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THE CIVIL AVIATION ACT,  
(CAP. 80)

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**REGULATIONS**

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*(Made under section 4)*

THE CIVIL AVIATION (OPERATION OF AIRCRAFT - COMMERCIAL  
AIR TRANSPORT) REGULATIONS, 2024

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THE CIVIL AVIATION ACT  
(CAP. 80)

**REGULATIONS**

*(Made under section 4)*

THE CIVIL AVIATION (OPERATION OF AIRCRAFT – COMMERCIAL AIR TRANSPORT)  
REGULATIONS, 2024

PART I  
PRELIMINARY PROVISIONS

- Citation                    **1.** These Regulations may be cited as the Civil Aviation (Operation of Aircraft - Commercial Air Transport) Regulations, 2024.
- Application                **2.** These Regulations shall apply to the operation of all aeroplanes by operators authorised to conduct both international and domestic commercial air transport operations.
- Interpretation            **3.** In these Regulations, unless the context otherwise requires-
- Cap. 80                    “Act” means the Civil Aviation Act;  
“acts of unlawful interference” means acts or attempted acts aimed at jeopardising the safety of civil aviation and air transport, such as-
- (a) unlawful seizure of aircraft in flight;
  - (b) unlawful seizure of aircraft on the ground;
  - (c) hostage-taking on board an aircraft or on aerodromes;
  - (d) forcible intrusion on board an aircraft, at an airport or on the premises of an aeronautical facility;
  - (e) introduction on board an aircraft or at an airport of a weapon or hazardous device or material intended for criminal purposes; and

- (f) communication of false information as to jeopardize the safety of an aircraft in flight or on the ground, of passengers, crew, ground personnel or the general public, at an airport or on the premises of a civil aviation facility;
- “advanced aircraft” means an aircraft with equipment in addition to that required for a basic aircraft for a given take-off, approach or landing operation;
- “advisory airspace” means an airspace of defined dimensions, or designated route, within which air traffic advisory service is available;
- “aerodrome” has the meaning ascribed to it under the Act;
- “aerial work” has the meaning ascribed to it under the Act;
- “accelerate-stop distance available (ASDA)” means the length of the take-off run available plus the length of stop way, where provided;
- “aerodrome operating minima” means the limits of usability of an aerodrome for-
- (a) take-off, expressed in terms of runway visual range or visibility and, if necessary, cloud conditions;
  - (b) landing in 2D instrument approach operations, expressed in terms of visibility 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 or runway visual range and decision altitude/height (DA/H) as appropriate to the type or category of the operation;
- “aeroplane” means 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;
- “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, 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” means a process, established by the operator that maintains and updates, at standardised intervals, a ground-based record of the four-dimensional position of individual aircraft in flight;

“air operator certificate (AOC)” means a certificate authorising an operator to carry out specified commercial air transport operations;

“air traffic service (ATS)” means 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” means 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, and includes take-off alternate, en-route alternate and destination alternate;

“altimetry system error (ASE)” means 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;

“area navigation (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;

“Authority” means the Tanzania Civil Aviation Authority established under section 29 of the Act;

“automatic deployable flight recorder (ADFR)” means a combination flight recorder installed on the aircraft

which is capable of automatically deploying from the aircraft;

“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;

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

“combined vision system (CVS)” means a system to display images from a combination of an enhanced vision system (EVS) and a synthetic vision system (SVS);

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

“configuration deviation list (CDL)” means a list established by the organisation 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” means a runway in which a significant portion of its 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;

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

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

- “continuous descent final approach (CDFA)” means a technique, consistent with stabilised approach procedures, for flying the final approach segment of a non-precision instrument approach procedure as a continuous descent, without level-off, from an altitude or height at or above the final approach fix altitude or height to a point approximately 15 m (50 ft) above the landing runway threshold or the point where the flare manoeuvre should begin for the type of aircraft flown;
- “crew member” means a person assigned by an operator to duty on an aircraft during a flight duty period;
- “cruise relief pilot” means 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” means 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 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;
- “destination alternate” means 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;
- “dry runway” means a runway which its surface is free of visible moisture and not contaminated within the area intended to be used;
- “duty” means any task that flight or cabin crew members are required by the operator to perform, including, 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” means 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;
- “EDTO significant system” means an aeroplane system whose failure or degradation could adversely affect the safety particular to an EDTO flight, or whose continued functioning is specifically important to the safe flight and landing of an aeroplane during an EDTO diversion;
- “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;
- “emergency locator transmitter (ELT)” means an equipment which broadcast distinctive signals on designated frequencies and, depending on application, may be automatically activated by impact or be manually activated;
- “engine” means a unit used for aircraft propulsion consisting of components and equipment necessary for functioning and control, but excludes the propeller and rotors;
- “enhanced vision system (EVS)” means a system to display electronic real-time images of the external scene achieved through the use of image sensors;
- “en-route alternate” means an alternate aerodrome at which an aircraft would be able to land in the event that a diversion becomes necessary while en-route;
- “extended diversion time operations (EDTO)” means 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 Authority;
- “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 perform safety-related operational duties;

