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| **SADC AVIATION SAFETY ORGANIZATION (SASO)**  **REGULATIONS** |



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| **OPERATION OF AIRCRAFT COMMERCIAL AIR TRANSPORT (AEROPLANES) REGULATIONS**  **First Edition**  **April 2023** |

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# PART I

# PRELIMINARY PROVISIONS

**OPS 1. Citation and Commencement**

1. These Regulations may be cited as the SASO Model Civil Aviation (Operation of Aircraft- Commercial Air Transport) Regulations, 2023.
2. These regulations come into operation on the date on which it is published in the [State] Gazette

**OPS 2. Interpretation**

“**Advanced aircraft”** means aircraft with equipment in addition to that required for a basic aircraft for a given take-off, approach or landing operation

“**Aerial work”** means 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;

**“Aerodrome”** means a defined area on land or water, including any buildings, installations and equipment intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft;

Aerodrome operating minima. The limits of usability of an aerodrome for:  
  
  
  
a)take-off, expressed in terms of runway visual range and/or visibility and, if necessary, cloud conditions;  
  
  
  
b)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  
  
  
  
c)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.

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.

**“Agreement summary**”. means 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;

**“Aircraft**” means 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;

**“Aircraft operating manual”** means a manual, acceptable to the (Authority)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;

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.

**“Air operator certificate or AOC”** means a certificate authorizing an operator to carry out specified commercial air transport operations;

**“Air traffic service or ATS**” is 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;

**“Airworthy**” means the status of an aircraft, engine, propeller or part when it conforms to its approved design and is in a condition for safe operation;

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.  
  
  
  
Note.— The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

**“Alternate heliport”** means 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:

1. **“Take-off alternate”** means 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;
2. **“En-route alternate”** means an alternate heliport at which a helicopter would be able to land in the event that a diversion becomes necessary while en route;
3. **“Destination alternate”** means 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;

**“Approach and landing phase helicopters**” means that part of the flight from 300 m or 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;

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.

**“Appropriate airworthiness requirements”** means the comprehensive and detailed airworthiness codes established, adopted or accepted by a Contracting State for the class of aircraft, engine or propeller under consideration;

**“Area navigation or RNAV”** means 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;

**“Basic aircraft**” means an aircraft which has the minimum equipment required to perform the intended take-off, approach or landing operation.

**“Cabin crew member”** means 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;

**“Combined vision system or CVS”** means a system to display images from a combination of an enhanced vision system or EVS and a synthetic vision system or SVS;

**“COMAT”** means operator material carried on an operator’s aircraft for the operator’s own purposes.

**“Commercial air transport operation”** means an aircraft operation involving the transport of passengers, cargo or mail for remuneration or hire;

**“Configuration deviation list or CDL”** means 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;

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.  
  
  
  
Note.— Further information on runway surface condition descriptors can be found in the Annex 14, Volume I — Definitions.

**“Congested area”** means in relation to a city, town or settlement, any area which is substantially used for residential, commercial or recreational purposes;

**“Congested hostile environment”** means a hostile environment within a congested area;

**“Continuing airworthiness”** means the set of processes by which an aircraft, engine, rotor or part complies with the applicable airworthiness requirements and remains in a condition for safe operation throughout its operating life;

**“Continuing airworthiness records”** means records which are related to the continuing airworthiness status of an aircraft, engine, rotor or associated part;

**“Continuous descent final approach (CDFA)”** means 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 level-off, from an altitude or height at or above the final approach fix altitude/height to a point approximately 15 m or 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 or H or visual flight manoeuvre altitude or height are reached;

**“Crew member”** means a person assigned by an operator to duty on an aircraft during a flight duty period;

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

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

**“Dangerous goods**” means 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;

**“Decision altitude (DA) or decision height (DH)”** means a specified altitude or height in a three-dimensional or 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;

Note 1.— Decision altitude (DA) is referenced to mean sea level and decision height (DH) is referenced to the threshold elevation.  
  
  
  
Note 2.— The required visual reference means that section of the visual aids or of the approach area which should have been in view for sufficient time for the pilot to have made an assessment of the aircraft position and rate of change of position, in relation to the desired flight path. In Category III operations with a decision height the required visual reference is that specified for the particular procedure and operation.  
  
  
  
Note 3.— For convenience where both expressions are used they may be written in the form “decision altitude/height” and abbreviated “DA/H”.

**“Defined point after take-off (DPATO)”** means 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;

**“Defined point before landing (DPBL)”** means 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;

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.

**“Duty means”** means 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;

**“Duty period”** means 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;

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.  
  
  
  
Note.— Guidance on EDTO critical fuel scenarios is contained in the Extended Diversion Time Operations (EDTO) Manual (Doc 10085).

**“Electronic flight bag (EFB)”** means 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;

**“Elevated heliport”** means a heliport located on a raised structure on land;

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

1. **“Automatic fixed ELT (ELT (AF))”** means an automatically activated ELT which is permanently attached to an aircraft.
2. **“Automatic portable ELT (ELT (AP))”** means an automatically activated ELT which is rigidly attached to an aircraft but readily removable from the aircraft.
3. **“Automatic deployable ELT (ELT(AD))”** means 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.
4. **“Survival ELT (ELT(S))”** means an ELT which is removable from an aircraft, stowed so as to facilitate its ready use in an emergency, and manually activated by survivors.

**“Engine”** means a unit used or intended to be used for aircraft propulsion. consisting of at least those components and equipment necessary for functioning and control, but excludes the propeller and rotors where applicable;

**“Enhanced vision system or EVS”** means a system to display electronic real-time images of the external scene achieved through the use of image sensors;

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.

**“En-route phase”** means 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;

“**Fatigue”** means a physiological state of reduced mental or physical performance capability resulting from sleep loss, extended wakefulness, circadian phase, or workload, mental or physical activity that can impair a person’s alertness and ability to adequately perform safety-related operational duties;

**“Fatigue risk management system (FRMS)”.** means 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;

**“Final approach and take-off area (FATO)”** means 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;

**“Final approach segment (FAS)”** means that segment of an instrument approach procedure in which alignment and descent for landing are accomplished;

**“Flight crew member**” means a licensed crew member charged with duties essential to the operation of an aircraft during a flight duty period;

**“Flight duty period”** means 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 the flight or cabin crew is a crew member;

**“Flight manual”** means 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;

**“Flight dispatcher”** means person designated by the operator to engage in the control and supervision of flight operations, whether licensed or not, suitably qualified in accordance with Part…Personnel Licensing who supports, briefs and assists the pilot-in-command in the safe conduct of the flight;

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.

**“Flight plan”** means a specified information provided to air traffic services units, relative to an intended flight or portion of a flight of an aircraft;

**“Flight recorder**” means any type of recorder installed in the aircraft for the purpose of complementing accident/incident investigation;

**“Automatic deployable flight recorder (ADFR)”** means a combination flight recorder installed on the aircraft which is capable of automatically deploying from the aircraft;

“**Flight safety documents system**” means 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;

**“Flight simulation training device”** means any one of the following three types of apparatus in which flight conditions are simulated on the ground;

1. **“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;
2. **“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;
3. **“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;

**“Flight time”** — helicopters” means 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;

Note.— Flight time as here defined is synonymous with the term “block to block” time or “chock to chock” time in general usage which is measured from the time an aeroplane first moves for the purpose of taking off until it finally stops at the end of the flight.

**“General aviation operation”** means an aircraft operation other than a commercial air transport operation or an aerial work operation;

**“Ground handling”** means services necessary for an aircraft’s arrival at, and departure from, an airport, other than air traffic services;

**“Head-up display (HUD)”** means a display system that presents flight information into the pilot’s forward external field of view;

**“Helicopter”** means 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;

**“Helideck”** means a heliport located on a floating or fixed offshore structure;

**“Heliport”** means 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;

**“Heliport operating minima”** means the limits of usability of a heliport for:

1. take-off, expressed in terms of runway visual range or visibility and, where necessary, cloud conditions;
2. landing in 2D instrument approach operations, expressed in terms of visibility and/or runway visual range, minimum descent altitude or MDA or minimum descent height MDH and, where necessary, cloud conditions; and
3. landing in 3D instrument approach operations, expressed in terms of visibility or runway visual range and decision altitude or DA or descent height or DH as appropriate to the type or category of the operation;

**“Hostile environment”** means an environment in which:

1. a safe forced landing cannot be accomplished because the surface and surrounding environment are inadequate;
2. the helicopter occupants cannot be adequately protected from the elements;
3. search and rescue response/capability is not provided consistent with anticipated exposure; or
4. there is an unacceptable risk of endangering persons or property on the ground.

**“Human Factors principles”** means 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;

**“Human performance”** means human capabilities and limitations which have an impact on the safety, security and efficiency of aeronautical operations;

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

1. a two-dimensional (2D) means instrument approach operation, using lateral navigation guidance only; and
2. a three-dimensional (3D) means instrument approach operation, using both lateral and vertical navigation guidance.

**“Instrument approach procedure (IAP)”** means 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:

1. **“Non-precision approach (NPA) procedure”** means an instrument approach procedure designed for 2D instrument approach operations Type A;
2. **“Approach procedure with vertical guidance (APV)”** means a performance - based navigation or PBN instrument approach procedure designed for 3D instrument approach operations Type A; and
3. **“Precision approach (PA) procedure”** means An instrument approach procedure based on navigation systems or ILS, MLS, GLS and SBAS CAT I designed for 3D instrument approach operations Type A or B.

**“Instrument meteorological conditions (IMC)”** means Meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, as defined in the Civil Aviation (Rules of the Air) Regulations, less than the minima specified for visual meteorological conditions;

**“Integrated survival suit”** means a survival suit which meets the combined requirements of the survival suit and life jacket;

**“Landing decision point (LDP)”** means 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;

**“Low-visibility operations (LVO)”.** Means approach operations in RVRs less than 550 m or with a DH less than 60 m or 200 ft or take-off operations in RVRs less than 400 m;

**“Maintenance”** means 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;

**“Maintenance organization’s procedures manual**” means 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;

**“Maintenance programme”** means 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;

**“Maintenance release”** means 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;

**“Master minimum equipment list (MMEL)”** means 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;

**“Maximum mass”** means maximum certificated take-off mass;

**“Minimum descent altitude (MDA) or minimum descent height (MDH)”** means 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;

**“Minimum equipment list (MEL)”** means 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;

**“Modification”** means a change to the type design of an aircraft, engine or propeller, and may include the embodiment of the modification which is a maintenance task subject to a maintenance release as per Part…Airworthiness of Aircraft;

**“Navigation specification”** means 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”** means 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”** means 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;

**“Night”** The hours between the end of evening civil twilight and the beginning of morning civil twilight where Civil twilight ends in the evening when the centre of the sun’s disc is 6 degrees below the horizon and begins in the morning when the centre of the sun’s disc is 6 degrees below the horizon;

**“Non-congested hostile environment”** means a hostile environment outside a congested area;

**“Non-hostile environment”** means an environment in which:

1. a safe forced landing can be accomplished because the surface and surrounding environment are adequate;
2. the helicopter occupants can be adequately protected from the elements;
3. search and rescue response/capability is provided consistent with anticipated exposure; and
4. the assessed risk of endangering persons or property on the ground is acceptable.

**“Obstacle clearance altitude (OCA) or obstacle clearance height (OCH)”** means 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;

**“Offshore operations”** means 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;

**“Operation”** means 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;

**“Operational control”** means 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;

**“Operational credit**” means 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

**“Operational flight plan”** means the operator’s plan for the safe conduct of the flight based on considerations of helicopter performance, other operating limitations and relevant expected conditions on the route to be followed and at the heliports concerned;

**“Operations in performance Class 1”** means 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 or TDP or after passing the landing decision point or LDP, in which cases the helicopter must be able to land within the rejected take-off or landing area;

**“Operations in performance Class 2”** means 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;

**“Operations in performance Class 3”** means operations with performance such that, in the event of an engine failure at any time during the flight, a forced landing will be required;

**“Operations manual”** means manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties;

**“Operations specifications”** means the authorizations including specific approvals, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual;

**“Operator”** means the person, organization or enterprise engaged in or offering to engage in an aircraft operation;

**“Operator’s maintenance control manual”** means 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;

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

**“Performance-based communication (PBC)”** means communication based on performance specifications applied to the provision of air traffic services;

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

**“Performance-based surveillance (PBS)”** means Surveillance based on performance specifications applied to the provision of air traffic services;

“Pilot-in-command” means 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;

“Point of no return” means 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;

Pressure-altitude. An atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the Standard Atmosphere.\*  
  
  
  
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\*As defined in Annex 8.

**“Psychoactive substances”** means Alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded;

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

**“Required communication performance (RCP) specification”** means a set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based communication;

**“Required surveillance performance (RSP) specification”** means a set of requirements for air traffic service provision and associated ground equipment, aircraft capability, and operations needed to support performance-based surveillance;

**“Rest period means”** 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;

**“Runway visual range (RVR)”** means 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;

**“Safe forced landing”** means unavoidable landing or ditching with a reasonable expectancy of no injuries to persons in the aircraft or on the surface;

**“Safety management system (SMS)”** means a systematic approach to managing safety, including the necessary organizational structures, accountability, responsibilities, policies and procedures;

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

**“Series of flights”** means consecutive flights that:

1. begin and end within a period of 24 hours; and
2. are all conducted by the same pilot-in-command.

**“Specific approval”.** means an approval which is documented in the Operations Specifications for commercial air transport operations or in the list of specific approvals for non-commercial operations;

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.   
  
  
  
Note.— The terms authorization, specific approval, approval and acceptance are further described in Attachment B.

**“State of Registry”** means the State on whose register the aircraft is entered;

**“State of the Aerodrome”** means the State in whose territory the aerodrome is located;

**“ State of Operator”** means the State in which the operator’s principal place of business is located or; if there is no such place of business, the operator permanent residence;

**“State of the principal location of a general aviation operator**”. Means 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;

**“Synthetic vision system (SVS)”** means a system to display data-derived synthetic images of the external scene from the perspective of the flight deck;

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

**“Take-off and initial climb phase”** means that part of the flight from the start of take-off to 300 m or 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;

**“Take-off decision point (TDP)”** means 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;

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.

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

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

**“VTOSS”** means the minimum speed at which climb shall be achieved with the critical engine inoperative, the remaining engines operating within approved operating limits;

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.  
  
  
  
  
  
  
  
  
  
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**OPS 3. Application**

1. This Part shall be applicable to the operation of all aeroplanes by operators authorised to conduct commercial air transport operations.

# PART II

# GENERAL REQUIREMENTS

**OPS 4. Compliance with laws, regulations and procedures**

(1) An operator shall ensure that all employees when abroad know that they must comply with the laws, regulations and procedures of those States in which operations are conducted.

(2) An 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 aerodromes to be used and the air navigation facilities relating thereto.

(3) An operator shall ensure that other members of the flight crew are familiar with these laws, regulations and procedures as are pertinent to the performance of their respective duties in the operation of the aeroplane.

(4) An operator or a designated representative shall have responsibility for operational control.

(5) The operator shall delegate responsibility for operational control only to—

(a) the pilot-in-command; or

(b) flight dispatcher if operator’s approved method of control and supervision

of flight operations requires the use of a flight dispatcher.

(6) Where an emergency situation which endangers the safety of the aeroplane or persons becomes known first to the flight dispatcher, action by that person in accordance with section 45 of this Part shall include, where necessary, notification to the appropriate authorities of the nature of the situation without delay, and requests for assistance where required.

(7) Where an emergency situation which endangers the safety of the aeroplane 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.

report on any such violation to the appropriate authority of such state, in that event, the PIC shall also submit a copy of it to the Authority, and the reports shall be submitted as soon as possible and normally within ten days.

(9) An operator shall ensure that the PIC has available on board the aeroplane all the essential information concerning the search and rescue services in the area over which the aeroplane will be flown.

(10) An operator shall ensure that flight crew members demonstrate the ability to speak and understand the English language used for radiotelephony communications as specified in Part…Personnel Licencing of these regulations.

**OPS 5. Compliance by foreign operator with laws, regulations and procedures of a State**

(1) Where the Authority identifies a case of non-compliance or suspected non-compliance by a foreign operator with laws, regulations and procedures applicable within [State]., or a similar serious safety issue with that operator, the Authority shall immediately notify the operator and, where the issue warrants it, the State of operator.

(2) Where the State of operator and the State of registry are different, the notification under subsection (1) shall also be made to the State of Registry, where the issue falls within the responsibilities of that State and warrants a notification.

(3) In the case of notification to States as specified in subsections (1) and (2), where the issue and its resolution warrant it, the State in which the operation is conducted shall engage in consultations with the Authority and the State of registry, as applicable, concerning the safety standards maintained by the operator.

**OPS 6. Safety management**

(1) The operator of an aeroplane of a certificated take-off mass in excess of 20 000 kg shall establish and maintain a flight data analysis programme as part of the safety management system.

(2) Where the operator contracts the operation of a flight data analysis programme to another party the operator shall retain overall responsibility for the maintenance of such a programme.

(3) A flight data analysis programme shall contain adequate safeguards to protect the source(s) of the data in accordance with Third Schedule to Part…….Safety Management.

(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 in accordance with Civil Aviation (Aircraft Accident and Incident Investigation) Regulations, 2018 published in Statutory Instrument 78 of 2018, except where the recordings or transcripts are—

(a) related to a safety-related event identified in the context of a safety management system;

(b) restricted to the relevant portions of a de-identified transcript of the recording;

are subject to the protection accorded in Part…Safety Management;

(c) 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 Part…Safety Management;

(d) used for inspections of flight recorder systems as provided in section 7 of the Eighth Schedule to this Part.

(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 in accordance with the Civil Aviation (Aircraft Accident and Incident Investigation) Regulations 2018 published in Statutory Instrument 78 of 2018, except where the recordings or transcripts are subject to the protections accorded by Part…Safety Management and are—

(a) used by the operator for airworthiness or maintenance purposes

(b) used by the operator in the operation of a flight data analysis Programme required in this Part;

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

(d) de-identified; or

(e) disclosed under secure procedures.

(6) An operator shall establish a flight safety documents system, for the use and guidance of operational personnel as part of its safety management system.

**OPS 7. Use of psychoactive substances**

2. (1) No member of a flight crew shall perform any function specified in the privileges applicable to his or her license where he or she is under the influence of any psychoactive substance which may render him or her unable to perform such functions in a safe and proper manner.

(2) No person whose function is critical to the safety of aviation (safety-sensitive personnel) shall undertake that function while under the influence of any psychoactive substance, by reason of which human performance is impaired.

(3) The person referred to in subsections (1) and (2) shall not engage in any kind of problematic use of substances as specified in accordance with the provisions in Part …Personnel Licensing and Part…………Rules of the Air.

**OPS 8. Aircraft tracking**

(1) An operator shall establish an aircraft tracking capability to track aeroplanes throughout its area of operations.

(2) An operator shall track the position of an aeroplane through automated reporting at least every 15 minutes for the portion or portions of the in-flight operations under the following conditions—

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

(b) where an ATS unit obtains aeroplane position information at greater than 15-minute intervals.

(3) An operator shall track the position of an aeroplane through automated reporting at least every 15 minutes for the portion or portions of the in-flight operations that is planned in an oceanic area or areas under the following conditions—

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

(b) where an ATS unit obtains aeroplane position information at greater than 15-minute intervals.

(4) Notwithstanding the provisions in subsection (2), the Authority may, based on the results of an approved risk assessment process implemented by the operator, allow for variations to automated reporting intervals.

(5) The risk assessment process referred to in sub section (4) shall demonstrate how risks to the operation resulting from such variations can be managed and shall include at least the following—

(a) capability of the operator’s operational control systems and processes, including those for contacting ATS units;

(b) overall capability of the aeroplane and its systems;

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

(d) frequency and duration of gaps in automated reporting;

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

(f) specific mitigation measures and contingency procedures.

(6) An operator shall establish procedures, approved by the Authority, for the retention of aircraft tracking data to assist search and rescue (SAR) in determining the last known position of the aircraft.

**PART III**

**FLIGHT OPERATIONS**

**OPS 9. Operating considerations and acilities**

3. (1) An operator shall ensure that a flight does not commence unless it has been ascertained by every reasonable means available that the ground or water facilities available and directly required on such flight, for the safe operation of the aeroplane and the 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.

(2) An operator shall ensure that a flight does 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.

(3) Where the operator intends to operate over or near conflict zones, a risk assessment shall be conducted and appropriate risk mitigation measures taken to ensure a safe flight.

(4) 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.

(5) 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 weather conditions.

(6) An operator shall, as part of its safety management system, assess the level of rescue and firefighting service or 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.

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

(8) An operator shall conduct a risk assessment and take appropriate risk mitigation measures to ensure a safe flight when intending to operate over or near conflict zones.

**OPS 10. Operational Certification and Supervision**

4. (1) An operator shall not engage in commercial air transport operations unless in possession of a valid air operator certificate issued by the Authority.

(2) The air operator certificate shall authorise the operator to conduct commercial air transport operations in accordance with the operations specifications.

(3) The issue of an air operator certificate by the Authority shall be dependent upon the operator demonstrating an adequate organisation, method of control and supervision of flight operations, training programme as well as ground handling and maintenance arrangements consistent with the nature and extent of the operations specified.

(4) The operator shall develop policies and procedures for third parties that perform work on its behalf.

(5) An operator shall ensure that policies, procedures and facilities for subcontracted third parties referred to in subsection (4) is approved by the Authority

(6) The continued validity of an air operator certificate shall depend upon the operator maintaining the requirements in subsection (3) under the supervision of the Authority.

(7) The air operator certificate shall be in the form laid out in the Sixth Schedule and shall contain at least the following information—

(a) the state of the Operator and the issuing authority;

(b) the air operator certificate number and its expiration date;

(c) the operator name, trading name (if different) and address of the principal

place of business;

(d) the date of issue and the name, signature and title of the authority

representative; and

(e) the location, in a controlled document carried on board, where the contact

details of operational management can be found.

(8) The operations specifications associated with the air operator certificate shall be in the form laid out in the Sixth Schedule and shall contain at least the following information—

(a) Each aircraft model in the operator’s fleet, identified by aircraft make, model

and series including the list of authorisations, conditions and limitations ;

(b) issuing authority contact details;

(c) operator name and AOC number;

(d) date of issue and signature of the authority representative;

(e) types and area of operations; and

(f) special limitations and authorisations.

(9) Air operator certificates and their associated operations specifications first issued from 20 November 2008 shall follow the layouts in the Sixth Schedule.

(10) The Authority shall establish a system for both certification and the continued surveillance of the operator in accordance with the Fifth Schedule to this Part and the provisions of Part….Safety Management to ensure the required standards of operations established in these regulations are maintained.

**OPS 11. Surveillance of operations by a foreign operator**

(1) The Authority shall recognise as valid an air operator certificate issued by another Contracting State, provided that the requirements under which the certificate was issued are at least equal to Annex 6 Part I and Annex 19.

(2) The Authority shall establish a programme with procedures for the surveillance of operations in the country by a foreign operator and for taking appropriate action when necessary to preserve safety.

(3) A foreign operator conducting aircraft operations in [State]. shall comply with the requirements of these regulations and any other applicable law to meet and maintain the requirements established by the Authority when operating in [State]..

**OPS 12. Operations manual**

(1) An operator shall provide, for the use and guidance of operations personnel concerned, an approved operation manual as described in the Second Schedule.

(2) The operator shall ensure that the operations manual is amended or revised as is necessary to ensure that the information contained therein is kept up to date and amendments or revisions shall be issued to all personnel that are required to use the manual.

(3) The operator shall provide a copy of the operations manual together with all amendments or revisions, for review, acceptance or approval by the Authority.

(4) The operator shall incorporate in the operations manual such mandatory material as the Authority may require.

**OPS 13. Operating instructions — General**

(1) The 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.

(2) No person shall taxi an aeroplane on the movement area of an aerodrome unless the person —

(a) has been duly authorised by the operator or a designated agent;

(b) is fully competent to taxi the aeroplane;

(c) is qualified to use the radiotelephone; and

(d) has received instruction from a competent person in respect of aerodrome layout, routes, signs, markings, lights, air traffic control (ATC) signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

(3) The operator shall issue operating instructions and provide information on aeroplane climb performance with all engines operating to enable the pilot-in-command to determine the climb gradient that can be achieved during the departure phase for the existing take-off conditions and intended take-off technique and this information shall be included in the operations manual.

**OPS 14. In-flight simulation of emergency situations**

**OPS 15. Checklists**

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

(1) The operator shall provide normal, abnormal and emergency procedures checklists that shall be used by flight crew prior to, during and after all phases of operations and in an emergency, to ensure compliance with the operating procedures contained in the aircraft operating manual and the aeroplane flight manual or other documents associated with the certificate of airworthiness and otherwise in the operations manual.

(2) The operator shall observe human factors principles in the design and utilisation of the checklists specified in subsection (1).

**OPS 16. Minimum Flight altitudes**

(1) The operator shall be permitted to establish minimum flight altitudes for those routes flown for which minimum flight altitudes have been established by the State flown over or the responsible State, provided that they shall not be less than those established by the State flown over or the responsible State.

(2) The operator shall specify the method by which it is intended to determine minimum flight altitudes for operations conducted over routes for which minimum flight altitudes have not been established by the State flown over or the responsible State, and shall include this method in the operations manual.

(3) The minimum flight altitudes determined in accordance with the method in subsection (2) shall not be—

(a) when over high terrain or in mountainous areas, lower than a level which is at least 600 m (2 000 ft), above the highest obstacle located within 8 km of the estimated position of the aircraft;

(b) elsewhere than as specified in (a), lower than a level which is at least 300 m (1 000 ft) above the highest obstacle located within 8 km of the estimated position of the aircraft.

(4) When determining the estimated position of the aircraft the operator shall take account of the navigational accuracy which can be achieved on the relevant route segment, having regard to the navigational facilities available on the ground and in the aircraft.

(5) The method for establishing the minimum flight altitudes shall be approved by the Authority.

(6) The Authority shall approve minimum flight altitudes method after consideration of the probable effects of the following factors on the safety of the operation—

(a) the accuracy and reliability with which the position of the aeroplane can be determined;

(b) the inaccuracies in the indications of the altimeters used;

(c) the characteristics of the terrain, including sudden changes in the elevation;

(d) the probability of encountering unfavourable meteorological conditions, including severe turbulence and descending air currents;

(e) possible inaccuracies in aeronautical charts; and

(f) airspace restrictions.

**OPS 17. Aerodrome operating minima**

5. (1) The Authority shall require that the operator establish aerodrome operating minima for each aerodrome to be used in operations and shall approve the method of determination of such minima.

(2) The minima specified in subsection (1) 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.

(3) The Authority shall authorise operational credit or credits for operations with advanced aircraft.

(4) Where the operational credit relates to low visibility operations, the Authority shall issue a specific approval.

(5) The authorisations specified in subsection (3) shall not affect the classification of the instrument approach procedure.

(6) For the purpose of this regulation “Operational credit” includes—

(a) for the purposes of an approach ban, a minima below the aerodrome operating minima;

(b) reducing or satisfying the visibility requirements; or

(c) requiring fewer ground facilities as compensated for by airborne capabilities.

(7) When issuing a specific approval for the operational credit, the Authority shall ensure that the—

(a) aeroplane meets the appropriate airworthiness certification requirements;

(b) 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;

(c) operator has carried out a safety risk assessment of the operations supported by the equipment;

(d) operator has established and documented normal and abnormal procedures and MEL;

(e) operator has established a training programme for the flight crew members and relevant personnel involved in the flight preparation;

(f) operator has established a system for data collection, evaluation and trend monitoring for low visibility operations for which there is an operational credit; and

(g) operator has instituted appropriate procedures in respect of continuing airworthiness (maintenance and repair) practices and programmes.

(8) 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.

(9) The Authority shall require that in establishing the aerodrome operating minima which applies to any particular operation, the operator take full account of the following—

(a) the type, performance and handling characteristics of the aeroplane and any conditions or limitations stated in the flight manual;

(b) the composition of the flight crew, their competence and experience;

(c) the dimensions and characteristics of the runways which may be selected for use;

(d) the adequacy and performance of the available visual and non-visual ground aids;

(e) the equipment available on the aeroplane for the purpose of navigation, acquisition of visual references and control of the flight path during the approach, landing and the missed approach;

(f) the obstacles in the approach and missed approach areas and the obstacle clearance altitude or height for the instrument approach procedures;

(g) the means used to determine and report meteorological conditions;

(h) the obstacles in the climb-out areas and necessary clearance margins;

(i) the conditions prescribed in the operations specifications; and

(f) any minima that may be promulgated by the State of the Aerodrome.

(10) 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—

(a) type A- a minimum descent height or decision height at or above 75 m (250 ft); and

(b) type B- a decision height below 75 m (250 ft) which are categorised as follows

(i) category I (CAT I)- a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m;

(ii) 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; and

(iii) category III (CAT III) - a decision height lower than 30 m (100 ft) or no decision height and a runway visual range less than 300 m or no runway visual range limitations.

(11) The Authority shall issue a specific approval for instrument approach operations in low visibility which shall only be conducted when RVR information is provided.

(12) For take-off in low visibility, the Authority shall issue a specific approval for the minimum take-off RVR.

(13) For instrument approach operations, aerodrome operating minima below 800 m visibility shall not be authorised unless RVR information is provided.

(14) An 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, where necessary, cloud conditions.

(15) An operator shall establish operational procedures designed to ensure that am 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 (RVR.)

**OPS 18. Threshold crossing height for 3D instrument approach operations**

6. 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.

**OPS 19. Fuel and oil records**

(1) An operator shall maintain fuel records to enable the Authority to ascertain that, for each flight, the requirements of sections 85 and 86 have been complied with.

(2) The operator shall maintain oil records to enable the Authority to ascertain that trends for oil consumption are such that an aeroplane has sufficient oil to complete each flight.

(3) Fuel and oil records shall be retained by the operator for a period of 3 months.

**OPS 20. Crew- Pilot In Command**

(1) An operator shall designate one pilot for each flight to act as pilot-in-command.

(2) For each flight of an aeroplane above 15 000 m (49 000 ft), the operator shall maintain records so that the total cosmic radiation dose received by each crew member over a period of 12 consecutive months can be determined.

**OPS 21. Passengers**

(1) An operator shall ensure that passengers are made familiar with the location and use of—

(a) seat belts;

(b) emergency exits;

(c) life jackets, where the carriage of life jackets is prescribed;

(d) oxygen dispensing equipment, where the provision of oxygen for the use of passengers is prescribed; and

(e) other emergency equipment provided for individual use, including passenger emergency briefing cards.

(2) The operator shall inform the passengers of the location and general manner of use of the principal emergency equipment carried for collective use.

(3) The operator shall ensure that in an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances.

(4) The operator shall ensure that, during take-off and landing and whenever considered necessary by reason of turbulence or any emergency occurring during flight, all passengers on board an aeroplane shall be secured in their seats by means of the seat belts or harnesses provided.

**OPS 22. Flight Preparation**

(1) No operator shall commence a flight until flight preparation forms have been completed certifying that the pilot-in-command is satisfied that—

(a) the aeroplane is airworthy and the appropriate certificates of airworthiness and certificate of registration are on board the aeroplane;

(b) the instruments and equipment prescribed in Part……Instruments and Equipment for the particular type of operation to be undertaken, are installed and are sufficient for the flight;

(c) a maintenance release as prescribed in Part……….Air Operator Certification and Administration has been issued in respect of the aeroplane;

(d) the mass of the aeroplane and centre of gravity location are such that the flight can be conducted safely, taking into account the flight conditions expected;

(e) any load carried is properly distributed and safely secured;

(f) a check has been completed indicating that the operating limitations of these regulations can be complied with for the flight to be undertaken; and

(g) the requirements in section 23 have been complied with.

