and understand instructions shouted by cabin crew, without assistance beyond a hearing aid;

The person lacks the ability adequately to impart information orally to other passengers; or

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.

Determinations as to the suitability of each person permitted to occupy an exit seat shall be made by the cabin crew or other persons designated in the AOC holder's operations manual.

In the event a cabin crew 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 shall expeditiously relocate the passenger to a non-exit seat.

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 shall move a passenger who is willing and able to assume the evacuation functions, to an exit seat.

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.

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.

Each cabin crew shall include in their passenger briefings a request that a passenger identify himself or herself to allow reseating if he or she:

Cannot meet the selection criteria;

Has a non-discernible condition that will prevent him or her from performing the evacuation functions;

(iii) May suffer bodily harm as the result of performing one or more of those functions; or

Does not wish to perform emergency exit functions.

Each cabin crew duties shall include in the passenger briefings a reference to the passenger information cards and the functions to be performed in an emergency exit.

Each passenger shall comply with instructions given by a crew member or other authorised employee of the AOC holder implementing exit seating restrictions.

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.

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:

Establish procedures that address the requirements of this standard; and

Submit their procedures for preliminary review and approval to the Authority

IS: 8.4.8 TABLES OF CRUISING LEVELS

The cruising levels at which a flight or a portion of a flight is to be conducted shall be in terms of:

FLs, for flights at or above the lowest usable FL or, where applicable, above the transition altitude; and

Altitude, for flights below the lowest usable FL or, where applicable, at or below the transition altitude.

The PIC shall observe the following cruising levels in areas where, on the basis of Regional Air Navigation Agreements and in accordance with conditions specified therein, a VSM of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive:*

TRACK**												
From 000 Degrees to 179 Degrees***						From 180 Degrees to 359 Degrees***					
IFR Flights			VFR Flights			IFR Flights			VFR Flights		
	Level			Level			Level			Level	
FL	Metres	Feet	FL	Metres	Feet	FL	Metres	Feet	FL	Metres	Feet
010	300	1 000				020	600	2 000			
030	900	3 000	035	1 050	3 500	040	1 200	4 000	045	1 350	4 500
050	1 500	5 000	055	1 700	5 500	060	1 850	6 000	065	2 000	6 500
070	2 150	7 000	075	2 300	7 500	080	2 450	8 000	085	2 600	8 500
090	2 750	9 000	095	2 900	9 500	100	3 050	10 000	105	3 200	10 500
110	3 350	11 000	115	3 500	11 500	120	3 650	12 000	125	3 800	12 500
130	3 950	13 000	135	4 100	13 500	140	4 250	14 000	145	4 400	14 500
150	4 550	15 000	155	4 700	15 500	160	4 900	16 000	165	5 050	16 500
170	5 200	17 000	175	5 350	17 500	180	5 500	18 000	185	5 650	18 500
190	5 800	19 000	195	5 950	19 500	200	6 100	20 000	205	6 250	20 500
210	6 400	21 000	215	6 550	21 500	220	6 700	22 000	225	6 850	22 500
230	7 000	23 000	235	7 150	23 500	240	7 300	24 000	245	7 450	24 500
250	7 600	25 000	255	7 750	25 500	260	7 900	26 000	265	8 100	26 500
270	8 250	27 000	275	8 400	27 500	280	8 550	28 000	285	8 700	28 500
290	8 850	29 000				300	9 150	30 000			
310	9 450	31 000				320	9 750	32 000			
330	10 050	33 000				340	10 350	34 000			
350	10 650	35 000				360	10 950	36 000			
370	11 300	37 000				380	11 600	38 000			
390	11 900	39 000				400	12 200	40 000			
410	12 500	41 000				430	13 100	43 000			
450	13 700	45 000				470	14 350	47 000			
490	14 950	49 000				510	15 550	51 000			
etc.	etc.	etc.				etc.	etc.	etc.			

Except when, on the basis of Regional Air Navigation Agreements, a modified table of cruising levels based on a nominal VSM of 300 m (1 000 ft) is prescribed for use, under specified conditions, by aircraft operating above FL 410 within designated portions of the airspace.

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.

The PIC shall observe the following cruising levels in other areas not specified in paragraph (1) of this IS.

TRACK*										
From 000 Degrees to 179 Degrees**					From 180 Degrees to 359 Degrees**					
IFR Flights		VFR Flights			IFR Flights			VFR Flights		
Level			Level			Level			Level	
FL Metres	Feet	FL	Metres	Feet	FL	Metres	Feet	FL	Metres	Feet
010 300	1 000				020	600	2 000			
030 900	3 000	035	1 050	3 500	040	1 200	4 000	045	1 350	4 500
050 1 500	5 000	055	1 700	5 500	060	1 850	6 000	065	2 000	6 500
070 2 150	7 000	075	2 300	7 500	050	2 450	8 000	085	2 600	8 500
090 2 750	9 000	095	2 900	9 500	100	3 050	10 000	105	3 200	10 500
110 3 350	11 000	115	3 500	11 500	120	3 650	12 000	125	3 800	12 500
130 3 950	13 000	135	4 100	13 500	140	4 250	14 000	145	4 400	14 500
150 4 550	15 000	155	4 700	15 500	160	4 900	16 000	165	5 050	16 500
170 5 200	17 000	175	5 350	17 500	180	5 500	18 000	185	5 650	18 500
190 5 800	19 000	195	5 950	19 500	200	6 100	20 000	205	6 250	20 500
210 6 400	21 000	215	6 550	21 500	220	6 700	22 000	225	6 850	22 500
230 7 000	23 000	235	7 150	23 500	240	7 300	24 000	245	7 450	24 500
250 7 600	25 000	255	7 750	25 500	260	7 900	26 000	265	8 100	26 500
270 8 250	27 000	275	8 400	27 500	280	8 550	28 000	285	8 700	28 500
290 8 850	29 000	300	9 150	30 000	310	9 450	31 000	320	9 750	32 000
330 10 050	33 000	340	10 350	34 000	350	10 650	35 000	360	10 950	36 000
370 11 300	37 000	380	11 600	38 000	390	11 900	39 000	400	12 200	40 000
410 12 500	41 000	420	12 800	42 000	430	13 100	43 000	440	13 400	44 000
450 13 700	45 000	460	14 000	46 000	470	14 350	47 000	480	14 650	48 000
490 14 950	49 000	500	15 250	50 000	510	15 550	51 000	520	15 850	52 000
etc. etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

*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.

Note 1: ICAO Doc 9574, Manual on the Implementation of a 300 m (1 000 ft) Vertical Separation Minimum between FL 290 and FL 410 Inclusive, *contains guidance material relating to vertical separation.*

Note 2: ICAO Doc 8168, Procedures for Air Navigation Services – Aircraft Operations (PANS-OPS), *contains guidance for the system of FLs.*

IS: 9.2.15 CARRIAGE OF CARGO IN PASSENGER COMPARTMENTS

Cargo may be carried anywhere in the passenger compartment if it is carried in an approved cargo bin that meets the following requirements-

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 mass of the bin and the maximum mass of cargo that may be carried in the bin;

The maximum mass of cargo that the bin is approved to carry and any instructions necessary to insure proper mass distribution within the bin must be conspicuously marked on the bin;

(iii) The bin may not impose any load on the floor or other structure of the aeroplane that exceeds the load limitations of that structure;

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 mass of the bin and the maximum mass of cargo that may be carried in the bin;

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;

The bin must be fully enclosed and made of material that is at least flame resistant;

Suitable safeguards must be provided within the bin to prevent the cargo from shifting under emergency landing conditions; and

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.

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:

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;

It is packaged or covered to avoid possible injury to occupants;

(iii) It does not impose any load on seats or in the floor structure that exceeds the load limitation for those components;

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;

It is not carried directly above seated occupants.

It is stowed in compliance with these restrictions during takeoff and landing.

For cargo-only operations, 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: 10.9 COMPANY PROCEDURES INDOCTRINATION

Each AOC holder shall ensure that all operations personnel are provided company indoctrination training that covers the following areas:

AOC holder's organisation, scope of operation, and administrative practices as applicable to their assignments and duties.

Appropriate provisions of these Regulations and other applicable Regulations and guidance materials.

(iii) Contents of the AOC holder's certificate and operations specifications (not required for cabin crew)

(iv) AOC holder policies and procedures.

(v) Crew member and flight operations officer duties and responsibilities.

(vi) AOC holder testing programme for alcohol and narcotic psychoactive substances

Applicable crew member manuals.