“fatigue risk management system (FRMS)” means a data-driven process of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles, knowledge and operational experience that aims at ensuring relevant personnel are performing at adequate levels of alertness;

“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 data analysis” means a process of analyzing recorded flight data in order to improve the safety of flight operations;

“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 aeroplane finally comes to rest and the engines are shut down at the end of the last flight on which he 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;

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“flight operations officer” means 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 Civil Aviation (Personnel Licensing) Regulations, who supports, briefs 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 or incident investigation;
- “flight safety documents system” means a set of interrelated documentation established by the operator, compiling and organising 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 an apparatus in which flight conditions are simulated on the ground, and which provides an accurate representation of the flight deck of a particular aircraft type to the extent that the mechanical, electrical, electronic, 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;
- “flight time - aeroplanes” means the total time from the moment an aeroplane first moves for the purpose of taking-off until the moment it finally comes to rest at the end of the flight;
- “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;
- “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 and efficiency of aeronautical operations;

“instrument approach operations” means an approach and landing using instruments for navigation guidance based on an instrument approach procedure, and includes-

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

“instrument approach procedure IAP” means a series of predetermined manoeuvre 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 meteorological conditions (IMC)” means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions;

“isolated aerodrome” means a destination aerodrome for which there is no destination alternate aerodrome suitable for a given aeroplane type;

“landing distance available (LDA)” means the length of runway which is declared available and suitable for the ground run of an aeroplane landing;

“large aeroplane” means an aeroplane of a maximum certificated take-off mass of over 5,700 kg;

“lateral and vertical navigation guidance” means the guidance provided either by-

- (a) a ground-based radio navigation aid; or

- (b) computer-generated navigation data from ground-based, space-based, self-contained navigation aids or a combination of these;
- “maintenance” means the performance of tasks required to ensure the continuing airworthiness of an aircraft, including any one or combination of overhaul, inspection, replacement, defect rectification, and the embodiment of a modification or repair;
- “maintenance organisation’s procedures manual” means a document endorsed by the head of the maintenance organisation which details the maintenance organisation’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, either in accordance with the approved data and the procedures described in the maintenance organisation’s procedures manual or under an equivalent system;
- “master minimum equipment list (MMEL)” means a list established for a particular aircraft type by the organisation 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;
- “maximum diversion time” means maximum allowable range, expressed in time, from a point on a route to an en-route alternate aerodrome;
- “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 shall 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;
- “navigation specification” means a set of aircraft and flight crew requirements needed to support performance-based navigation operations within a defined airspace;
- “night” means the hours between the end of evening civil twilight and the beginning of morning civil twilight or such other period between sunset and sunrise, as may be prescribed by the appropriate authority;
- “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;
- “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 authorised for operations with an advanced aircraft enabling a lower aerodrome operating minimum than would normally be authorised 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 aeroplane performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned;

- “operations manual” means a manual containing procedures, instructions and guidance for use by operational personnel in the execution of their duties;
- “operations specifications” means the authorisations, conditions and limitations associated with the air operator certificate and subject to the conditions in the operations manual;
- “operator” means a person, organisation 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 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” means an atmospheric pressure expressed in terms of altitude which corresponds to that pressure in the standard atmosphere;

- “psychoactive substances” means alcohol, opioids, cannabinoids, sedatives and hypnotics, cocaine, other psychostimulants, hallucinogens, and volatile solvents, whereas coffee and tobacco are excluded;
- “repair” means the restoration of an aeronautical product to an airworthy condition to ensure that the aircraft continues to comply with the design aspects of the appropriate airworthiness requirements used for the issuance of the type certificate for the respective aircraft type, 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 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 center line of a runway can see the runway surface markings or the lights delineating the runway or identifying its center 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 organisational structures, accountability, responsibilities, policies and procedures;
- “small aeroplane” means an aeroplane of a maximum certificated take-off mass of 5 700 kg or less;
- “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 general aviation operations;
- “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 the 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’s 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;
- “take-off alternate” means 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;
- “target level of safety (TLS)” means a generic term representing the level of risk which is considered acceptable in particular circumstances;
- “threshold time” means the range, expressed in time, established by the Authority, to an en-route alternate aerodrome, whereby any time beyond requires an EDTO approval from the Authority;
- “total vertical error (TVE)” means the vertical geometric difference between the actual pressure altitude flown by an aircraft and its assigned pressure altitude or 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; and
- “wet runway” means a runway which its surface is covered by any visible dampness or water up to and including 3 mm deep within the intended area of use