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

**OPS 23. Operational flight planning**

(1) An operator shall complete an operational flight plan for every intended flight.

(2) The operational flight plan shall be approved and signed by the pilot-in-command and where applicable, signed by the flight dispatcher and a copy shall be filed with the operator or a designated agent, or, if these procedures are not possible, it shall be left with the aerodrome authority or on record in a suitable place at the point of departure.

(3) The operations manual shall describe the content and use of the operational flight plan.

**OPS 24. Take-off alternate aerodrome**

(1) A take-off alternate aerodrome shall be selected and specified in the operational flight plan where either the meteorological conditions at the aerodrome of departure are below the operator’s established aerodrome landing minima for that operation or if it would not be possible to return to the aerodrome of departure for other reasons.

(2) The take-off alternate aerodrome shall be located within the following flight time from the aerodrome of departure—

(a) for aeroplanes with two engines, one hour of flight time at a one-engine-inoperative cruising speed, determined from the aircraft operating manual, calculated in International Standard Atmosphere (ISA) and still-air conditions using the actual take-off mass; or

(b) for aeroplanes with three or more engines, two hours of flight time at an all engines operating cruising speed, determined from the aircraft operating manual, calculated in ISA and still-air conditions using the actual take-off mass; or

(c) for aeroplanes engaged in extended diversion time operations (EDTO) where an alternate aerodrome meeting the distance criteria under paragraphs (a) or (b) is not available, the first available alternate aerodrome located within the distance of the operator’s specified maximum diversion time considering the actual take-off mass.

(3) 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.

**OPS 25. En-route alternate aerodromes**

En-route alternate aerodromes, required under section 104 for extended diversion time operations (EDTO) by aeroplanes with two turbine engines shall be selected and specified in the operational and air traffic services (ATS) flight plans.

**OPS 26. Destination alternate aerodromes**

(1) For a flight to be conducted in accordance with the instrument flight rules, at least one destination alternate aerodrome shall be selected and specified in the operational and ATS flight plans, unless—

(a) 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, a reasonable certainty exists that—

(i) the approach and landing may be made under visual

meteorological conditions; and

(ii) 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;

and

(b) the aerodrome is isolated and operations into isolated aerodromes do not require the selection of a destination alternate aerodrome or aerodromes and shall be planned in accordance with section 76(3)(d);

(i) for each flight into an isolated aerodrome, a point of no

return shall be determined; and

(ii) 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.

(2) Two destination alternate aerodromes shall be selected and specified in the operational and ATS flight plans when, for the destination aerodrome—

(a) meteorological conditions at the estimated time of use will be below the operator’s established aerodrome operating minima for that operation; or

(b) meteorological information is not available.

(3) Notwithstanding the provisions of sections 24, 25 and subsections (1) and (2), the Authority may, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety shall be maintained, approve operational variations to alternate aerodrome selection criteria, and the specific safety risk assessment shall, include—

(a) capabilities of the operator;

(b) overall capability of the aeroplane and its systems;

(c) available aerodrome technologies, capabilities and infrastructure;

(d) quality and reliability of meteorological information;

(e) identified hazards and safety risks associated with each alternate aerodrome variation;

(f) specific mitigation measures.

**OPS 27. Meteorological conditions - VFR Flights**

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

**OPS 28. Meteorological conditions- IFR Flights**

A flight to be conducted in accordance with the instrument flight rules shall not—

(a) take off from the departure aerodrome unless the meteorological conditions, at the time of use, are at or above the operator’s established aerodrome operating minima for that operation; and

(b) take off or continue beyond the point of in-flight re-planning unless at the aerodrome of intended landing or at each alternate aerodrome to be selected in compliance with sections 67, 68 and 69, 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.

**OPS 29. Visibility or cloud base**

(1) 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 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.

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

**OPS 30. Icing conditions**

(1) A flight to be operated in known or expected icing conditions shall not be commenced unless the aeroplane is certificated and equipped to cope with such conditions.

(2) A flight to be planned or expected to operate in suspected or known ground icing conditions shall not take off unless the aeroplane has been inspected for icing and, where necessary, has been given appropriate de-icing or anti-icing treatment.

(3) An operator shall remove accumulation of ice or other naturally occurring contaminants so that the aeroplane is kept in an airworthy condition prior to take-off.

**OPS 31. Fuel requirements**

(1) An operator shall ensure that an aeroplane carries sufficient amount of usable fuel to complete the planned flight safely and to allow for deviations from the planned operation.

(2) The amount of usable fuel to be carried shall, at a minimum, be based on—

(a) the following data—

(i)current aeroplane-specific data derived from a fuel consumption monitoring system, where available; or

(ii) where current aeroplane-specific data are not available, data provided by the aeroplane manufacturer; and

(b) the operating conditions for the planned flight including—

(i) anticipated aeroplane mass;

(ii)current meteorological reports or a combination of current reports and forecasts;

(iii)air traffic services procedures, restrictions and anticipated delays; and

(iv)the effects of deferred maintenance items and configuration deviations.

(3) The pre-flight calculation of usable fuel required shall include—

(a) 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 auxiliary power unit (APU) fuel consumption;

(b) trip fuel, which shall be the amount of fuel required to enable the aeroplane to fly from take-off, or the point of inflight re-planning, until landing at the destination aerodrome taking into account the operating conditions of subsection (2);

(c) contingency fuel, which shall be the amount of fuel required to compensate for unforeseen factors and it shall be 5 per centum 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 (1 500 ft) above the destination aerodrome in standard conditions;

(d) destination alternate fuel, shall be—

(i) where a destination alternate aerodrome is required, the amount of fuel required to enable the aeroplane to—

A. perform a missed approach at the destination aerodrome;

B. climb to the expected cruising altitude;

C. fly the expected routing D. descend to the point where the expected approach is initiated; and

E. conduct the approach and landing at the destination alternate aerodrome; or

(ii)where two destination alternate aerodromes are required, the amount of fuel, as calculated in paragraph (i), required to enable the aeroplane to proceed to the destination alternate aerodrome which requires the greater amount of alternate fuel; or

(iii)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 (1 500 ft) above destination aerodrome elevation in standard conditions; or

(iv)where the aerodrome of intended landing is an isolated aerodrome—

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

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

(a) 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—

(i) 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

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

(b) additional fuel, which shall be the supplementary amount of fuel required if the minimum fuel calculated in accordance with paragraph (b), (c), (d) and (e) is not sufficient to—

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

A. fly for 15 minutes at holding speed at 450 m or 1 500 ft above aerodrome elevation in standard conditions; and

B. make an approach and landing;

(ii) allow an aeroplane engaged in EDTO to comply with the EDTO critical fuel scenario as established by the Authority;

(iii) meet additional requirements not covered above;

(c) Discretionary fuel - which shall be the extra amount of fuel to be carried at the discretion of the pilot-in-command.

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

(5) A pilot in command shall not commence a flight unless the usable fuel on board meets all the requirements in subsection (3) if required and shall not continue from the point of in-flight re-planning unless the usable fuel on board meets the requirements in subsection (3) (b), (c),(d),(e)and (f) if required.

(6) Notwithstanding the provisions in subsection (3) (a), (b),(c),(d) and (f), the Authority may, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety will be maintained, approve variations to the pre-flight fuel calculation of taxi fuel, trip fuel, contingency fuel, destination alternate fuel, and additional fuel.

(7) The specific safety risk assessment shall include —

(a) flight fuel calculations;

(b) capabilities of the operator to include—

(i) a data-driven method that includes a fuel consumption monitoring programme; and

(ii) the advanced use of alternate aerodromes;

and

(c) specific mitigation measures.

(8) 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.

**OPS 32. In-flight fuel management**

(1) An operator shall establish policies and procedures, approved by the Authority, to ensure that inflight fuel checks and fuel management are performed.

(2) The pilot-in-command shall continually ensure that the amount of usable fuel remaining on board is not less than the fuel required to proceed to an aerodrome where a safe landing can be made with the planned final reserve fuel remaining upon landing.

(3) The pilot-in-command shall request delay information from ATC when unanticipated circumstances result in landing at the destination aerodrome 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.

(4) The pilot-in-command shall 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 may result in landing with less than the planned final reserve fuel.

(5) The pilot-in-command shall 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 where a safe landing can be made is less than the planned final reserve fuel.

**OPS 33. Refuelling with passengers on board**

(1) No person shall refuel an aeroplane when passengers are embarking, on board or disembarking unless the aeroplane is properly attended to by qualified personnel ready to initiate and direct an evacuation of the aeroplane by the most practical and expeditious means available.

(2) When refuelling with passengers embarking, on board or disembarking, two-way communication shall be maintained by the aeroplane’s inter-communication system or other suitable means between the ground crew supervising the refuelling and the qualified personnel on board the aeroplane.

(3) Every person shall observe additional precautions required when refuelling with fuels other than aviation kerosene or when refuelling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used.

**OPS 34. Oxygen supply**

(1) The approximate altitudes in the Standard Atmosphere corresponding to the values of absolute pressure used in these Regulations are as follows—

Absolute pressure Metres Feet

700 hPa 3000 10 000

620 hPa 4000 13 000

376 hPa 7600 25 000

(2) A flight to be operated at flight altitudes at which the atmospheric pressure in personnel compartments is less than 700 hPa shall not be commenced unless sufficient stored breathing oxygen is carried to supply—

(a) all crew members and 10 per cent of the passengers for any period in excess of 30 minutes that the pressure in compartments occupied by them will be between 700 hPa and 620 hPa; and

(b) the crew and passengers for any period that the atmospheric pressure in compartments occupied by them will be less than 620 hPa.

(3) A flight to be operated with a pressurised aeroplane shall not be commenced unless a sufficient quantity of stored breathing oxygen is carried to supply all the crew members and passengers, as is appropriate to the circumstances of the flight being undertaken, in the event of loss of pressurisation, for any period that the atmospheric pressure in any compartment occupied by them would be less than 700 hPa.

(4) Where an aeroplane is operated at flight altitudes at which the atmospheric pressure is less than 376 hPa, or which, when operated at flight altitudes at which the atmospheric pressure is more than 376 hPa and cannot descend safely within 4 minutes to a flight altitude at which the atmospheric pressure is equal to 620 hPa, there shall be no less than a 10-minute supply for the occupants of the passenger compartment.

**OPS 35. Time capability of cargo compartment fire suppression system**

(1) An Operator shall ensure that, all flights are planned so that the diversion time to an aerodrome where a safe landing can be made does not exceed time for the cargo compartment fire suppression capability of the aeroplane, when the cargo compartment fire suppression capability time is identified in the relevant aeroplane documentation, reduced by an operational safety margin specified by the Authority.

(2) The operator shall ensure that the aircraft cargo compartment fire suppression time capabilities are clearly identified in the relevant aeroplane documentation when they are to be considered for the operation.

**OPS 36. In-flight procedures -Aerodrome operating minima**

(1) The Pilot in command shall not continue a flight 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 accordance with section 16.

(2 The pilot in command—

(a) shall not continue an instrument approach below 300 m or 1 000 ft above the aerodrome elevation or into the final approach segment unless the reported visibility or controlling RVR is at or above the aerodrome operating minima;

(b) after entering the final approach segment or after descending below 300 m or 1 000 ft above the aerodrome elevation, the reported visibility or controlling RVR falls below the specified minimum, he or she may continue the approach to DA/H or MDA/H;

(c) shall not continue the approach-to-land at any aerodrome beyond a point at which the limits of the operating minima specified for that aerodrome would be infringed.

**OPS 37. Meteorological observations**

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

**OPS 38. Hazardous flight conditions**

Any person who encounters hazardous flight conditions, other than those associated with meteorological conditions, shall report to the appropriate aeronautical station as soon as possible and the reports so rendered shall give such details as may be pertinent to the safety of other aircraft.

**OPS 39. Flight crew members at duty stations**

(1) During take-off and landing all flight crew members are required to be on flight deck duty shall be at their stations.

(2) Whilst enroute, all flight crew members required to be on flight deck duty shall remain at their stations except when their absence is necessary for the performance of duties in connection with the operation of the aeroplane or for physiological needs.

(3) All flight crew members shall keep their seat belts fastened when at their stations except where it is necessary for the performance of their duties in connection of the aeroplane or for physiological needs.

(4) Any flight crew member occupying a pilot’s seat shall keep the safety harness fastened during the take-off and landing phases whilst all other flight crew members shall keep their safety harnesses fastened during the take-off and landing phases unless the shoulder straps interfere with the performance of their duties, in which case the shoulder straps may be unfastened but the seat belt shall remain fastened.

**OPS 40. Use of oxygen**

(1) All flight crew members, when engaged in performing duties essential to the safe operation of an aeroplane inflight, shall use breathing oxygen continuously whenever the circumstances prevail for which its supply has been required in section 79.

(2) All flight crew members of pressurised aeroplanes operating above an altitude where the atmospheric pressure is less than 376 hPa shall have available at the flight duty station a quick-donning type of oxygen mask which will readily supply oxygen upon demand.

**OPS 41. Safeguarding of cabin crew and passengers in pressurized aeroplanes in the event of loss of pressurisation**

(1) Every Operator shall develop procedures to safeguard—

(a) cabin crew to ensure reasonable probability of their retaining consciousness during any emergency descent which may be necessary in the event of loss of pressurisation and, in addition, they shall have means of protection to enable them to administer first aid to passengers during stabilized flight following the emergency;

(b) passengers with such devices or operational procedures to ensure reasonable probability of their surviving the effects of hypoxia in the event of loss of pressurisation.

**OPS 42. 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 aeroplane.

**OPS 43. Instrument flight procedures.**

(1) An operator shall comply with instrument approach procedures designed to support instrument approach operations approved and published by the Authority in the aeronautical information publication (AIP) to serve each instrument runway or aerodrome utilized for instrument flight operations for aerodromes located in [State]..

(2) An operator shall ensure that an aeroplane when operated in accordance with instrument flight rules shall comply with the instrument flight procedures approved by the State in which the aerodrome is located.

**OPS 44. Aeroplane operating procedures for noise abatement.**

(1) An operator shall ensure that aeoplane operating procedures for noise abatement comply with the provisions contained in the technical guidance material.

(2) Noise abatement procedures referred to in subsection (1) by the operator for any one aeroplane type shall be the same for all aerodromes except where the same procedure may not satisfy the requirements at some aerodrome.

**OPS 45. Aeroplane operating procedures for rates of climb, descent and Landing Performance**

(1) 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 aeroplane climbing or descending to an assigned altitude or flight level, especially with an autopilot engaged, shall do so at a rate less than 8 m/sec( 1 500 ft/min ), depending on the instrumentation available throughout the last 300 m (1 000 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.

(2) The pilot in command must ensure that an approach to land shall not be continued below 300 m( 1 000 ft) above aerodrome elevation unless the pilot-in-command is satisfied that, with the runway surface condition information available, the aeroplane performance information indicates that a safe landing can be made.

**OPS 46. Duties of Pilot-In-Command**

. (1) A pilot-in-command shall—

(a) be responsible for the safety of all crew members, passengers and cargo on board when the doors are closed;

(b) be responsible for the operation and safety of the aeroplane from the moment the aeroplane 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 or engines used as primary propulsion units are shut down;

(c) ensure that the checklists specified in section 186 are complied with in detail;

(d) be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aeroplane, resulting in serious injury or death of any person or substantial damage to the aeroplane or property;

(e) be responsible for reporting all known or suspected defects in the aeroplane, to the operator, at the termination of the flight;

(f) submit a report to the Authority of any accident which occurred while that PIC was responsible for the flight;

(g) be responsible for the journey log book or the general declaration containing the information listed in Part……….Air Operator Certification and Administration.

**OPS 47. Duties of flight Dispatcher**

(1) Subject to section 26, a flight dispatcher shall—

(a) assist the pilot-in-command in flight preparation and provide the relevant information;

(b) assist the pilot-in-command in preparing the operational and ATS flight plans, sign when applicable and file the ATS flight plan with the appropriate ATS unit;

(c) furnish the pilot-in-command while in flight, by appropriate means, with information which may be necessary for the safe conduct of the flight; and

(d) notify the appropriate ATS unit when the position of the aeroplane cannot be determined by an aircraft tracking capability, and attempts to establish communication are unsuccessful.

(2) In the event of an emergency, a flight dispatcher shall—

(a) initiate such procedures as outlined in the operations manual while avoiding taking any action that would conflict with ATC procedures; and

(b) 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 amendment to the flight plan that become necessary in the course of the flight.

**OPS 48. Additional requirements for operations by aeroplanes with turbine engines beyond 60 minutes to an en-route alternate aerodrome including extended diversion time operations (EDTO)**

(1) Every operator conducting operations beyond 60 minutes from a point on a route to an en-route alternate aerodrome shall ensure that—

(a) for all aeroplanes—

(i) en-route alternate aerodromes are identified; and

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

(b) 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.

(2) In addition to the requirements in subsection (1) all operators shall ensure that the following are taken into account and provide the overall level of safety intended by the provisions of these regulations—

(a) operational control and flight dispatch procedures;

(b) operating procedures; and

(c) training programs.

**OPS 49. Requirements for extended diversion time operations (EDTO**)

(1) Unless the Authority has issued a specific approval for EDTO, an aeroplane with two or more turbine engines shall not be operated on a route where the diversion time to an en-route alternate aerodrome from any point on the route, calculated in ISA and still-air conditions at the one-engine-inoperative cruise speed for aeroplanes with two turbine engines and at the all engines operating cruise speed for aeroplanes with more than two turbine engines, exceeds a threshold time established for such operations by the Authority.

(2) The specific approval referred to in subsection (1) shall identify the applicable threshold time established for each particular aeroplane and engine combination.

(3) On issuing the specific approval for extended diversion time operations, the Authority shall specify the maximum diversion time granted to the operator for each particular aeroplane and engine combination.

(4) When specifying the appropriate maximum diversion time for the operator of a particular aeroplane type engaged in extended diversion time operations, the Authority shall ensure that—

(a) for all aeroplanes-the 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

(b) for aeroplanes with two turbine engines- the aeroplane is EDTO certified.

(5) Notwithstanding the provisions of subsection (4)(a), the Authority may, based on the results of a specific safety risk assessment conducted by the operator which demonstrates how an equivalent level of safety will be maintained, approve operations beyond the time limits of the most time-limited system.

(6) The specific safety risk assessment as provided in subsection (5) shall include—

(a) capabilities of the operator;

(b) overall reliability of the aeroplane;

(c) reliability of each time-limited system;

(d) relevant information from the aeroplane manufacturer; and

(e) specific mitigation measures.

(7) For aeroplanes engaged in EDTO, the additional fuel required under section 76(3)(f)(ii) shall include the fuel necessary to comply with the EDTO critical fuel scenario as established by the Authority.

(8) An operator shall ensure that a flight does not proceed beyond the threshold time in accordance with subsection (1) 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 the operation.

(9) An operator shall determine an alternative course of action where any conditions are identified that would preclude a safe approach and landing at that aerodrome during the estimated time of use.

(10) The Authority shall, when specifying maximum diversion times for aeroplanes with two turbine engines, ensure that the following are taken into account in providing the overall level of safety intended by the provisions of Part……. (Airworthiness of Aircraft)—

(a) reliability of the propulsion system;

(b) airworthiness certification for EDTO of the aeroplane type; and

(c) maintenance programme.

**OPS 50. Carry-on baggage**

An operator shall ensure that all baggage carried onto an aeroplane and taken into the passenger cabin is adequately and securely stowed.

**OPS 51. Additional requirements for single pilot operations under the instrument flight rules (IFR) or at night**

(1) No operator shall allow operations under IFR or at night by a single pilot unless—

(a) approved by the Authority;

(b) the flight manual does not require a flight crew of more than one;

(c) the aeroplane is propeller-driven;

(d) the maximum approved passenger seating configuration is not more than nine;

(e) the maximum certificated take-off mass does not exceed 5 700 kg;

(f) the aeroplane is equipped as described in Part…….the Civil Aviation (Instruments and Equipment) Regulations; and

(g) the pilot-in-command has satisfied the requirements of experience, training, checking and recency described in section 154.

**OPS 52. Fatigue management**

The Authority has established prescriptive flight time, flight duty period and duty period limitations and rest period requirements as outlined in the Twelfth Schedule of this Part.

1. The prescriptive limits referred to in sub section (1) are 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.
2. An operator, shall in compliance with this section and for the purposes of managing its fatigue-related safety risks, establish flight time, flight duty period, duty period limitations and rest period requirements that are within the prescriptive limits established in the Twelfth Schedule.
3. An operator shall maintain records of flight time, flight duty periods, duty periods and rest periods for all its flight and cabin crew members for 12 months.
4. In approving an operator’s flight time, flight duty period and duty period limitations and rest period requirements ,the Authority—
5. shall require that the operator familiarize those personnel involved in managing fatigue with their responsibilities and the principles of fatigue management;
6. 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 limitations.

(5) No operator shall implement non prescriptive fatigue management methods.

**PART IV**

**AEROPLANE PERFORMANCE OPERATING LIMITATIONS**

**OPS 53. General**

(1) An operator shall ensure that an aeroplane operates in accordance with requirements of Part…Airworthiness of Aircraft.

(2) Except as provided for in section 117, an operator shall ensure that 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.

(3 )An operator of an aeroplane for which Parts IIIA and IIIB of Annex 8 are not applicable because of the exemption provided for in Article 41 of the Convention, shall ensure that the level of performance specified in section 53 is met as far as practicable.

**OPS 54. Applicable to aeroplanes certificate in accordance with IIIA and IIIB of Annex8**

(1)The provisions contained in this section are applicable to the large aeroplanes to which Parts IIIA and IIIB of Annex 8 are applicable.

(2) The level of performance defined by the appropriate provisions of the Part ….Airworthiness of Aircraft referred to in section 52(1) for large aeroplanes shall be at least substantially equivalent to the overall level embodied in this Sub Part.

(3) An operator shall ensure that an aeroplane shall be operated in compliance with the terms of its certificate of airworthiness and within the approved operating limitations contained in its flight manual.

(4) The Authority 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.

(5 )An operator shall ensure that a flight is not be commenced unless the performance information provided in the flight manual, supplemented as necessary with other data acceptable to the Authority, indicates that the provisions of subsection (6) to subsection (12) can be complied with for the flight to be undertaken.

(6) In applying the provisions of this Sub Part, an operator shall take into account all factors that significantly affect the performance of the aeroplane, including but not limited to—

(a) the mass of the aeroplane;

(b) the operating procedures;

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

(d) the runway slope;

(e) the ambient temperature;

(f) the wind;

(g) surface conditions of the runway at the expected time of use that may include—

(i) presence of snow;

(ii) slush;

(iii) water; or

(iv) ice for landplanes;

(h) water surface condition for seaplanes.

(7) The factors referred to in subsection (6) shall be taken into account directly as operational parameters or indirectly by means of allowances or margins, which shall be provided in the scheduling of performance data or in the comprehensive and detailed code of performance in accordance with which the aeroplane is being operated.

**OPS 55. Mass limitations**

(1) The mass of the aeroplane at the start of take-off shall—

(a) not exceed the mass at which subsection (2) is complied with, or the mass at subsections (5), (6) and (7) are complied with, allowing for expected reductions in mass as the flight proceeds, and for such fuel jettisoning as is envisaged in applying subsections (6) and (7) and, in respect of alternate aerodromes, subsections (1) (c) and (7);

(b) not exceed the maximum take-off mass specified in the flight manual for the pressure-altitude appropriate to the elevation of the aerodrome, and, where used as a parameter to determine the maximum take-off mass, any other local atmospheric condition;

(c) not exceed the estimated mass for the expected time of landing at the aerodrome of intended landing and at any destination alternate aerodrome, exceed the maximum landing mass specified in the flight manual for the pressure-altitude appropriate to the elevation of those aerodromes, and where used as a parameter to determine the maximum landing mass, any other local atmospheric condition; or

(d) at the expected time of landing at the aerodrome of intended landing or at any destination alternate aerodrome, not exceed the relevant maximum masses at which compliance has been demonstrated with the applicable noise certification, unless otherwise authorised 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.

(2) Take off; An operator shall ensure that an aeroplane in the event of a critical engine failing, or for other safety reasons, at any point in the take-off, is capable of, either discontinuing the take-off and stop within the accelerate-stop distance available, or continuing 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 subsection (6) and when determining the resulting take-off obstacle accountability area, the operator shall take into account the operating conditions, such as the crosswind component and navigation accuracy.

(3) In determining the length of the runway available, the operator shall take into account the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

(4) En route — one engine inoperative; An operator shall ensure that an aeroplane is 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 provisions of subsection (6) can be met, without flying below the minimum flight altitude at any point. (5)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 shall be allowed for if the general level of safety implied by this Sub Part is to be maintained, an operator shall ensure that the aeroplane shall, in the event of any two engines becoming inoperative, be able to continue the flight to an en-route alternate aerodrome and land.

(6) Landing:An operator shall ensure that, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin—

(a) an aeroplane is capable to land, with assurance that it can come to a stop;

(b) a seaplane is capable of being reduced to a satisfactorily low speed;

within the landing distance available.

(7) 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.

**OPS 56. Obstacle Data**

(1) The Authority shall ensure that obstacle data is provided to enable the operator to develop procedures to comply with section 54 (4)

(2) The operator shall use the obstacle data referred to in subsection (1) to develop procedures to comply with section 54 (4).

(3) The operator shall take into account of charting accuracy when assessing compliance with section 54 (2).

**OPS 57. Additional requirements for operations of single-engine turbine-powered aeroplanes at night or in instrument meteorological conditions (IMC)**

(1) 1) No operator shall operate a single-engine piston powered aeroplane under instrument meteorological conditions (IMC) or at night.

(2) No operator shall operate a single engine turbine powered aeroplane under instrument meteorological conditions (IMC) or at night unless an approval for such operations is issued by the Authority.

(3) In approving operations by single-engine turbine-powered aeroplanes referred to in subsection (2), the Authority shall ensure that the airworthiness certification of the aeroplane is appropriate and that the overall level of safety intended by the provisions of the Third Schedule to this Part and to Part….. Airworthiness of aircraft is provided by—

(a) the reliability of the turbine engine;

(b) the operator’s maintenance procedures, operating practices, flight dispatch procedures and crew training programs; and

(c) equipment and other requirements provided in accordance with the Third Schedule.

(4) All single-engine turbine-powered aeroplanes operated at night or in IMC shall have an engine trend monitoring system and those aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 2005 shall have an automatic trend monitoring system.

**PART V**

**AEROPLANE INSTRUMENTS, EQUIPMENT AND FLIGHT DOCUMENTS**

**GENERAL**

**OPS 58. Instruments, equipment and flight documents to be installed or carried in aeroplanes**

(1) In addition to the minimum equipment necessary for the issuance of a certificate of airworthiness, the instruments, equipment and flight documents prescribed in subsections (3) to (5) shall be installed or carried, as appropriate, in aeroplanes according to the aeroplane used and to the circumstances under which the flight is to be conducted.

(2) The prescribed instruments and equipment, including their installation, shall be approved or accepted by the State of Registry.

(3) An aeroplane shall carry a certified true copy of the air operator certificate, and a copy of the operations specifications relevant to the aeroplane, issued in conjunction with the certificate:

Provided that where the certificate and the associated operations specifications are issued by the State of Operator in a language other than English, an English translation shall be included.

(4) An operator shall include in the operations manual a minimum equipment list (MEL), approved by the Authority in accordance with the Thirteenth Schedule, which will enable the pilot-in-command to determine whether a flight may be commenced or continued from any intermediate stop should any instrument, equipment or systems become inoperative:

Provided that where [State]. is not the State of Registry, the Authority shall ensure that the MEL does not affect the aeroplane’s compliance with the airworthiness requirements applicable in the State of Registry.

(5) An operator shall provide operations staff and flight crew with an aircraft operating manual, which shall—

(a) include details of the aircraft systems and of the checklists to be used for each aircraft type operated;

(b) contain the normal, abnormal and emergency procedures relating to the operation of the aircraft; and

be designed in a manner that observes Human Factors principles.

**OPS 59. Aeroplane operated under an Article 83 bis agreement**

(1) An operator when operating an aeroplane under an Article 83 bis agreement entered into between the State of Registry and the State of the Operator, shall carry on board the aeroplane a certified true copy of the agreement summary, in either an electronic or hard copy format:

Provided that where the summary is issued in a language other than English, an English translation shall be included.

(2) An operator shall ensure that the agreement summary referred to in subsection (1) is —

(a) accessible to a civil aviation safety inspector to determine which functions and duties are transferred under the agreement by the State of Registry to the State of the Operator when conducting surveillance activities, such as ramp checks ;and

(b) transmitted to ICAO for registration with the ICAO Council.

(3) The agreement summary shall contain the information and follow the layout specified in the Tenth Schedule…….

**OPS 60. Aeroplanes on all flights**

(1 An operator shall ensure that an aeroplane is equipped with instruments which will enable the flight crew to –

(a) control the flight path of the aeroplane;

(b) carry out any required procedural manoeuvres; and

(c) observe the operating limitations of the aeroplane in the expected operating conditions.

(2) An operator shall ensure that an aeroplane is equipped with—

(a) accessible and adequate medical supplies which shall comprise of the following—

(i) one or more first-aid kits for the use of cabin crew in managing incidents of ill health;

(ii) for aeroplanes required to carry cabin crew as part of the operating crew, one universal precaution kit (two for aeroplanes authorized to carry more than 250 passengers) for the use of cabin crew members in managing incidents of ill health associated with a case of suspected communicable disease, or in the case of illness involving contact with body fluids; and

(iii) for aeroplanes authorized to carry more than 100 passengers on a sector length of more than two hours, a medical kit for the use of medical doctors or other qualified persons in treating in-flight medical emergencies.

(b) portable fire extinguishers of a type which, when discharged, will not cause dangerous contamination of the air within the aeroplane, and at least one shall be located in—

(i) the pilot’s compartment; and

(ii)each passenger compartment that is separate from the pilot’s compartment and that is not readily accessible to the flight crew;

(c) a seat or berth for each person aged 2 years and above;

(d) a seat belt for each seat and restraining belts for each berth;

(e) a safety harness for each flight crew seat, with the safety harness for each pilot seat incorporating a device —

(i) which will automatically restrain the occupants torso in the event of rapid deceleration;

(ii) to prevent a suddenly incapacitated pilot from interfering with flight controls.

(f) means of ensuring that the following information and instructions are conveyed to passengers—

(i) when seat belts are to be fastened;

(ii) when and how oxygen equipment is to be used if the carriage of oxygen is required;

(iii) restrictions on smoking;

(iv) location and use of life jackets or equivalent individual flotation devices where their carriage is required; and

(v) location and method of opening emergency exits; and

(g) spare electrical fuses of appropriate ratings for replacement of those accessible in flight.

(3) Any agent used in a built-in fire extinguisher for each lavatory disposal receptacle for towels, paper or waste in an aeroplane for which the individual certificate of airworthiness is first issued on or after 31 December 2011 and any extinguishing agent used in a portable fire extinguisher in an aeroplane for which the individual certificate of airworthiness is first issued on or after 31 December 2018 shall—

(a) meet the applicable minimum performance requirements of the State of Registry; and

(b) not be of a type listed in the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer as it appears in the Eighth Edition of the Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer, Annex A, Group II.

(4) An operator shall ensure that an aeroplane carries—

(a) an operations manual prescribed in this Part, or parts of it that pertain to flight operations;

(b) a flight manual for the aeroplane, or other documents containing performance data and any other information necessary for the operation of the aeroplane within the terms of its certificate of airworthiness, unless these data are available in the operations manual; and

(c) 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.