Appropriate portions of the AOC holders operations manual.

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: 10.10 INITIAL DANGEROUS GOODS TRAINING

Each AOC holder shall establish, maintain, and have approved by the Authority, staff training programmes, as required by the Technical Instructions.

Each AOC holder not holding a permanent approval to carry dangerous goods shall ensure that:

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.

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

Areas of Dangerous Goods Training	1	2
General Philosophy	x	x
Limitations on Dangerous Goods in Air Transport	x	x
Package Marking and Labelling	x	x
Dangerous Goods in Passengers' Baggage		x
Emergency Procedures		x

Note: x indicates an area to be covered

Each AOC holder not holding a permanent approval to carry dangerous goods shall ensure that:

Staffs 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 I of Table 2 to a depth sufficient to ensure the staff can take decisions on the acceptance or refusal of dangerous goods offered for carriage by air.

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.

(iii) 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.

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.

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.

Each AOC holder shall ensure that all staff who requires dangerous goods training receives recurrent training at intervals of no longer than 2 years.

Each AOC holder shall ensure that records of dangerous goods training are maintained for all staff trained in accordance with paragraph (d).

Each AOC holder shall ensure that its handling agent's staff are trained in accordance with the applicable column of Table I or Table 2.

Table 2

Areas of Training	**1**	**2**	**3**	**4**	**5**
General Philosophy	x	x	x	x	x
Limitations on Dangerous Goods in Air Transport	x	x	x	x	x
Classification and list of Dangerous Goods	x	x		x	
General Packing Requirements and Packing Instructions	x				
Packaging Specifications Marking	x				
Package Marking and Labelling	x	x	x	x	x
Documentation from the Shipper	x				
Acceptance of Dangerous Goods, including the use of a checklist	x				
Loading, Restrictions on Loading and Segregation	x	x	x	x	
Inspectionsfor Damage or Leakage and Decontamination Procedures	x	x			
Provision of information to Commander	x	x		x	
Dangerous Goods in Passengers' Baggage	x			x	x
Emergency Procedures	x	x		x	x

Note: x indicates an area to be covered.

An AOC holder shall provide dangerous goods training manual which contains adequate procedures and information to assist personnel in identifying packages marked or labeled as containing hazardous materials including –

Instructions on the acceptance, handling, and carriage of hazardous materials;

Instruments governing the determination of proper shipping names and hazard classes;

Packaging, labelling, and marking requirements;

Requirements for shipping papers, compatibility requirements, loading, storage and handling requirements; and

Restrictions.

IS: 10.12 INITIAL CREW RESOURCE MANAGEMENT TRAINING

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.

A CRM training program shall include:

An initial indoctrination/awareness segment;

A method to provide recurrent practice and feedback; and

(iii) A method of providing continuing reinforcement.

Curriculum topics to be contained in an initial CRM training course include –

Communication processes and decision behaviour;

Internal and external influences on interpersonal communications;

(iii) Barriers to communication;

Listening skills;

Decision making skills;

Effective briefings;

Developing open communications;

Inquiry, advocacy, and assertion training;

Crew self- critique;

Conflict resolution;

Team building and maintenance;

Leadership and fellowship training;

Interpersonal relationships;

Workload management;

Situational awareness;

How to prepare, plan and monitor task completions;

Workload distribution;

Distraction avoidance;

Individual factors; and

Stress reduction.

IS: 10.13 INITIAL EMERGENCY EQUIPMENT DRILLS

Each aircraft crew member shall accomplish emergency training during the specified training periods, using those items of installed emergency equipment for each type of aircraft in which he or she is to serve.

During initial training, each aircraft crew member shall perform the following one-time emergency drills:

Protective Breathing Equipment/Firefighting Drill:

Locate source of fire or smoke (actual or simulated fire).

Implement procedures for effective crew co-ordination and communication, including notification of flight crew members about fire situation.

Don and activate installed PBE or approved PBE simulation device.

Manoeuvre in limited space with reduced visibility.

Effectively use the aircraft's communication system.

Identify class of fire.

Select the appropriate extinguisher.

Properly remove extinguisher from securing device.

Prepare, operate and discharge extinguisher properly.

Utilise correct firefighting techniques for type of fire.

Emergency Evacuation Drill:

Recognise and evaluate an emergency.

Assume appropriate protective position.

Command passengers to assume protective position.

Implement crew co-ordination procedures.

Ensure activation of emergency lights.

Assess aircraft conditions.

Initiate evacuation (dependent on signal or decision).

Command passengers to release seatbelts and evacuate.

Assess exit and redirect, if necessary; to open exit, including deploying slides and commanding helpers to assist.

Command passengers to evacuate at exit and run away from aircraft.

Assist special need passengers, such as handicapped, elderly, and persons in a state of panic.

Actually exit aircraft or training device using at least one of the installed emergency evacuation slides.

Each aircraft crew member shall accomplish additional emergency drills during initial and recurrent training, including actual performance the following emergency drills-

Emergency Exit Drill:

Correctly pre-flight each type of emergency exit and evacuation slide or slideraft (if part of cabin crew assigned duties).

Disarm and open each type of door exit in normal mode.

Close each type of door exit in normal mode.

Arm each type of door exit in emergency mode.

Open each type of door exit in emergency mode.

Use manual slide inflation system to accomplish or ensure slide or slide raft inflation.

Open each type of window exit.

Remove escape rope and position for use.

Hand Fire Extinguisher Drill:

Pre-flight each type of hand fire extinguisher.

Locate source of fire or smoke and identify class of fire.

Select appropriate extinguisher and remove from securing device.

Prepare extinguisher for use.

Actually operate and discharge each type of installed hand fire extinguisher.

Note 1: *Fighting an actual or a simulated fire is not necessary during this drill.*

Note 2: The discharge of Halon extinguishing agents during firefighting drills in not appropriate, unless a training facility is used that is specifically designed to prevent harm to the environment from the discharged Halon. When such facilities are not used, other fire extinguishing agents that are not damaging to the environment should be used during the drills.

Utilise correct firefighting techniques for type of fire.

Implement procedures for effective crew co-ordination and communication, including notification of crew members about the type of fire situation.

(iii)Emergency Oxygen System Drill:

Preflight and operation of portable oxygen devices.

Actually operate portable oxygen bottles, including masks and tubing.

Verbally demonstrate operation of chemical oxygen generators or installed oxygen supply system.

Prepare for use and operate oxygen device properly, including donning and activation.

Administer oxygen to self, passengers, and to those persons with special oxygen needs.

Utilise proper procedures for effective crew co-ordination and communication.

Manually open each type of oxygen mask compartment and deploy oxygen masks.

Identify compartments with extra oxygen masks.

Implement immediate action decompression procedures.

Reset oxygen system, if applicable.

Preflight and operation of PBE.

Activate PBE.

Note*: Several operators equip their aircraft with approved PBE units that have approved storage pouches fastened with two metal staples at one end. However, considerations of practicality and cost compel operators to use a less durable storage pouch that lacks the staple fasteners for training purposes. As a result, pilots and cabin crew members have been surprised that opening the pouch furnished on board requires more force than opening the training pouch. The Authority should require crew member training that includes the appropriate procedures for operating PBE. In those cases where pouches with staples are used for storage of the PBE unit, special emphasis in training should highlight the difference between the training pouch and the onboard pouch. The training pouch may be easy to open, but the approved, onboard pouch may require as much as*

pounds of force to overcome the 2 staple fasteners.

Floatation Device Drill:

Preflight flotation device, if appropriate.

Don and inflate life vests.

Remove and use flotation seat cushions.

Demonstrate swimming techniques using a seat cushion as installed

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.*

Implement crew co-ordination procedures, including briefing with captain to obtain pertinent ditching information and briefing cabin crew.

Co-ordinate time frame for cabin and passenger preparation.

Adequately brief passengers on ditching procedures.

Ensure cabin is prepared, including the securing of carry-on baggage, lavatories, and galleys.

Demonstrate how to properly deploy and inflate sliderafts.

Remove, position, and attach sliderafts to aircraft.

Inflate rafts.

Use escape ropes at overwing exits.

Command helpers to assist.

Use slides and seat cushions as floatation devices.

Remove appropriate emergency equipment from aircraft.

Board rafts properly.

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).

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).

Use heaving line to rescue persons in water.

Tie sliderafts or rafts together.

Use life line on edge of slideraft or raft as a handhold.

Secure survival kit item

Each aircraft crew member shall accomplish additional emergency drill requirements during initial and recurrent training including observing the following emergency drills:

Life raft Removal and Inflation Drill, if applicable:

Removal of a life raft from the aircraft or training device.