PART II  
OPERATIONAL REQUIREMENTS

Compliance  
with laws,  
regulations  
and procedures

**4.-(1)** An air operator shall ensure that all its employees when abroad comply with the laws, regulations and procedures of those States in which operations are conducted.

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

(4) An air operator or a designated representative shall be responsible for operational control.

(5) Responsibility for operational control shall be delegated only to the pilot -in-command and to a flight operations officer if the operator's approved method of control and supervision of flight operations requires the use of flight operations officer personnel.

Emergency  
situation

**5.-(1)** Where an emergency situation which endangers the safety of the aeroplane or persons-

(a) becomes known first to the flight operations officer, action by that person shall include, where necessary, notification to the appropriate authorities of the nature of the situation without delay, and requests for assistance if required; and

(b) necessitates the taking of action which involves a violation of local regulations or procedures, the pilot-in-command shall notify the appropriate local authority without delay.

(2) Subject to subregulation (1), the pilot-in-command, where required by the State in which the incident occur shall within ten days submit a report on any such violation to the appropriate authority of such State and a copy of it to the Authority.

(3) An air operator shall ensure that a pilot-in-command 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.

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(4) An air operator shall ensure that flight crew members demonstrate the ability to speak and understand the language used for radiotelephony communications as specified in the Civil Aviation (Personnel Licensing) Regulations.

(5) An air operator shall ensure that an aeroplane has-

- (a) equipment and instruments; and
- (b) communication, navigation and surveillance equipment, in the manner provided in the regulations relating to instrument and equipment.

Registration  
markings

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6. A person shall not operate an aircraft registered in the United Republic or a foreign registered aircraft in Tanzanian airspace unless that aircraft displays the proper markings prescribed in the Civil Aviation (Aircraft Registration and Marking) Regulations.

Airworthiness  
and safety  
precautions

7. An air operator shall develop procedures to ensure that a flight is not commenced unless-

- (a) the aeroplane is airworthy, duly registered and that appropriate certificates with respect thereto are aboard the aeroplane;
- (b) the instruments and equipment installed in the aeroplane are appropriate, taking into account the expected flight conditions;
- (c) any necessary maintenance has been performed;
- (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; and

- (f) the aeroplane operating limitations, contained in the flight manual, or its equivalent, will not be exceeded.

Certificate of  
Airworthiness  
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**8.** A person shall not operate an aircraft with a Certificate of Airworthiness except as provided in the limitations issued with that certificate in accordance with the Civil Aviation (Airworthiness) Regulations.

Inoperative  
instruments  
and equipment

**9.-(1)** A person shall not-

- (a) commence an aircraft flight with inoperative instruments or equipment installed, except as authorised by the Authority;
- (b) operate a multi-engine aircraft in commercial air transport with inoperative instruments and equipment installed unless the following conditions are met-
  - (i) an approved MEL exists for that aircraft;
  - (ii) the Authority has issued operations specifications authorising operations in accordance with an approved MEL
  - (iii) the flight crew has direct access at all times prior to flight to all of the information contained in the approved MEL through printed or other means approved by the Authority in the operations specifications which constitutes an approved change to the type design without requiring desertification;
  - (iv) the approved MEL which shall-
    - (aa) be prepared in accordance with the limitations specified in these Regulations; and
    - (bb) provide for the operation of the aircraft with certain instruments and equipment in an inoperative condition;
  - (v) records identifying the inoperative instruments and equipment and the

information required by paragraph (c) which shall be available to the pilot; and

- (vi) the aircraft is operated under all applicable conditions and limitations contained in the Minimum Equipment List and the operations specifications authorising use of the MEL.

(2) Flight operations with inoperative instruments and equipment installed may be allowed in situations where no master minimum equipment list is available and no minimum equipment list is required for the specific aircraft operation under this regulation.

(3) The inoperative instruments and equipment referred to in subregulation (1) shall not be-

- (a) part of the visual flight rules day instruments and equipment prescribed in the regulations relating to instruments and equipment;
- (b) required on the aircraft's equipment list or the operations equipment list for the kind of flight operation being conducted;
- (c) required by the regulations relating to instruments and equipment for the specific kind of flight operation being conducted; or
- (d) required to be operational by an airworthiness directive.