**OPS 61. Marking of break-in points**

(1) If areas of the fuselage suitable for break-in by rescue crews in an emergency are marked on an aeroplane, the operator shall ensure that such areas shall be marked as shown in the Eleventh Schedule.

(2)The colour of the markings shall be red or yellow, and if necessary they shall be outlined in white to contrast with the background.

(3) If the corner markings are more than 2 m apart, intermediate lines 9 cm × 3 cm shall be inserted so that there is no more than 2 m between adjacent markings.

**OPS 62. Flight recorders(1) Crash-protected flight recorders comprise of one or more of the following—**

(a) a flight data recorder (FDR);

(b) a cockpit voice recorder (CVR);

(c) an airborne image recorder (AIR); or

(d) a data link recorder (DLR)

(2) As per the Eighth Schedule of this Part, image and data link information may be recorded on either the CVR or the FDR.

(3) Lightweight flight recorders comprise of one or more of the following—

(a) an aircraft data recording system (ADRS);

(b) a cockpit audio recording system (CARS);

(c) an airborne image recording system (AIRS); or

(d) a data link recording system (DLRS).

(4) As per the Eighth Schedule, image and data link information may be recorded on either the (CARS) or (ADRS).

**OPS 63. Flight data recorders (FDR), and aircraft data recording systems**

(1) An operator shall ensure that a turbine-engined aeroplane of a maximum certificated take-off mass of 5 700 kg or less for which the individual certificate of airworthiness is first issued on or after 1 January 2016 shall be equipped—

(a) an FDR which shall record at least the first 16 parameters listed in table A8-1 in the Eighth Schedule of this Part; or

(b) a class C (AIR) or (AIRS) which shall record at least the flight path and speed parameters displayed to the pilot or pilots; as defined in the Eighth Schedule of this Part; or

(c) an ADRS which shall record at least the first 7 parameters listed in table A8-3 in the Eighth Schedule of this Part.

(2) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1989 shall be equipped with an FDR which shall record at least the first 32 parameters listed in table A8-1 of the Eighth Schedule of this Part.

(3) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 5 700 kg, up to and including 27 000 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 1989, shall be equipped with an FDR which shall record at least the first 16 parameters listed in table A8-1 of the Eighth Schedule of this Part.

(4) An operator shall ensure that a multi-engined turbine aeroplane of a maximum certificated take-off mass of 5 700 kg or less for which the individual certificate of airworthiness was first issued on or after 1 January 1990 shall be equipped with an FDR which shall record at least the first 16 parameters listed in table A8-1 of the Eighth Schedule of this Part.

(5) An operator shall ensure that a turbine-engined aeroplane, for which the individual certificate of airworthiness was first issued before 1 January 1989, with a maximum certificated take-off mass of over 5 700 kg, except those in subsection (7), shall be equipped with an FDR which shall record at least the first 5 parameters listed in table A8-1 to The Eighth Schedule of this Part.

(6) An operator shall ensure that a turbine-engined aeroplane, for which the individual certificate of airworthiness was first issued before 1 January 1987 but before 1 January 1989, with a maximum certificated take-off mass of over 5 700 kg, except those in subsection (7), shall be equipped with an FDR which shall record at least the first 9 parameters listed in table A8-1 of the Eighth Schedule of this Part.

(7) An operator shall ensure that a turbine-engined aeroplane, for which the individual certificate of airworthiness was first issued before 1 January 1987, with a maximum certificated take-off mass of over 27 000 kg that are of types of which the prototype was certificated by the appropriate national authority after 30 September 1969 shall be equipped with an FDR which shall record, in addition to the first 5 parameters listed in the table A8-1 of the Eighth Schedule of this Part, such additional parameters as are necessary to meet the objectives of determining—

(a) the attitude of the aeroplane in achieving its flight path; and

(b) the basic forces acting upon the aeroplane resulting in the achieved flight path and the origin of such basic forces.

(8) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate of airworthiness was first issued after 1 January 2005 shall be equipped with an FDR which shall record at least the first 78 parameters listed in table A8-1 of the Eighth Schedule of this Part.

(9) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 5 700 kg for which individual certificate of airworthiness is first issued to a Contracting State on or after 1 January 2023 shall be equipped with an FDR capable of recording at least the 82 parameters listed in table A8-1 of the Eighth Schedule to of this Part.

**OPS 64. FDR -Recording technology**

An operator shall ensure that FDRs or ADRS do not use engraving metal foil, frequency modulation, photographic film or magnetic tape.

**OPS 65. FDR Duration**

(1) An operator shall ensure that an FDR shall retain the information recorded during at least the last 25 hours of their operation, with exception of those installed on aeroplanes referred in section 64 (4) for which the FDR shall retain the information recorded during at least the last 30 minutes of its operation, and in addition sufficient information from the preceding take-off for calibration purpose.

**OPS 66. Cockpit voice recorders and cockpit audio recording systems - application**

(1) Anoperator shall ensure that turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less for which the individual certificate of airworthiness are first issued on or after 1 January 2016 and required to be operated by more than one pilot is equipped with either a CVR or a CARS.

(2) An operator shall ensure that all aeroplanes of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 1987 are equipped with a CVR.

(3) An operator shall ensure that all turbine-engined aeroplanes, for which the individual certificate of airworthiness was first issued before 1 January 1987, with a maximum certificated take-off mass of over 5 700 kg that are of types of which the prototype was certificated by the appropriate national after 30 September 1969 are equipped with a CVRS.

**OPS 67. CVR and CARS Recording technology**

An operator shall ensure that CVRS and CARS do not use magnetic tape or wire.

**OPS 68. CVR and CARS duration**

(1) An operator shall ensure that a CVR shall retain the information recorded during at least the last 2 hours of its operation.

(2) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness was first issued on or after 1 January 2022 is equipped with a CVR which shall retain the information recorded during at least the last 25 hours of its operation.

(3) An operator shall ensure that an aeroplane that is required to be equipped with CARS for which the individual certificate of airworthiness is issued on or after 1 January 2025 is equipped with a CARS which shall retain the information recorded during at least the last 2 hours of the operation.

**OPS 69. CVR - alternate power source**

(1) An operator shall ensure that an aeroplane is installed with a CVR that has an alternate power source that shall automatically engage and provide 10 minutes, plus or minus one minute, of operation whenever aeroplane power to the recorder ceases, either by normal shutdown or by any other loss of power and the alternate power source shall power the CVR and its associated cockpit area microphone components.

(2) The CVR referred to in subsection (1) shall be located as close as practicable to the alternate power source.

(3) An operator shall ensure that all aeroplanes of a maximum certificated take-off mass of over 27 000 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2018 is provided with an alternate power source, as specified in subsection (1).

**OPS 70. Data link recorders**

(1) An operator shall ensure that an aeroplane for which the individual certificate of airworthiness is first issued on or after 1 January 2016, which uses any of the data link communications applications referred to in the Eighth Schedule and is required to carry a CVR, shall record the data link communications messages on a crash-protected flight recorder.

(2) An operator shall ensure that an aeroplane for which the individual certificate of airworthiness was first issued before 1 January 2016, that is required to carry a CVR and is modified on or after 1 January 2016 to use any of the data link communications applications referred to in the Eighth Schedule , shall record the data link communications messages on a crash-protected flight recorder.

**OPS 71. Data link recorders - duration**

An operator shall ensure that the minimum recording duration shall be equal to the duration of the CVR.

**OPS 72. Correlation of data link recorders**

An operator shall ensure that data link recording shall be capable of being correlated with the recorded cockpit audio.

**OPS 73. flight crew-machine interface recordings-Applicability**

An operator shall ensure that an aeroplane of a maximum take-off mass of over 5 700 kg for which the application for type certification is submitted to a Contracting State on or after 1 January 2023, is equipped with a crash-protected flight recorder which shall record the information displayed to the flight crew from electronic displays, as well as the operation of switches and selectors by the flight crew, as defined in the Eighth Schedule of this Part.

**OPS 74 flight crew-machine interface recordings- Duration**

An operator shall ensure that the minimum flight crew-machine interface recording duration shall be at least for the last 2 hours of operation.

**OPS 75. Correlation of flight crew machine interface recordings to recorded cockpit audios**

An operator shall ensure that flight crew-machine interface recordings shall be able to be correlated to the recorded cockpit audio.

**OPS 76. Flight Recorders General-Construction and installation**

(1)An operator shall ensure that flight recorders—

(a) are constructed, located and installed so as to provide maximum practical protection for the recordings so that the recorded information may be preserved, recovered and transcribed;

(b) meet the prescribed crashworthiness and fire protection specifications.

**OPS 77. Operations**

(1) No person shall switch off flight recorders during flight time.

(2) To preserve flight recorder records, an operator shall ensure that flight recorders are deactivated upon completion of flight time following an accident or incident:

Provided that the flight recorders shall not be reactivated before their disposition as determined in accordance with Civil Aviation (Accident and Incident Investigation) Regulations.

**OPS 78. Continued serviceability**

An operator shall conduct operational checks and evaluations of recordings from the flight recorder systems to ensure the continued serviceability of the recorders in accordance with the Eighth Schedule to this Part.

**OPS 79. Flight recorder electronic documentation**

An operator shall provide to accident investigation authorities the documentation required concerning FDR and ADRS parameters in electronic format and take account of industry specifications.

**OPS 80. Combination recorders**

(1) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 5 700 kg for which the application for type certification is submitted to a Contracting State on or after 1 January 2016, and which is required to be equipped with both a CVR and an FDR, is equipped with two combination recorders (FDR and CVR) with one recorder located as close to the cockpit as practicable and the other located as far aft as practicable.

(2)An operator of an aeroplane of a maximum certificated take-off mass over 5 700 kg, required to be equipped with an FDR and a CVR, may alternatively be equipped with two combination recorders (FDR/CVR).

**OPS 81. Flight recorder data recovery**

(1) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 27 000 kg and authorised to carry more than nineteen passengers for which the application for type certification is submitted to a Contracting State on or after 1 January 2021, shall be equipped with a means approved by the Authority, to recover flight recorder data and make it available in a timely manner.

(2) In approving the means to make flight recorder data available in a timely manner, the Authority shall take into account the following—

(a) the capabilities of the operator;

(b) overall capability of the aeroplane and its systems as certified by the State of Design;

(c) the reliability of the means to recover the appropriate CVR channels and appropriate FDR data; and

(d) specific mitigation measures.

**OPS 82. All aeroplanes operated as VFR flights**

(1) An operator shall ensure that an aeroplanes when operated as VFR flights shall be equipped with—

(a) a magnetic compass;

(b) an accurate timepiece indicating the time in hours, minutes and seconds;

(c) a sensitive pressure altimeter;

(d) an airspeed indicator; and

(e) such additional instruments or equipment as may be prescribed by the Authority.

(2) VFR flights which are operated as controlled flights shall be equipped in accordance with section 88.

**OPS 83. All aeroplanes on flights over water seaplanes**

(1). An operator of a seaplane shall ensure that a seaplane for all flights shall be equipped with—

(a) one life jacket, or equivalent individual flotation device, for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided;

(b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable; and

(c) one sea anchor (drogue).

**OPS 84. Landplanes**

(1) An operator of a landplane shall ensure that a landplane shall carry one life jacket or equivalent individual flotation device for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided when—

(a) flying over water and at a distance of more than 93 km (50 NM) away from the shore, in the case of landplanes operated in accordance withsection 56 (2)(b) or 56 (5)

(b) flying en route over water beyond gliding distance from the shore, in the case of all other landplanes; and

(c) taking off or landing at an aerodrome where, in the opinion of the Authority, the take-off or approach path is so disposed over water that in the event of a mishap there would be a likelihood of a ditching.

(2) The equipment referred to in subsection (1) shall comprise one life jacket or equivalent individual flotation device for each person on board, stowed in a position easily accessible from the seat or berth of the person for whose use it is provided.

(3)Life jackets accessible from seats or berths located in crew rest compartments are required only when the seats or berths concerned are certified to be occupied during take-off and landing.

**OPS 85. All aeroplanes on long-range over-water flights**

(1) An operator shall ensure that in addition to the equipment referred to in section 114(Z) and 114(aa), whichever is applicable, the following equipment shall be installed in all aeroplanes when used over routes on which the aeroplane may be over water and at more than a distance corresponding to 120 minutes at cruising speed or 740 km (400 NM), whichever is the lesser, away from land suitable for making an emergency landing in the case of aircraft operated in terms of sections 56 (2)(b) and 56 (5), and 30 minutes or 185 km (100 NM), whichever is the lesser, for all other aeroplanes—

(a) life-saving rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency, provided with such life-saving equipment including means of sustaining life as is appropriate to the flight to be undertaken;

(b) equipment for making the pyrotechnical distress signals described in Part…… Rules of the Air;

(c) on all aeroplanes of a maximum certificated take-off mass of over 27 000 kg, a securely attached underwater locating device operating at a frequency of 8.8 kHz, which is automatically activated underwater, and operates for a minimum of thirty days and shall not be installed in wings or empennage.

(2) Each life jacket and equivalent individual flotation device, when carried in terms of sections 114Z(a) and 114(aa) , shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons, except where the requirements in section 114(aa)(c) are met by the provision of individual flotation devices other than life jackets.

**OPS 86. All Aeroplanes on flights over designated land areas**

When operating across land areas which have been designated by the State concerned as areas in which search and rescue would be especially difficult, an operator shall ensure that the aeroplane is equipped with such signalling devices and life-saving equipment, including means of sustaining life as may be appropriate to the area overflown.

**OPS 87. All aeroplanes on high altitude flights**

(1) Approximate altitude in the Standard Atmosphere corresponding to the value of absolute pressure used in this section is as follows:

Absolute pressure Metres Feet

700 hPa 3000 10 000

620 hPa 4000 13 000

376 hPa 7600 25 000

(2) An operator shall ensure that an aeroplane intended to be operated at flight altitudes at which the atmospheric pressure is less than 700 hPa in personnel compartments shall be equipped with oxygen storage and dispensing apparatus capable of storing and dispensing the oxygen supplies required in terms of section 79.

(3) An operator shall ensure that an aeroplane intended to be operated at flight altitudes at which the atmospheric pressure is less than 700 hPa but which is provided with means of maintaining pressures greater than 700 hPa in personnel compartments shall be provided with oxygen storage and dispensing apparatus capable of storing and dispensing the oxygen supplies required in terms of section 79.

(4) An operator shall ensure that all pressurised aeroplanes intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa shall be equipped with a device to provide positive warning to the flight crew of any dangerous loss of pressurisation.

(5) An operator shall ensure that an aeroplane intended to be operated at flight altitudes at which the atmospheric pressure is less than 376 hPa, or which, when operated at flight altitudes at which the atmospheric pressure is more than 376 hPa, cannot descend safely within 4 minutes to a flight altitude at which the atmospheric pressure is equal to 620 hPa shall be provided with automatically deployable oxygen equipment to satisfy the requirements of in terms of section 79.

(6) The total number of oxygen dispensing units shall exceed the number of passenger and cabin crew seats by at least 10 per centum.

**OPS 88. All aeroplanes in icing conditions**

An operator shall ensure that an aeroplane is equipped with suitable de-icing or anti-icing devices when operated in circumstances in which icing conditions are reported to exist or are expected to be encountered.

**OPS 89. All aeroplanes operated in accordance with instrument flight rules**

(1) An operator shall ensure that an aeroplane when operated in accordance with the instrument flight rules, or when the aeroplane cannot be maintained in a desired attitude without reference to one or more flight instruments, shall be equipped with—

(a) a magnetic compass;

(b) an accurate timepiece indicating the time in hours, minutes and seconds;

(c) two sensitive pressure altimeters with counter drum-pointer; or equivalent presentation;

(d) an airspeed indicating system with means of preventing malfunctioning due to either condensation or icing;

(e) a turn and slip indicator;

(f) an attitude indicator (artificial horizon);

(g) a heading indicator (directional gyroscope);

(h) a means of indicating whether the power supply to the gyroscopic instrument is adequate;

(i) a means of indicating in the flight crew compartment the outside air temperature;

(j) a rate-of-climb and descent indicator; and

(k) such additional instruments or equipment as may be prescribed by the Authority.

(2) The requirements of subsection 1(e), (f) and (g) may be met by combinations of instruments or by integrated flight director systems provided that the safeguards against total failure, inherent in the three separate instruments, are retained.

**OPS 90. All aeroplanes over 5 700 kg — emergency power supply for electrically operated attitude indicating instruments**

(1) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 5 700 kg newly introduced into service after 1 January 1975 shall be fitted with an emergency power supply, independent of the main electrical generating system, for the purpose of operating and illuminating, for a minimum period of 30 minutes, an attitude indicating instrument (artificial horizon), clearly visible to the pilot-in-command.

(2) The emergency power supply referred to in subsection (1) must be automatically operative after the total failure of the main electrical generating system and clear indication shall be given on the instrument panel that the attitude indicator(s) are being operated by emergency power.

(3) The instruments used by any one pilot shall be so arranged as to permit the pilot to see their indications readily from his or her station, with the minimum practicable deviation from the position and line of vision normally assumed when looking forward along the flight path.

**OPS 91. All aeroplanes when operated at night**

(1) An operator shall ensure that an aeroplane when operated at night shall be equipped with—

(a) all equipment specified in section 114 (gg);

(b) the lights required by the Part…Rules of the Air for aircraft in flight or operating on the movement area of an aerodrome;

(c) two landing lights;

(d) illumination for all instruments and equipment that are essential for the safe operation of the aeroplane that are used by the flight crew;

(e) lights in all passenger compartments; and

(f) an independent portable light for each crew member station.

**OPS 92. Pressurized aeroplanes when carrying passengers — weather radar**

An operator shall ensure that a pressurized aeroplane when carrying passengers shall be equipped with operative weather radar whenever such aeroplanes are being operated in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather radar, may be expected to exist along the route either at night or under instrument meteorological conditions.

**OPS 93. All aeroplanes operated above 15 000 m (49 000 ft) — radiation indicator**

(1) An operator shall ensure that an aeroplane intended to be operated above 15 000 m (49 000 ft) shall carry equipment to measure and indicate continuously the dose rate of total cosmic radiation received, being the total of ionizing and neutron radiation of galactic and solar origin, and the cumulative dose on each flight.

(2) The display unit of the equipment shall be readily visible to a flight crew member.

**OPS 94. All aeroplanes complying with noise certification**

An operator shall ensure that an aeroplane carries a document attesting noise certification and where 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.

**OPS 95. Mach number indicator**

10. An operator shall ensure that an aeroplane with speed limitations expressed in terms of Mach number shall be equipped with a Mach number indicator.

**OPS 96. Aeroplanes required to be equipped with ground proximity warning systems (GPWS)**

(1) An operator shall ensure that all turbine-engined aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than nine passengers shall be equipped with a ground proximity warning system which has a forward-looking terrain avoidance function.

(2) An operator shall implement database management procedures that ensure the timely distribution and update of current terrain and obstacle data to the ground proximity warning system.

(3) An operator shall ensure that all turbine-engined aeroplanes of a maximum certificated take-off mass of 5 700 kg or less and authorised to carry more than five but not more than nine passengers is equipped with a ground proximity warning system which provides the warnings excessive descent rate and excessive altitude loss after take-off or go-around, warning of unsafe terrain clearance and a forward-looking terrain avoidance function.

(4) An operator shall ensure that a piston-engined aeroplane of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than nine passengers is equipped with a ground proximity warning system which provides the warnings in excessive descent rate and excessive altitude loss after take-off or go-around, warning of unsafe terrain clearance and a forward-looking terrain avoidance function.

(5) A ground proximity warning system shall provide automatically a timely and distinctive warning to the flight crew when the aeroplane is in potentially hazardous proximity to the earth’s surface.

(6) A ground proximity warning system referred to in subsection (1) shall provide, unless otherwise specified herein, warnings of the following circumstances—

(a) excessive descent rate;

(b) excessive terrain closure rate;

(c) excessive altitude loss after take-off or go-around;

(d) unsafe terrain clearance while not in landing configuration—

(i) gear not locked down;

(ii) flaps not in a landing position; and

(e) excessive descent below the instrument glide path.

**OPS 97. Aeroplanes carrying passengers — cabin crew seats**

(1) An operator shall ensure that an aeroplane is equipped with a forward or rearward facing seat, within 15 degrees of the longitudinal axis of the aeroplane, fitted with a safety harness for the use of each cabin crew member required to comply with the section 201 in respect of emergency evacuation.

(2) Every operator shall ensure that cabin crew seats provided in accordance with subsection (1) shall be located near floor level and other emergency exits as required by the State of Registry for emergency evacuation.

**OPS 98. Emergency locator transmitter (ELT)**

(1) An operator shall ensure that an aeroplane shall carry an automatic ELT.

(2) Subject to subsection (1) an operator shall ensure that an aeroplane authorised to carry more than 19 passengers for which the individual certificate of airworthiness is first issued after 1 July 2008 shall be equipped with at least two ELTs one of which shall be automatic.

(3) ELT equipment carried in terms of this section shall operate in compliance with Part…..Aeronautical Telecommunication – Communication Systems Procedures.

**OPS 099. Location of aeroplane in distress**

(1) An operator shall ensure that an aeroplane of a maximum certificated take-off mass of over 5 700 kg for which the individual certificate of airworthiness is first issued on or after 1 January 2023, shall autonomously transmit information from which a position can be determined at least once every minute, when in distress, in accordance with the Ninth Schedule .

(2) An operator shall make position information of a flight in distress available to the appropriate organisations, as established by the Authority in the applicable technical OPS 99 Aeroplanes required to guidance material be equipped with airborne collision avoidance system (ACAS II)

**OPS 100. Aeroplanes required to be equipped with airborne collision avoidance system (ACAS II)**

(1)An operator shall ensure that a tubine-engined aeroplane of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than 19 passengers is equipped with an airborne collision avoidance system (ACAS II).

(2) An airborne collision avoidance system referred to in subsection (1) shall operate in accordance with the relevant provisions of Part…….. Aeronautical Telecommunications – Surveillance and Collision Avoidance Systems

**OPS 101. Requirements for pressure-altitude reporting transponders**

(1) An operator shall ensure that an aeroplane is equipped with a pressure-altitude reporting transponder which operates in accordance with the relevant provisions of Part… Aeronautical Telecommunications – Surveillance and Collision Avoidance Systems.

(2) An operator shall ensure that an aeroplane is equipped with a data source that provides pressure-altitude information with a resolution of 7.62 m (25 ft) or better.

(3) The Mode S transponder shall be provided with the airborne or on-the-ground status if the aeroplane is equipped with an automatic means of detecting such status.

**OPS 102. Microphones**

An operator shall ensure that flight crew members required to be on flight deck duty communicate through boom or throat microphones below the transition level or altitude.

**OPS 103. Turbo-jet aeroplanes — forward-looking wind shear warning system**

(1) An operator shall ensure that a turbo-jet aeroplane of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than 9 passengers is equipped with a forward-looking wind shear warning system.

(2) The forward-looking wind shear warning system referred to in subsection (1) shall—

(a) be capable of providing the pilot with a timely aural and visual warning of wind shear ahead of the aircraft, and the information required to permit the pilot to safely commence and continue a missed approach or go-around or to execute an escape manoeuvre when necessary;

(b) provide an indication to the pilot when the limits specified for the certification of automatic landing equipment are being approached, when such equipment is in use.

**OPS 104. All aeroplanes operated by a single pilot under IFR or at night**

In order for an operator to obtain an approval required in terms of section 109 (1)(a), the operator shall ensure that an aeroplane operated by a single pilot under the IFR or at night shall be equipped with—

(a) a serviceable autopilot that has at least altitude hold and heading select modes;

(b) a headset with a boom microphone or equivalent; and

(c) means of displaying charts that enables them to be readable in all ambient light conditions.

**OPS 105. Aeroplanes equipped with automatic landing systems, a head-up display (HUD) or equivalent displays, enhanced vision systems (EVS), synthetic vision systems (SVS) or combined vision systems (CVS)**

(1) Where aeroplanes are equipped with automatic landing systems, a HUD or equivalent displays, EVS, SVS, CVS, or any combination of those systems into a hybrid system, the use of such systems for the safe operation of an aeroplane shall be approved by the Authority.

(2) In approving the operational use of automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS, the Authority shall ensure that—

(a) the equipment meets the appropriate airworthiness certification requirements; and

(b) the operator has carried out a safety risk assessment of the operations supported by the automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS; and

(c) the operator has established and documented the procedures for the use of, and training requirements for, automatic landing systems, a HUD or equivalent displays, EVS, SVS or CVS.

**OPS 106. Electronic flight bags- equipment**

Where portable EFBs are used on board an aeroplane, the operator shall ensure that they do not affect the performance of the aeroplane systems, equipment or the ability to operate the aeroplane.

**OPS 107. EFB Functions**

(1) (1) Where EFBs are used on board an aeroplane the operator shall—

(a) assess the safety risks associated with each EFB function;

(b) establish and document the procedures for the use of, and training requirements for, the device and each EFB function; and

(c) ensure that, in the event of an EFB failure, sufficient information is readily available to the flight crew for the flight to be conducted safely.

(2) The Authority shall issue a specific approval for the operational use of EFB functions to be used for the safe operation of aeroplanes.

**OPS 108. EFB specific approval**

When issuing a specific approval for the use of EFBs, the Authority shall ensure that—

(a) the EFB equipment and its associated installation hardware, including interaction with aeroplane systems where applicable, meet the appropriate airworthiness certification requirements;

(b) the operator has assessed the safety risks associated with the operations supported by the EFB functions;

(c) the operator has established requirements for redundancy of the information where appropriate as contained in and displayed by the EFB functions;

(d) the operator has established and documented procedures for the management of the EFB functions including any database it may use; and

(e) the operator has established and documented the procedures for the use of, and training requirements for, the EFB and the EFB function.

**OPS 109. Turbine Aeroplane - Runway Overrun Awareness and Alerting System (ROAAS)**

An operator shall ensure that a turbine-engined aeroplane of a maximum certificated take-off mass in excess of 5 700 kg, for which the individual certificate of airworthiness is first issued on or after 1 January 2026, is equipped with a runway overrun awareness and alerting system (ROAAS).

**PART VI**

**AEROPLANE COMMUNICATION, NAVIGATION AND SURVEILLANCE EQUIPMENT**

**OPS 110. Communication equipment**

(1) An operator shall ensure that an aeroplane is provided with radio communication equipment capable of—

(a) conducting two-way communication for aerodrome control purposes;

(b) receiving meteorological information at any time during flight; and

(c) conducting two-way communication at any time during flight with at least one aeronautical station and with such other aeronautical stations and on such frequencies as may be prescribed by the appropriate authority.

(2) The radio communication equipment required in accordance with subsection (1) shall provide for communications on the aeronautical emergency frequency 121.5 MHz.

(3) For operations where communication equipment is required to meet required communication performance (RCP) specification for performance-based communication (PBC), an aeroplane shall, in addition to the requirements specified in subsection (1)—

(a) be provided with communication equipment which will enable it to operate in accordance with the prescribed RCP specifications;

(b) have information relevant to the aeroplane RCP specification capabilities listed in the flight manual or other aeroplane documentation approved by the State of Design or State of Registry; and

(c) have information relevant to the aeroplane RCP specification capabilities included in the MEL.

(4) The Authority shall, for operations where an RCP specification for PBC has been prescribed, ensure that the operator has established and documented—

(a) normal and abnormal procedures, including contingency procedures;

(b) flight crew qualification and proficiency requirements, in accordance with appropriate RCP specifications;

(c) a training programme for relevant personnel consistent with the intended operations; and

(d) appropriate maintenance procedures to ensure continued airworthiness, in accordance with appropriate RCP specifications.

(5) The Authority shall ensure that, in respect of those aeroplanes referred to in subsection (3), adequate provisions exist for—

(a) receiving the reports of observed communication performance issued by monitoring programmes established in accordance with the applicable Part…Air Traffic Services and

(b) taking immediate corrective action for individual aircraft, aircraft types or operators, identified in such reports as not complying with the RCP specifications.

**OPS 111. Navigation equipment**

(1) An operator shall ensure that an aeroplane is provided with navigation equipment which will enable it to proceed in accordance with —

(a) its operational flight plan;

(b) the requirements of air traffic services;

except when, if not so precluded by the appropriate authority, navigation for flights under VFR is accomplished by visual reference to landmarks.

(2) For operations where a navigation specification for PBN has been prescribed, an operator shall ensure that an aeroplane shall, in addition to the requirements specified in subsection (1)—

(a) be provided with navigation equipment which will enable it to operate in accordance with the prescribed navigation specifications;

(b) have information relevant to the aeroplane navigation specification capabilities listed in the flight manual or other aeroplane documentation approved by the State of the Design or State of Registry; and

(c) have information relevant to the aeroplane navigation specification capabilities included in the MEL.

(2) The Authority shall, for operations where a navigation specification for PBN has been prescribed, ensure that the operator has established and documented—

(a) normal and abnormal procedures including contingency procedures;

(b) flight crew qualification and proficiency requirements in accordance with the appropriate navigation specifications;

(c) a training programme for relevant personnel consistent with the intended operations; and

(d) appropriate maintenance procedures to ensure continued airworthiness in accordance with the appropriate navigation specifications.

(3) The Authority shall issue a specific approval for operations based on PBN authorization required (AR) navigation specifications.

(4) For flights in defined portions of airspace where, based on regional air navigation agreement, MNPS are prescribed, an operator shall ensure that an aeroplane is provided with navigation equipment which—

(a) continuously provides indications to the flight crew of adherence to or departure from track to the required degree of accuracy at any point along that track; and

(b) has been authorised by the Authority for the MNPS operations concerned.

(5) An operator shall ensure that for flights in defined portions of airspace where, based on regional air navigation agreement, an RVSM of 300 m (1 000 ft) is applied between FL 290 and FL 410 inclusive —

(a) the aeroplane shall be provided with equipment which is capable of—

(i) indicating to the flight crew the flight level being flown;

(ii) automatically maintaining a selected flight level;

(iii) providing an alert to the flight crew when a deviation occurs from the selected flight level and the threshold for the alert shall not exceed ± 90 m (300 ft); and

(iv) automatically reporting pressure-altitude; and

(b) the State of the Operator shall issue a specific approval for RVSM operations.

(6) Prior to granting the RVSM specific approval required in accordance with subsection (5) the Authority shall be satisfied that—

(a) the vertical navigation performance capability of the aeroplane satisfies the requirements specified in Fourth Schedule of this Part;

(b) the operator has instituted appropriate procedures in respect of continued airworthiness (maintenance and repair) practices and programmes; and

(c) the operator has instituted appropriate flight crew procedures for operations in RVSM airspace.

(7) The State of the Operator, in consultation with the State of Registry where appropriate, shall ensure that, in respect of those aeroplanes mentioned in subsection (5), adequate provisions exist for—

(a) receiving the reports of height-keeping performance issued by the monitoring agencies established in accordance with Part…… Air Traffic Services; and

(b) taking immediate corrective action for individual aircraft, or aircraft type groups, identified in such reports as not complying with the height-keeping requirements for operation in airspace where RVSM is applied.

(8) An operator issued with an RVSM specific approval by the Authority, shall ensure that a minimum of two aeroplanes of each aircraft type grouping have their height-keeping performance monitored, at least once every two years or within intervals of 1 000 flight hours per aeroplane, whichever period is longer.

(9)Where the operator referred to in subsection (8) has aircraft type grouping consisting of a single aeroplane, monitoring of that aeroplane shall be accomplished within the period specified in subsection (8).

(10) No operator shall operate in RVSM airspace without a specific RVSM approval issued by the State of operator.