Inflation of a life raft.

Slideraft Transfer Drill:

Transfer of each type of slideraft pack from an unusable door to a usable door.

Disconnect slideraft at unusable door.

Redirect passengers to usable slideraft.

Installation and deployment of slideraft at usable door.

(iii)Slide and Slideraft Deployment, Inflation, and Detachment Drill:

(1) Engage slide girt bar in floor brackets, if applicable.

Arm slide for automatic inflation.

Inflate slides with and without quick-release handle (manually and automatically).

Disconnecting slide from the aircraft for use as a flotation device.

Arm sliderafts for automatic inflation.

Disconnecting slideraft from the aircraft.

Emergency Evacuation Slide Drill:

Open armed exit with slide or slide raft deployment and inflation.

Egress from aircraft via the evacuation slide and runaway to a safe distance.

IS: 10.14(B) INITIAL AIRCRAFT GROUND TRAINING - FLIGHT CREW

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-

AOC holder's dispatch, flight release, or flight locating procedures;

Principles and methods for determining mass and balance, and runway limitations for takeoff;

Adverse weather recognition and avoidance, and flight procedures which shall be followed when operating in the following conditions:

Icing.

Fog

Turbulence

Heavy precipitation

Thunderstorms

Low-level windshear and microburst

Low visibility.

Normal and emergency communications procedures and navigation equipment including the AOC holder's communications procedures and ATC clearance requirements;

Navigation procedures used in area departure, en route, area arrival, approach and landing phases;

Approved crew resource management training;

Air traffic control systems, procedures, and phraseology;

Aircraft performance characteristics during all flight regimes, including:

The use of charts, tables, tabulated data and other related manual information;

Normal, abnormal, and emergency performance problems;

Meteorological and weight limiting performance factors (such as temperature, pressure, contaminated runways, precipitation, climb/runway limits);

Inoperative equipment performance limiting factors (such as MEL/CDL, inoperative antiskid);

Special operational conditions (such as unpaved runways, high altitude aerodromes and drift down requirements).

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:

Aircraft:

Aircraft dimensions, turning radius, panel layouts, cockpit and cabin configurations.

Other major systems and components or appliances of the aircraft.

Powerplants:

Basic engine description.

Engine thrust ratings.

Engine components such as accessory drives, ignition, oil, fuel control, hydraulic, and bleed air features.

(iii)Electrical.

Sources of aircraft electrical power (engine driven generators, APU generator, and external power);

Electrical buses;

Circuit breakers;

Aircraft battery; and

Standby power systems.

Hydraulic.

Hydraulic reservoirs, pumps, accumulators; filters, check valves, interconnects and actuators; and

Other hydraulically operated components.

Fuel.

Fuel tanks (location and quantities);

Engine driven pumps;

Boost pumps;

System valves and crossfeeds;

Quantity indicators; and

Provisions for fuel jettisoning.

Pneumatic.

Bleed air sources (APU) or external ground air); and

Means of routing, venting and controlling bleed air via valves, ducts, chambers, and temperature and pressure limiting devices

Air conditioning and pressurisation.

Heaters, air conditioning packs, fans, and other environmental control devices;

Pressurisation system components such as outflow and negative pressure relief valves; and

Automatic, standby, and manual pressurisation controls and annunciators.

Flight controls.

Primary controls (yaw, pitch, and roll devices);

Secondary controls (leading/trailing edge devices, flaps, trim, and damping mechanisms);

Means of actuation (direct/indirect or fly by wire); and

Redundancy devices.

Landing gear.

Landing gear extension and retraction mechanism including the operating sequence of struts, doors, and ocking devices, and brake and antiskid systems, if applicable;

Steering (nose or body steering gear);

Bogie arrangements;

Air/ground sensor relays; and

Visual downlock indicators.

Ice and rain protection.

Rain removal systems; and

Anti-icing and/or de-icing system(s) affecting flight controls, engines, pitot static probes, fluid outlets, cockpit windows, and aircraft structures.

Equipment and furnishings.

Exits;

Galleys;

Water and waste systems;

Lavatories;

Cargo areas;

Crew member and passenger seats;

Bulkheads;

Seating and/or cargo configurations; and

Non-emergency equipment and furnishings.

Navigation equipment.

Flight directors;

Horizontal situation indicator;

Radio magnetic indicator;

Navigation receivers (GPS, ADF, SDF/LDA, VOR, TACAN, LORAN-C, RNAV, Marker Beacon, DME) as required for the flight operations to be conducted.

Inertial systems (INS, IRS);

Functional displays;

Fault indications and comparator systems;

Aircraft transponders;

Radio altimeters;

Weather radar; and

Cathode ray tube or computer generated displays of aircraft position and navigation information.

Auto flight system.

Autopilot;

Autothrottles;

Flight director and navigation systems;

Automatic approach tracking;

Autoland; and

Automatic fuel and performance management systems.

Flight instruments.

Panel arrangement;

Flight instruments (attitude indicator, directional gyro, magnetic compass, airspeed indicator, vertical speed indicator, altimeters, standby instruments); and

Instrument power sources, and instrument sensory sources (e.g., Pitot static pressure).

Display systems.

Weather radar; and

Other Cathode Ray Tube (CRT) or computer generated displays (e.g., checklist, vertical navigation or longitudinal navigation displays).

Communication equipment.

VHF/HF radios;
Audio panels;
Inflight interphone and passenger address systems;
Voice recorder; and
Air/ground passive communications systems (ACARS).
Warning systems.
Aural, visual, and tactile warning systems (including the character and degree of urgency related to each signal); and
Warning and caution annunciator systems (including ground proximity and takeoff warning systems).
Fire protection.
Fire and overheat sensors, loops, modules, or other means of providing visual and/or aural indications of fire or overheat detection;
Procedures for the use of fire handles, automatic extinguishing systems and extinguishing agents; and
Power sources necessary to provide protection for fire and overheat conditions in engines, APU, cargo bay/wheel well, cockpit, cabin and lavatories.
Oxygen.
Passenger, crew, and portable oxygen supply systems;
Sources of oxygen (gaseous or solid);
Flow and distribution networks;
Automatic deployment systems;
Regulators, pressure levels and gauges; and
Servicing requirements.
Lighting.
Cockpit, cabin, and external lighting systems;
Power sources;
Switch positions; and
Spare lightbulb locations.
Emergency equipment.
Fire and oxygen bottles;
First aid kits;
Liferafts and life preservers;
Crash axes;
Emergency exits and lights;
Slides and sliderafts;
Escape straps or handles; and
Hatches, ladders and movable stairs.
Survival suits, if applicable to the operation
Auxiliary Power Unit (APU).
Electric and bleed air capabilities;
Interfaces with electrical and pneumatic systems;
Inlet doors and exhaust ducts;
Fuel supply.

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:

Use of checklist.

Safety chocks;

Cockpit preparation (switch position and checklist flows);

Checklist callouts and responses; and

Checklist sequence.

Flight planning.

Performance limitations (meteorological, weight, and MEL/CDL items);

Required fuel loads;

Weather planning (lower than standard takeoff minimums or alternate requirements).

(iii)Navigation and communication systems.

Pre-flight and operation of applicable receivers;

Onboard navigation systems; and

Flight plan information input and retrieval.

Autoflight.

Autopilot, autothrust, and flight director systems, including the appropriate procedures,

normal and abnormal indications, and annunciators.

Cockpit familiarisation

Activation of aircraft system controls and switches to include normal, abnormal and emergency switches; and

Control positions and relevant annunciators, lights, or other caution and warning systems.

IS: 10.14(C) INITIAL AIRCRAFT GROUND TRAINING - CABIN CREW

Each AOC holder shall have an initial ground training curriculum for cabin crew applicable to the type of operations conducted and aircraft flown, including at least the following *general subjects:*

Aircraft familiarisation.

Aircraft characteristics and description;
Flightdeck configuration;
Cabin configuration;
Galleys;
Lavatories; and
Stowage areas.

Aircraft equipment and furnishings.

Cabin crew member stations;
Cabin crew member panels;
Passenger seats;
Passenger service units and convenience panels;
Passenger information signs;
Aircraft markings; and
Aircraft placard.

(iii)Aircraft systems.

Air conditioning and pressurisation system;
Aircraft communication systems (call, interphone and passenger address);
Lighting and electrical systems;
Oxygen systems (flight crew), observer and passenger); and
Water system.
Bassinets and bayonet tables

Aircraft exits.