(4) The Authority may authorise a person to operate an aircraft with inoperative instruments and equipment where such instruments and equipment are-

- (a) determined by the pilot-in-command not to be a hazard to safe operation;
- (b) deactivated and placarded "inoperative"; and
- (c) removed from the aircraft, the cockpit control placarded and the maintenance recorded in accordance with the Civil Aviation (Airworthiness) Regulations.

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(5) Where deactivation of the inoperative instrument or equipment involves maintenance, it shall be accomplished and recorded in accordance with the Civil Aviation (Airworthiness) Regulations.

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(6) The following instruments and equipment shall not be included in the MEL that-

- (a) are either specifically or otherwise required by the certification airworthiness requirements and which are essential for safe operations under all operating conditions;
- (b) required for operable condition by an airworthiness directive, unless the airworthiness directive provides otherwise; or
- (c) required for specific operations.

Aircraft flight manual, marking and placard requirements

**10.-(1)** A person shall not operate an aircraft registered in the United Republic unless there is available in the aircraft-

- (a) a current, approved aircraft flight manual;
- (b) an operations manual approved by the Authority for the aircraft operator certification; and
- (c) the General Operations Manual describing the content and use of the operational flight plan.

(2) A person operating an aircraft under these Regulations shall display in the aircraft all placards, listings, instrument markings or combination thereof, containing those operating limitations prescribed by the aircraft's State of registry for visual presentation.

(3) Each AFM shall be updated by implementing changes made mandatory by the State of Registry.

Required aircraft and equipment

**11.-(1)** A person shall not operate an aircraft registered in the United Republic unless he is authorised by the Authority and the aircraft has had the following inspections-

- (a) an annual inspection within the past twelve months;
- (b) a one-hundred hour inspection;
- (c) an altimeter and pilot static system inspection in the past twelve months;
- (d) for transponder equipped aircraft, a transponder check within the past twelve months; and
- (e) for emergency locator transmitter equipped aircraft, an emergency locator transmitter check within the past twelve months.

(2) The Aircraft for remuneration or hire operations maintained under maintenance and inspection programme

approved by the Authority, shall not require current annual or one-hundred hour inspections in their maintenance records.

Electronic flight bag

**12.-(1)** An air operator who uses an electronic flight bag on board an aircraft shall ensure that-

- (a) it is approved by the Authority;
- (b) it does not affect the performance of the aircraft systems, equipment or the ability to operate;
- (c) he assesses the safety risks associated with each function;
- (d) he establishes and documents the procedures for use of and training requirements for the device and each function; and
- (e) sufficient information is readily available to the flight crew for the flight to be conducted safely in the event of any failure.

(2) The Authority in approving the use of electronic flight bags, shall ensure that-

- (a) the electronic flight bag equipment and its associated installation hardware, including interaction with aircraft systems, where applicable, meet the appropriate airworthiness certification requirements;
- (b) the operator has assessed the safety risks associated with the operations supported by the electronic flight bag functions;
- (c) the operator has established and documented procedures for the management of the electronic flight bag functions including any database it may use and its training requirements; and
- (d) the operator has established requirements for redundancy of the information, where appropriate, contained in and displayed by the electronic flight bag functions.

Documents to be carried on aircraft

**13.-(1)** A person shall not fly an aircraft unless it carries documents which are required to be carried on board under the law of the State of registry.

(2) An aircraft registered in United Republic shall, when in flight, carry on board the documents specified in this regulation:

Provided that, where the flight is intended to begin and end at the same aerodrome and does not include passage over the territory of any other State other than the United Republic, the documents may be kept at the aerodrome instead of being carried aboard the aircraft.

(3) The documents to be carried in an aircraft are-

(a) on a flight for the purpose of commercial air transport:

- (i) licence in force in respect of the aircraft radio station installed in the aircraft;
- (ii) the certificate of airworthiness in force in respect of the aircraft;
- (iii) the licences and certificates of members of the flight crew of the aircraft;
- (iv) one copy of mass and balance documentation, if any, required with respect to the flight;
- (v) one copy of the certificate of release to service, if any, in force with respect to the aircraft;
- (vi) the technical logbook required by these Regulations;
- (vii) the operations manual required by these Regulations to be carried on the flight;
- (viii) aircraft certificate of registration;
- (ix) aircraft journey logbook;
- (x) list of passenger names and points of embarkation and disembarkation;
- (xi) cargo manifest including special loads information where applicable;
- (xii) certified true copy of the aircraft operator certificate and operations specifications relevant to the aircraft type, issued in conjunction with the certificate;