(11) Any operator who contravenes subsection (10)—

(a) in [State].an airspace shall be —

(i) grounded at the nearest appropriate aerodrome;

(ii) liable to a civil penalty in terms of Part…General Enforcement;

(iii) reported to the State of the operator in the case where the operator is not registered in [State].;

(b) outside [State].an airspace, where the operator is registered in [State]., shall be liable to a civil penalty in terms of Part…General Enforcement.

(12) An operator shall ensure that an aeroplane is sufficiently provided with navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment will enable the aeroplane to navigate in terms of subsection (1) and where applicable subsections (2), (5) and (7).

(13) An operator shall ensure that on flights in which it is intended to land in instrument meteorological conditions, an aeroplane shall be provided with radio equipment capable of receiving signals providing guidance to a point from which a visual landing can be effected.

(14) The equipment referred to in subsection (13) shall be capable of providing such guidance for each aerodrome at which it is intended to land in instrument meteorological conditions and for any designated alternate aerodromes.

**OPS 112. Surveillance equipment**

(1) An operator shall ensure that an aeroplane is provided with surveillance equipment which will enable it to operate in accordance with the requirements of air traffic services.

(2) For operations where surveillance equipment is required to meet an Required Surveillance Perfomance (RSP) specification for performance-based surveillance (PBS), an aeroplane shall, in addition to the requirements specified in subsection (1)—

(a) be provided with surveillance equipment which will enable it to operate in accordance with the prescribed RSP specifications;

(b) have information relevant to the aeroplane RSP specification capabilities listed in the flight manual or other aeroplane documentation approved by the State of Design or State of Registry; and

(c) have information relevant to the aeroplane RSP specification capabilities included in the MEL.

(3) The Authority shall, for operations where an RSP specification for PBS has been prescribed, ensure that the operator has established and documented—

(a) normal and abnormal procedures, including contingency procedures;

(b) flight crew qualification and proficiency requirements, in accordance with appropriate RSP specifications;

(c) a training programme for relevant personnel consistent with the intended operations; and

(d) appropriate maintenance procedures to ensure continued airworthiness, in accordance with appropriate RSP specifications.

(4) The Authority shall ensure that, in respect of those aeroplanes mentioned in subsection (2), adequate provisions exist for—

(a) receiving the reports of observed surveillance performance issued by monitoring programmes established in accordance with Part…. Air Traffic Services; and

(b) taking immediate corrective action for individual aircraft, aircraft types or operators, identified in such reports as not complying with the RSP specifications.

**OPS 113. Installation**

An operator shall ensure that the equipment installation is such that the failure of any single unit required for communication, navigation or surveillance purposes or any combination thereof shall not result in the failure of another unit required for communication, navigation or surveillance purposes.

**OPS 114. Electronic navigation data management**

(1) No operator shall employ electronic navigation data products that have been processed for application in the air and on the ground unless the Authority has approved the operator’s procedures for ensuring that the process applied and the products delivered have met acceptable standards of integrity and that the products are compatible with the intended function of the existing equipment.

(2) The Authority shall ensure that the operator continues to monitor both the process and products.

(3) An operator shall implement procedures that ensure the timely distribution and insertion of current and unaltered electronic navigation data to all aircraft as appropriate.

**PART VII**

**AEROPLANE CONTINUING AIRWORTHINESS**

**OPS 115. Operator’s Continuing Airworthiness Responsibilities**

(1) For the purpose of this subpart “aeroplane” includes engines, propellers, components, accessories, instruments, equipment and apparatus including emergency equipment.

(2) An operator shall ensure that, in accordance with procedures acceptable to the Authority—

(a) each aeroplane they operate is maintained in an airworthy condition;

(b) the operational and emergency equipment necessary for an intended flight is serviceable; and

(c) the certificate of airworthiness of each aeroplane they operate remains valid.

(3)The operator shall not operate an aeroplane unless maintenance on the aeroplane, including any associated engine, propeller and part, is carried out—

(a) by an organisation complying with Part…. AMO regulations that is either approved by the Authority or is approved by another Contracting State and is accepted by the Authority; or

(b) by a person or organisation in accordance with procedures that are authorised by the Authority;

and there is a maintenance release in relation to the maintenance carried out.

(4) An operator shall employ a person or group of persons to ensure that all maintenance is carried out in accordance with the approved maintenance control manual.

(5) An operator shall ensure that the maintenance of its aeroplanes is performed in accordance with the approved maintenance programme

**OPS 116. Operator’s maintenance control manual**

(1) An operator shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance control manual, acceptable to the Authority, in accordance with the requirements of operator’s maintenance control manual.

(2) The design of the maintenance control manual referred to in subsection (1) shall observe Human Factors principles.

(3) An operator shall ensure that the maintenance control manual is amended as necessary to keep the information contained therein up to date.

(4) Copies of all amendments to the operator’s maintenance control manual shall be furnished promptly to all organisations or persons to whom the manual has been issued.

(5) An operator shall provide the State of the Operator and the State of Registry with a copy of the operator’s maintenance control manual, together with all amendments and revisions to it and shall incorporate in it such mandatory material as the State of the Operator or the State of Registry may require.

**OPS 117. Maintenance programme**

(1) An operator shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance programme, approved by the Authority, containing the information required in section 185 of this Part.

(2) The design and application of the operator’s maintenance programme referred to in sub-section (1) shall observe Human Factors principles.

(3Copies of all amendments to the maintenance programme shall be furnished promptly to all organisations or persons to whom the maintenance programme has been issued.

**OPS 118. Continuing airworthiness records**

(1) An operator shall ensure that the following records are kept for a minimum period of 90 days—

(a) the total time in service (hours, calendar time and cycles, as appropriate) of the aeroplane and all life-limited components;

(b) the current status of compliance with all mandatory continuing airworthiness information;

(c) appropriate details of modifications and repairs;

(d) the time in service (hours, calendar time and cycles, as appropriate) since the last overhaul of the aeroplane or its components subject to a mandatory overhaul life;

(e) the current status of the aeroplane’s compliance with the maintenance programme; and

(f) the detailed maintenance records to show that all requirements for the signing of a maintenance release have been met.

(2) The continuing airworthiness records referred to in subsection (1) (a) to (e) 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 referred to in subsection (1) (f), for a minimum period of one year after the signing of the maintenance release.

(3) In the event of a temporary change of operator, the records shall be made available to the new operator. In the event of any permanent change of operator, the records shall be transferred to the new operator.

(4) Records kept and transferred in terms of this section shall be maintained in a form and format that ensures readability, security and integrity of the records at all times.

**OPS 119. Continuing airworthiness information**

(1) An operator of an aeroplane over 5 700 kg maximum certificated take-off mass shall monitor and assess maintenance and operational experience with respect to continuing airworthiness and provide the information as prescribed by the Authority and report through the system specified in Part…Airtworthiness of Aircraft.

(2) An operator of an aeroplane over 5 700 kg maximum certificated take-off mass shall obtain and assess continuing airworthiness information and recommendations available from the organisation responsible for the type design and shall implement resulting actions considered necessary in accordance with a procedure acceptable to the Autority.

**OPS 120. Modifications and repairs**

An operator shall ensure that all modifications and repairs comply with airworthiness requirements acceptable to the Authority and procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.

**OPS 121. Approved maintenance organisation**

An approved maintenance organization shall comply with Part…AMO..

**OPS 122. Maintenance release**

(1) When maintenance is carried out by an approved maintenance organisation, the maintenance release shall be issued by the approved maintenance organisation in accordance with the provisions of Part…AMO.

(2) When maintenance is not carried out by an approved maintenance organization, the maintenance release shall be completed and signed by a person appropriately licensed in accordance with Part…Personnel licensing to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data and procedures acceptable to the Authority.

(3) When maintenance is not carried out by an approved maintenance organization, the maintenance release shall include the following—

(a) basic details of the maintenance carried out including detailed reference of the approved data used;

(b) the date such maintenance was completed; and

(c) the identity and licence details of the person or persons signing the release.

**PART VIII**

**AEROPLANE FLIGHT CREW**

**OPS 123. Composition of flight crew**

(1) An operator shall ensure that the number and composition of the flight crew is not less than that specified in the approved operations manual.

(2) The flight crew referred to in subsection (1) shall include flight crew members in addition to the minimum numbers specified in the flight manual or other documents associated with the certificate of airworthiness, when necessitated by considerations related to the type of aeroplane used, the type of operation involved and the duration of flight between points where flight crew are changed.

**OPS 124. Radio operator**

The flight crew shall include at least one member who holds a valid license, issued or rendered valid by the State of Registry, authorising operation of the type of radio transmitting equipment to be used.

**OPS 125. Flight engineer**

Where a separate flight engineer’s station is incorporated in the design of an aeroplane, the flight crew shall include at least one flight engineer especially assigned to that station, unless the duties associated with that station can be satisfactorily performed by another flight crew member, holding a flight engineer license, without interference with regular duties.

**OPS 126. Flight navigator**

12. Flight navigatorAn operator shall ensure that flight crew include at least one member who holds a flight navigator licence in all operations where, as determined by the Authority, navigation necessary for the safe conduct of the flight cannot be adequately accomplished by the pilots from the pilot station.

**OPS 127. Flight crew member emergency duties**

(1) An operator shall, for each type of aeroplane, assign to all flight crew members the necessary functions they are to perform in an emergency or in a situation requiring emergency evacuation.

(2) 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.

**OPS 128. Flight crew member training programmes**

(1) An operator shall establish and maintain a ground and flight training programme including—

(a) Initial,

(b) transition(conversion),

(c) requalification,

(d) upgrade,

(e) recency of experience,

(f) familiarisation,

(g) differences; and

(h) other specialized training as applicable.

(2) An operator shall ensure that the training programme referred to in subsection (1),, which ensures that all flight crew members are adequately trained to perform their assigned duties is approved by the Authority.

(3) The training programme shall—

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

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

(c) 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;

(d) include upset prevention and recovery training;

(e) 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;

(f) 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

(g) be undertaken on a recurrent basis, as determined by the Authority and shall include an assessment of competence.

(4) The requirement for recurrent flight training in a particular type of aeroplane shall be considered fulfilled by—

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

(b) the completion within the appropriate period of the proficiency check required by section 131 in that type of aeroplane.

**OPS 129. Duties during critical phases of flight**

No flight crew member shall—

(a) perform any duties during a critical phase of flight except duties required for the safe operation of the aircraft;

(b) engage in any activity during a critical phase of flight which may distract or interfere with the performance of that flight crew member’s assigned duties.

**OPS 130. Manipulation of the controls**

(1) A pilot in command shall not allow an unqualified person to manipulate the controls of an aircraft during commercial air transport operations.

(2) No person shall manipulate the controls of an aircraft during commercial air transport operations unless such person is qualified to manipulate the controls and is authorised to do so by the air operator certificate holder.

**OPS 131. Power to inspect**

(1) The pilot in command shall give an inspector free and uninterrupted access to the aircraft, including the cockpit, when an inspector from the Authority presents valid aviation safety inspector credentials to the PIC in order to conduct an inspection.

(2) The pilot in command may refuse an inspector access to the cockpit if, in his opinion, the safety of the aircraft may be endangered.

**OPS 132. Qualifications-recent experience — pilot-in-command and co-pilot**

(1) An operator shall not assign a pilot-in-command or a co-pilot to operate at the flight controls of a type or variant of a type of aeroplane during take-off and landing unless that pilot has operated the flight controls during at least three take-offs and landings within the preceding 90 days on the same type of aeroplane or in a flight simulator approved for the purpose.

(2) Where a pilot-in-command or a co-pilot is flying several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the Authority shall decide under which conditions the requirements of subsection (1) for each variant or each type of aeroplane can be combined.

(3) The take-offs and landings required by subsection (1) may be performed in a visual synthetic flight trainer approved by the Authority to include take-off and landing manoeuvres and any person who fails to make the 3 required take-offs and landings within any consecutive 90 day period shall re-establish recency of experience as provided in this Part.

(4) In addition to meeting all applicable training and checking requirements of this Part, a flight crew member who has not met the requirements of subsection (1) shall re-establish recency of experience as follows—

(a) under the supervision of a check pilot, make at least 3 take-offs and landings in the type of aircraft in which that person is to serve or where an advanced synthetic flight trainer is used, the requirements of these regulations shall be met; and

(b) the take-offs and landings required in this paragraph shall include—

(i) at least one take-off with a simulated failure of the most critical engine;

(ii) at least one landing from an instrument landing system approach to the lowest instrument landing system minimum authorised for the certificate holder; and

(iii) at least one landing to a full stop.

(5) A required flight crew member who performs the manoeuvres prescribed in subsection (3) in a visual synthetic flight trainer shall—

(a) have previously logged 100 hours of flight time in the same aircraft type in which the pilot is to serve; and

(b) be observed on the first 2 landings made in operations under this Part by an approved check pilot who acts as pilot-in-command and occupies a pilot seat and the landings shall be made in weather minima that are not less than those contained in the AOC holder’s operation specifications for Category I operations, and shall be made within 45 days following completion of training in the synthetic flight trainer.

(6) When using a synthetic flight trainer to accomplish any of the requirements of subsection (1) or (3), a required flight crew member position shall be operated as if in a normal in-flight environment without use of the repositioning features of the synthetic flight trainer.

(7) A check pilot who observes the take-offs and landings prescribed in subsection (3)(a) and (4) shall certify that the person being observed is proficient and qualified to perform flight duty in operations under this Part and may require any additional manoeuvres that are determined necessary to make this certifying statement.

**OPS 133. Pilot operating limitations and pairing requirements**

(1) Where a co-pilot has fewer than 50 hours of flight time as co-pilot in operations in the aircraft type being flown, and the pilot-in-command is not an appropriately qualified check pilot, the pilot in command shall make all take-offs and landings in the following situations—

(a) special airports designated by the Authority or special airports designated by the AOC holder; and

(b) in any of the following conditions—

(i) the prevailing visibility value in the latest weather report for the airport is at or below 1200 m;

(ii) the Runway Visual Range (RVR) for the runway to be used is at or below 4,000 ft;

(iii) the runway to be used has water, snow, slush or similar conditions that may adversely affect aircraft performance;

(iv) the braking action on the runway to be used is reported to be less than “good”;

(v) the crosswind component for the runway to be used is in excess of 15 knots;

(vi) wind shear is reported in the vicinity of the airport; or

(vii) any other condition in which the pilot in command determines to be prudent to exercise the PIC’s prerogative.

(2) A person shall not conduct operations under this Part unless, for that type of aircraft, either the pilot in command or the co-pilot has at least 75 hours of line operating flight time, either as pilot in command or co-pilot.

(3) The Authority may, upon application by the AOC holder, authorize exemptions from the requirements of this Partby an appropriate amendment to the operations specifications in any of the following circumstances—

(a) a newly certificated AOC holder does not employ any pilots who meet the minimum requirements of these regulations;

(b) an existing AOC holder adds to its fleet an aircraft type not before proven for use in its operations; or

(c) an existing certificate holder establishes a new domicile to which it assigns pilots who will be required to become qualified on the aircraft operated from that domicile.

**OPS 134. Recent experience — cruise relief pilot**

(1) An operator shall not assign a pilot to act in the capacity of cruise relief pilot in a type or variant of a type of aeroplane unless, within the preceding 90 days that pilot has either—

(a) operated as a pilot-in-command, co-pilot or cruise relief pilot on the same type of aeroplane; or

(b) carried out flying skill refresher training including normal, abnormal and emergency procedures specific to cruise flight on the same type of aeroplane 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 aeroplane.

(2) When a cruise relief pilot is flying several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the Authority shall decide under which conditions the requirements of this section for each variant or each type of aeroplane can be combined.

**OPS 135. Pilot-in-command area, route and aerodrome qualification**

(1) An operator shall not utilize a pilot as pilot-in-command of an aeroplane on a route or route segment for which that pilot is not currently qualified until such pilot has complied with subsections (2) and (3).

(2) Each pilot referred to in subsection (1) shall demonstrate to the operator an adequate knowledge of—

(a) the route to be flown, and the aerodromes which are to be used and this shall include knowledge of—

(i) the terrain and minimum safe altitudes;

(ii) the seasonal meteorological conditions;

(iii) the meteorological, communication and air traffic facilities, services and procedures;

(iv) the search and rescue procedures; and

(v) the navigational facilities and procedures, including any long-range navigation procedures, associated with the route along which the flight is to take place; and

(b) procedures applicable to flight paths over heavily populated areas and areas of high air traffic density, obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures, and applicable operating minima and the portion of the demonstration relating to arrival, departure, holding and instrument approach procedures may be accomplished in an approved training device which is adequate for this purpose.

(3) A pilot-in-command shall have made an actual approach into each aerodrome of landing on the route, accompanied by a pilot who is qualified for the aerodrome, as a member of the flight crew or as an observer on the flight deck, unless—

(a) the approach to the aerodrome 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

(b) the descent from the initial approach altitude can be made by day in visual meteorological conditions; or

(c) the operator qualifies the pilot-in-command to land at the aerodrome concerned by means of an adequate pictorial presentation; or

(d) the aerodrome concerned is adjacent to another aerodrome at which the pilot-in-command is currently qualified to land.

(4) 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.

(5) The operator shall not continue to utilize a pilot as a pilot-in-command on a route or within an area specified by the operator and approved by the Authority unless, within the preceding 12 months, that pilot has made at least one trip as a pilot member of the flight crew, or as a check pilot, or as an observer in the flight crew compartment—

(a) within that specified area; and

(b) where appropriate, on any route where procedures associated with that route or with any aerodromes intended to be used for take-off or landing require the application of special skills or knowledge.

(6) 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, 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 shall re-qualify in accordance with these regulations.

**OPS 136. Pilot proficiency checks**

An operator 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 aeroplane.

(2) Where the operation may be conducted under instrument flight rules, the operator shall ensure that the pilot’s competence to comply with such rules is demonstrated to either a check pilot of the operator or to a representative of the Authority.

(3) The pilot proficiency checks referred to in subsection (1) shall be—

(a) performed twice within any period of one year and two such checks which are similar and which occur within a period of four consecutive months shall not alone satisfy this requirement.

(b) conducted by the Authority or a designated examiner.

(4) Flight simulation training devices approved by the Authority may be used for those parts of the checks for which they are specifically approved.

(5) Where the operator schedules flight crew on several variants of the same type of aeroplane or different types of aeroplanes with similar characteristics in terms of operating procedures, systems and handling, the Authority shall determine under which conditions the requirements of subsection (1) for each variant or each type of aeroplane can be combined.

**OPS 137. Single pilot operations under the instrument flight rules (IFR) or at night**

(1) An operator shall comply with the experience, recency and training requirements applicable to single pilot operations intended to be carried out under the IFR or at night as specified in these regulations.

(2) The pilot-in-command shall—

(a) for operations under the IFR or at night, have accumulated at least 50 hours flight time on the class of aeroplane, of which at least 10 hours shall be as pilot-in-command;

(b) for operations under the IFR, have accumulated at least 25 hours flight time under the IFR on the class of aeroplane, which may form part of the 50 hours flight time in paragraph (a);

(c) for operat-+ions at night, have accumulated at least 15 hours flight time at night, which may form part of the 50 hours flight time in paragraph (a);

(d) for operations under the IFR, have acquired recent experience as a pilot engaged in a single pilot operation under the IFR of—

(i) at least 5 IFR flights, including 3 instrument approaches carried out during the preceding 90 days on the class of aeroplane in the single pilot role; or

(ii) an IFR instrument approach check carried out on such an aeroplane during the preceding 90 days;

(e) for operations at night, have made at least 3 take-offs and landings at night on the class of aeroplane in the single pilot role in the preceding 90 days; and

(f) have successfully completed training programmes that include, in addition to the requirements of section 119, passenger briefing with respect to emergency evacuation, autopilot management, and the use of simplified in-flight documentation.

(3) The initial and recurrent flight training and proficiency checks indicated in sections 119 and 131 shall be performed by the pilot-in-command in the single pilot role on the class of aeroplane in an environment representative of the operation. Flight crew equipment

**OPS 138. Flight navigator**

A flight crew member assessed as fit to exercise the privileges of a license, subject to the use of suitable correcting lenses, shall have a spare set of the correcting lenses readily available when exercising those privileges.

**OPS 139. Pilot authorisation in lieu of a type rating**

The Authority may authorise a pilot without a type rating to operate an aircraft requiring a type rating for a period not exceeding 60 days, provided that—

(a) the applicant has demonstrated to the satisfaction of the Authority that an equivalent level of safety can be achieved through the operating limitations on the authorisation;

(b) the applicant shows that compliance with these regulations is impracticable for the flight or series of flights;

(c) the operations—

(i) involve only a ferry flight, training to qualify on type or test flight;

(ii) are within [State]., unless by previous agreement with the Authority, the aircraft is flown to an adjacent Contracting State for maintenance;

(iii) are not for compensation or hire unless the compensation or hire involves payment for the use of the aircraft for training; and

(iv) involve only the carriage of flight crew members considered essential for the flight.

**OPS 140. Licences required**

(1) No person shall act as pilot-in-command or in any other capacity as a required flight crew member of an aircraft—

(a) registered in [State]., unless that person carries in his personal possession the appropriate and valid licence for that flight crew position for that type of aircraft; or

(b) of foreign registry, unless that person carries in his personal possession a valid licence for that type of aircraft issued to them by the State of registry.

(2) The flight crew for international and domestic operations shall hold a valid radiotelephony operator licence or endorsement issued or rendered valid by the State of Registry, authorising operation of the type of radio transmitting equipment to be used.

**OPS 141. Pilot Qualifications**

(1) No person shall operate an aircraft in commercial air transport unless that person is qualified for the specific operation and in the specific type of aircraft used.

(2) The operator or owner of the aircraft shall ensure that flight crew engaged in civil aviation operations speak and understand the English Language.

**OPS 142. Fitness of crew members**

(1) No person shall act as a crew member at any time when that person is aware of any decrease in the medical fitnes

which might render him unable to safely and properly execute the duties of a crew member.

(2) The operator and the pilot in command shall be responsible for ensuring that a flight is not—

(a) commenced if any crew member is incapacitated or unable to perform duties by any cause such as injury, sickness, fatigue, the effects of alcohol or drugs; or

(b) continued beyond the nearest suitable aerodrome where 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.

Special authorisation required for Category II or III operations

14. (1) A person shall not act as a pilot of an aircraft in a Category II or III operations unless—

(a) in the case of a pilot-in-command, the person holds a current Category II or III pilot authorisation for that aircraft type; or

(b) in the case of a co-pilot, the person is authorised by the State of Registry to act in that capacity in that aircraft in Category II or III operations.

(2) An authorisation is not required for individual pilots of an AOC holder operations specifications approved for Category II or III operations.

**OPS 144. Recording of flight time**

(1) A pilot shall record and keep details of all flights he or she has flown in a logbook format acceptable to the Authority.

(2) An AOC holder

(a) may record details of flights flown by a pilot in an acceptable computerised format maintained by the AOC holder; and

(b) shall make the records of all flights operated by the pilot, including differences and familiarisation training, available on request to the pilot concerned.

(3) The record referred to in subsection (1) and (2) shall contain the following information—

(a) name and address of the holder;

(b) for each flight:

(i) of the PIC;

(ii) date of flight;

(iii) place and time of departure and arrival, times to be UTC and block to block;

(iv) type, aircraft make, model and variant, aircraft nationality and registration marks of aircraft;

(v) single engine or multi-engine;

(vi) total time of flight; and

(vii) accumulated total time of flight;

(c) for each synthetic flight trainer or flight and navigation procedures trainers session:

(i) type and qualification number of training device;

(ii) synthetic training device instruction;

(ii) date;

(iv) total time of session; and accumulated total time.

(d) pilot function—

(i) the PIC;

(ii) the co-pilot;

(iii) dual;

(iv) authorised instructor or authorised examiner; and

(v) remarks column to give details of specific functions such as student PIC time,

(vi) PIC under supervision time, PIC instrument flight time.

(e) operational conditions—

(i) night; or

(ii) instrument flight rules.

(4) Logging of time—

(a) PIC flight time—

(i) the holder of a licence may log as PIC time all of the flight time during which he or she is the PIC;

(ii) the applicant for or the holder of a pilot licence may log as PIC time all solo flight time and flight time as student PIC provided that such student PIC time is countersigned by the instructor;

(iii) the holder of an instructor rating may log as PIC all flight time during which he acts as an instructor in an aeroplane;

(iv) the holder of an examiner’s authorisation may log as PIC all flight time during which he or she occupies a pilot’s seat and acts as an examiner in an aeroplane;

(v) a co-pilot acting as PIC under the supervision of the PIC on an aeroplane on which more than one pilot is required under the certificate of airworthiness of the aeroplane or by these regulations may log as PIC under supervision flight time, provided such PIC time under supervision is countersigned by the PIC; or

(vi) where the holder of a licence carries out a number of flights upon the same day returning on each occasion to the same place of departure and the interval between successive flights does not exceed thirty minutes, such series of flights are to be recorded as a single entry.

(b) co-pilot flight time- the holder of pilot licence occupying a pilot seat as co-pilot may log all flight time as co-pilot flight time on an aeroplane on which more than one pilot is required under the certificate of airworthiness of the aeroplane;

(c) cruise relief co-pilot flight time- a cruise relief co-pilot may log all flight time as co-pilot when occupying a pilot’s seat;

(d) instruction time- a summary of all time logged by an applicant for a licence or rating as flight instruction, instrument flight instruction, instrument ground time, shall be certified by the appropriately rated or authorised instructor from whom it was received; and

(e) PIC under supervision- a co-pilot may log as PIC under supervision flight time flown as PIC under supervision, when all of the duties and functions of PIC on that flight were carried out, such that the intervention of the PIC in the interest of safety was not required, provided that the method of supervision is acceptable to the Authority.

(5) Presentation of flight time record—

(a) a holder of a licence or a student pilot shall without undue delay present his flight time record for inspection upon request by an authorised person; and

(b) a student pilot shall carry his flight time record logbook with him on all solo cross-country flights as evidence of the required instructor authorisation.

**OPS 145. Completion of the technical logbook**

A pilot-in-command shall ensure that all portions of the technical logbook required under the Civil Aviation (Air Operator Certification and Administration) Regulations, are completed at the appropriate points before, during and after flight operations.

**OPS 146. Reporting mechanical irregularities**

A pilot-in-command shall ensure that all mechanical irregularities occurring during flight time are—

(a) reported to the operator at the termination of the flight;

(b) entered in the aircraft logbook and dealt with in accordance with the Minimum Equipment List or other approved or prescribed procedure;

(c) for commercial air transport operations, entered in the technical log of the aircraft at the end of that flight time.

**OPS 147. Reporting of facility and navigation aid inadequacies**

(1) An operator 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.

(2) 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 weather conditions.

**OPS 148. Pilot privileges and limitations**

A pilot shall not conduct flight operations unless the operations are within the privileges and limitations of each licence he or she holds as specified in the Civil Aviation (Personnel Licensing) Regulations.

**OPS 149. Crew resource management (CRM) Training**

(1) A person shall not serve nor shall any AOC holder use a person as a crew member or flight operations officer unless that person has completed the initial crew resource management curriculum approved by the Authority.

(2) An AOC holder shall ensure that all crew members have crew resource management training as part of their initial and recurrent training requirements.

(3) A crew resource management training program shall include—

(a) an initial indoctrination or awareness segment;

(b) a method to provide recurrent practice and feedback; and

(c) a method of providing continuing reinforcement.

(4) Curriculum topics to be contained in an initial crew resource management training course include—

(a) communications processes and decision behaviour;

(b) internal and external influences on interpersonal communications;

(c) barriers to communication;

(d) listening skills;

(e) decision making skills;

(f) effective briefings;

(g) developing open communications;

(h) inquiry, advocacy, and assertion training;

(i) crew self-critique;

(j) conflict resolution;

(k) team building and maintenance;

(l) leadership and fellowship training;

(m) interpersonal relationships;

(n) workload management;

(o) situational awareness;

(p) how to prepare, plan and monitor task completions;

(q) workload distribution;

(r) distraction avoidance;

(s) individual factors; and

(t) stress reduction.

**OPS 150. Human Factors (HF) Training**

(1) A person shall not serve nor shall any AOC holder use a person as a crew member or flight dispatcher unless that person has completed the initial HF curriculum approved by the Authority.

(2) An AOC holder shall ensure that all crew members have Human Factors training as part of their initial and recurrent training requirements.

(3) A Human Factors training program shall include—

(d) an initial or induction training;

(e) a recurrent training; and

(f) a requalification

(4) Curriculum topics to be contained in an initial Human Factors training course include—

Elements of Human Factors;

(a) Clinical Psychology;

(b) Experimental Psychology;

(c) Anthropometrics;

(d) Computer Science;

(e) Cognitive Science;

(f) Medical Science;

(g) Organisational Psychology; and

(h) Educational Psychology;

**OPS 151. Initial emergency equipment drills**

(1) A person shall not serve nor shall any air operator certificate 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.

(2) A crew member shall complete emergency training during the specified training periods, using the items of installed emergency equipment for each type of aircraft in which that crew member is to serve.

(3) During initial training, a crew member shall perform the following one time emergency drills—

(a) protective breathing equipment or fire-fighting drill—

(i) locate the source of fire or smoke for an actual or simulated fire;

(ii) implement procedures for effective crew co-ordination and communication, including notification of flight crew members about the fire situation;

(iii) don and activate installed protective breathing equipment or approved protective breathing equipment simulation device;

(iv) manoeuvre in limited space with reduced visibility;

(v) effectively use the aircraft's communication system;

(vi) identify the class of fire;

(vii) select the appropriate extinguisher;

(viii) properly remove the extinguisher from the securing device;

(ix) prepare, operate and discharge the extinguisher properly; and

(x) utilise the correct fire-fighting techniques for type of fire.

(b) emergency evacuation drill—

(i) recognise and evaluate an emergency;

(ii) assume the appropriate protective position;

(iii) command passengers to assume protective position;

(iv) implement crew co-ordination procedures;

(v) ensure activation of emergency lights;

(vi) assess aircraft condition;

(vii) initiate evacuation, dependent on signal or decision;

(viii) command passengers to release their seatbelts and evacuate;

(ix) assess exit and redirect passengers, where necessary, to open exits, including deploying slides and commanding helpers to assist;

(x) command the passengers to evacuate at exit and run away from the aircraft;

(xi) assist special need passengers, such as handicapped, elderly, and persons in a state of panic; and

(xii) actually exit the aircraft or training device using at least one of the installed emergency evacuation slides.

(4) In the case of an emergency evacuation drill, the crew member may either observe the aircraft exits being opened in the emergency mode and the associated exit slider or aft pack being deployed and inflated, or perform the tasks resulting in the accomplishment of these actions.

(5) An aircraft crew member shall accomplish additional emergency drills during initial and recurrent training, including performing the following emergency drills—

(a) emergency exit drill—

(i) correctly pre-flight each type of emergency exit and evacuation slide or slide raft, if part of cabin crew member's assigned duties;

(ii) disarm and open each type of door exit in normal mode;

(iii) close each type of door exit in normal mode;

(iv) arm each type of door exit in emergency mode;

(v) open each type of door exit in emergency mode;

(vi) use the manual slide inflation system to accomplish or ensure slide or slide raft inflation;

(vii) open each type of window exit;and

(viii) remove the escape rope and position it for use.

(b) hand fire extinguisher drill fighting an actual or a simulated fire is not necessary during this drill—

(i) pre-flight each type of hand fire extinguisher;

(ii) locate the source of fire or smoke and identify class of fire;

(iii) select the appropriate extinguisher and remove from securing device;

(iv) prepare the extinguisher for use;

(v) actually operate and discharge each type of installed hand fire extinguisher;

(vi) utilise correct fire-fighting techniques for the type of fire; and

(vii) implement procedures for effective crew coordination and communication, including notification of crew members about the type of fire situation.