General information;
Exits with slides or sliderafts (pre-flight and normal operation);
Exits without slides (pre-flight and normal operations); and
Window exits (preflight).

Crew member communication and co-ordination.

Authority of PIC;
Routine communication signals and procedures; and
Crew member briefing.

Routine crew member duties and procedures.

Crew member general responsibilities;
Reporting duties and procedures for specific aircraft;
Pre-departure duties and procedures prior to passenger boarding;
Passenger boarding duties and procedures;
Prior to movement on the surface duties and procedures;
Prior to takeoff duties and procedures applicable to specific aircraft;
Inflight duties and procedures;
Prior to landing duties and procedures;
Movement on the surface and arrival duties and procedures;

After arrival duties and procedures; and
Intermediate stops.
Passenger handling responsibilities.
Crew member general responsibilities;
Infants, children, and unaccompanied minors;
Passengers needing special assistance;
Passengers needing special accommodation;
Carry-on stowage requirements;
Passenger seating requirements; and
Smoking and no smoking requirements.
Approved Crew Resource Management (CRM) training for cabin crew.

Each AOC holder shall have an initial ground training curriculum for cabin crew applicable to the type of operations conducted and aircraft flown, including at least the following *aircraft specific emergency subjects:*

Emergency equipment.
Emergency communication and notification systems;
Aircraft exits;
Exits with slides or sliderafts (emergency operation);
Slides and sliderafts in a ditching;
Exits without slides (emergency operation);
Window exits (emergency operation);
Exits with tailcones (emergency operation);
Cockpit exits (emergency operation);
Ground evacuation and ditching equipment;
First aid equipment;
Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));
Firefighting equipment;
Emergency lighting systems;
Universal precaution kits;
Automated external defibrillators
Survival suits, if applicable to the operation;
Additional emergency equipment.
Emergency assignments and procedures.
General types of emergencies specific to aircraft including crew coordination and communication;
Emergency communication signals and procedures;
Rapid decompression;
Insidious decompression and cracked window and pressure seal leaks;
Fires;
Ditching;
Ground evacuation;
Unwarranted evacuation (i.e., passenger initiated);
Illness or injury;
Abnormal situations involving passengers or crew members;
Hijacking;

Bomb threat;

Turbulence;

Other unusual situations including an awareness of other crewmembers' assignments and functions as they pertain to the cabin crew's own duties; and

Previous aircraft accidents and incidents.

(iii)Aircraft specific emergency drills.

Emergency exit drill;

Hand fire extinguisher drill;

Emergency oxygen system drill;

Rotation device drill;

Ditching drill, if applicable;

Liferaft removal and inflation drill, if applicable;

Slideraft pack transfer drill, if applicable;

Slide or slideraft deployment, inflation, and detachment drill, if applicable; and

Emergency evacuation slide drill, if applicable.

Each AOC holder shall ensure that initial ground training for cabin crew includes a competence check given by the appropriate supervisor or ground instructor to determine his or her ability to perform assigned duties and responsibilities.

Each AOC holder shall ensure that initial ground training for cabin crew member consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority:

Piston-engined - 6 hours.

Turbopropeller-powered - 6 hours.

(iii)Turbo-jet – 16 hours.

(iv) Other aircraft, including, if applicable, helicopter and powered lift 6 hours.

IS: 10.14(D) INITIAL AIRCRAFT GROUND TRAINING-FLIGHT OPERATIONS OFFICER

Each AOC holder shall provide initial aircraft ground training for flight operations officers that include instruction in at least the following subjects:

General dispatch subjects:

Appropriate Regulations.

Operations Manual of the AOC holder.

Operations specifications of the AOC holder.

Weather reports: interpretation, available sources, actual and prognostic, seasonal variations.

Communications, to include normal and emergency.

Meteorology, to include effects on radio reception.

Adverse weather.

Notices to airmen.

Navigational charts and publications.

Joint dispatcher/pilot responsibilities.

ATC coordination procedures.

Familiarisation with operations area, including classes of airspace and special areas of navigation.

Characteristics of special aerodromes.

Aircraft characteristics:

Aircraft specific flight preparation.

Aircraft operating and performance characteristics.

Navigation equipment, including peculiarities and limitations.

Instrument approach and communication equipment.

Emergency equipment.

AFM or RFM provisions applicable to the aircraft duties.

MEL/CDL.

Applicable equipment training.

(iii)Operations procedures:

Adverse weather phenomena (wind-shear, clear air turbulence and thunderstorms).

Mass and balance computations and load control procedures.

Aircraft performance computations, to include takeoff weight limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations.

Flight planning procedures, to include route selection, flight time, and fuel requirements analysis.

Dispatch release preparation.

Crew briefings.

Flight monitoring procedures.

MEL and CDL procedures.

Manual performance of all required procedures in case of the loss of automated capabilities.

Training in appropriate geographic areas.

ATC and instrument procedures, ground hold and central flow control procedures.

Radio/telephone procedures.

Abnormal and emergency procedures.

Assisting flight crew in an emergency.

Alerting of appropriate governmental, company and private agencies.

Dispatch Resource Management.

Note: IS 10.12 contains CRM training items.

Dangerous goods.

Note: IS 10.10 contains dangerous goods training items.

Security.

Note: ICAO Doc 96 11, Manual on the Implementation of the Security Provisions of Annex 6, Chapter 3, provides additional guidance.

(viii) Differences training.

Note: IS 10.17 contains items on differences training.

Each AOC holder shall ensure that initial ground training for flight operations officers includes a competency check given by an appropriately qualified dispatch supervisor or ground instructor that demonstrates the required knowledge and abilities.

Each AOC holder shall ensure that initial ground training for flight operations officers consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority:

Piston-engined aircraft – 30 hours.

Turbo-propeller-powered aircraft – 40 hours.

(iii)Turbo-jet aircraft – 40 hours.

IS: 10.15 INITIAL AIRCRAFT FLIGHT TRAINING

Each AOC holder shall ensure that pilot initial flight training includes at least the following training and practice in procedures related to the carrying out of pilot duties and functions. This training and practice may be accomplished either in flight or in a flight simulation training device (FSTD), as appropriate to the category and class of aircraft, and as approved by the Authority.

Note: The flight training events for pilots listed in this IS are generic in nature for a type-rated aeroplane training curriculum conducted in a FSTD. All of the events may not apply to all aircraft (e.g., one engine inoperative landing for mutli-engine versus single engine aeroplanes) or may differ in the requirements for a similar event (e.g.,taxi for aeroplane, helicopter, and seaplane). Additional training events may need to be added, changed or deleted for aircraft based on aircraft category or class.

Preparation.

Aircraft pre-flight done by external walk around, unless the use of pictorial display is authorised by the Authority.

Pre-taxi procedures

Performance limitations.

Surface operation.

Pushback.

Powerback taxi, if applicable to the type of operation to be conducted.

Starting.

Taxi

Pre-takeoff checks.

Takeoff.

Normal.

Crosswind.

Rejected.

Power failure after V1.

Lower than standard minimum, if applicable to the type of operation to be conducted.

(iii)Climb.

Normal.

One-engine inoperative during climb to en route altitude.

En route.

Steep turns.

Approaches to stalls (takeoff, en route, and landing configurations).

Inflight powerplant shutdown.

Inflight powerplant restart.

High speed handling characteristics.

Descent.

Normal.

Maximum rate.

Approaches.

VFR procedures.

Visual approach with 50% loss of power of available powerplants

Visual approach with slat/flap malfunction.

IFR precision approaches (ILS normal and ILS with one-engine inoperative).

IFR non-precision approaches (NDB normal and VOR normal).

Note: Non-precision approach with one engine inoperative may include LOC back course procedures, SDF/LDA, GPS, TACAN and circling approach procedures, as applicable to the operator's authorisations.

Note: Simulator shall be qualified for training/checking on the circling manoeuvre.

Missed approach from precision approach.

Missed approach from non-precision approach.

Missed approach with powerplant failure.

Landings.

Normal with a pitch mistrim (small aircraft only).

Normal from precision instrument approach.

Normal from precision instrument approach with most critical engine inoperative.

Normal with 50% loss of power of available powerplants.

Normal with flap/slat malfunction.

Rejected landings.

Crosswind.

Manual reversion/degraded control augmentation.

Short/soft field (small aircraft only).

Glassy/rough water (seaplanes only).

Auto-rotation (helicopter only)

After landing.

Parking.

Emergency evacuation.

Docking, mooring, and ramping (seaplanes only).

Other flight procedures during any airborne phase.

Airborne Collision Avoidance System: use and avoidance manoeuvres

Holding.

Ice accumulation on airframe.

Air hazard avoidance.

Wind shear/mirco burst.

Normal, abnormal and alternate systems procedures during any phase.

Pneumatic/pressurisation.

Air conditioning.

Fuel and oil.

Electrical.

Hydraulic.

Flight controls.

Anti-icing and deicing systems.

Autopilot.

Flight management guidance systems and/or automatic or other approach and landing aids.

Stall warning devices, stall avoidance devices, and stability augmentation systems.

Airborne weather radar.
Flight instrument system malfunction.
Communications equipment.
Navigation systems.

Emergency systems procedures during any phase.

Aircraft fires.
Smoke control.
Powerplant malfunctions.
Fuel jettison.
Electrical, hydraulic, pneumatic systems.
Flight control system malfunction.
Landing gear and flap system malfunction.

Each AOC holder shall ensure that flight engineer flight training includes at least the following 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 or in a flight simulation training device (FSTD), as approved by the Authority.

Note: The flight training events for flight engineers listed in this IS are generic in nature for a type-rated aeroplane training curriculum. Additional training events may need to be added, changed or deleted. The events listed are typically conducted in a FSTD, except as noted, and may be conducted in aircraft when appropriate

Preparation.

Airplane preflight.
Logbook procedures.
Safety checks.
Cabin/interiors.
Exterior Walkaround.
Servicing/deicing.
Use of Oxygen.

Ground Operations.

Performance Data.

A.TO/LND Data.
Airport Analysis.
Mass and Balance.

Use of Checklist.

Panel setup.

Starting.

External power.
External Air.
APU.

Communications.

Station Procedures.
ACARS.

Taxi.

(iii)Takeoff.

Powerplant Control.
Flaps/landing gear.

Fuel management.
Other Systems Operation.
Aircraft Performance.
Checklist Completion.

Climb.
Powerplant control.
Fuel Management.
Pressurization.
Electrical System.
Air Conditioning.
Flight Controls.
Other Systems.

En Route.
Powerplant Operation.
Fuel Management.
Performance Management.
High Altitude Performance.
Other Systems Operation.

Descent.
Powerplant operation.
Other Systems Operation.
Performance Management.

Approach.
Landing Data.
Landing Gear Operation.
Flat/Slat/Spoiler Operation.
Approach Monitoring.

Landings.
Powerplant Operation.
Aircraft Configuration.
System Operation.
Emergency Evacuation.

Procedures during Any Ground or Airborne Phase.
Cockpit Equipment.
Flap Slats/Gear.
Powerplant.
Pressurisation.
Pneumatic.
Air Conditioning.
Fuel and Oil.
Electrical.
Hydraulic.
Flight Controls.
Anti-Icing and Deicing.
Other Checklist Procedures.

Each AOC holder shall ensure that flight navigator flight training includes at least the following training and practice in procedures related to the carrying out of flight navigator duties and functions. This training and practice may be accomplished either in flight or in a flight simulation training device (FSTD), as approved by the Authority.

Initial flight training for flight navigators must include flight training and a flight check that is adequate to ensure the crew member's proficiency in the performance of his or her assigned duties.

The flight training and check specified in paragraph (a) must be performed:

In-flight or in an appropriate flight simulation training device; or

In commercial air transport operations, if performed under the supervision of a qualified flight navigator instructor or check navigator, as applicable.

Each AOC holder shall ensure that initial flight training for pilots and flight engineers consists of at least the following programmed hours of instruction based on the aircraft to be used, unless a reduction is determined appropriate by the Authority:

For one pilot in either an aircraft or flight simulation training devices:

Piston-engined aircraft—PIC: 14 hours; CP: 14 hours; and Flight Engineer 12 hours.

Turbo-propeller-powered aircraft—PIC: 15 hours; CP: 15 hours; and FE: 12 hours.

Turbo-jet aircraft—PIC: 20 hours; CP: 16 hours; and FE; 12 hours.

Other aircraft—PIC and CP: 14 hours.

For two pilots in a flight simulation training device:

Piston-engined aircraft—PIC: 24 hours; CP: 24 hours; and FE: 20 hours.

Turbo-propeller-powered aircraft—PIC: 24 hours; CP: 24 hours; and FE: 20 hours.

Turbo-jet aircraft—PIC: 26 hours; CP: 26 hours; and FE: 20 hours.

Other aircraft—PIC and CP: 24 hours.

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IS: 10.16 INITIAL SPECIALISED OPERATIONS TRAINING

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:

Long-range navigation.

Knowledge of specialised navigation procedures, such as MNPS, NPAC.

Knowledge of specialised equipment, such as INS, LORAN,

GPS. (iii)CAT II and CAT III approaches

Special equipment, procedures and practice

A demonstration of competency

Low visibility takeoff operations

Runway and lighting requirements

Rejected takeoffs at, or near-V1 with a failure of the most critical engine

Taxi operations

Procedures to prevent runway incursions under low visibility conditions

Extended range operations with two engine aeroplanes

Airborne radar approaches

Autopilot instead of CP

IS: 10.17 AIRCRAFT DIFFERENCES - FLIGHT OPERATIONS OFFICER

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:

Operations procedures-

Operations under adverse weather phenomena conditions,

including clear air turbulence, windshear, and thunderstorms;

(iii)Mass and balance computations and load control procedures;

Aircraft performance computations, to include takeoff weight

limitations based on departure runway, arrival runway, and en route limitations, and also engine-out limitations;

Flight planning procedures, to include route selection, flight

time, and fuel requirements analysis;

Dispatch release preparation;

Crew briefings;

Flight monitoring procedures;

Flight crew response to various emergency situations, including the assistance the aircraft flight operations officer can provide in each situation;

MEL and CDL procedures;

Manual performance of a required procedure in case of the loss of automated capabilities;

Training in appropriate geographic areas;

ATC and instrument procedures, to include ground hold and central flow control procedures; and

Radio/telephone procedures.

Emergency procedures:

Actions taken to aid the flight crew; and

AOC holder and Authority notification.

IS: 10.19 PILOT PROFICIENCY - AIRCRAFT AND INSTRUMENT PROFICIENCY CHECKS:

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:

That proficiency check includes all manoeuvres and procedures required for a type rating practical test; and

Proficiency checks are be conducted by an examiner approved by the Authority.

Aircraft and instrument proficiency checks for PIC and Co-Pilot 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.

TYPE OF OPERATION OR PROCEDURE	**PIC or Co-Pilot**	**Notes**
Ground Operations		
Preflight inspection	PIC/Co-Pilot	
Taxiing	PIC/Co-Pilot	Both pilots may take simultaneous credit.
Powerplant checks	PIC/Co-Pilot	Both pilots may take simultaneous credit.
Takeoffs		
Normal	PIC/Co-Pilot	
Instrument	PIC/Co-Pilot	
Crosswind	PIC/Co-Pilot	
With powerplant failure	PIC/Co-Pilot	
Rejected takeoff	PIC/Co-Pilot	Both pilots may take simultaneous credit. May be waived.
Instrument Procedures		
Area departure	PIC/Co-Pilot	May be waived.
Area arrival	PIC/Co-Pilot	May be waived.
Holding	PIC/Co-Pilot	May be waived.
Normal ILS approach	PIC/Co-Pilot	
Engine-out ILS	PIC/Co-Pilot	
Coupled ILS approach	PIC/Co-Pilot	Both pilots may take simultaneous credit
Nonprecision approach	PIC/Co-Pilot	
Second nonprecision	PIC/Co-	

approach	Pilot	
Missed approach from an ILS	PIC/Co-Pilot	
Second missed approach	PIC only	
Circling approach	PIC/Co-Pilot	Only when authorized in the AOC holder's Operations Manual. May be waived.
Inflight Maneuvers		
Steep turns	PIC only	May be waived.
Specific flight characteristics	PIC/Co-Pilot	
Approaches to stalls	PIC/Co-Pilot	May be waived.
Powerplant failure	PIC/Co-Pilot	
2engine inoperative	PIC/Co-	

TYPE OF OPERATION OR PROCEDURE	PIC or Co-Pilot	Notes
approach (3 and 4 engine aircraft)	Pilot	
Normal landing	PIC/Co-Pilot	
Landing from an ILS	PIC/Co-Pilot	
Crosswind landing	PIC/Co-Pilot	
Landing with engine-out	PIC/Co-Pilot	
Landing from circling approach	PIC/Co-Pilot	Only if authorized in Operations Manual. May be waived.
Normal And Non-Normal Procedures	PIC/Co-Pilot	
Rejected landing	PIC/Co-Pilot	
2engine inoperative landing (3 and 4 engine aircraft)	PIC only	
Other Events	PIC or Co-Pilot	Examiner's discretion.