(c) emergency oxygen system drill—

(i) actually operate portable oxygen bottles, including masks and tubing;

(i) verbally demonstrate operation of chemical oxygen generators;

(ii) prepare for use and properly operate an oxygen device, including donning and activation;

(iii) administer oxygen to self, passengers, and to those persons with special oxygen needs;

(iv) utilise proper procedures for effective crew coordination and communication;

(v) activate protective breathing equipment;

(vi) manually open each type of oxygen mask compartment and deploy oxygen masks;

(vii) identify compartments with extra oxygen masks;

(viii) implement immediate action decompression procedures; and

(ix) reset the oxygen system, where applicable.

(c) flotation device drill—

(i) don and inflate life vests;

(ii) remove and use flotation seat cushions; and

(iii) demonstrate swimming techniques using a seat cushion.

(d) ditching drill, where applicable, during which ditching drill trainees shall perform the "prior to impact" and "after impact" procedures for a ditching, as appropriate to the specific operator's type of operation—

(i) implement crew coordination procedures, including a briefing with the captain to obtain pertinent ditching information and briefing cabin crew members;

(ii) coordinate time-frame for cabin and passenger preparation;

(iii) adequately brief passengers on ditching procedures;

(iv) ensure the cabin is prepared, including the securing of carry-on baggage, lavatories, and galleys;

(v) demonstrate how to properly deploy and inflate slide rafts;

(vi) remove, position and attach slide rafts to aircraft;

(vii) inflate the rafts;

(viii) use escape ropes at over wing exits;

(ix) command any helpers to assist;

(x) use slides and seat cushions as flotation devices;

(xi) remove appropriate emergency equipment from the aircraft;

(xii) board rafts properly;

(xiii) initiate raft management procedures, such as disconnecting rafts from aircraft, applying immediate first aid, rescuing persons in water, salvaging floating rations and equipment, deploying sea anchor, tying rafts together, and activating or ensuring operation of emergency locator transmitter;

(xiv) initiate basic survival procedures, such as removing and utilising survival kit items, repairing and maintaining raft, ensuring protection from exposure, erecting canopy, communicating location, providing continued first aid, and providing sustenance;

(xv) use heaving line to rescue persons in the water;

(xvi) tie slide rafts or rafts together;

(xvii) use life line on edge of slide raft or raft as a handhold; and

(xviii) secure survival kit items.

(6) An aircraft crew member shall accomplish additional emergency drill requirements during initial and recurrent training including observing the following emergency drills:

(a) life raft removal and inflation drill, if applicable—

(i) removal of a life raft from the aircraft or training device; and

(ii) inflation of a life raft.

(b) slide raft transfer drill—

(i) transfer each type of slide raft pack from an unusable door to a usable door;

(ii) disconnect the slide raft at an unusable door;

(iii) redirect passengers to the usable slide raft; and

(iv) install and deploy the slide raft at a usable door.

(c) slide and slide raft deployment, inflation, and detachment—

(i) engage slide girt bar in floor brackets;

(ii) inflate slides with and without quick-release handle, manually and automatically;

(iii) disconnect slide from aircraft for use as a flotation device;

(iv) arm slide rafts for automatic inflation; and

(v) disconnect slide raft from the aircraft.

(d) emergency evacuation slide drill—

(i) open armed exit with slide or slide raft deployment and inflation; and

(ii) egress from aircraft via the evacuation slide and run away to a safe distance.

**OPS 152. Initial aircraft ground training: flight crew**

(1) A person shall not serve nor shall an air operator certificate holder use a person as a flight crew member unless that person has completed the initial ground training approved by the Authority for the aircraft type.

(2) Initial aircraft ground training for flight crew members shall include the pertinent portions of the operations manuals relating to aircraft-specific performance, mass and balance, operational policies, systems, limitations, normal, abnormal and emergency procedures on the aircraft type to be used.

(3) An AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to the type of operations conducted and aircraft flown.

(4) Instructions shall include at least the following general subjects—

(a) AOC holder’s dispatch, flight release, or operational control or flight following procedures:

(b) principles and methods for determining mass and balance, and runway limitations for take-off;

(c) adverse weather recognition and avoidance, and flight procedures which shall be followed when operating in the followed when operating in the following conditions—

(i) icing;

(ii) fog;

(iii) Turbulence;

(iv) heavy precipitation;

(v) thunderstorms;

(vi) low-level wind shear and microburst; and

(vii) low visibility.

(a) normal and emergency communications procedures and navigation equipment including the AOC holder’s communications procedures and air traffic control clearance requirements;

(b) navigation procedures used in area departure, en route, area arrival, approach and landing phases;

(c) approved crew resource management or CRM training;

(d) air traffic control systems, procedures, and phraseology;

(e) aircraft performance characteristics during all flight regimes, including—

(i) the use of charts, tables, tabulated data and other related manual information;

(ii) normal, abnormal, and emergency performance problems;

(iii) meteorological and weight limiting performance factors, such as temperature, pressure, contaminated runways, precipitation, climb and runway limits;

(iv) inoperative equipment performance limiting factors, such as minimum equipment list or configuration deviation list, inoperative antiskid; and

(v) special operational conditions, such as unpaved runways, high altitude aerodromes and drift down requirements.

(5) An AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to the type of operations conducted and aircraft flown, including at least the following aircraft systems—

(a) aircraft—

(i) aircraft dimensions, turning radius, panel layouts, cockpit and cabin configurations; and

(ii) other major systems and components or appliances of the aircraft.

(b) power plants—

(i) basic engine description;

(ii) engine thrust ratings; and

(iii) engine components such as accessory drives, ignition, oil, fuel control, hydraulic, and bleed air features.

(c) electrical—

(i) sources of aircraft electrical power, such as engine driven generators, auxiliary power unit or APU generator, and external power;

(ii) electrical buses;

(iii) circuit breakers;

(iv) aircraft battery; and

(v) standby power systems.

(d) hydraulic—

(i) hydraulic reservoirs, pumps, accumulators, filters, check valves, interconnects and actuators; and

(ii) other hydraulically operated components.

(e) fuel—

(i) fuel tanks, including location and quantities;

(ii) engine driven pumps;

(iii) boost pumps;

(iv) system valves and cross feeds;

(v) quantity indicators;

(vi) quantity indicators; and

(vii) provisions for fuel jettisoning.

(f) pneumatic–

(i) bleed air sources, auxiliary power unit or external ground air; and

(ii) means of routing, venting and controlling bleed air via valves, ducts, chambers, and temperature and pressure limiting devices.

(g) air conditioning and pressurization—

(i) heaters, air conditioning packs, fans, and other environmental control devices;

(ii) pressurisation system components such as outflow and negative pressure relief valves; and

(iii) automatic, standby, manual pressurisation controls and annunciations.

(h) flight controls—

(i) primary controls, including yaw, pitch, and roll devices;

(ii) secondary controls, including leading or trailing edge devices: flaps, trim, and damping mechanisms;

(iii) means of actuation, whether direct or indirect or fly by wire; and

(iv) redundancy devices.

(i) landing gear—

(i) landing gear extension and retraction mechanism including the operating sequence of struts, doors, and locking devices, and brake and antiskid systems, where applicable;

(ii) steering, including nose or body steering gear;

(iii) bogie arrangements;

(iv) air or ground sensor relays; and

(v) visual down lock indicators.

(j) ice and rain protection—

(i) rain removal systems;

(ii) anti-icing or de-icing systems affecting flight controls, engines; and

(iii) pitot static probes, fluid outlets, cockpit windows, and aircraft structures.

(k) equipment and furnishings—

(i) exits;

(ii) galleys;

(iii) water and waste systems;

(iv) lavatories;

(v) cargo areas;

(vi) crew member and passenger seats;

(vii) bulkheads;

(viii) seating and cargo configurations; and

(ix) non-emergency equipment and furnishings.

(l) navigation equipment—

(i) flight directors;

(ii) horizontal situation indicator;

(iii) radio magnetic indicator;

(iv) navigation receivers such as global positioning system, automatic direction finder (ADF), very high frequency omnidirectional radio range (VOR), OMEGA, long range navigation (LORAN-C), area navigation (RNAV), marker beacon, distance measuring equipment (DME);

(v) inertial systems such as inertia navigation system (INS) and inertia reference (IRS);

(vi) functional displays;

(vii) fault indications and comparator systems;

(viii) aircraft transponders;

(ix) radio altimeters;

(x) weather radar; and

(xi) cathode ray tube or computer-generated displays of aircraft position and navigation information.

(m) auto flight system—

(i) autopilot;

(ii) auto throttles;

(iii) flight director and navigation systems;

(iv) automatic approach tracking;

(v) auto land; and

(vi) automatic fuel and performance management systems.

(n) flight instruments—

(i) panel arrangement;

(ii) flight instruments, including attitude indicator, directional gyro, magnetic compass, airspeed indicator, vertical speed indicator, altimeters, standby instruments; and

(iii) instrument power sources, and instrument sensory sources, such as pitot static pressure.

(o) display systems—

(i) weather radar; and

(ii) other Cathode ray tube (CRT) displays, such as checklist, vertical navigation or longitudinal navigation displays.

(p) communication equipment—

(i) very high frequency (VHF) or high frequency (HF);

(ii) audio panels;

(iii) in flight interphone and passenger address systems;

(iv) voice recorder; and

(v) aircraft communication addressing and reporting system (ACARS).

(q) warning systems—

(i) aural, visual, and tactile warning systems, including the character and degree of urgency related to each signal; and

(ii) warning and caution annunciator systems, including ground proximity and take-off warning systems.

(r) fire protection—

(i) fire and overheat sensors, loops, modules, or other means of providing visual or aural indications of fire or overheat detection;

(ii) procedures for the use of fire handles, automatic extinguishing systems and extinguishing agents; and

(iii) power sources necessary to provide protection for fire and overheat conditions in engines, auxiliary power unit, cargo bay or wheel well, cockpit, cabin and lavatories.

(s) oxygen—

(i) passenger, crew, and portable oxygen supply systems;

(ii) sources of oxygen such as gaseous or solid;

(iii) flow and distribution networks;

(iv) automatic deployment systems;

(v) regulators, pressure levels and gauges; and

(vi) servicing requirements.

(t) lighting—

(i) cockpit, cabin, and external lighting systems;

(ii) power sources;

(iii) switch positions; and

(iv) spare light bulb locations..

(u) emergency equipment—

(i) fire and oxygen bottles;

(ii) first aid kits;

(iii) life rafts and life preservers;

(iv) crash axes;

(v) emergency exits and lights;

(vi) slides and slide rafts;

(vii) escape straps or handles; and

(viii) hatches, ladders and movable stairs.

(v) auxiliary power unit—

(i) electric and bleed air capabilities;

(ii) interfaces with electrical and pneumatic systems;

(iii) inlet doors and exhaust ducts; and

(iv) fuel supply.

(6) An AOC holder shall have an initial aircraft ground training curriculum for the flight crew applicable to the type of operations conducted and aircraft flown, including at least the following aircraft systems integration items—

(a) use of checklist—

(i) safety chocks;

(ii) cockpit preparation (switch position and checklist flows);

(iii) checklist callouts and responses; and

(iv) checklist sequence.

(b) flight planning—

(i) performance limitations, including meteorological, weight, minimum equipment list and configuration deviation list items;

(ii) required fuel loads; and

(iii) weather planning, lower than standard take-off minimums or alternate requirements.

(c) navigation systems—

(i) pre-flight and operation of applicable receivers;

(ii) onboard navigation systems; and

(iii) flight plan information input and retrieval.

(d) auto flight— autopilot, auto thrust, and flight director systems, including the appropriate procedures, normal and abnormal indications, and enunciators;

(e) cockpit familiarization—

(i) activation of aircraft system controls and switches to include normal, abnormal and emergency switches; and

(ii) control positions and relevant enunciators, lights, or other caution and warning systems.

(7) An AOC holder may have separate initial aircraft ground training curricula of varying lengths and subject emphasis which recognise the experience levels of a flight crew members approved by the Authority.

**OPS 153. Initial flight Training- flight crew member**

(1) A person shall not serve nor shall an air operator certificate holder use a person as a flight crew member unless that person has completed the initial flight training approved by the Authority for the aircraft type.

(2) Initial flight training of a flight crew member shall focus on the manoeuvring and safe operation of the aircraft in accordance with AOC holder’s normal, abnormal and emergency procedures.

(3) An AOC holder may have separate initial flight training curriculum which recognise the experience levels of flight crew members approved by the Authority.

(4) Flight training may be conducted in an appropriate aircraft or adequate synthetic flight trainer—

(a) having landing capability; and

(b) qualified for training or checking on circling manoeuvres.

(5) An AOC holder shall ensure that pilot initial flight training includes at least the following—

(a) preparation—

(i) visual inspection, and use authorised of pictorial display for aircraft with a flight engineer;

(ii) pre-taxi procedures; and

(iii) performance limitations

(b) surface operation—

(i) pushback;

(ii) power back taxi, where applicable to type of operation to be conducted;

(iii) starting;

(iv) taxi; and

(v) pre-take-off checks.

(c) take-off—

(i) normal;

(ii) crosswind;

(iii) rejected;

(iv) power failure after v1; and

(v) lower than standard minimum, where applicable to type of operation to be conducted.

(d) climb—

(i) normal; and

(ii) one-engine inoperative during climb to en route altitude.

(iii) en-route:

(iv) steep turns;

(v) approaches to stalls ,take-off, en route, and landing configurations;

(vi) in flight power plant shutdown;

(vii) in-flight power plant restart;

(viii) high speed handling characteristics.

(e) descent—

(i) normal; and

(ii) maximum rate.

(f) approaches—

(i) visual flight rules procedures;

(ii) visual approach with 50% loss of power on one-side 2 engines inoperative on 3-engine aircraft for pilot-in-command only;

(iii) visual approach with slat or flap malfunction;

(iv) instrument flight rules precision approaches such as instrument landing system normal and instrument landing system with one-engine inoperative;

(v) IFR non-precision approaches non-directional radio beacon or NDB normal and VHF omni-directional radio range beacon or VOR normal;

(vi) non-precision approach with one engine inoperative Localizer back course procedures, SDF or localizer type directional aid, a global positioning system, TACAN and circling approach procedures;

(vii) missed approach from precision approach;

(viii) missed approach from non-precision approach; and

(ix) missed approach with engine failure.

(g) landings—

(i) normal with a pitch mis-trim small aircraft only;

(ii) normal from precision instrument approach;

(iii) normal from precision instrument approach with most critical engine inoperative;

(iv) normal with 50% loss of power on one side 2 engines inoperative on 3-engine aircraft;

(v) normal with flap or slat malfunction;

(vi) rejected landings;

(vii) crosswind;

(viii) manual reversion or degraded control augmentation;

(ix) short or soft field small aircraft, land amphibian aircraft only; and

(x) glassy or rough water, seaplanes only.

(h) after landing—

(i) parking;

(ii) emergency evacuation; and

(iii) docking, mooring, and ramping, seaplanes only.

(i) other flight procedures during any airborne phase—

(i) holding;

(ii) ice accumulation on airframe;

(iii) air hazard avoidance; and

(iv) wind shear or microburst.

(v) normal, abnormal and alternate systems procedures during any phase:

(vi) pneumatic or pressurisation;

(vii) air conditioning;

(viii) fuel and oil;

(ix) electrical;

(x) hydraulic;

(xi) flight controls;

(xii) anti-icing and de-icing systems;

(xiii) autopilot;

(xiv) flight management guidance systems and automatic or other approach and landing aids;

(xv) stall warning devices, stall avoidance devices, and stability augmentation systems;

(xvi) airborne weather radar;

(xvii) flight instrument system malfunction;

(xviii) communications equipment; and

(xix) navigation systems.

(j) emergency systems procedures during any phase—

(i) aircraft fires;

(ii) smoke control;

(iii) power plant malfunctions;

(iv) fuel jettison;

(v) electrical, hydraulic, pneumatic systems;

(vi) flight control system malfunction; and

(vii) landing gear and flap system malfunction.

(k) procedures for upset prevention and recovery training in a flight simulation training device as contained in the Procedures for Air Navigation Services.”

(6) An AOC holder shall ensure that flight engineer training includes at least the following—

(a) training and practice in procedures related to the carrying out of flight engineer duties and functions, where this training and practice may be accomplished either in flight or, in a synthetic flight trainer;

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

(c) a proficiency check as specified in these regulations.

**OPS 154. Initial specialised operations training**

(1) A person shall not serve nor shall any AOC holder use a person as a flight crew member unless that person has completed the appropriate initial specialised operations training curriculum approved by the Authority.

(2) Specialised operations for which initial training curricula shall be developed include—

(a) low minima operations, including low visibility take-offs and Category II and III operations;

(b) extended range operations;

(c) specialised navigation; and

(d) pilot-in-command right seat qualification.

(3) An 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 that person serves and in any specialised or new equipment, procedures, and techniques, such as—

(a) class II navigation—

(i) knowledge of specialised navigation procedures, such as Required Navigation Performance (RNP), Minimum Navigation Performance System (MNPS) and Reduced Vertical Separation Minimum (RVSM); and

(ii) knowledge of specialised equipment, such as Inertia Navigation System (INS), Long Range Navigation (LORAN), OMEGA.

(b) Category II and CAT III operations approaches—

(i) special equipment, procedures and practice;

(ii) a demonstration of competency;

(c) lower than standard minimum take-offs—

(i) runway and lighting requirements;

(ii) rejected take-offs at or near V1 with a failure of the most critical engine;

(iii) taxi operations; and

(iv) procedures to prevent runway incursions under low visibility conditions.

(d) extended range operations with two turbine engine aeroplanes.

(e) airborne radar approaches; and

(f) autopilot instead of co-pilot.

**OPS 155. Aircraft differences training**

(1) A person shall not serve nor shall an AOC holder use a person as a crew member on an aircraft of a type for which a differences curriculum is included in the AOC holder’s approved training programme, unless that person has satisfactorily completed that curriculum, with respect to both the crew member position and the particular variant of that aircraft.

(2) An operator shall ensure that a crew member completes—

(a) differences training which requires additional knowledge and training on an appropriate training device or the aircraft—

(i) when operating another variant of an aircraft of the same type or another type of the same class currently operated; or

(ii) when changing equipment procedures on types or variants currently operated.

(b) familiarization training which requires the acquisition of additional knowledge—

(i) when operating another aircraft of the same type; or

(ii) when changing equipment procedures on types of variants currently operated.

(c) the operator referred to in subsection (1) shall specify in the operations manual when such differences training or familiarization training is required.

(3) An 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—

(a) operations procedures—

(i) operations under adverse weather phenomena conditions, including clear air turbulence, wind shear, and thunderstorms;

(ii) mass and balance computations and load control procedures;

(iii) aircraft performance computations, to include take-off mass limitations based on departure runway, arrival runway, and en –route limitations, and also engine-out limitations;

(iv) flight planning procedures, to include route selection, flight time, and fuel requirements analysis;

(v) dispatch release preparation;

(vi) crew briefings;

(vii) flight monitoring procedures;

(viii) flight crew response to various emergency situations, including the assistance the aircraft flight operations officer can provide in each situation;

(ix) minimum equipment list and configuration deviation list procedures;

(x) manual performance of required procedures in case of the loss of automated capabilities;

(xi) training in appropriate geographic areas;

(xii) air traffic control and instrument flight rules procedures, to include ground hold and central flow control procedures; and

(xiii) radiotelephony procedures.

(b) emergency procedures—

(i) actions taken to aid the flight crew; and

(ii) AOC holder and Authority notification.

**OPS 156. Use of synthetic flight trainers**

A synthetic flight trainer that is used for flight crew member qualification shall—

(a) be specifically approved by the Authority for the—

(i) air operator certificate holder;

(ii) type aircraft, including type variations, for which the training or check is being conducted; and

(iii) particular manoeuvre, procedure, or flight crew member function involved.

(b) maintain the performance, functional, and other characteristics that are required for approval;

(c) be modified to conform with any modification to the aircraft being simulated that results in changes to performance, functional, or other characteristics required for approval;

(d) be given a daily functional pre-flight check before use;

(e) have a daily discrepancy logbook kept by the appropriate instructor or check pilot at the end of each training or check flight; and

(f) for initial aircraft type training, be qualified for training and checking on the circling manoeuvre.

**OPS 157. Aircraft and instrument proficiency checks**

(1) A person shall not serve nor shall any AOC holder use a person as a pilot flight crew member unless, since the beginning of the sixth calendar month before that service, that person has passed the proficiency check prescribed by the Authority in the make and model of aircraft on which their services are required.

(2) A person shall not serve nor shall any AOC holder use a person as a flight crew member in instrument flight rules operations unless, from the beginning of the sixth calendar month before that service, that pilot has passed the instrument competency check prescribed by the Authority.

(3) A flight crew member may complete the requirements of subsections (1) and (2) of this regulation simultaneously in a make and model of the aircraft.

(4) The completion of an approved operator training programme for the particular aircraft type and the satisfactory completion of a PIC proficiency check, shall satisfy the requirement for an aircraft type rating practical test provided that the proficiency check—

(a) includes all manoeuvres and procedures required for a type rating practical test; and

(b) is conducted by an examiner.

(5) Aircraft and instrument proficiency checks for PIC and co-pilot shall include the following operations and procedures listed in Table 6.

(6) Examiners or check pilots may waive certain events on the proficiency check based on an assessment of the pilot’s demonstrated level of performance.

(7) The oral and flight phases of a proficiency check should not be conducted simultaneously.

(8) When the examiner or check pilot determines that an pilot’s performance is unsatisfactory, the examiner or check pilot may terminate the immediately.

(9) If the proficiency check must be terminated for mechanical or other reasons, and there are events which still need to be repeated, the examiner or check pilot shall issue a letter of discontinuance, valid for sixty days, listing the specific areas of operation that have been successfully completed.

(10) At least one of the two annual proficiency checks shall be conducted by an examiner.

(11) The other proficiency check may be conducted by a check pilot or the Authority.

**OPS 158. Introduction of new equipment or procedures**

A person shall not serve or an AOC holder shall not use any other person as a flight crew unless such person attends the AOC holder’s approved training programme to both the crew member position and the particular variant of that aircraft.

**OPS 159. Flight engineer proficiency checks**

(1) A person shall not serve nor shall any AOC holder use a person as a flight engineer on an aircraft unless within the preceding twelve calendar months he has—

(a) had a proficiency check in accordance with the requirements prescribed by the Authority; or

(b) 50 hours flight time for the AOC holder as flight engineer in the type aircraft.

(2) Examiners shall include during proficiency checks for flight engineers an oral or written examination of the normal, abnormal, and emergency procedures listed below—

(a) normal procedures—

(i) interior pre-flight;

(ii) panel set-up;

(iii) fuel load;

(iv) engine start procedures;

(v) taxi and before take-off procedures;

(vi) take-off and climb pressurization;

(vii) cruise and fuel management;

(viii) descent and approach;

(ix) after landing and securing;

(x) crew coordination;

(xi) situational awareness;

(xii) performance computations; and

(xiii) anti-ice and de-ice measures.

(b) abnormal and emergency procedures—

(i) troubleshooting;

(ii) knowledge of checklist;

(iii) crew coordination;

(iv) minimum equipment list or MEL

(v) configuration deviation list or CDL; and

(vi) emergency or alternate operation of aircraft flight systems.

**OPS 160. Supervised line flying- pilots**

(1) A pilot initially qualifying as a PIC shall complete a minimum of ten flights performing the duties of a PIC under the supervision of an check pilot.

(2) A PIC transitioning to a new aircraft type shall complete a minimum of five flights performing the duties of a PIC under the supervision of an check pilot.

(3) A pilot qualifying for duties other than PIC shall complete a minimum of five flights performing those duties under the supervision of an check pilot.

(4) During the time that a qualifying PIC is acquiring operating experience, an authorised instructor who is also serving as the PIC shall occupy a co-pilot station.

(5) In the case of a transitioning PIC, the check pilot serving as PIC may occupy the observer's seat if the transitioning pilot has made at least two take-offs and landings in the type aircraft used, and has satisfactorily demonstrated to the authorized instructor that he is qualified to perform the duties of a PIC for that type of aircraft.

**OPS 161. Supervised line flying- flight engineers**.

A flight engineer who has qualified on a new type rating on an aircraft shall perform the functions of a flight engineer for a minimum of five flights under the supervision of a flight instructor or qualified flight engineer approved by the air operator certificate holder and accepted by the Authority

**OPS 162. Route and area checks: pilot qualification**

(1) A person shall not serve nor shall any AOC holder use a person as a pilot unless, within the preceding twelve months, that person has passed a route check in which the person satisfactorily performed his assigned duties in one of the types of aircraft he is to fly.

(2) A person shall not perform PIC duties over a designated special operational area that requires a special navigation system or procedures or in EDTO operations unless his competency with the system and procedures has been demonstrated to the AOC holder within the past twelve months.

(3) A PIC of an aircraft shall demonstrate special operational competency by navigation over the route or area as PIC under the supervision of a check pilot on an annual basis by demonstrating a knowledge of—

(a) the terrain and minimum safe altitudes;

(b) the seasonal meteorological conditions;

(c) the search and rescue procedures;

(d) the navigational facilities and procedures, including any long-range navigation procedures, associated with the route along which the flight is to take place;

(e) procedures applicable to flight paths over heavily populated areas of high air traffic density, obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures, and applicable operating minima; and

(f) the meteorological, communication and air traffic facilities, services and procedures.

**OPS 163. Low minimums authorization- PIC**

Where a PIC has not completed—

(a) fifteen flights performing PIC duties in an aircraft type, including five approaches to landing using Category I or II operations procedures, that PIC shall not plan for or initiate an instrument approach when the ceiling is less than 300 feet and the visibility is less than 2000 m; and

(b) twenty flights performing PIC duties in an aircraft including five approaches and landing using Category III operations procedures, that PIC shall not plan for or initiate an approach when the ceiling is less than 100 feet or the visibility is less than 400 m runway visual range (RVR).

**OPS 164. Designated Special aerodromes- PIC qualification**

(1) The Authority may determine that certain aerodrome, due to items such as surrounding terrain obstructions, or complex approach or departure procedures are special airport qualifications and that certain areas or routes, or both require a special type of navigation qualification.

(2) A person shall not serve nor shall any AOC holder use a person as PIC for operations at special airport qualifications aerodromes unless within the preceding twelve months the PIC—

(a) has been qualified by the AOC holder through a pictorial means acceptable to the Authority for that aerodrome; or

(b) the assigned co-pilot has made a take-off and landing at that aerodrome or while serving as a flight crew member for the AOC holder.

**OPS 165. Designated special airport qualifications aerodrome limitations**

(1) Designated special airport qualifications aerodrome limitations are not applicable if the operation occurs——

(a) during daylight hours;

(b) when the visibility is at least 5 km; and

(c) when the ceiling at that aerodrome is at least 1,000 feet above the lowest initial approach altitude prescribed for an instrument approach procedure.

**OPS 166. Recurrent training and checking- flight crew members**

(1) An operator shall ensure that—

(a) a flight crew member undergoes recurrent training listed in subsection (2) and checking in subsection (3) and that all such training and checking is relevant to the type or variant of aircraft on which the flight crew member operates; and

(b) a recurrent training and checking programme is established in the operations manual and approved by the Authority.

(3) Recurrent training referred to in subsection (1) shall be conducted by the following personnel—

(a) ground and refresher training: by suitably qualified personnel;

(b) aeroplane synthetic flight trainer training: by an authorized instructor or in the case of the synthetic flight trainer content schedule, a synthetic flight trainer authorized instructor provided that the authorized instructor or synthetic flight trainer authorized instructor satisfied the operator’s experience and knowledge requirements sufficient to instruct on the items specified in the operations manual;

(c) emergency and safety equipment training: by suitably qualified personnel;

(d) crew resource management training: by suitably qualified personnel to integrate elements of crew resource management into all phases of recurrent training; and

(e) modular crew resource management training: by at least one Crew Resource Management (CRM) trainer acceptable to the Authority who may be assisted by experts in order to address specific areas.

(4) The recurrent checking referred to in subsection (1) shall be conducted by the following personnel—

(a) operator proficiency check: by a check pilot or flight engineer authorized by the AOC holder and accepted by the Authority, as appropriate, or, if the check is conducted in a synthetic flight trainer training device, by check pilot or authorized flight engineer as appropriate; or

(b) line checks: by a check pilot of the operator and acceptable to the Authority; and

(c) emergency and safety equipment checking by suitably qualified personnel acceptable to the Authority.

(5) The period of validity of an operator proficiency check shall be—

(a) six months in addition to the remainder of the month of issue; or

(b) if issued within the final three months of validity of a previous operator proficiency check, extended from the date of issue until six months from the expiry date of that previous operator proficiency check.

(6) An operator shall ensure that each flight crew member undergoes a line check on the aircraft to demonstrate his competence in carrying out normal line operations described in the operations manual.

(7) The period of validity of a line check referred to in subsection shall be—

(a) twelve months, in addition to the remainder of the month of issue; or

(b) if issued within the final three months of validity of a previous line check, extended from the date of issue until twelve months from the expiry date of that previous check.

(8) An operator shall ensure that each flight crew member undergoes trainingand checking on the location and use of emergency and safety equipment carried.

(9) The period of validity of an emergency and safety equipment check referred to in subsection (7) shall be—

(a) twelve months in addition to the remainder of the month of issue; or

(b) if issued within the final three months of validity of a previous emergency and safety check, extended from the date of issue until twelve months from the expiry date of the previous emergency and safety equipment check.

(10) An operator shall ensure—

(a) elements of CRM are integrated into all appropriate phases of the recurrent training; and

(b) a flight crew member undergoes specific modular CRM training and all major topics of CRM training shall be covered over a period not exceeding three years.

(11) An operator shall ensure that each flight crew member undergoes—

(a) ground and refresher training at least every twelve months, if the training is conducted within three months prior to the expiry of the twelve months period, the next ground and refresher training must be completed within twelve months of the original expiry date of the previous ground and refresher training; and

(b) aircraft training or synthetic flight trainer training at least every six months, if the training is conducted within three months prior to the expiry of the twelve months period, the next aircraft or synthetic flight trainer training must be completed within six months of the original expiry date of the previous aircraft or synthetic flight trainer training.

**OPS 167. Check pilot training**

(1) A person shall not serve nor shall any AOC holder use a person as a check pilot in an aircraft or check pilot in a synthetic flight trainer 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, that are required to serve as pilot-in-command PIC .

(2) An AOC holder shall ensure that initial ground training for check pilots includes—

(a) check pilot duties, functions, and responsibilities;

(b) applicable regulations and the AOC holder's policies and procedures;

(c) appropriate methods, procedures, and techniques for conducting the required checks;

(d) proper evaluation of student performance including the detection of:

(e) improper and insufficient training; and

(f) personal characteristics of an applicant that could adversely affect safety.

(g) appropriate corrective action in the case of unsatisfactory checks; and

(h) approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft.

(3) Transition ground training for all check pilots 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 pilot is in transition.

(4) An AOC holder shall ensure that the initial and transition flight training for check pilots in an aircraft include—

(a) training and practice in conducting flight evaluations, from the left and right pilot seats for pilot check pilots in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight checks;

(b) the potential results of improper, untimely, or non-execution of safety measures during an evaluation; and

(c) the safety measures, to be taken from either pilot seat for pilot check pilots, for emergency situations that are likely to develop during an evaluation.