The oral and flight test phases of a proficiency check should not be conducted simultaneously.

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.

If the check must be terminated (for mechanical or other reasons) and there are events which still need to be repeated, the examiner shall issue a letter of discontinuance, valid for 60 days, listing the specific areas of operation that have been successfully completed.

Tolerances allowed during flight checks are as follows:

VOR: Radial within 2.5° on either side of track.

LLZ: Within 2° on either side of track (½ scale deflection) * see note below

NDB:QDM within 3°on either side **Heading** Within 15°

ILS fly-up demand: Maximum fly-up demand is ½ scale deflection.

Note: *½ scale deflection is ICAO terminology. On some aircraft this is about one dot deflection. As future developments are not known, ICAO terminology will be used.*

IS: 10.21 PAIRING OF LOW EXPERIENCE PILOTS

Situations designated as critical by the Authority at special aerodromes designated by the Authority or at special aerodromes designated by the AOC holder include-

The prevailing visibility value in the latest weather report for the aerodrome is at or below 3/4 mile;

The runway visual range for the runway to be used is at or below 4,000 feet;

(iii)The runway to be used has water, snow, slush or similar conditions that may adversely affect aircraft performance;

The braking action on the runway to be used is reported to be less than "good";

The crosswind component for the runway to be used is in excess of 15 knots;

Windshear is reported in the vicinity of the aerodrome; or

Any other condition in which the PIC determines it to be prudent to exercise the PIC's prerogative.

Circumstances which would routinely be considered for deviation from the required minimum line operating flight time include-

A newly certified AOC holder does not employ any pilots who meet the minimum flight time requirements;

An existing AOC holder adds to its fleet a type aircraft not before proven for use in its operations; or

(iii)An existing AOC holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the aircraft operated from that domicile.

Note: ICAO Doc 9376, Preparation of an Operations Manual, provides additional guidance.

IS: 10.22 FLIGHT ENGINEER PROFICIENCY CHECKS

Examiners shall include during proficiency checks for flight engineers an oral or written examination of the normal, abnormal, and emergency procedures listed below:

Normal procedures:

- Interior pre-flight
- Panel set-up
- Fuel load
- Engine start procedures
- Taxi and before takeoff procedures
- Takeoff and climb Pressurization
- Cruise and fuel management
- Descent and approach
- After landing and securing
- Crew co-ordination
- Situational awareness, traffic scan, etc.
- Performance computations
- Anti-ice, de-ice

Abnormal and emergency procedures:

- Troubleshooting
- Knowledge of checklist
- Ability to perform procedures
- Crew co-ordination
- Minimum equipment list (MEL) and configuration deviation list (CDL)
- Emergency or alternate operation of aeroplane flight systems

IS: 10.23 COMPETENCY CHECKS: CABIN CREWMEMBERS

A check cabin crewmember, approved by the Authority, shall conduct competency checks for cabin crewmembers in the following areas to demonstrate that each candidate's competency level is sufficient to successfully perform assigned duties and responsibilities.

Emergency equipment, as applicable:

Emergency communication and notification systems;

Aircraft exits;

(iii)Exits with slides or sliderafts (emergency operation);

Slides and sliderafts in a ditching;

Exits without slides (emergency operation);

Window exits (emergency operation);

Exits with tailcones (emergency operation);

Cockpit exits (emergency operation);

Ground evacuation and ditching equipment;

First aid equipment;

Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));

Firefighting equipment;

Emergency lighting systems; and

Additional emergency equipment.

Emergency procedures:

General types of emergencies specific to aircraft;

Emergency communication signals and procedures;

(iii)Rapid decompression;

Insidious decompression and cracked window and pressure seal leaks;

Fires;

Ditching;

Ground evacuation;

Unwarranted evacuation (i.e., Passenger initiated);

Illness or injury;

Abnormal situations involving passengers or crew members;

Turbulence; and

Other unusual situations.

Emergency drills:

Location and use of all emergency and safety equipment carried on the aeroplane;

The location and use of all types of exits;

(iii)Actual donning of a lifejacket where fitted;

Actual donning of protective breathing equipment; and

Actual handling of fire extinguishers.

Crew Resource Management:

Decision making skills;

Briefings and developing open communication;

(iii)Inquiry, advocacy, and assertion training; and

Workload management.

Dangerous goods:

Recognition of and transportation of dangerous goods;

Proper packaging, marking, and documentation; and

(iii)Instructions regarding compatibility, loading, storage and handling characteristics.

Security:

Hijacking; and

Disruptive passengers.

IS: 10.24 COMPETENCY CHECKS: FLIGHT OPERATIONS OFFICERS

A check flight operations officer, approved by the Authority, shall conduct competency checks for flight operations officers in at least the following areas to demonstrate that each candidate's competency level is sufficient to successfully perform assigned duties and responsibilities.

Use of communications systems including the characteristics of those systems and the appropriate normal and emergency procedures;

Meteorology, including various types of meteorological information and forecasts, interpretation of weather data (including forecasting of en route and terminal temperatures and other weather conditions), frontal systems, wind conditions, and use of actual and prognostic weather charts for various altitudes;

The NOTAM system;

Navigational aids and publications;

Joint dispatcher-pilot responsibilities;

Characteristics of appropriate airports;

Prevailing weather phenomena and the available sources of weather information;

Air traffic control and instrument approach procedures; and

Approved dispatcher resource management (DRM) initial training.

IS 10.29 PILOT ROUTE AND AREA QUALIFICATION REQUIREMENTS

Each pilot shall demonstrate to the operator an adequate knowledge of:

The route to be flown, and the aerodrome(s)/ heliport(s) which are to be used. This shall include knowledge of:

The terrain and minimum safe altitudes;

The seasonal meteorological conditions;

(iii)The meteorological, communication and air traffic facilities, services and procedures;

The search and rescue procedures;

The navigational facilities and procedures associated with the route along which the flight is to take place; and

Procedures applicable to flight paths over heavily populated areas and areas of high density traffic, obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures, and applicable operating minima.

Note: *That portion of the demonstration relating to arrival, departure, holding and instrument approach procedures may be accomplished in an approved training device.*

IS: 10.32 RECURRENT TRAINING: FLIGHT CREW

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.

Each flight crew member shall undergo recurrent training relevant to the type or variant of aircraft on which he or she is certified to operate and for the crew member position involved.

Each AOC holder shall have all recurrent training conducted by suitably qualified personnel.

Each AOC holder shall ensure that flight crew member recurrent ground training includes at least the following:

General subjects

Flight locating procedures

Principles and method for determining weight/balance and runway limitations

Meteorology to ensure practical knowledge of weather phenomena including the principles of frontal system, icing, fog, thunderstorms, windshear, and high altitude weather situations

ATC systems and phraseology

Navigation and use of navigational aids

Normal and emergency communication procedures (vii) Visual cues before descent to MDA

Accident/incident and occurrence review

Other instructions necessary to ensure the pilot's competence.

Aircraft systems and limitations

Normal, abnormal, and emergency procedures

Aircraft performance characteristics

Engines and or propellers (iv) Major aircraft components

Major aircraft systems (i.e., flight controls, electric, hydraulic and other systems as appropriate)

Ground icing and de-icing procedures and requirements

(iii)Emergency equipment and drills

Every 12 months:

Location and use of all emergency and safety equipment carded on the aeroplane;

The location and use of all types of exits;

Actual donning of a lifejacket where fitted;

Actual donning of protective breathing equipment; and

Actual handling of fire extinguishers.

Every 3 years:

Operation of all types of exits;

Demonstration of the method used to operate a slide, where fitted; and

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.*

Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment;
Actual handling of pyrotechnics, real or simulated, where fitted;
Demonstration in the use of the life-raft(s), where fitted;
An emergency evacuation drill;
A ditching drill, if applicable; and
A rapid decompression drill, if applicable.

Crew resource management-
Decision making skills;
Briefings and developing open communication;
Inquiry, advocacy, and assertion training;
Workload management; and
Situational awareness.

Dangerous goods:
Recognition of and transportation of dangerous goods;
Proper packaging, marking, and documentation; and
Instructions regarding compatibility, loading, storage and handling characteristics

Security:
Hijacking; and
Disruptive passengers.

Each AOC holder shall verify knowledge of the recurrent ground training by an oral or written examination.

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, adequate flight simulation training device (FSTD), or in a combination of aircraft and FSTD, as approved by the Authority.*

Preparation:
Visual inspection (use of pictorial display authorised); and
Pre-taxi procedures.

Surface operation:
Performance limitations;
Cockpit management;
Securing cargo;
Pushback;
Powerback taxi;
Starting;
Taxi; and
Pre take-off checks

(iii)Takeoff:
Normal;
Crosswind;
Rejected;

Power failure after V1;
Powerplant failure during second segment; and
Lower than standard minimum.

Climb:

Normal; and
One-engine inoperative during climb to en route altitude.

En route:

Steep turns;
Approaches to stalls (takeoff, en route, and landing configurations);
Inflight powerplant shutdown;
Inflight powerplant restart; and
High speed handling characteristics.

Descent:

Normal; and
Maximum rate.

Approaches:

VFR procedures;
Visual approach with 50% loss of power on one-engine (2 engines inoperative on 3-engine aeroplanes) (PIC, only);
Visual approach with slat/flap malfunction;
IFR precision approaches (ILS normal and ILS with one-engine inoperative);
IFR non-precision approaches (NDB normal and VOR normal);
Non-precision approach with one engine inoperative (LOC backcourse, SDF/LDA, GPS, TACAN and circling approach procedures);
Note: A Flight Simulation Training Device shall not be used for training/checking on the circling manoeuvre unless it has been qualified for circling manoeuvres. The operator must be approved to conduct circling manoeuvres by the Authority to participate in that training and checking.
Missed approach from precision approach;
Missed approach from non-precision approach; and
Missed approach with powerplant failure.

Landings:

Abnormal with a pitch mistrim (small aircraft only).
Abnormal from precision instrument approach.
Abnormal from precision instrument approach with most critical engine inoperative.
Abnormal with 50% loss of power of available powerplants.
Abnormal with flap/slat malfunction.
Rejected landings.
Crosswind.
Short/soft field (small aircraft only).
Glassy/rough water (seaplanes only).
Auto-rotation (helicopter only)

After landing-

Parking;

Emergency evacuation; and

Docking, mooring, and ramping (seaplanes only).

Other flight procedures during any airborne phase-

Holding;

Ice accumulation on airframe;

Air hazard avoidance; and

Windshear/microburst.

Normal, abnormal and alternate systems procedures during any phase-

Pneumatic/pressurization;

Air conditioning;

Fuel and oil;

Electrical;

Hydraulic;

Flight controls;

Anti-icing and de-icing systems;

Flight management guidance systems and/or automatic or other approach and landing aids;

Stall warning devices, stall avoidance devices, and stability augmentation systems;

Airborne weather radar;

Flight instrument system malfunction;

Communications equipment;

Navigation systems;

Auto-pilot;

Approach and landing aids; and

Flight instrument system malfunction.

Emergency systems procedures during any phase-

Aircraft fires;

Smoke control;

Powerplant malfunctions;

Fuel jettison;

Electrical, hydraulic, pneumatic systems;

Flight control system malfunction; and

Landing gear and flap system malfunction.

Each AOC holder shall ensure that flight engineer recurrent flight training includes at least the flight training specified in IS: 6 .10.15(b).

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.

The AOC holder may combine recurrent training with the AOC holder's proficiency check.

Recurrent ground and flight training curricula may be accomplished concurrently or intermixed, but completion of each of these curricula shall be recorded separately.

IS: 10.33 RECURRENT NORMAL AND EMERGENCY TRAINING: CABINCREW MEMBERS

Each AOC holder shall establish and have approved by the Authority a recurrent training program for all cabin crew.

Each cabin Crewmember 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 aircraft on which they operate.

Each AOC holder shall have all recurrent training conducted by suitably qualified personnel.

Each AOC holder shall ensure that, every 12 months, each cabin crew member receive recurrent training in at least the following:

Emergency equipment:

Emergency communication and notification systems;
Aircraft exits;
Exits with slides or sliderafts (emergency operation);
Slides and sliderafts in a ditching;
Exits without slides (emergency operation);
Window exits (emergency operation);
Exits with tailcones (emergency operation);
Cockpit exits (emergency operation);
Ground evacuation and ditching equipment;
First aid equipment;
Portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));
Firefighting equipment;
Emergency lighting systems; and
Additional emergency equipment.

Emergency procedures:

General types of emergencies specific to aircraft;
Emergency communication signals and procedures;
Rapid decompression;
Insidious decompression and cracked window and pressure seal leaks;
Fires;
Ditching;
Ground evacuation;
Unwarranted evacuation (i.e., passenger initiated);
Illness or injury;
Abnormal situations involving passengers or crew members;
Turbulence; and
Other unusual situations.

Emergency drills.

Every 12 months:

Location and use of all emergency and safety equipment carried on the aeroplane;
The location and use of all types of exits;
Actual donning of a lifejacket where fitted;
Actual donning of protective breathing equipment; and
Actual handling of fire extinguishers.

Every 3 years:

Operation of all types of exits;
Demonstration of the method used to operate a slide, where fitted;
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.*
Effects of smoke in an enclosed area and actual use of all relevant equipment in a simulated smoke-filled environment;
Actual handling of pyrotechnics, real or simulated, where fitted;
Demonstration in the use of the life-raft(s), where fitted;
An emergency evacuation drill;
A ditching drill if applicable;
A rapid decompression drill, if applicable;

Crew resource management:

Decision making skills;
Briefings and developing open communication;
Inquiry, advocacy, and assertion training; and
Workload management.

Dangerous goods:

Recognition of and transportation of dangerous goods;
Proper packaging, marking, and documentation; and
Instructions regarding compatibility, loading, storage and handling characteristics.

Security:

Hijacking; and
Disruptive passengers.

Each AOC holder shall verify knowledge of the recurrent training by an oral or written examination.

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: 10.34 RECURRENT TRAINING - FLIGHT OPERATIONS OFFICER

Each AOC holder shall establish and maintain a recurrent training program, approved by the Authority and established in the AOC holders operations manual, to be completed annually by each flight operations officer.

Each flight operations officer shall undergo recurrent training relevant to the type(s) and/or variant(s) of aircraft and the operations conducted by the AOC holder, and that training shall consist of at least the following hours of instruction:

Piston-engined aircraft – 6 hours.

Turbopropeller-powered aircraft – 10 hours.

(iii)Turbo-jet aircraft – 20 hours.

Other aircraft to include rotorcraft– 10 hours.

Each AOC holder shall have all recurrent training conducted by an appropriately qualified instructor.

An AOC holder shall ensure that, every 12 months, each flight operations officer receives recurrent training in the subjects required for initial training listed in IS 10.14(D) in sufficient detail to ensure competency in each specified area of training. Operators may choose to provide in-depth coverage of selected subjects on any one cycle of training. In such cases the operator's training programme must cover all the subjects to the detail required for initial qualification within three years.

Each AOC holder shall verify knowledge of the recurrent training by an oral or written examination.

An AOC holder shall record completion of the required training

IS: 10.36 INSTRUCTOR TRAINING

Flight crew instructor training.

No operator may use a person, nor may any person serve as flight instructor in a training programme unless:

That person has satisfactorily completed initial or transition flight instructor training; and

Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check personnel.

An AOC holder may accomplish the observation check for a flight instructor, in part or in full, in an aircraft or a flight simulation training device.

(iii)Each AOC holder shall ensure that initial ground training for flight instructors includes the following:

Flight instructor duties, functions, and responsibilities.

Applicable Regulations and the AOC holder's policies and procedures.

Appropriate methods, procedures, and techniques for conducting the required checks.

Proper evaluation of student performance including the detection of:

Improper and insufficient training; and

Personal characteristics of an applicant that could adversely affect safety.

Appropriate corrective action in the case of unsatisfactory checks.

Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.

Except for holders of existing flight instructor licences:

The fundamental principles of the teaching-learning process;

Teaching methods and procedures; and

The instructor-student relationship.

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 aircraft to which the flight instructor is in transition.

Each AOC holder shall ensure that the initial and transition flight training for flight instructors includes the following:

The safety measures for emergency situations that are likely to develop during instruction.

The potential results of improper, untimely, or non-execution of safety measures during instruction.

For pilot flight instructor (aircraft):

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

The safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction.

For flight engineer instructors and flight navigator instructors, in-flight training to ensure competence to perform assigned duties.