(d) training and practice in conducting flight checks in the required normal, abnormal, and emergency procedures to ensure competence to conduct the evaluations checks required by this regulation; and

(e) training in the operation of synthetic flight trainers to ensure competence to conduct the evaluations required by these regulations.

(f) (5) An AOC holder shall accomplish flight training for check pilot in full or in part in an aircraft, in flight in a synthetic flight trainer, as appropriate.

**OPS 168. Authorised instructor or synthetic flight trainer and authorised instructor training**

(1) A person shall not serve nor shall any AOC holder use a person as an authorised instructor or a synthetic flight trainer authorised instructor in a training programme unless—

(a) that person has satisfactorily completed initial or transition authorized instructor or a synthetic flight trainer authorised instructor training, as appropriate; and

(b) within the preceding 24 months, that person satisfactorily conducts instruction under the observation of an authorized person, an AOC holder’s check pilot, an authorised flight engineer, as appropriate, or an examiner employed by the AOC holder.

(2) An AOC holder shall—

(a) accomplish the observation check for a authorized instructor or a synthetic flight trainer authorised instructor, in part or in full, in an aircraft, or a synthetic flight trainer; as appropriate;

(b) ensure that initial ground training for an authorised instructor and synthetic flight trainer authorised instructor includes the following—

(i) the duties, functions, and responsibilities;

(ii) applicable regulations and the AOC holder's policies and procedures;

(iii) appropriate methods, procedures, and techniques for conducting the required checks; and

(iv) proper evaluation of trainee performance including the detection of—

A. improper and insufficient training; and

B. personal characteristics of an applicant that could adversely affect safety.

(v) appropriate corrective action in the case of unsatisfactory checks;

(vi) approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures in the aircraft; and

(vii) except for holders of a flight instructor licence;

(viii) the fundamental principles of the teaching-learning process;

(ix) teaching methods and procedures; and

(x) the instructor-trainee relationship.

(c) ensure that the transition ground training for an authorised instructor and synthetic flight trainer authorised instructor includes the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the authorised instructor is in transition;

(d) ensure that the initial and transition flight training for an authorized instructor and synthetic flight trainer authorised instructor includes the following—

(i) the safety measures for emergency situations that are likely to develop during instruction;

(ii) the potential results of improper, untimely, or non-execution of safety measures during instruction;

(iii) for pilot authorised instructor:

(iv) in-flight 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

(v) the safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction; and

(vi) for authorised flight engineer instructor, in-flight training to ensure competence to perform assigned duties.

(e) accomplish the flight training requirements for an authorised instructor in full or in part in an aircraft, in flight or in a synthetic flight trainer;

(f) ensure that the initial and transition flight training for synthetic flight trainer authorised instructor includes the following:

(i) training and practice in the required normal, abnormal, and emergency procedures to ensure competence to conduct the flight instruction required by this regulation, where the training and practice are accomplished in full or in part in a synthetic flight trainer; and

(ii) training in the operation of synthetic flight trainers, to ensure competence to conduct the flight instruction required by this regulation.

**OPS 169. Authorised instructor qualifications**

An AOC holder shall not use a person nor shall any person serve as an instructor in an established training programme unless, with respect to the aircraft type involved, that person—

(a) holds licences and ratings required to serve as a PIC or a flight engineer;

(b) has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training, that are required to serve as a PIC or a flight engineer, as applicable;

(c) has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC or a flight engineer, as applicable;

(d) has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check; and

(e) holds a Class 1 medical certificate.

**OPS 170. Check pilot and authorised flight engineer qualifications**

An air operator certificate (AOC) holder shall not use a person, nor shall any person serve as a check pilot or an flight engineer authorised by the AOC holder and accepted by the Authority in an established training programme unless, with respect to the aircraft type involved, that person—

(a) holds the pilot licences and ratings required to serve as PIC or a flight engineer;

(b) has satisfactorily completed the appropriate training phases for the aircraft, including recurrent training, that are required to serve as a PIC or a flight engineer;

(c) has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a PIC or a flight engineer;

(d) has satisfactorily completed the applicable initial or transitional training requirements and the Authority-observed in-flight competency check;

(e) holds Class I or II medical certificate as may be applicable; and

(f) has been approved by the Authority for the check pilot or authorised flight engineer duties involved as applicable.

**OPS 171. Check pilot designation, authorizations and limitations**

(1) A person shall not serve nor shall any AOC holder use a person as a check pilot for—

(a) any flight check unless that person has been designated by name for specified function by the Authority within the preceding twelve months;

(b) for any check—

(i) in an aircraft as a required flight crew member unless that person holds the required flight crew licence and ratings and has completed for the AOC holder all applicable training, qualification and currency requirements under these Regulations applicable to the crew position and the flight operations being checked;

(ii) in an aircraft as an observer check pilot unless that person holds the pilot licences and ratings and has completed all applicable training, qualification and line observation requirements under these Regulations applicable to the position and the flight operations being checked; or

(iii) in a synthetic flight trainer unless that person has completed or observed with the AOC holder all training, qualification and line observation requirements under these Regulations applicable to the position and flight operations being checked.

(2) For purposes of subsection (1), a check pilot shall be authorised to—

(a) conduct proficiency or competency checks, line checks, and special qualification checks;

(b) supervise the re-establishment of landing currency; and

(c) supervise any initial operating experience requirements prescribed by the regulations or the Authority.

**OPS 172. Synthetic flight trainer approval**

An AOC holder shall not use a synthetic flight trainer for—

(a) training or checking unless that synthetic flight trainer has been specifically approved for the AOC holder in writing by the Authority; or

(b) any purpose other than that specified in the Authority’s approval.

**OPS 173. Line qualification: check pilot and instructor**

A person shall not serve nor shall any air operator certificate holder use a person as a check pilot or synthetic flight trainer instructor unless, within the preceding twelve months before that service, that person has—

(a) flown at least five flights as a required flight crew member for the type of aircraft involved; or

(b) observed, in the cockpit, the conduct of two complete flights in the aircraft type to which the person is assigned.

**OPS 174. Termination of a proficiency, competence or line check**

An air operator certificate holder shall not use a crew member or flight operations officer in whose check was terminated in commercial air transport operations until the completion of a satisfactory recheck of that crew member or flight operations officer has been carried out.

**OPS 175. Recording of crew member qualifications**

(1) The air operator certificate holder shall record and maintain for each crew member and flight operations officer, a record of each test and check as required by these Regulations.

(2) A pilot may complete the curricula required by these Regulations concurrently or intermixed with other required curricula, but completion of each of these curricula shall be recorded separately.

**OPS 176. Monitoring of training and checking activities**

(1) An AOC holder shall forward to the Authority, at least five working days prior to the scheduled activity, the dates, location, reporting times and report of all—

(a) training for which a curriculum is approved in the AOC holder’s training programme; and

(b) proficiency, competence and line checks. so as to enable adequate supervision of its training and checking activities,

(2) Failure to provide the information in subsection (1) may invalidate the training or check and the Authority may require that it be repeated for observation purposes.

**OPS 177. Eligibility period**

(1) A crew member who is required to take a proficiency check, a test or competency check, or recurrent training to maintain qualification for commercial air transport operations shall complete those requirements at any time during the eligibility period.

(2) The eligibility period is defined as the 3 month period including the month prior, the month due, and the month after any due date specified by these Regulations.

(3) Completion of the requirement at any time during the period shall be considered as completed in the month due for calculation of the next due date.

**PART IX**

**FLIGHT DISPATCHER**

**OPS 178. Initial Training-flight dispatcher**

(1) No person shall serve nor shall any air operator certificate holder use a person as a flight dispatcher unless that person has completed the initial training approved by the Authority.

(2) Aircraft initial flight dispatcher training shall include the pertinent portions of the operations manual relating to aircraft specific flight preparation procedures, performance, mass and balance, systems, limitations for the aircraft types within the fleet.

(3) A flight dispatcher shall provide initial aircraft training for flight operations officers that include instruction in at least the following general dispatch subjects—

(a) normal and emergency communications procedures;

(b) available sources of weather information;

(c) actual and prognostic weather charts;

(d) interpretation of weather information;

(e) adverse weather phenomena, such as clear air turbulence, wind shear, and thunderstorms;

(f) notice to Airmen or NOTAM system;

(g) navigational charts and publications;

(h) air traffic control and instrument flight rules procedures;

(i) familiarisation with operational area;

(j) characteristics of special aerodromes and other operationally significant aerodromes which the operator uses, such as terrain, approach aids, or prevailing weather phenomena;

(k) joint flight operations officer and group responsibilities; and

(l) approved crew resource management training for flight dispatchers.

(4) An AOC holder shall provide initial aircraft training for flight dispatchers that include instruction in at least the following aircraft characteristics—

(a) general operating characteristics of the AOC holder’s aircraft;

(b) aircraft specific training with emphasis on the following topics—

(i) aircraft operating and performance characteristics;

(ii) navigation equipment;

(iii) instrument approach and communications equipment; and

(iv) emergency equipment.

(c) flight manual training; and

(d) equipment training.

(5) An AOC holder shall provide initial aircraft training for flight dispatchers that include instruction in at least the following emergency procedures—

(a) assisting the flight crew in an emergency; and

(b) alerting of appropriate governmental, company and private agencies.

(6) An AOC holder shall ensure that initial ground training for flight dispatchers includes a competence check given by an appropriate supervisor or ground instructor that demonstrates the required knowledge and abilities.

**OPS 179. Competence checks- flight dispatchers**.

(1) A person shall not serve nor shall any AOC holder use person as a flight operations officer unless, within the preceding 12 months before that service, such person passed the competency check, approved by the Authority, performing the flight preparation and subsequent duties appropriate to that person’s assignment.

(2) Evaluators of the flight operations officer referred to under subsection (1) shall conduct competency checks for flight operations officers to demonstrate that the candidate's proficiency level is sufficient to ensure the successful outcome of all dispatch operations.

(3) An authorized person shall observe and evaluate competency checks for flight operations officers.

(4) Each competency check for flight operations officers shall include—

(a) an evaluation of all aspects of the dispatch function;

(b) a demonstration of the knowledge and abilities in normal and abnormal situations; and

(c) an observation of actual flights being dispatched.

(5) An evaluator of newly hired flight operations officer shall include during initial competency checks, an evaluation of all of geographic areas and types of aircraft the flight operations officer shall be qualified to dispatch.

(6) The authorized person may approve a competency check of representative aircraft types when, in his judgement, a check including all types is impractical or unnecessary.

(7) Evaluators may limit initial equipment and transition competency checks solely to the dispatch of the types of aircraft on which the flight operations officer is qualifying, unless the check is to simultaneously count as a recurrent check.

(8) An evaluator of flight operations officers shall include, during recurrent and re-qualification competency checks, a representative sample of aircraft and routes for which the flight operations officers maintain current qualification.

(9) A flight operations officer shall not qualify in extended diversion time operations or EDTO or other special operations authorised by the Authority unless that flight operations officer submits special operations competency checks to the Authority.

**OPS 180. flight dispatcher Persons qualified in flight release**

(1) An Operator engaging flight operations officers or flight dispatchers employed in conjunction with an approved method of control and supervision of flight operations shall be licensed in accordance with the provisions of Civil Aviation (Personnel Licensing) Regulations,

(2) A person shall not act as a flight operations officer in releasing a scheduled passenger-carrying commercial air transport operation aircraft unless that person holds a flight operations officer licence or an Airline Transport Pilot Licence, and is currently qualified by the air operator certificate holder for the operation and type of aircraft used.

(3) In accepting proof of qualifications other than the option of holding of a flight operations officer or flight dispatcher license, the Authority, in accordance with the approved method of control and supervision of flight operations, shall require that, as a minimum, such persons meet the requirements specified in Civil Aviation (Personnel Licensing) Regulations for the flight operations officer or flight dispatcher license.

(4) A flight operations officer or flight dispatcher shall not be assigned to duty unless that person has—

(a) Satisfactorily completed the operator-specific training course that addresses all the specific components of its approved method of control and supervision of flight operations as specified in regulation 26 of these Regulations;

(b) made, within the preceding 12 months, at least two qualification flights in the flight crew compartment of an aeroplane over any area for which that individual is authorized to exercise flight supervision and the flight should include landings at as many aerodromes as practicable;

(c) demonstrated to the operator a knowledge of—

(i) the contents of the operations manual described in the SECOND SCHEDULE;

(ii) the radio equipment in the aeroplanes used; and

(iii) the navigation equipment in the aeroplanes used;

(d) 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—

(i) the seasonal meteorological conditions and the sources of meteorological information;

(ii) the effects of meteorological conditions on radio reception in the aeroplanes used;

(iii) the peculiarities and limitations of each navigation system which is used by the operation; and

(iv) the aeroplane loading instructions;

(e) demonstrated to the operator knowledge and skills related to human performance relevant to dispatch duties; and

(f) demonstrated to the operator the ability to perform the duties specified in regulation 102 of these regulations.

(5) 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.

(6) A flight operations officer or flight dispatcher shall not be assigned to duty after 12 consecutive months of absence from such duty, unless the provisions of subsection (4) are met.

**OPS 181. Line Observations-flight operations officer.**

A person shall not serve nor shall any air operator certificate holder use a person as a flight operations officer unless within the preceding twelve months before that service, that person has observed, in the cockpit, the conduct of two complete flights over routes representative of those for

**OPS 182. Company procedures indoctrination**

(1) A person shall not serve nor shall an air operator certificate holder use a person as a crew member or flight operations officer unless that person has completed the company procedures indoctrination curriculum approved by the Authority, which shall include a complete review of operations manual procedures pertinent to the crew member or flight operation officer’s duties.

(2) An AOC holder shall ensure that all operations personnel are provided with company indoctrination training that covers the following areas—

(a) AOC holder's organisation, scope of operation, and administrative practices as applicable to crew member assignments and duties;

(b) appropriate provisions of civil aviation regulations and other applicable regulations and guidance materials;

(c) AOC holder policies and procedures;

(d) applicable crew member manuals; and

(e) appropriate portions of the AOC holder's operations manual.

(3) An AOC holder shall provide a minimum of 40 hours of programmed instruction for basic indoctrination training unless a reduction of the hours of instruction is approved by the Authority.

**OPS 183. Recurrent Training- flight operations officers**

(1) A person shall not serve nor shall AOC holder use a person as a flight operations officer unless within the preceding twelve months that person has completed the recurrent ground curricula approved by the Authority.

(2) An AOC holder shall—

(a) establish and maintain a recurrent training programme, approved by the Authority and established in the AOC holder’s operations manual, to be completed annually by each flight operations officer;

(b) conduct all recurrent training, of flight operations officers, by suitably qualified personnel;

(c) ensure that, every twelve months, each flight operations officer receive recurrent training in at least the following—

(i) aircraft-specific flight preparation;

(ii) emergency assistance to flight crews;

(iii) crew resource management; and

(iv) recognition and transportation of dangerous goods; and

(d) may administer each of the recurrent ground and flight training curricula concurrently or intermixed, but shall record completion of each of these curricula separately.

(3) A flight operations officer shall undergo recurrent training relevant to the type or variant of aircraft and operations conducted by the AOC holder.

186. (1) Where the Authority requires that a flight dispatcher, employed in conjunction with an approved method of control and supervision of flight operations, be licensed, that flight dispatcher shall be licensed in accordance with the provisions of Part …Personnel Licencing.

(2) In accepting proof of qualifications other than the option of holding of a flight dispatcher licence, the State of the Operator, in accordance with the approved method of control and supervision of flight operations, shall require that, as a minimum, such persons meet the requirements specified in Annex 1 for the flight dispatcher licence.

(3) A flight dispatcher shall not be assigned to duty unless that person has—

(a) satisfactorily completed the operator-specific training course that addresses all the specific components of its

approved method of control and supervision of flight operations specified in section 10;

(b) 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 and the flight should

include landings at as many aerodromes as practicable;

(c) demonstrated to the operator a knowledge of--

i. the contents of the operations manual described in Appendix 2;

ii. the radio equipment in the aeroplanes used; and

iii. the navigation equipment in the aeroplanes used;

(d) 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:

i. the seasonal meteorological conditions and the sources of meteorological information;

ii. the effects of meteorological conditions on radio reception in the aeroplanes used;

iii. the peculiarities and limitations of each navigation system which is used by the operation; and

iv. the aeroplane loading instructions;

(e) demonstrated to the operator knowledge and skills related to human performance relevant to dispatch duties; and

(f) demonstrated to the operator the ability to perform the duties specified in section 103 of this part.

(4) A 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.

(5) A flight dispatcher shall not be assigned to duty after 12 consecutive months of absence from such duty, unless the provisions of section 10.3X are met and satisfied.

**PART X**

**MANUALS, LOGS AND RECORDS**

**OPS 184. Flight manual**

(1) An operator shall ensure that a flight manual contains the information specified in Part………. Part….. Airworthiness of Aircraft.

(2) The flight manual shall be updated by implementing changes made mandatory by the Authority.

**OPS 185. Operator’s maintenance control manual**

(1) The operator’s maintenance control manual provided in accordance with Part ……….. Part…Operators Certification and Administration), shall contain the following information—

(a) a description of the procedures required by Part……….. Part….. (Operators Certification and Administration) including where applicable—

(i) a description of the administrative arrangements between the operator and the approved maintenance organisation;

(ii) a description of the maintenance procedures and the procedures for completing and signing a maintenance release when maintenance is based on a system other than that of an approved maintenance organization.

(b) names and duties of the qualified person or persons required by section 117(4);

(c) a reference to the maintenance programme required by section 117(5);

(d) a description of the methods used for the completion and retention of the operator’s continuing airworthiness ormaintenance records required by section 120;

(e) a description of the procedures for monitoring, assessing and reporting maintenance and operational experience required by PartSection 121(1).

(f) a description of the procedures for complying with the service information reporting requirements of Part 5 Airworthiness of Aircraft.;

(g) a description of procedures for assessing continuing airworthiness information and implementing any resulting actions, as required by section 121(2).

(h) a description of the procedures for implementing action resulting from mandatory continuing airworthiness information;

(i) a description of establishing and maintaining a system of analysis and continued monitoring of the performance and efficiency of the maintenance programme in order to correct any deficiency in that programme;

(j) a description of aircraft types and models to which the manual applies;

(k) a description of procedures for ensuring that unserviceabilities affecting airworthiness are recorded and rectified; and

(l) a description of the procedures for advising the Authority of significant in-service occurrences.

(2) An operator shall submit two copies of the maintenance control manual referred to in subsection (1) and any amendments to it review and approval by the Authority.

**OPS 186. Maintenance programme**

(1) An operator shall ensure that maintenance programme for each aeroplane as required by Part………. the Civil Aviation (Operators Certification and Administration) Regulation shall contain the following information—

(a) maintenance tasks and the intervals at which these are to be performed, taking into account the anticipated utilisation of the aeroplane;

(b) where applicable, a continuing structural integrity programme;

(c) procedures for changing or deviating from paragraphs (a) and (b); and

(d) where applicable, condition monitoring and reliability programme descriptions for aircraft systems, components and engines.

(2) Maintenance tasks and intervals that have been specified as mandatory in approval of the type design shall be identified as such by the operator.

(3) The maintenance programme shall be based on maintenance programme information made available by the State of Design or by the organisation responsible for the type design, and any additional applicable experience.

(4) Electronic Aircraft Maintenance Records (EAMR) may be used in accordance with Part………. the Civil Aviation (Approved Maintenance Organisation) Regulations that address the existence and use of EAMR digital and other paperless forms of maintenance records.

**OPS 187. Journey log book**

(1)An aeroplane journey log book shall contain the following items and the corresponding roman numerals—

I — Aeroplane nationality and registration

II — Date

III — Names of crew members

IV — Duty assignments of crew members

V — Place of departure

VI — Place of arrival

VII — Time of departure

VIII — Time of arrival

IX — Hours of flight

X — Nature of flight (private, aerial work, scheduled or non-scheduled)

XI — Incidents, observations, if any

XII — Signature of person in charge.

(2) Entries in the journey log book shall be made currently and in ink or indelible pencil.

(3) Completed journey log book shall be retained to provide a continuous record of the last 6 months of operations.

**OPS 188. Records of emergency and survival equipment carried**

(1) An Operator shall at all times have available for immediate communication to rescue coordination centers, lists containing information on the emergency and survival equipment carried on board any aeroplane engaged in air navigation.

(2) The information specified in subsection (1) shall include, as applicable—

(a) the number, colour and type of life rafts and pyrotechnics;

(b) details of emergency medical supplies;

(c) water supplies; and

(d) the type and frequencies of the emergency portable radio equipment.

**OPS 189. Portable electronic devices**

A PIC or any other crew member shall not permit any person to use, nor shall any person use a portable electronic device on board an aircraft that may adversely affect the performance of aircraft systems and equipment unless—

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

(b) for commercial air transport operations, the AOC holder makes a determination of acceptable devices and publishes that information in the Operations Manual for the crew members’ use; and

(c) the PIC informs passengers of the permitted use.

**OPS 190. Flight recorder records**

The operator shall ensure that to the extent possible, in the event the aeroplane becomes involved in an accident or incident, the preservation of all related flight recorder records and, where necessary, the associated flight recorders, and their retention in safe custody pending their disposition as determined in accordance with the Civil Aviation (Aircraft Accident and Incident Investigation) Regulations published in Statutory Instrument………………;

**PART XI**

**CABIN CREW**

**OPS 191. Initial aircraft ground training- cabin crew members**

(1) A person shall not serve nor shall an air operator certificate holder use a person as a cabin crew member unless that person has completed the initial ground training approved by the Authority for aircraft type.

(2) Initial aircraft ground training for cabin crew members 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.

(3) An AOC holder shall have an initial ground training curriculum for cabin crew members applicable to the type of operations conducted and aircraft flown, including at least the following general subjects—

(a) aircraft familiarization—

(i) aircraft characteristics and description;

(ii) cockpit configuration;

(iii) cabin configuration;

(iv) galleys;

(v) lavatories; and

(vi) stowage areas.

(b) aircraft equipment and furnishings—

(i) cabin crew member stations;

(ii) cabin crew member panels;

(iii) passenger seats;

(iv) passenger service units and convenience panels;

(v) passenger information signs;

(vi) aircraft markings; and

(vii) aircraft placards.

(c) aircraft systems—

(i) air conditioning and pressurisation system;

(ii) aircraft communication systems call, interphone and passenger address;

(iii) lighting and electrical systems;

(iv) oxygen systems flight crew, observer and passenger; and

(v) water system.

(d) aircraft exits—

(i) general information;

(ii) exits with slides or slide rafts for pre-flight and normal operation;

(iii) exits without slides pre-flight and normal operations; and

(iv) window exits.

(e) crew member communication and coordination—

(i) authority of pilot-in-command;

(ii) routine communication signals and procedures; and

(iii) crew member briefing.

(f) routine crew member duties and procedures—

(i) crew member general responsibilities;

(ii) reporting duties and procedures for specific aircraft;

(iii) pre-departure duties and procedures prior to passenger boarding;

(iv) passenger boarding duties and procedures;

(v) prior-to-movement-on-the-surface duties and procedures;

(vi) prior-to-take-off duties and procedures applicable to specific aircraft;

(vii) in-flight duties and procedures;

(viii) prior-to-landing duties and procedures;

(ix) movement on the surface and arrival duties and procedures;

(x) after-arrival duties and procedures; and

(xi) intermediate stops.

(g) passenger handling responsibilities—

(i) crew member general responsibilities;

(ii) infants, children, and unaccompanied minors;

(iii) passengers needing special assistance;

(iv) passengers needing special accommodation;

(v) carry-on stowage requirements;

(vi) passenger seating requirements;

(vii) smoking and no-smoking requirements and;

(viii) approved Crew Resource Management (CRM) training.

(4) An AOC holder shall have an initial ground training curriculum for cabin crew members applicable to the type of operations conducted and aircraft flown, including at least the following aircraft specific emergency subjects—

(a) emergency equipment—

(i) emergency communication and notification systems;

(ii) aircraft exits;

(iii) exits with slides or slide rafts, emergency operation;

(iv) slides and slide rafts in a ditching;

(v) exits without slides emergency operation;

(vi) window exits emergency operation;

(vii) exits with tail cones, emergency operation;

(viii) cockpit exits emergency operation;

(ix) ground evacuation and ditching equipment;

(x) first-aid equipment;

(xi) portable oxygen systems, oxygen bottles, chemical oxygen generators, protective breathing equipment;

(xii) fire-fighting equipment;

(xiii) emergency lighting systems; and

(xiv) additional emergency equipment.

(b) emergency assignments and procedures—

(i) general types of emergencies specific to aircraft;

(ii) emergency communication signals and procedures;

(iii) rapid decompression;

(iv) insidious decompression and cracked window and pressure seal leaks;

(v) fires;

(vi) ditching;

(vii) ground evacuation;

(viii) unwarranted evacuation for example, passenger initiated;

(ix) illness or injury;

(x) abnormal situations involving passengers or crew members;

(xi) unlawful interference;

(xii) bomb threat;

(xiii) turbulence;

(xiv) other unusual situations; and

(xv) previous aircraft accidents and incidents.

(c) aircraft specific emergency drills—

(i) emergency exit drill;

(ii) hand fire extinguisher drill;

(iii) emergency oxygen system drill;

(iv) flotation device drill;

(v) ditching drill, if applicable;

(vi) life raft removal and inflation drill, if applicable;

(vii) slide raft pack transfer drill, if applicable;

(viii) slide or slide raft deployment, inflation, and detachment drill, where applicable; and

(ix) emergency evacuation slide drill, where applicable.

(5) An AOC holder shall ensure that initial ground training for cabin crew members include a competence check to determine that person’s ability to perform assigned duties and responsibilities.

(6) An AOC holder shall ensure that initial ground training for cabin crew members consists of at least the following programmed hours of instruction—

(a) multi-engine turbine: 32 hours; and

(b) multi-engine reciprocating: 16 hours.

(7) An operator shall ensure that a training programme is completed by all persons before being assigned as a cabin crew member.

(8) Cabin crew members shall complete a recurrent training programme annually.

(9) The training programmes shall ensure that each person is—

(a) competent to execute those safety duties and functions that the cabin attendant is assigned to perform in the event of an emergency or in a situation requiring emergency evacuation;

(b) drilled and capable in the use of emergency and life-saving equipment required to be carried, such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment, first-aid and universal precaution kits, and automated external defibrillators;

(c) aware of other crew members’ assignments and functions in the event of an emergency so far as is necessary for the fulfilment of the cabin crew member’s own duties;

(d) aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin; and

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

**OPS 192. Competence checks: cabin crew members**

(1) A person shall not serve nor shall any AOC holder use a person as a cabin crew member unless, within the preceding twelve months before that service, that person has passed the competency check approved by the Authority performing the emergency duties appropriate to that person’s assignment.

(2) Evaluators shall conduct competency checks for cabin crew members to demonstrate that the candidate's proficiency level is sufficient to successfully perform assigned duties and responsibilities.

(3) A qualified supervisor or inspector approved by the Authority shall observe and evaluate competency checks for cabin crew members.

(4) Evaluators shall include during each cabin crew member competency check a demonstrated knowledge of—

(a) emergency equipment: emergency communication and notification systems:

(i) aircraft exits;

(ii) exits with slides or slide rafts emergency operation;

(iii) slides and slide rafts in a ditching;

(iv) exits without slides emergency operation;

(v) window exits emergency operation;

(vi) exits with tail cones emergency operation;

(vii) cockpit exits emergency operation;

(viii) ground evacuation and ditching equipment;

(ix) first-aid equipment;

(x) portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment or PBE;

(xi) fire-fighting equipment;

(xii) emergency lighting systems; and

(xiii) additional emergency equipment.

(b) emergency procedures—

(i) general types of emergencies specific to aircraft;

(ii) emergency communication signals and procedures;

(iii) rapid decompression;

(iv) insidious decompression and cracked window and pressure seal leaks;

(v) fires;

(vi) ditching;

(vii) ground evacuation;

(viii) unwarranted evacuation, for example that is passenger initiated;

(ix) illness or injury;

(x) abnormal situations involving passengers or crew members;

(xi) turbulence; and

(xii) other unusual situations.

(c) emergency drills—

(i) location and use of all emergency and safety equipment carried on the aircraft;

(ii) the location and use of all types of exits;

(iii) actual donning of a lifejacket where fitted;

(iv) actual donning of protective breathing equipment; and

(v) actual handling of fire extinguishers.

(d) crew resource management—

(i) decision making skills;

(ii) briefings and developing open communication;

(iii) inquiry, advocacy, and assertion training; and

(iv) workload management.

(e) dangerous goods—

(i) recognition of and transportation of dangerous goods;

(ii) proper packaging, marking, and documentation; and

(iii) instructions regarding compatibility, loading, storage and handling characteristics.

(f) security—

(i) unlawful interference; and

(ii) disruptive passengers.

(5) An operator shall establish and maintain a cabin crew training programme that is designed to ensure that persons who receive training acquire the competency to perform their assigned duties and includes or makes reference to a syllabus for the training programme in the company operations manual. The training programme should include Human Factors training.

**OPS 193. Assignment of emergency duties**

(1) An operator shall establish, to the satisfaction of the Authority, the minimum number of cabin crew required for each type of aeroplane, based on seating capacity or the number of passengers carried, in order to effect a safe and expeditious evacuation of the aeroplane, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation.

(2) The operator shall assign the functions referred to in subsection (1) for each type of aeroplane.

**OPS 194. Cabin crew at emergency evacuation stations**

Each cabin crew member assigned to emergency evacuation duties shall occupy a seat provided in accordance with the Civil Aviation (Instruments and Equipment) Regulation during take-off and landing and whenever the pilot-in-command so directs.

**OPS 195. Arming of automatic emergency exits.**

A person shall not cause an aircraft carrying passengers to be moved on the surface, take-off or land unless each automatically deployable emergency evacuation assisting means installed on the aircraft is ready for evacuation.

**OPS 196. Accessibility of emergency exits and equipment**

A person shall not allow carry-on baggage or other items to block access to the emergency exits when the aircraft is moving on the surface, during take-off or landing, or while passengers remain on board.

**OPS 197. Stops where passengers remain on board**

(1) A PIC shall ensure that where passengers remain on board the aircraft—

(a) all engines are shut down;

(b) at least one floor level exit remains open to provide for the evacuation of passengers where necessary; and

(c) there is at least one person who is qualified in the emergency evacuation of the aircraft and who has been identified to the passengers on board as responsible for the passenger safety is immediately available.

(2) When refuelling with passengers on board, the PIC or a designated AOC holder’s representative shall ensure that the AOC holder’s operations manual procedures are followed.

**OPS 198. Protection of cabin crew during flight**

Each cabin crew member shall be seated with seat belt or, when provided, safety harness fastened during take-off and landing and whenever the pilot-in-command so directs.

**OPS 199. Training**

(1) An operator shall establish and maintain a training programme, approved by the Authority, to be completed by all persons before being assigned as a cabin crew member.

(2) Cabin crew members shall complete a recurrent training programme annually.

(3) The training programs established in terms of subsection (1) shall ensure that each person is—

(a) competent to execute those safety duties and functions which the cabin crew member is assigned to perform in the event of an emergency or in a situation requiring emergency evacuation;

(b) (b) drilled and capable in the use of emergency and life-saving equipment required to be carried, such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment, first-aid and universal precaution kits, and automated external defibrillators;

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

(d) aware of other crew members’ assignments and functions in the event of an emergency so far as is necessary for the fulfilment of the cabin crew member’s own duties;

(e) aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin; and

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

**OPS 200. Supervised line experience- cabin crew**.

A person training as a cabin crew member shall—

(a) perform the functions of a cabin crew member for a minimum of two flights under the supervision of a cabin crew instructor; and

(b) not serve as a required crew member.