An AOC holder may accomplish the flight training requirements for flight instructors in full or in part in flight or in a flight simulation training device, as appropriate.

An AOC holder shall ensure that the initial and transition flight training for flight instructors (flight simulation training device) includes the following:

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 simulation training device.

Training in the operation of flight simulation training devices, to ensure competence to conduct the flight instruction required by this Part.

Cabin crew instructor training.

No operator may use a person, nor may any person serve as cabin instructor in a training programme unless:

That person has satisfactorily completed initial or transition cabin instructor training; and

Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder’s check personnel.

An AOC holder may accomplish the observation check for a cabin instructor, in part or in full, in an aircraft or a cabin simulation training device.

(iii)Each AOC holder shall ensure that initial ground training for cabin instructors includes the following:

Cabin instructor duties, functions, and responsibilities.

Applicable Regulations and the AOC holder's policies and procedures.

Appropriate methods, procedures, and techniques for conducting the required checks.

Proper evaluation of student performance including the detection of:

Improper and insufficient training; and

Personal characteristics of an applicant that could adversely affect safety.

Appropriate corrective action in the case of unsatisfactory checks.

Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft, as applicable.

Except for existing cabin instructors:

The fundamental principles of the teaching-learning process;

Teaching methods and procedures; and

The instructor-student relationship.

Each AOC holder shall ensure that the transition ground training for cabin instructors includes the approved methods, procedures, and limitations for performing the required

normal, abnormal, and emergency procedures applicable to the aircraft, as appropriate to which the cabin instructor is in transition.

Each AOC holder shall ensure that the initial and transition flight training for cabin instructors includes the following:

The safety measures for emergency situations that are likely to develop during instruction.

The potential results of improper, untimely, or non-execution of safety measures during instruction.

Flight operations officer instructor training.

No operator may use a person, nor may any person serve as flight operations officer instructor in a training programme unless:

That person has satisfactorily completed initial or transition flight operations officer instructor training; and

Within the preceding 24 calendar months, that person satisfactorily conducts instruction under the observation of an inspector from the Authority or an AOC holder's check flight operations officer.

An AOC holder may accomplish the observation check for a flight operations officer instructor, in part or in full, in a flight operations centre.

(iii)Each AOC holder shall ensure that initial ground training for flight operations officer instructors includes the following:

Flight operations officer instructor duties, functions, and responsibilities.

Applicable Regulations and the AOC holder's policies and procedures.

Appropriate methods, procedures, and techniques for conducting the required checks.

Proper evaluation of student performance including the detection of:

Improper and insufficient training; and

Personal characteristics of an applicant that could adversely affect safety.

Appropriate corrective action in the case of unsatisfactory checks.

Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures for the aircraft or position involved.

Except for holders of existing flight operations officer instructor licences:

The fundamental principles of the teaching-learning process;

Teaching methods and procedures; and

The instructor-student relationship.

Each AOC holder shall ensure that the transition ground training for flight operations officer instructors includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft or position involved to which the flight operations officer instructor is in transition.

Each AOC holder shall ensure that the initial and transition training for flight operations officer instructors includes the following:

The safety measures for emergency situations that are likely to develop during instruction in a flight operations centre.

The potential results of improper, untimely, or non-execution of safety measures during instruction in a flight operations centre.

Dangerous Goods Instructor Training.

No operator may use a person, nor may any person serve as dangerous goods instructor in a training programme unless:

That person has satisfactorily completed dangerous goods training in the applicable dangerous goods category prior to delivering such a dangerous goods training programme.

That person has within the preceding 24 calendar months, satisfactorily conducted initial or recurrent instructions or in the absence undergoes recurrent training.

IS: 10.39 CHECK PERSONNEL TRAINING

Training for check personnel - general.

No operator may use a person, nor may any person serve as a check person in a training programme unless, with respect to the aircraft type involved, that person has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training and differences training, that are required to serve as PIC, flight engineer, navigator, cabin crewmember, or flight operations officer, as applicable.

Each AOC holder shall ensure that initial ground training for check personnel includes:

Check personnel duties, functions, and responsibilities.

Applicable Regulations and the AOC holder's policies and procedures.

Appropriate methods, procedures, and techniques for conducting the required checks.

Proper evaluation of student performance including the detection of:

Improper and insufficient training.

Personal characteristics of an applicant that could adversely affect safety.

Appropriate corrective action in the case of unsatisfactory checks.

Approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.

(iii)Transition ground training for all check personnel, shall include the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the check person is in transition.

Training for check personnel of flight crew.

For check pilots, each AOC holder shall ensure that the initial and transition flight training includes:

Training and practice in conducting flight evaluations (from the left and right pilot seats for check pilots) in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight checks.

The potential results of improper, untimely or non-execution of safety measures during an evaluation.

The safety measures (to be taken from either pilot seat for check pilots) for emergency situations that are likely to develop during an evaluation.

For check flight engineers and check flight navigators, each AOC holder shall ensure training to ensure competence to perform assigned duties to include:

The safety measures for emergency situations that are likely to develop during a check.

The potential results of improper, untimely or non-execution of safety measures during a check.

(iii)Each AOC holder shall ensure that the initial and transition flight training for check personnel (simulator) includes:

Training and practice in conducting flight checks in the required normal, abnormal, and emergency procedures to ensure competence to conduct the checks required by this part (this training and practice shall be accomplished in a flight simulation training device).

Training in the operation of flight simulation training devices, to ensure competence to conduct the checks required by this Part.

(iv) An AOC holder may accomplish flight training for check personnel, in full or in part in an aircraft or in a flight simulation training device, as appropriate.

The AOC holder shall record the training in each individuals training record maintained by the AOC holder.

Training for check cabin crewmembers.

For check cabin crewmembers, each AOC holder shall ensure that the training includes:

The safety measures for emergency situations that are likely to develop during a check; and

The potential results of improper, untimely or non-execution of safety measures during a check.

Training for check flight operations officers.

For check flight operations officers, each AOC holder shall ensure that the training includes:

The safety measures for emergency situations that are likely to develop during a check; and

The potential results of improper, untimely or non-execution of safety measures during a check.

The AOC holder shall record the training in each individuals training record maintained by the AOC holder.

IS: 11.3 DUTY AND REST PERIODS

Each AOC holder and each crewmember shall use the following table, as appropriate, 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					
	Consecutive Hours of Flight Deck	**Intervening Rest Period**	**Flight Deck Duty(24 hour period)**	**Duty Aloft (Hours)**	**Total Duty Period (Hours)**
1 Pilot Crew	8	16	8	8	16
2 Pilot Crew	8	16	8	8	16
2 Pilot + FE	9	NA	9	9	16
2 Pilots + 1 Relief Pilot	8	2X Actual Hours Flown	12	12	16
2 Pilot + 2 Relief Pilots	8	8	12	16	20

No certificate holder may schedule a flight crewmember, and no flight crewmember may accept an assignment, for flight time during the 24 consecutive hours preceding the schedule completion of any flight segment without the scheduled rest period during that 24 hours of at least the following:

9 consecutive hours of rest for less than 8 hours of scheduled flight time;

10 consecutive hours of rest for 8 or more but less than 9 hours of scheduled flight time;

(iii)11 Consecutive hours of rest for 9 or more hours of scheduled flight time.

Acceptable Scheduled Initial Rest Period Reduction by Lengthening the Subsequent Rest Period			
Flight Deck Duty Period (Hours)	**Rest Period (Hours**	**Authorized Reduced Rest Period (Hours)**	**Next Rest Period if Reduction Taken**
Less than 8	9	8	10
8-9	10	8	11
9 or more	11	9	12

Situations Requiring Longer Flight Crew Member Rest Periods				
	Period of Time	**Total Flight Time (Hours)**	**Intervening Rest Period (Hours)**	**Subsequent Rest Period (Hours)**
1 or 2 Pilot Crew	24	8 +	2X Actual Hours Flown (but not less than 8 hours)	18
2 Pilots + FE	48	20+	NA	18
2 Pilots + FE	72	24+	NA	18
2 Pilots + FE + Relief	Return to Base	NA	NA	2X Crew Total flight hours aloft

Acceptable Situations for Reducing Initial Cabin Attendant Rest Period Through the Addition of Extra Attendants on the Flights				
Scheduled Duty Period (Hours)	**Extra Attendants Required**	**Rest Period (Hours)**	**Authorised Reduced Rest Period (Hours)**	**Next Rest Period if Reduction Taken**
14 or less	0	9	8	10
14-16	1	12	10	14
16-16	2	12	10	14
16 -20	3	12	10	14