**OPS 201. Recurrent Training- cabin crew members**

(1) An operator shall ensure—

(a) a cabin crew member undergoes recurrent training, covering the actions assigned to each cabin crew member in normal and emergency procedures and drills relevant to the type or variant of aircraft on which they operate as specified in this regulation; and

(b) the recurrent training and checking programme, approved by the Authority includes theoretical and practical instruction together with individual practice as provided in these regulations.

(2) The period of validity of recurrent training and the associated checking required by this regulation shall be twelve months in addition to the remainder of three-month of issue.

(3) If issued within the final three calendar months of validity of a previous check, the period of validity shall extend from the date of issue until twelve months from the expiry date of that previous check.

(4) An operator shall ensure—

(a) recurrent training required under this regulation is conducted by suitably qualified persons;

(b) ensure that every twelve months, the programme of practical training includes the following—

(i) emergency procedures including pilot incapacitation;

(ii) evacuation procedures including crowd control techniques;

(iii) touch-drills by each cabin crew member for opening normal and emergency exists for passenger evacuation;

(iv) the location and handling of emergency equipment, including oxygen systems, and the donning by each cabin crew member of lifejackets, portable oxygen and protective breathing equipment;

(v) first aid and the contents of the first aid kit;

(vi) stowage of articles in the cabin;

(vii) security procedures;

(viii) incident and accident review; and

(ix) crew resource management.

(c) at intervals not exceeding three years, recurrent training for cabin crew members also includes—

(i) the operation and actual opening of all normal and emergency exits for passenger evacuation in an aeroplane or representative training device;

(ii) demonstration of the operation of all other exits including cock pit windows: and

(iii) the training of cabin crew member undergoing realistic and practical training in the use of all fire-fighting equipment, including protective clothing, representative of that carried in the aeroplane shall include—

A. each cabin crew member extinguishing a fire characteristic of an aeroplane interior fire except that, in the case of Halon extinguishers, an alternative extinguishing agent may be used; and

B. the donning and use of protective breathing equipment by each cabin crew member in an enclosed, simulated smoke-filled environment.

(i) use of pyrotechnics, actual or representative devices; and

(ii) demonstration of the use of the life-raft, or slide-raft, where fitted.

(d) all appropriate requirements in these regulations are included in the training of cabin crew members.

**OPS 202. Assignment of emergency duties**

The operator shall establish, to the satisfaction of the Authority, the minimum number of cabin crew required for each type of aeroplane, based on seating capacity or the number of passengers carried, in order to effect a safe and expeditious evacuation of the aeroplane, and the necessary functions to be performed in an emergency or a situation requiring emergency evacuation and the operator shall assign these functions for each type of aeroplane.

**OPS 203. Cabin crew at emergency evacuation stations**

Each cabin crew member assigned to emergency evacuation duties shall occupy a seat provided in accordance with section 114 during take-off and landing and whenever the pilot-in-command so directs.

Protection of cabin crew during flight

208. Each cabin crew member shall be seated with seat belt or, when provided, safety harness fastened during take-off and landing and whenever the pilot-in-command so directs.

Training

209. The operator shall establish and maintain a training programme, approved by the Authority, to be completed by all persons before being assigned as a cabin crew member.

210. All Cabin crew members shall complete a recurrent training programme annually and

211. The training programmes specified in subsection (1) shall ensure that each person is—

(a) competent to execute those safety duties and functions which the cabin crew member is assigned to perform in the event of an emergency or in a situation requiring emergency evacuation;

(b) drilled and capable in the use of emergency and life-saving equipment required to be carried, such as life jackets, life rafts, evacuation slides, emergency exits, portable fire extinguishers, oxygen equipment, first-aid and universal precaution kits, and automated external defibrillators;

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

(d) aware of other crew members’ assignments and functions in the event of an emergency so far as is necessary for the fulfilment of the cabin crew member’s own duties;

(e) aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin; and

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

SUB PART XII

SECURITY

Security of the flight crew compartment

204. (1) The operator shall ensure that in all aeroplanes which are equipped with a flight crew compartment door, the flight crew compartment door shall be capable of being locked, and means shall be provided by which cabin crew can discreetly notify the flight crew in the event of suspicious activity or security breaches in the cabin.

(2) All passenger-carrying aeroplanes of a maximum certificated take-off mass in excess of 54 500 kg or a maximum certificated take-off mass in excess of 45 500 kg with a passenger seating capacity greater than 19 or with a passenger seating capacity greater than 60 shall be equipped with an approved flight crew compartment door that is —

(a) designed to resist penetration by small arms fire and grenade shrapnel; and

(b) designed to resist forcible intrusions by unauthorised persons; and

(c) capable of being locked and unlocked from either pilot’s station.

(3) In all aeroplanes which are equipped with a flight crew compartment door in accordance with subsection (2)—

(a) the door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorised persons; and

(b) means shall be provided for monitoring from either pilot’s station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

(4) All passenger-carrying aeroplanes shall be equipped with an approved flight crew compartment door, where practicable, that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorised persons., and the door shall be capable of being locked and unlocked from either pilot’s station.

(5) In all aeroplanes which are equipped with a flight crew compartment door in accordance with subsections (4)—

(a) the door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorised persons; and

(b) means shall be provided for monitoring from either pilot’s station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

Aeroplane search procedure checklist

205. (1) Every operator shall ensure that there is on board a checklist of the procedures to be followed in searching for a bomb in case of suspected sabotage and for inspecting aeroplanes for concealed weapons, explosives or other dangerous devices when a well-founded suspicion exists that the aeroplane may be the object of an act of unlawful interference.

(2) The checklist referred to in subsection (1) shall be supported by guidance on the appropriate course of action to be taken should a bomb or suspicious object be found and information on the least-risk bomb location specific to the aeroplane.

(3) Specialised means of attenuating and directing the blast shall be provided for use at the least-risk bomb location.

Training programmes

206. (1) Every operator shall establish and maintain—

(a) an approved security training programme which ensures crew members act in the most appropriate manner to minimize the consequences of acts of unlawful interference;

(b) 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.

(2) As a minimum, approved security training programme shall include the following elements—

(a) determination of the seriousness of any occurrence;

(b) crew communication and coordination;

(c) appropriate self-defense responses;

(d) use of non-lethal protective devices assigned to crew members whose use is authorised by the Authority;

(e) understanding of behaviour of terrorists so as to facilitate the ability of crew members to cope with hijacker behaviour and passenger responses;

(f) live situational training exercises regarding various threat conditions;

(g) flight crew compartment procedures to protect the aeroplane; and

(h) aeroplane search procedures and guidance on least-risk bomb locations where practicable.

Reporting acts of unlawful interference

207. Following an act of unlawful interference, the pilot-in-command shall submit, without delay, a report of such an act to the Authority.

Stowage of weapons removed from passengers

208. Where the operator accepts the carriage of weapons removed from passengers, the aeroplane shall have provision for stowing such weapons in a place so that they are inaccessible to any person during flight time.

SUB PART XIII

DANGEROUS GOODS

Operators with no specific approval for the transport of dangerous goods as cargo

209. (1) An operator with no specific approval to transport dangerous goods shall —

(a) establish a dangerous goods training programme that meets—

(i) the requirements of Part…………. Civil Aviation (Dangerous Goods) Regulations;

(ii) the applicable requirements of the Technical Instructions, as appropriate and details of the dangerous goods training programme, shall be included in the operator’s operations manuals;

(iii) establish dangerous goods policies and procedures in its operations manual to meet, at a minimum, the requirements of Part…………. the Civil Aviation (Dangerous Goods) Regulations and the Technical Instructions to allow operator personnel to—

A. identify and reject undeclared dangerous goods, including COMAT classified as dangerous goods; and

B. report to the appropriate authorities of the State of the operator and the State in which it occurred any—

I. occasions when undeclared dangerous goods are discovered in cargo or mail; and

II. dangerous goods accidents and incidents.

(b) 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—

(i) when not loaded, segregated, separated or secured in accordance with the Technical Instructions,; and

(ii) without information having been provided to the pilot-in-command;

(c) accept, handle, store, transport, load and unload dangerous goods, including COMAT classified as dangerous goods as cargo on board an aircraft; and

(d) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo.

Operators with a specific approval for the transport of dangerous goods as cargo

210. The Authority shall issue a specific approval for the transport of dangerous goods and ensure that the Operator—

(a) establishes a dangerous goods training programme that meets the requirements in the Technical Instructions, and the requirements of Part ………..the Civil Aviation (Dangerous Goods) Regulations as appropriate;

(b) details of the dangerous goods training programme shall be included in the operator’s operations manuals;

(c) establishes dangerous goods policies and procedures in its operations manual to meet, at a minimum, the requirements of Part………..Civil Aviation (Dangerous Goods) Regulations and the Technical Instructions to enable operator personnel to—

(i) identify and reject undeclared or misdeclared dangerous goods, including COMAT classified as dangerous goods;

(ii) report to the appropriate authorities of the state of the operator and the State in which it occurred any—

A. occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail; and

B. dangerous goods accidents and incidents;

(d) report to the appropriate authorities of the state 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; and

(e) accept, handle, store, transport, load and unload dangerous goods, including COMAT classified as dangerous goods as cargo on board an aircraft; and

(f) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo.

Provision of information

211. (1) 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.

(2) The provisions relating to Dangerous Goods set forth in sub-part X shall also apply to domestic commercial air transport operations.

SUB PART XIII

CARGO COMPARTMENT SAFETY

Transport of items in the cargo compartment

212. (1) An Operator shall establish a policy and procedures for the transport of items in the cargo compartment, which include the conduct of a specific safety risk assessment.

(2) The risk assessment specified in subsection (1) shall include at least the—

(a) hazards associated with the properties of the items to be transported;

(b) capabilities of the operator;

(c) operational considerations including area of operations, diversion time;

(d) capabilities of the aeroplane and its systems including cargo compartment fire suppression capabilities;

(e) containment characteristics of unit load devices;

(f) packing and packaging;

(g) safety of the supply chain for items to be transported; and

(h) quantity and distribution of dangerous goods items to be transported.

(3) The operator shall comply with the requirements for the transport of dangerous goods as specified in Part …………the applicable Civil Aviation (Dangerous Goods) Regulations.

Fire protection

213. (1) The elements of the cargo compartment 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.

(2) The operator shall establish policy and procedures that address the items to be transported in the cargo compartment.

(3) The policy and procedures specified in subsection (2) shall ensure to a reasonable certainty that in the event of a fire involving those items in the cargo compartment, 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.

SUB PART XII

EXEMPTIONS

Application for exemptions

223. (1) A person or operator may apply to the Authority for an exemption from any provision of these Regulations.

(2) A request for exemption shall be made in accordance with the requirements of these Regulations and an application for such exemption shall be submitted and processed in a manner prescribed in the applicable technical guidance material.

(3) A request for an exemption must contain the applicant’s—

(a) name;

(b) physical address and mailing address;

(c) telephone number;

(d) fax number where available; and

(e) email address where available;

(4) The application shall be accompanied by a fee prescribed by the Authority in the applicable aeronautical information circulars for technical evaluation.

Exemptions

224. (1) The Authority may, upon consideration of the circumstances of a particular organisation or individual, issue an exemption providing relief from specified provisions of these Regulations, provided that—

(a) the Authority finds that the circumstances presented warrant the exemption; and

(b) a level of safety shall be maintained equal to that provided by the Regulations from which the exemption is sought.

(2) The exemption referred to in subsection (1) may be terminated or amended at any time by the Authority.

(3) A person or operator who receives an exemption shall have a means of notifying the management and appropriate personnel performing functions subject to the exemption.

PART VIII

GENERAL PROVISIONS

Possession of the licence, certificate, approval or authorisation

225. (1) A holder of a licence, certificate, approval, or authorisation issued by the Authority shall have in his or her physical possession or at the workstation when exercising the privileges of that licence, certificate, approval or authorisation.

(2) A crew member of a foreign registered aircraft shall hold a valid licence, certificate or authorisation and have in his or her physical possession or at the workstation when exercising the privileges of that licence, certificate, approval or authorisation

Inspection of licences, certificates, approval or authorisation

226. A person who holds a licence, certificate, approval or authorisation required by these regulations shall present it for inspection upon a request from the Authority or any other person authorized by the Authority.

Change of Address

227.(1) A holder of a licence, certificate, approval or authorisation, or any other such document issued under these Regulations shall notify the Authority of any change in the physical and mailing address and shall do so in the case of—

(a) physical address, at least fourteen days before the change; and

(b) mailing address, upon the change;

(2) A person who does not notify the Authority of the change in the physical address within the time frame specified in subsection (1) shall not exercise the privileges of the certificate or authorisation.

Replacement of licence, certificate, approval or authorisation

228. A person may apply to the Authority in a form and manner determined by the Authority in the applicable technical guidance material for replacement of documents issued under these Regulations when such documents are lost or destroyed.

Suspension and revocation of licence, certificate, approval or authorisation

229. (1) The Authority may, where it considers it to be in public interest, suspend provisionally, pending further investigation, any licence, certificate, authorisation or any such other document issued under these Regulations.

(2) The Authority may, upon the completion of an investigation which has shown sufficient ground to the Authority’s satisfaction and where it considers it to be in public interest, revoke, suspend, or vary any licence, certificate, approval, authorisation or any other document issued or granted under these Regulations.

(3) The Authority may, where it considers it to be in public interest, prevent any person or aircraft from flying.

(4) A holder or any person having the possession or custody of any licence, certificate, approval, authorisation or any such other documents which have been revoked, suspended or varied under these Regulations shall surrender the licence, certificate, approval, authorisation or such other documents to the Authority within fourteen days from the date of revocation, suspension or variation.

(5) The breach of any condition subject to which any licence, certificate, authorisation or any such other document has been granted or issued under these Regulations shall render the document invalid during the continuance of the breach.

Use and retention of licence, certificate, authorisation and records

230.(1) A person shall not—

(a) use any licence, certificate, approval, authorisation, or such other document issued or required under these Regulations which has been forged, altered, revoked, or suspended, or to which that person is not entitled;

(b) (b) forge or alter any licence, certificate, approval, authorisation or any such other document issued or required by, or under these Regulations;

(c) lend any licence, certificate, approval, authorisation or any such other document issued or required under these Regulations to any other person;

(d) make any false representation for the purpose of procuring for himself or herself or any other person the issue, renewal or variation of the licence, certificate, approval, authorisation or any such other document.

(2) During the period for which it is required under these Regulations to be preserved, a person shall not mutilate, alter, render illegible or destroy any records, or any entry made therein, required by or under these Regulations to be maintained, or knowingly make, or procure or assist in the making of, any false entry in any such record, or willfully omit to make a material entry in such record.

(3) All records required to be maintained by or under these Regulations shall be recorded in a permanent and indelible material.

(4) A person shall not purport to issue any licence, certificate, approval, authorisation or any such other document for the purpose of these Regulations unless he is authorized to do so under these Regulations.

(5) A person shall not issue any licence, certificate, approval, authorisation any such other document of the kind referred to in these Regulations unless he has satisfied himself that all statements in the licence, certificate, approval, authorisation any such other document are correct, and that the applicant is qualified to hold that licence, certificate, approval, authorisation or any such other document.

Reports of violation

231. (1) A person who knows of a violation of the Civil Aviation Act, any rule, Regulation, or order made there-under, shall report it to the Authority.

(2) The Authority shall determine the nature and type of any additional investigation or enforcement action that shall be taken.

Enforcement of directions

232. (1) A person who fails to comply with any direction given to him or her by the Authority or by any authorized person under any provision of these Regulations shall be deemed for the purposes of these Regulations to have contravened that provision.

(2) The Authority shall take enforcement action on any regulated entity that fails to comply with any provisions of these regulations.

(3) The inspectors of the Authority holding valid delegations shall take necessary actions to preserve safety where an undesirable condition has been detected.

(4)The action (s) referred to in subsection (2) may include—

(a) In the case of a regulated entity, imposition of operating restrictions until such a time the existing undesirable condition has been resolved; or

(b) In case of a licensed personnel, require that the individual does not exercise the privileges of the licence until such a time that the undesirable condition has been resolved.

(5) In carrying out enforcement actions pursuant to the provisions of subsection (3), the Inspectors of the Authority shall invoke the powers with due care and act in good faith in the interest of preserving safety.

Aeronautical user fees

233. (1) The Authority shall notify applicants of the fees to be charged in connection with the issue, validation, renewal, extension or variation of any licence, certificate, authorisation or such other document, including the issue of a copy thereof, or the undergoing of any examination, test, inspection or investigation or the grant of any permission or approval, required by, or for the purpose of these Regulations any orders, notices or proclamations made thereunder.

(2) Upon an application being made in connection with which any fee is chargeable in accordance with subsection (1), the applicant shall be required, before the application is entertained, to pay the fee so chargeable.

(3) Where payment of fees has been made and the application is withdrawn by the applicant or otherwise ceases to have effect or is rejected, the Authority shall not refund such payment.

Application of Regulations to government and visiting forces, etc.

234. (1) These regulations shall apply to aircraft, not being military aircraft, belonging to or exclusively employed in the service of the government, and for the purposes of such application, the department or other authority for the time being responsible for management of the aircraft shall be deemed to be the operator of the aircraft, and in the case of an aircraft belonging to the government, to be the owner of the interest of the government in the aircraft.

(2) Except as otherwise expressly provided, the naval, military and air force authorities and members of any visiting force and property held or used for the purpose of such a force shall be exempt from the provision of these regulations to the same extent as if the visiting force formed part of the military force of [State].

Extra- territorial application of Regulations

235.Except where the context otherwise requires, the provisions of these regulations shall—

(a) in so far as they apply, whether by express reference or otherwise, to aircraft registered in [State], apply to such aircraft wherever they may be;

(b) in so far as they apply, whether by express reference or otherwise, to other aircraft, apply to such aircraft when they are within [State].;

(c) in so far as they prohibit, require or regulate, whether by express reference or otherwise, the doing of anything by any person in, or by any of the crew of, any aircraft registered in [State]., shall apply to such persons and crew, wherever they may be; and

(d) in so far as they prohibit, require or regulate, whether by express reference or otherwise, the doing of anything in relation to any aircraft registered in [State]. by other persons shall, where such persons are citizens of [State]., apply to them wherever they may be.

PART XIV

OFFENCES AND PENALTIES

Contravention of Regulations

236.A person who contravenes any provision of these Regulations may have his or her licence, certificate, approval, authorisation, exemption, or such other document revoked or suspended.

Penalties

237. (1) Where any provision of these Regulations, orders, notices or proclamations made there under is contravened in relation to an aircraft, the operator of that aircraft and the pilot-in-command, when the operator or, the pilot in command is not the person who contravened that provision the person shall, without prejudice to the liability of any other person under these Regulations for that contravention, be deemed for the purposes of the following provisions of this Regulation to have contravened that provision unless he or she proves that the contravention occurred without his or her consent or connivance and that he or she exercised all due diligence to prevent the contravention.

(2) Where it is proved that an act or omission of any person, which would otherwise have been a contravention by that person of a provision of these Regulations, orders, notices or proclamations made there under was due to any cause not avoidable by the exercise of reasonable care by that person, the act or omission shall be deemed not to be a contravention by that person of that provision.

(3) Where a person is charged with contravening a provision of these Regulations, orders, notices or proclamations made there under by reason of his or her having been a member of the flight crew of an aircraft on a flight for the purpose of commercial air transport operations, the flight shall be treated, without prejudice to the liability of any other person under these Regulations, as not having been for that purpose where he or she proves that he or she neither knew nor had reason to know that the flight was for that purpose.

(4) A person who contravenes any provision of these Regulations, orders, notices or proclamations made thereunder not being a provision referred to in subsection (9) shall, upon conviction, be liable to a fine, and in the case of a continuing contravention, each day of the contravention shall constitute a separate offence.

(5) Where an aircraft is involved in a contravention and the contravention is by the owner or operator of the aircraft, the aircraft shall be subject to a lien for the penalty.

(6) Any aircraft subject to alien for the purpose of sub- section (5) may be seized by and placed in the custody of the Authority.

(7) The aircraft shall be released from custody of the Authority Upon—

(a) payment of the penalty or the amount agreed upon in compromise;

(b) deposit of a bond in such amount as the Authority may prescribe in the applicable aeronautical information circular, conditioned upon payment of the penalty or the amount agreed upon in compromise; and

(c) receiving an order of the court to that effect.

(8) The Authority and any person specifically authorized by name or any police officer not below the rank of inspector specifically authorized by name by the [Minister], may compound offences under Part A of the EIGHTH SCHEDULE to these Regulations by assessing the contravention and requiring the person reasonably suspected of having committed the offence to pay to the Authority a sum equivalent of one hundred United States dollars and three hundred United States dollars for provisions referred to Part A of the EIGHTH SCHEDULE to these regulations.

(9) Where a person contravenes any provision specified in Part B of the EIGHTH SCHEDULE to these Regulations, upon conviction is liable to a fine not less than the equivalent of one thousand United States Dollars or to imprisonment for a term of twelve months or to both.

(10) Where any person is aggrieved by any order made under sub- section (8), he may, within twenty-one days of such order being made, appeal against the order to a higher court and the relevant provisions of the ………………………….. Act, shall apply mutatis mutandis, to every such appeal as if it were an appeal against a sentence passed by a district court in the exercise of its original jurisdiction.

(11) A person who contravenes any provision specified as an “A” provision in the Second schedule to these Regulations commits an offence and is liable on conviction to a fine not exceeding a sum equivalent of ten thousand United States dollars shillings for each offence and or to imprisonment for a term not exceeding one year or to both.

(12) A person who contravenes any provision specified as a “B” provision in the Second schedule to these Regulations commits an offence and is liable on conviction to a fine not exceeding a sum equivalent of twenty thousand United States dollars for each offence and or to imprisonment for a term not exceeding three years or to both.

(13) A person who contravenes any provision of these Regulations not being a provision referred to in the EIGHTH SCHEDULE to these Regulations commits an offence and is liable on conviction to a fine not exceeding a sum equivalent of twenty thousand United States dollars, and in the case of a second or subsequent conviction for the like offence to a fine not exceeding a sum equivalent of forty thousand United States dollars.

Revocation of SI 121

238.The Civil Aviation (Operation of aircraft) Regulations, 2018 are revoked.

FIRST SCHEDULE

LIGHTS TO BE DISPLAYED BY AEROPLANES

1. TERMINOLOGY

When the following terms are used in this Appendix, they have the following meanings:

Angles of coverage.

a) Angle of coverage A is formed by two intersecting vertical planes making angles of 70 degrees to the right and 70 degrees to the left respectively, looking aft along the longitudinal axis to a vertical plane passing through the longitudinal axis.

b) Angle of coverage F is formed by two intersecting vertical planes making angles of 110 degrees to the right and 110 degrees to the left respectively, looking forward along the longitudinal axis to a vertical plane passing through the longitudinal axis.

c) Angle of coverage L is formed by two intersecting vertical planes, one parallel to the longitudinal axis of the aeroplane, and the other 110 degrees to the left of the first, when looking forward along the longitudinal axis.

d) Angle of coverage R is formed by two intersecting vertical planes, one parallel to the longitudinal axis of the aeroplane, and the other 110 degrees to the right of the first, when looking forward along the longitudinal axis.

Horizontal plane. The plane containing the longitudinal axis and perpendicular to the plane of symmetry of the aeroplane.

Longitudinal axis of the aeroplane. A selected axis parallel to the direction of flight at a normal cruising speed, and passing through the centre of gravity of the aeroplane.

Making way. An aeroplane on the surface of the water is “making way” when it is under way and has a velocity relative to the water.

Under command. An aeroplane on the surface of the water is “under command” when it is able to execute manoeuvres as required by the International Regulations for Preventing Collisions at Sea for the purpose of avoiding other vessels.

Under way. An aeroplane on the surface of the water is “under way” when it is not aground or moored to the ground or to any fixed object on the land or in the water.

Vertical planes. Planes perpendicular to the horizontal plane.

Visible. Visible on a dark night with a clear atmosphere.

2. NAVIGATION LIGHTS TO BE DISPLAYED IN THE AIR

Note.— The lights specified herein are intended to meet the requirements of Annex 2 for navigation lights.

As illustrated in Figure 1, the following unobstructed navigation lights shall be displayed:

a) a red light projected above and below the horizontal plane through angle of coverage L;

b) a green light projected above and below the horizontal plane through angle of coverage R;

c) a white light projected above and below the horizontal plane rearward through angle of coverage A.

3. LIGHTS TO BE DISPLAYED ON THE WATER

3.1 General

Note.— The lights specified herein are intended to meet the requirements of Annex 2 for lights to be displayed by aeroplanes on the water.

The International Regulations for Preventing Collisions at Sea require different lights to be displayed in each of the following circumstances:

a) when under way;

b) when towing another vessel or aeroplane;

c) when being towed;

d) when not under command and not making way;

e) when making way but not under command;

f) when at anchor;

g) when aground.

The lights required by aeroplanes in each case are described below.

3.2 When under way

As illustrated in Figure 2, the following appearing as steady unobstructed lights:

a) a red light projected above and below the horizontal through angle of coverage L;

b) a green light projected above and below the horizontal through angle of coverage R;

c) a white light projected above and below the horizontal through angle of coverage A; and

d) a white light projected through angle of coverage F.

The lights described in 3.2 a), b) and c) should be visible at a distance of at least 3.7 km (2 NM). The light described in 3.2 d) should be visible at a distance of 9.3 km (5 NM) when fitted to an aeroplane of 20 m or more in length or visible at a distance of 5.6 km (3 NM) when fitted to an aeroplane of less than 20 m in length.

3.3 When towing another vessel or aeroplane

As illustrated in Figure 3, the following appearing as steady, unobstructed lights:

a) the lights described in 3.2;

b) a second light having the same characteristics as the light described in 3.2 d) and mounted in a vertical line at least 2 m above or below it; and

c) a yellow light having otherwise the same characteristics as the light described in 3.2 c) and mounted in a vertical line at least 2 m above it.

3.4 When being towed

The lights described in 3.2 a), b) and c) appearing as steady, unobstructed lights.

3.5 When not under command and not making way

As illustrated in Figure 4, two steady red lights placed where they can best be seen, one vertically over the other and not less than 1 m apart, and of such a character as to be visible all around the horizon at a distance of at least 3.7 km (2 NM).

3.6 When making way but not under command

As illustrated in Figure 5, the lights described in 3.5 plus the lights described in 3.2 a), b) and c).

Note.— The display of lights prescribed in 3.5 and 3.6 is to be taken by other aircraft as signals that the aeroplane showing them is not under command and cannot therefore get out of the way. They are not signals of aeroplanes in distress and requiring assistance.

3.7 When at anchor

a) If less than 50 m in length, where it can best be seen, a steady white light (Figure 6), visible all around the horizon at a distance of at least 3.7 km (2 NM).

b) If 50 m or more in length, where they can best be seen, a steady white forward light and a steady white rear light (Figure 7) both visible all around the horizon at a distance of at least 5.6 km (3 NM).

c) If 50 m or more in span a steady white light on each side (Figures 8 and 9) to indicate the maximum span and visible, so far as practicable, all around the horizon at a distance of at least 1.9 km (1 NM).

3.8 When aground

The lights prescribed in 3.7 and in addition two steady red lights in vertical line, at least 1 m apart so placed as to be visible all around the horizon.

SECOND SCHEDULE

ORGANIZATION AND CONTENTS OF AN OPERATIONS MANUAL

1. ORGANIZATION

An operations manual, which may be issued in separate parts corresponding to specific aspects of operations, provided in accordance with Chapter 4, 4.2.3.1, shall be organized with the following structure:

a) General;

b) Aircraft operating information;

c) Areas, routes and aerodromes; and

d) Training.

2. CONTENTS

The operations manual referred to in 1 shall contain at the least the following:

2.1 General

2.1.1 Instructions outlining the responsibilities of operations personnel pertaining to the conduct of flight operations.

2.1.2 Information and policy relating to fatigue management including:

a) policies pertaining to flight time, flight duty period, duty period limitations and rest requirements for flight and cabin crew members in accordance with Chapter 4, 4.10.2 a); and

b) where applicable, policy and documentation pertaining to the operator’s FRMS in accordance with Appendix 7.

2.1.3 A list of the navigational equipment to be carried including any requirements relating to operations where performance-based navigation is prescribed.

2.1.4 Where relevant to the operations, the long-range navigation procedures, engine failure procedure for EDTO and the nomination and utilization of diversion aerodromes.

2.1.5 The circumstances in which a radio listening watch is to be maintained.

2.1.6 The method for determining minimum flight altitudes.

2.1.7 The methods for determining aerodrome operating minima.

2.1.8 Safety precautions during refuelling with passengers on board.

2.1.9 Ground handling arrangements and procedures.

2.1.10 Procedures, as prescribed in Annex 12, for pilots-in-command observing an accident.

2.1.11 The flight crew for each type of operation including the designation of the succession of command.

2.1.12 Specific instructions for the computation of the quantities of fuel and oil to be carried, taking into account all circumstances of the operation including the possibility of loss of pressurization and the failure of one or more engines while en route.

2.1.13 The conditions under which oxygen shall be used and the amount of oxygen determined in accordance with Chapter 4, 4.3.9.2.

2.1.14 Instructions for mass and balance control.

2.1.15 Instructions for the conduct and control of ground de-icing/anti-icing operations.

2.1.16 The specifications for the operational flight plan.

2.1.17 Standard operating procedures (SOPs) for each phase of flight.

2.1.18 Instructions on the use of normal checklists and the timing of their use.

2.1.19 Departure contingency procedures.

2.1.20 Instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude call-out.

2.1.21 Instructions on the use of autopilots and auto-throttles in IMC.

Note.— Instructions on the use of autopilots and auto-throttles, together with 2.1.26 and 2.1.30, are essential for avoidance of approach and landing accidents and controlled flight into terrain accidents.

2.1.22 Instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved.

2.1.23 Departure and approach briefings.

2.1.24 Procedures for familiarization with areas, routes and aerodromes.

2.1.25 Stabilized approach procedure.

2.1.26 Limitation on high rates of descent near the surface.

2.1.27 Conditions required to commence or to continue an instrument approach.

2.1.28 Instructions for the conduct of precision and non-precision instrument approach procedures.

2.1.29 Allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach operations.

2.1.30 Instructions and training requirements for the avoidance of controlled flight into terrain and policy for the use of the ground proximity warning system (GPWS).

2.1.31 Policy, instructions, procedures and training requirements for the avoidance of collisions and the use of the airborne collision avoidance system (ACAS).

Note.— Procedures for the operation of ACAS are contained in PANS-OPS (Doc 8168), Volume I, and in PANS-ATM (Doc 4444), Chapters 12 and 15.

2.1.32 Information and instructions relating to the interception of civil aircraft including:

a) procedures, as prescribed in Annex 2, for pilots-in-command of intercepted aircraft; and

b) visual signals for use by intercepting and intercepted aircraft, as contained in Annex 2.

2.1.33 For aeroplanes intended to be operated above 15 000 m (49 000 ft):

a) information which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation; and

b) procedures in the event that a decision to descend is taken, covering:

1) the necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance; and

2) the action to be taken in the event that communication with the ATS unit cannot be established or is interrupted.

Note.— Guidance material on the information to be provided is contained in Circular 126 — Guidance Material on SST Aircraft Operations.

2.1.34 Details of the safety management system (SMS) provided in accordance with Chapters 3 and 4 of Annex 19.

2.1.35 Information and instructions on the carriage of dangerous goods, in accordance with Chapter 14, including action to be taken in the event of an emergency.

Note.— Guidance material on the development of policies and procedures for dealing with dangerous goods incidents on board aircraft is contained in Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods (Doc 9481).

2.1.36 Security instructions and guidance.

2.1.37 The search procedure checklist provided in accordance with Chapter 13, 13.3.

2.1.38 Instructions and training requirements for the use of head-up displays (HUD) and enhanced vision systems (EVS) equipment as applicable.

2.1.39 Instructions and training requirements for the use of the EFB, as applicable.

2.2 Aircraft operating information

2.2.1 Certification limitations and operating limitations.

2.2.2 The normal, abnormal and emergency procedures to be used by the flight crew and the checklists relating thereto as required by Chapter 6, 6.1.4.

2.2.3 Operating instructions and information on climb performance with all engines operating, if provided in accordance with Chapter 4, 4.2.4.3.

2.2.4 Flight planning data for pre-flight and in-flight planning with different thrust/power and speed settings.

2.2.5 The maximum crosswind and tailwind components for each aeroplane type operated and the reductions to be applied to these values having regard to gusts, low visibility, runway surface conditions, crew experience, use of autopilot, abnormal or emergency circumstances, or any other relevant operational factors.

2.2.6 Instructions and data for mass and balance calculations.

2.2.7 Instructions for aircraft loading and securing of load.

2.2.8 Aircraft systems, associated controls and instructions for their use, as required by Chapter 6, 6.1.4.

2.2.9 The minimum equipment list and configuration deviation list for the aeroplane types operated and specific operations authorized, including any requirements relating to operations where performance-based navigation is prescribed.

2.2.10 Checklist of emergency and safety equipment and instructions for its use.

2.2.11 Emergency evacuation procedures, including type-specific procedures, crew coordination, assignment of crew’s emergency positions and the emergency duties assigned to each crew member.

2.2.12 The normal, abnormal and emergency procedures to be used by the cabin crew, the checklists relating thereto and aircraft systems information as required, including a statement related to the necessary procedures for the coordination between flight and cabin crew.

2.2.13 Survival and emergency equipment for different routes and the necessary procedures to verify its normal functioning before take-off, including procedures to determine the required amount of oxygen and the quantity available.

2.2.14 The ground-air visual signal code for use by survivors, as contained in Annex 12.

2.3 Routes and aerodromes

2.3.1 A route guide to ensure that the flight crew will have, for each flight, information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures as applicable for the operation, and such other information as the operator may deem necessary for the proper conduct of flight operations.

2.3.2 The minimum flight altitudes for each route to be flown.

2.3.3 Aerodrome operating minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes.

2.3.4 The increase of aerodrome operating minima in case of degradation of approach or aerodrome facilities.

2.3.5 Instructions for determining aerodrome operating minima for instrument approaches using HUD and EVS.

2.3.6 The necessary information for compliance with all flight profiles required by regulations, including but not limited to, the determination of:

a) take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by system failures which affect the take-off distance;

b) take-off climb limitations;

c) en-route climb limitations;

d) approach climb limitations and landing climb limitations;

e) landing runway length requirements for dry, wet and contaminated conditions, including systems failures which affect the landing distance; and

f) supplementary information, such as tire speed limitations.

2.4 Training

2.4.1 Details of the flight crew training programme, as required by Chapter 9, 9.3.

2.4.2 Details of the cabin crew duties training programme as required by Chapter 12, 12.4.

2.4.3 Details of the flight operations officer/flight dispatcher training programme when employed in conjunction with a method of flight supervision in accordance with Chapter 4, 4.2.1.

Note.— Details of the flight operations officer/flight dispatcher training programme are contained in Chapter 10, 10.2.

THIRD SCHEDULE

ADDITIONAL REQUIREMENTS FOR APPROVED OPERATIONS BY SINGLE-ENGINE TURBINE-POWERED AEROPLANES AT NIGHT AND/OR IN INSTRUMENT METEOROLOGICAL CONDITIONS (IMC)

1. TURBINE ENGINE RELIABILITY

1.1 Turbine engine reliability shall be shown to have a power loss rate of less than 1 per 100 000 engine hours.

Note.— Power loss in this context is defined as any loss of power, the cause of which may be traced to faulty engine or engine component design or installation, including design or installation of the fuel ancillary or engine control systems. (See Attachment G.)

1.2 The operator shall be responsible for engine trend monitoring.

1.3 To minimize the probability of in-flight engine failure, the engine shall be equipped with:

a) an ignition system that activates automatically, or is capable of being operated manually, for take-off and landing, and during flight, in visible moisture;

b) a magnetic particle detection or equivalent system that monitors the engine, accessories gearbox, and reduction gearbox, and which includes a flight deck caution indication; and

c) an emergency engine power control device that permits continuing operation of the engine through a sufficient power range to safely complete the flight in the event of any reasonably probable failure of the fuel control unit.

2. SYSTEMS AND EQUIPMENT

Single-engine turbine-powered aeroplanes approved to operate at night and/or in IMC shall be equipped with the following systems and equipment intended to ensure continued safe flight and to assist in achieving a safe forced landing after an engine failure, under all allowable operating conditions:

a) two separate electrical generating systems, each one capable of supplying all probable combinations of continuous in-flight electrical loads for instruments, equipment and systems required at night and/or in IMC;

b) a radio altimeter;

c) an emergency electrical supply system of sufficient capacity and endurance, following loss of all generated power, to as a minimum:

1) maintain the operation of all essential flight instruments, communication and navigation systems during a descent from the maximum certificated altitude in a glide configuration to the completion of a landing;

2) lower the flaps and landing gear, if applicable;

3) provide power to one pitot heater, which must serve an air speed indicator clearly visible to the pilot;

4) provide for operation of the landing light specified in 2 j);

5) provide for one engine restart, if applicable; and

6) provide for the operation of the radio altimeter;

d) two attitude indicators, powered from independent sources;

e) a means to provide for at least one attempt at engine re-start;

f) airborne weather radar;

g) a certified area navigation system capable of being programmed with the positions of aerodromes and safe forced landing areas, and providing instantly available track and distance information to those locations;

h) for passenger operations, passenger seats and mounts which meet dynamically-tested performance standards and which are fitted with a shoulder harness or a safety belt with a diagonal shoulder strap for each passenger seat;

i) in pressurized aeroplanes, sufficient supplemental oxygen for all occupants for descent following engine failure at the maximum glide performance from the maximum certificated altitude to an altitude at which supplemental oxygen is no longer required;

j) a landing light that is independent of the landing gear and is capable of adequately illuminating the touchdown area in a night forced landing; and

k) an engine fire warning system.

3. MINIMUM EQUIPMENT LIST

The State of the Operator shall require the minimum equipment list of the operator approved in accordance with Chapter 5,

5.4 to specify the operating equipment required for night and/or IMC operations, and for day/VMC operations.

4. FLIGHT MANUAL INFORMATION

The flight manual shall include limitations, procedures, approval status and other information relevant to operations by single-engine turbine-powered aeroplanes at night and/or in IMC.

5. EVENT REPORTING

5.1 The operator approved for operations by single-engine turbine-powered aeroplanes at night and/or in IMC shall report all significant failures, malfunctions or defects to the State of the Operator who in turn will notify the State of Design.

5.2 The State of the Operator shall review the safety data and monitor the reliability information so as to be able to take any actions necessary to ensure that the intended safety level is achieved. The State of the Operator will notify major events or trends of particular concern to the appropriate Type Certificate Holder and the State of Design.

6. OPERATOR PLANNING

6.1 Operator route planning shall take account of all relevant information in the assessment of intended routes or areas of operations, including the following:

a) the nature of the terrain to be overflown, including the potential for carrying out a safe forced landing in the event of an engine failure or major malfunction;

b) weather information, including seasonal and other adverse meteorological influences that may affect the flight; and

c) other criteria and limitations as specified by the State of the Operator.

6.2 The operator shall identify aerodromes or safe forced landing areas available for use in the event of engine failure, and the position of these shall be programmed into the area navigation system.

Note 1.— A ‘safe’ forced landing in this context means a landing in an area at which it can reasonably be expected that it will not lead to serious injury or loss of life, even though the aeroplane may incur extensive damage.

Note 2.— Operation over routes and in weather conditions that permit a safe forced landing in the event of an engine failure, as specified in Chapter 5, 5.1.2, is not required by Appendix 3, 6.1 and 6.2 for aeroplanes approved in accordance with Chapter 5, 5.4. The availability of forced landing areas at all points along a route is not specified for these aeroplanes because of the very high engine reliability, additional systems and operational equipment, procedures and training requirements specified in this Appendix.

7. FLIGHT CREW EXPERIENCE, TRAINING AND CHECKING

7.1 The State of the Operator shall prescribe the minimum flight crew experience required for night/IMC operations by single-engine turbine-powered aeroplanes.

7.2 The operator’s flight crew training and checking shall be appropriate to night and/or IMC operations by single- engine turbine-powered aeroplanes, covering normal, abnormal and emergency procedures and, in particular, engine failure, including descent to a forced landing in night and/or in IMC conditions.

8. ROUTE LIMITATIONS OVER WATER

The State of the Operator shall apply route limitation criteria for single-engine turbine-powered aeroplanes operating at night and/or in IMC on over water operations if beyond gliding distance from an area suitable for a safe forced landing/ditching having regard to the characteristics of the aeroplane, seasonal weather influences, including likely sea state and temperature, and the availability of search and rescue services.

9. OPERATOR CERTIFICATION OR VALIDATION

The operator shall demonstrate the ability to conduct operations by single-engine turbine-powered aeroplanes at night and/or in IMC through a certification and approval process specified by the State of the Operator.

FOURTH SCHEDULE

ALTIMETRY SYSTEM PERFORMANCE REQUIREMENTS FOR OPERATIONS IN RVSM AIRSPACE

1. In respect of groups of aeroplanes that are nominally of identical design and build with respect to all details that could influence the accuracy of height-keeping performance, the height-keeping performance capability shall be such that the total vertical error (TVE) for the group of aeroplanes shall have a mean no greater than 25 m (80 ft) in magnitude and shall have a standard deviation no greater than 28 – 0.013z2 for 0 ≤ z ≤ 25 when z is the magnitude of the mean TVE in metres, or 92 – 0.004z2 for 0 ≤ z ≤ 80 where z is in feet. In addition, the components of TVE shall have the following characteristics:

a) the mean altimetry system error (ASE) of the group shall not exceed 25 m (80 ft) in magnitude;

b) the sum of the absolute value of the mean ASE and of three standard deviations of ASE shall not exceed 75 m (245 ft); and

c) the differences between cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.

2. In respect of aeroplanes for which the characteristics of the airframe and altimetry system fit are unique and so cannot be classified as belonging to a group of aeroplanes encompassed by paragraph 1, the height-keeping performance capability shall be such that the components of the TVE of the aeroplane have the following characteristics:

a) the ASE of the aeroplane shall not exceed 60 m (200 ft) in magnitude under all flight conditions; and

b) the differences between the cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m, with a standard deviation no greater than 13.3 m (43.7 ft), and in addition, the decrease in the frequency of differences with increasing difference magnitude shall be at least exponential.

FIFTH SCHEDULE

SAFETY OVERSIGHT OF AIR OPERATORS

1. PRIMARY AVIATION LEGISLATION

The State of the Operator shall enact and implement laws that enable the State to regulate the certification and continued supervision of air operators and the resolution of safety issues identified by the authority and to ensure that compliance will result in an acceptable level of safety performance for the operations undertaken.

Note 1.— The term authority as used in this Appendix refers to the Civil Aviation Authority as well as equivalent organizations, including inspectors and staff.

Note 2.— Guidance on the inspection, certification and continued surveillance of operations is contained in the Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335) and the Airworthiness Manual (Doc 9760).

2. SPECIFIC OPERATING REGULATIONS

The State of the Operator shall adopt regulations that provide for the certification and continued surveillance of aircraft operations and the maintenance of aircraft in conformity with the Annexes to the Convention on International Civil Aviation.

3. STATE SAFETY OVERSIGHT SYSTEM AND FUNCTIONS

3.1 The State of the Operator shall ensure that the authority is responsible for the safety oversight of air operators.

3.2 The State of the Operator shall use a methodology to determine its inspector staffing requirements according to the size and complexity of civil air operations in that State.

3.3 Recommendation.— The methodology in 3.2 should be documented.

3.4 The State of the Operator shall ensure that authority inspectors have adequate support, credentials and transportation to accomplish, independently, their certification and continued surveillance tasks.

4. QUALIFIED TECHNICAL PERSONNEL

The State of the Operator shall require that the initial and recurrent training of the authority inspectors include aircraft- specific subjects.

Note.— Guidance on experience and training for inspectors is contained in the Manual of Procedures for Operations Inspection, Certification and Continued Surveillance (Doc 8335).

5. TECHNICAL GUIDANCE, TOOLS AND PROVISION OF SAFETY-CRITICAL INFORMATION

5.1 The State of the Operator shall ensure that authority inspectors are provided with technical guidance manuals containing the policies, procedures and standards to be used in the certification and continued surveillance of air operators.

5.2 The State of the Operator shall ensure that authority inspectors are provided with technical guidance manuals containing the policies, procedures and standards to be used in the resolution of safety issues, including enforcement.

5.3 The State of the Operator shall ensure that authority inspectors are provided with technical guidance manuals that address ethics, personal conduct and the avoidance of actual or perceived conflicts of interest in the performance of official duties.

6. CERTIFICATION OBLIGATIONS

The State of the Operator shall require, prior to commencement of new commercial air transport operations, air operators to demonstrate that they can safely conduct the proposed operations.

Note.— Attachment D contains further information in this regard.

7. CONTINUED SURVEILLANCE OBLIGATIONS

The State of the Operator shall use an ongoing surveillance plan to confirm that operators continue to meet the relevant requirements for initial certification and that each air operator is functioning satisfactorily.

8. RESOLUTION OF SAFETY ISSUES

Note.— Provisions for the resolution of safety issues are contained in Appendix 1 to Annex 19.

SEVENTH SCHEDULE

AIR OPERATOR CERTIFICATE (AOC)

1. PURPOSE AND SCOPE

1.1 The AOC and its associated model specific operations specifications shall contain the minimum information required in paragraphs 2 and 3 respectively, in a standardized format.

1.2 The air operator certificate and its associated operations specifications shall define the operations for which the operator is authorized, including specific approvals, conditions and limitations.

Note.— Attachment D, paragraph 3.2.2, contains additional information that may be listed in the operations specifications associated with the air operator certificate.

2. AOC TEMPLATE

Note.— Chapter 6, 6.1.2, requires a certified true copy of the AOC to be carried aboard.

AIR OPERATOR CERTIFICATE

1 STATE OF THE OPERATOR2

1

ISSUING AUTHORITY3

AOC #4:

Expiry date5: OPERATOR NAME6 OPERATIONAL POINTS OF CONTACT10

Dba trading name7: Operator address8: Telephone9:

Fax: Email: Contact details, at which operational management can be contacted without undue delay, are listed in

11.

This certificate certifies that 12 is authorized to perform commercial air operations, as defined in the attached operations specifications, in accordance with the operations manual and the 13 .

Date of issue14: Name and signature15: Title:

Notes.—

1. For use of the State of the Operator.

2. Replace by the name of the State of the Operator.

3. Replace by the identification of the issuing authority of the State of the Operator.

4. Unique AOC number, as issued by the State of the Operator.

5. Date after which the AOC ceases to be valid (dd-mm-yyyy).

6. Replace by the operator’s registered name.

7. Operator’s trading name, if different. Insert “dba” before the trading name (for “doing business as”).

8. Operator’s principal place of business address.

9. Operator’s principal place of business telephone and fax details, including the country code. Email to be provided if available.

10. The contact details include the telephone and fax numbers, including the country code, and the email address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew competency, dangerous goods and other matters, as appropriate.

11. Insert the controlled document, carried on board, in which the contact details are listed, with the appropriate paragraph or page reference, e.g.: “Contact details are listed in the operations manual, Gen/Basic, Chapter 1, 1.1” or “… are listed in the operations specifications, page 1” or “… are listed in an attachment to this document”.

12. Operator’s registered name.

13. Insertion of reference to the appropriate civil aviation regulations.

14. Issuance date of the AOC (dd-mm-yyyy).

15. Title, name and signature of the authority representative. In addition, an official stamp may be applied on the AOC.

3. OPERATIONS SPECIFICATIONS FOR EACH AIRCRAFT MODEL

Note.— Chapter 6, 6.1.2, requires a copy of the operations specifications of this section to be carried aboard.

3.1 For each aircraft model in the operator’s fleet, identified by aircraft make, model and series, the following information shall be included: issuing authority contact details, operator name and AOC number, date of issue and signature of the authority representative, aircraft model, types and area of operations, special limitations and specific approvals.

Note.— If specific approvals and limitations are identical for two or more models, these models may be grouped in a single list.

3.2 The operations specifications layout referred to in Chapter 4, 4.2.1.6, shall be as follows:

Note.— The MEL constitutes an integral part of the operations manual.

OPERATIONS SPECIFICATIONS

(subject to the approved conditions in the operations manual)

ISSUING AUTHORITY CONTACT DETAILS1

Telephone: Fax: Email:

AOC#2: Operator name3: Date4: Signature:

Dba trading name3:

Aircraft model5:

Types of operation: Commercial air transportation ☐Passengers ☐ Cargo ☐ Other6:

Area(s) of operation7:

Special limitations8:

SPECIFIC APPROVAL YES NO DESCRIPTION 9 REMARKS

Dangerous goods ☐ ☐

Low visibility operations Approach and landing Take-off

Operational credit(s)

☐

☐

☐

☐

☐

☐

CAT10: RVR: m DH: ft RVR11: m

12

RVSM13 ☐ N/A ☐ ☐

EDTO14 ☐ N/A ☐ ☐ Threshold time15: minutes

Maximum diversion time15: minutes

AR navigation specifications for PBN operations ☐ ☐

16

Continuing airworthiness

17

EFB ☐ ☐

18

Other 19 ☐ ☐

Notes.—

1. Telephone contact details of the authority, including the country code. Email and fax to be provided if available.

2. Insert the associated AOC number.

3. Insert the operator’s registered name and the operator’s trading name, if different. Insert “dba” before the trading name (for “doing business as”).

4. Issuance date of the operations specifications (dd-mm-yyyy) and signature of the authority representative.

5. Insert the Commercial Aviation Safety Team (CAST)/ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232). The CAST/ICAO taxonomy is available at: http://www.intlaviationstandards.org/.

6. Other type of transportation to be specified (e.g. emergency medical service).

7. List the geographical area(s) of authorized operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries) as defined by the issuing authority.

8. List the applicable special limitations (e.g. VFR only, day only).

9. List in this column the most permissive criteria for each specific approval (with appropriate criteria).

10. Insert the applicable precision approach category (CAT II or III). Insert the minimum RVR in metres and decision height in feet. One line is used per listed approach category.

11. Insert the approved minimum take-off RVR in metres, or the equivalent horizontal visibility if RVR is not used. One line per approval may be used if different approvals are granted.

12. List the airborne capabilities (i.e. automatic landing, HUD, EVS, SVS, CVS) and associated operational credit(s) granted.

13. “Not applicable (N/A)” box may be checked only if the aircraft maximum ceiling is below FL 290.

14. If extended diversion time operations (EDTO) specific approval does not apply based on the provisions in Chapter 4, 4.7, select “N/A”. Otherwise a threshold time and maximum diversion time must be specified.

15. The threshold time and maximum diversion time may also be listed in distance (NM). Details of each particular aeroplane-engine combination for which the threshold time is established and maximum diversion time has been granted may be listed under "remarks". One line per approval may be used if different approvals are granted.

16. 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.

17. Insert the name of the person/organization responsible for ensuring that the continuing airworthiness of the aircraft is maintained and the regulation that requires the work, i.e. within the AOC regulation or a specific approval (e.g. EC2042/2003, Part M, Subpart G).

18. List the EFB functions used for the safe operation of aeroplanes and any applicable limitations.

19. Other authorizations or data can be entered here, using one line (or one multi-line block) per authorization (e.g. special approach authorization, approved navigation performance).

EIGHTH SCHEDULE

FLIGHT RECORDERS

The material in this Appendix concerns flight recorders intended for installation in aeroplanes engaged in international air navigation. Crash-protected flight recorders comprise one or more of the following:

— a flight data recorder (FDR),

— a cockpit voice recorder (CVR),

— an airborne image recorder (AIR),

— a data link recorder (DLR).

When image or data link information is required to be recorded on a crash-protected flight recorder, it is permissible to record it on either the CVR or the FDR.

Lightweight flight recorders comprise one or more of the following:

— an aircraft data recording system (ADRS),

— a cockpit audio recording system (CARS),

— an airborne image recording system (AIRS),

— a data link recording system (DLRS).

When image or data link information is required to be recorded on a lightweight flight recorder, it is permissible to record it on either the CARS or the ADRS.

1. GENERAL REQUIREMENTS

1.1 Non-deployable flight recorder containers shall be painted a distinctive orange colour.

1.2 Non-deployable crash-protected flight recorder containers shall:

a) carry reflective material to facilitate their location; and

b) have securely attached an automatically activated underwater locating device operating at a frequency of 37.5 kHz. At the earliest practicable date, but not later than 1 January 2018, this device shall operate for a minimum of 90 days.

1.3 Automatic deployable flight recorder containers shall:

a) be painted a distinctive orange colour, however the surface visible from outside the aircraft may be of another colour;

b) carry reflective material to facilitate their location; and

c) have an integrated automatically activated ELT.

1.4 The flight recorder systems shall be installed so that:

a) the probability of damage to the recordings is minimized;

b) there is an aural or visual means for pre-flight checking that the flight recorder systems are operating properly; and

c) if the flight recorder systems have an erasure device, the installation shall be designed to prevent operation of the device during flight time or crash impact; and

d) for aeroplanes for which the individual certificate of airworthiness is first issued on or after 1 January 2023, a flight crew-operated erase function shall be provided on the flight deck which, when activated, modifies the recording of a CVR and AIR so that it cannot be retrieved using normal replay or copying techniques. The installation shall be designed to prevent activation during flight. In addition, the probability of an inadvertent activation of an erase function during an accident shall also be minimized.

Note.— The erase function is intended to prevent access to CVR and AIR recordings by normal replay or copying means, but would not prevent accident investigation authorities access to such recordings by specialized replay or copying techniques.

1.5 The crash-protected flight recorders shall be installed so that they receive electrical power from a bus that provides the maximum reliability for operation of the flight recorders without jeopardizing service to essential or emergency loads.

1.6 The lightweight flight recorders shall be connected to a power source having the characteristics which ensure proper and reliable recording in the operational environment.

1.7 The flight recorder systems, when tested by methods approved by the appropriate certificating authority, shall be demonstrated to be suitable for the environmental extremes over which they are designed to operate.

1.8 Means shall be provided for an accurate time correlation between the flight recorder systems recordings.

1.9 The manufacturer shall provide the appropriate certificating authority with the following information in respect of the flight recorder systems:

a) manufacturer’s operating instructions, equipment limitations and installation procedures;

b) parameter origin or source and equations which relate counts to units of measurement; and

c) manufacturer’s test reports.

2. FLIGHT DATA RECORDER (FDR) AND AIRCRAFT DATA RECORDING SYSTEMS (ADRS)

2.1 Start and stop logic

The FDR or ADRS shall start to record prior to the aeroplane moving under its own power and record continuously until the termination of the flight when the aeroplane is no longer capable of moving under its own power.

2.2 Parameters to be recorded

Note.— In previous editions of Annex 6, Part I, types of recorders were defined to capture the first evolutions of FDRs.

2.2.1 The parameters that satisfy the requirements for FDRs are listed in Table A8-1. The number of parameters to be recorded shall depend on aeroplane complexity. The parameters without an asterisk (\*) are mandatory parameters which shall be recorded regardless of aeroplane complexity. In addition, the parameters designated by an asterisk (\*) shall be recorded if an information data source for the parameter is used by aeroplane systems or the flight crew to operate the aeroplane. However, other parameters may be substituted with due regard to the aeroplane type and the characteristics of the recording equipment.

2.2.2 If further FDR recording capacity is available, recording of the following additional information shall be considered:

a) operational information from electronic display systems, such as electronic flight instrument systems (EFIS), electronic centralized aircraft monitor (ECAM) and engine indication and crew alerting system (EICAS). Use the following order of priority:

1) parameters selected by the flight crew relating to the desired flight path, e.g. barometric pressure setting, selected altitude, selected airspeed, decision height, and autoflight system engagement and mode indications if not recorded from another source;

2) display system selection/status, e.g. SECTOR, PLAN, ROSE, NAV, WXR, COMPOSITE, COPY, ETC.;

3) warnings and alerts; and

4) the identity of displayed pages for emergency procedures and checklists; and

b) retardation information including brake application for use in the investigation of landing overruns and rejected take-offs.

2.2.3 The parameters that satisfy the requirements for flight path and speed as displayed to the pilot(s) are listed below. The parameters without an (\*) are mandatory parameters which shall be recorded. In addition, the parameters designated by an (\*) shall be recorded if an information source for the parameter is displayed to the pilot and is practicable to record:

— Pressure altitude

— Indicated airspeed or calibrated airspeed

— Heading (primary flight crew reference)

— Pitch attitude

— Roll attitude

— Engine thrust/power

— Landing-gear status\*

— Total or outside air temperature\*

— Time\*

— Navigation data\*: drift angle, wind speed, wind direction, latitude/longitude

— Radio altitude\*

2.2.4 The parameters that satisfy the requirements for ADRS are the first 7 parameters in Table A8-3.

2.2.5 If further ADRS recording capacity is available, the recording of any parameters from 8 onwards defined in Table A8-3 shall be considered.

2.3 Additional information

2.3.1 The measurement range, recording interval and accuracy of parameters on installed equipment shall be verified by methods approved by the appropriate certificating authority.

2.3.2 Documentation concerning parameter allocation, conversion equations, periodic calibration and other serviceability/maintenance information shall be maintained by the operator. The documentation needs to be sufficient to ensure that accident investigation authorities have the necessary information to read out the data in engineering units.

NINETH SCHEDULE

LOCATION OF AN AEROPLANE IN DISTRESS

1. PURPOSE AND SCOPE

Location of an aeroplane in distress aims at establishing, to a reasonable extent, the location of an accident site within a 6 NM radius.

2. OPERATION

2.1 An aeroplane in distress shall automatically activate the transmission of information from which its position can be determined by the operator and the position information shall contain a time stamp. It shall also be possible for this transmission to be activated manually. The system used for the autonomous transmission of position information shall be capable of transmitting that information in the event of aircraft electrical power loss, at least for the expected duration of the entire flight.

Note.— Guidance on the location of an aeroplane in distress is provided in Attachment K.

2.2 An aircraft is in a distress condition when it is in a state that, if the aircraft behaviour event is left uncorrected, can result in an accident. Autonomous transmission of position information shall be active when an aircraft is in a distress condition. This will provide a high probability of locating an accident site to within a 6 NM radius. The operator shall be alerted when an aircraft is in a distress condition with an acceptable low rate of false alerts. In case of a triggered transmission system, initial transmission of position information shall commence immediately or no later than five seconds after the detection of the activation event.

Note 1.— Aircraft behaviour events can include, but are not limited to, unusual attitudes, unusual speed conditions, collision with terrain and total loss of thrust/propulsion on all engines and ground proximity warnings.

Note 2.— A distress alert can be triggered using criteria that may vary as a result of aircraft position and phase of flight. Further guidance regarding in-flight event detection and triggering criteria may be found in the EUROCAE ED-237, Minimum Aviation System Performance Specification (MASPS) for Criteria to Detect In-Flight Aircraft Distress Events to Trigger Transmission of Flight Information.

2.3 When an aircraft operator or an air traffic service unit (ATSU) has reason to believe that an aircraft is in distress, coordination shall be established between the ATSU and the aircraft operator.

2.4 The State of the Operator shall identify the organizations that will require the position information of an aircraft in an emergency phase. These shall include, as a minimum:

a) air traffic service unit(s) (ATSU); and

b) SAR rescue coordination centre(s) (RCC) and sub-centres.

Note 1.— Refer to Annex 11 for emergency phase criteria.

Note 2.— Refer to Annex 12 for required notifications in the event of an emergency phase.

2.5 When autonomous transmission of position information has been activated, it shall only be able to be deactivated using the same mechanism that activated it.

2.6 The accuracy of position information shall, as a minimum, meet the position accuracy requirements established for ELTs.

TENTH SCHEDULE

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]3

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

From1 To (if applicable)2

Notes.—

1. dd/mm/yyyy.

2. dd/mm/yyyy or N/A if not applicable.

3. Square brackets indicate information that needs to be provided.

ELEVENTH SCHEDULE

MARKING OF BREAK-IN POINTS

If areas of the fuselage suitable for break-in by rescue crews in emergency are marked on an aeroplane such areas shall be marked as shown below (see figure following). The colour of the markings shall be red or yellow, and if necessary they shall be outlined in white to contrast with the background.

If the corner markings are more than 2 m apart, intermediate lines 9 cm  3 cm shall be inserted so that there is no more than 2 m between adjacent markings.

MARKING OF BREAK-IN POINTS

TWELFTH SCHEDULE: PRESCRIPTIVE DUTY TIME LIMITATIONS (taken from SI 87)

THIRTEENTH SCHEDULE

ATTACHMENT E. MINIMUM EQUIPMENT LIST (MEL)

Supplementary to Chapter 6, 6.1.2

1. If deviations from the requirements of States in the certification of aircraft were not permitted an aircraft could not be flown unless all systems and equipment were operable. Experience has proved that some unserviceability can be accepted in the short term when the remaining operative systems and equipment provide for continued safe operations.

2. The State should indicate through approval of a minimum equipment list those systems and items of equipment that may be inoperative for certain flight conditions with the intent that no flight can be conducted with inoperative systems and equipment other than those specified.

3. A minimum equipment list, approved by the State of the Operator, is therefore necessary for each aircraft, based on the master minimum equipment list established for the aircraft type by the organization responsible for the type design in conjunction with the State of Design.

4. The State of the Operator should require the operator to prepare a minimum equipment list designed to allow the operation of an aircraft with certain systems or equipment inoperative provided an acceptable level of safety is maintained.

5. The minimum equipment list is not intended to provide for operation of the aircraft for an indefinite period with inoperative systems or equipment. The basic purpose of the minimum equipment list is to permit the safe operation of an aircraft with inoperative systems or equipment within the framework of a controlled and sound programme of repairs and parts replacement.

6. Operators are to ensure that no flight is commenced with multiple minimum equipment list items inoperative without determining that any interrelationship between inoperative systems or components will not result in an unacceptable degradation in the level of safety and/or undue increase in the flight crew workload.

7. The exposure to additional failures during continued operation with inoperative systems or equipment must also be considered in determining that an acceptable level of safety is being maintained. The minimum equipment list may not deviate from requirements of the flight manual limitations section, emergency procedures or other airworthiness requirements of the State of Registry or of the State of the Operator unless the appropriate airworthiness authority or the flight manual provides otherwise.

8. Systems or equipment accepted as inoperative for a flight should be placarded where appropriate, and all such items should be noted in the aircraft technical log to inform the flight crew and maintenance personnel of the inoperative system or equipment.

9. For a particular system or item of equipment to be accepted as inoperative, it may be necessary to establish a maintenance procedure, for completion prior to flight, to de-activate or isolate the system or equipment. It may similarly be necessary to prepare an appropriate flight crew operating procedure.

10. The responsibilities of the pilot-in-command in accepting an aeroplane for operation with deficiencies in accordance with a minimum equipment list are specified in Chapter 4, 4.3.1.

# APPENDIX I