- (xiii) noise certificate, if required;
  - (xiv) aeroplane flight manual or rotorcraft flight manual;
  - (xv) minimum equipment list;
  - (xvi) Category II or III manual, as applicable;
  - (xvii) operational flight plan;
  - (xviii) filed notice to airmen (NOTAMS) briefing documentation;
  - (xix) meteorological information;
  - (xx) maps and charts required for the flight and possible diversions;
  - (xxi) forms for complying with the reporting requirements of the Authority;
  - (xxii) list of special situation passengers;
  - (xxiii) filed air traffic controller flight plan;
  - (xxiv) search and rescue information; and
  - (xxv) any other document which may be required by the Authority or States concerned with a flight;
- (b) on a flight which includes passage over a territory of any country other than the United Republic for the purpose of commercial air transport and aerial work-
- (i) the documents set forth in paragraph (a);
  - (ii) a copy of notified procedure to be followed by the pilot-in-command of an intercepted aircraft and the notified visual signals for use by intercepting and intercepted aircraft; and
  - (iii) general declaration;
- (c) on a flight for the purpose of aerial work-
- (i) licence in force in respect of the aircraft radio station installed in the aircraft;
  - (ii) the certificate of airworthiness in force in respect of the aircraft;
  - (iii) the licences and certificates of members of the flight crew of the aircraft;

- (iv) the technical logbook required by these Regulations;
  - (v) one copy of the certificate of release to service, if any, in force with respect to the aircraft;
  - (vi) aircraft certificate of registration; and
  - (vii) any other document required by the Authority; or
- (d) on a flight which includes passage over a territory of any country other than the United Republic for the purpose of aerial work-
- (i) the documents set forth in paragraph (c); and
  - (ii) a copy of notified procedure to be followed by pilot-in-command of an intercepted aircraft and the notified visual signals for use by intercepting and intercepted aircraft.

(4) Where the certificate and the associated operations specifications are issued by the State of the operator in a language other than English, an English translation shall be included.

Production of documents

**14.-(1)** A pilot-in -command shall, after being requested to do so by an authorised person, produce for examination by that person-

- (a) the certificates of registration and airworthiness in force in respect of the aircraft;
- (b) the licences and certificates of crew members, as applicable; and
- (c) such other documents as required by regulation 11 to be on board the aircraft when in flight.

(2) An air operator of an aircraft registered in the United Republic shall, after being requested to do so by an authorised person, produce to that person any of the following documents or records-

- (a) licence in force in respect of the aircraft radio station installed in the aircraft;
- (b) the certificate of airworthiness in force in respect of the aircraft;

- (c) the certificate of registration in force with respect to the aircraft;
- (d) the aircraft logbook, engine logbooks and variable pitch propeller logbooks required under these Regulations to be kept;
- (e) the mass and balance documentation, if any;
- (f) any records of flight time, duty periods and rest periods which are required to be preserved and such other documents and information in the possession or control of the operator, as the authorised person may require for the purpose of determining whether those records are complete and accurate;
- (g) any operations manuals or other data required to be made available under these Regulations; and
- (h) the record made by any flight recorder installed under the relevant regulations relating to instrument and equipment.

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(3) The holder of a licence or certificate granted or rendered valid under the Civil Aviation (Personnel Licensing) Regulations, shall, after being requested to do so by an authorized person, produce to that authorized person, his licence, certificate, including any validation thereof.

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(4) A person required by the Civil Aviation (Personnel Licensing) Regulations, to keep a personal flying logbook shall-

- (a) keep such records for a period of not less than two years after the date of the last entry therein; and
- (b) produce it to an authorised person immediately, and in any case not later than fourteen days after being requested to do so.

Preservation of  
documents

**15.-(1)** Subject to subregulation (2), a person required to preserve any documents or records by reason of his being the operator of an aircraft shall-

- (a) if he ceases to be the operator of the aircraft, continue to preserve the documents or records as if he had not ceased to be the operator; and

- (b) in the event of his death the duty to preserve the documents or records shall fall upon his personal representative.
- (2) Where-
  - (a) another person becomes the operator of the aircraft, the first mentioned operator or his personal representative shall deliver to that person upon demand the certificate of release to service, the logbooks and the mass and balance schedule and any record made by a flight recorder and preserved in accordance with this regulation which are in force or required to be preserved in respect of that aircraft;
  - (b) an engine or variable pitch propeller is removed from the aircraft and installed in another aircraft operated by another person the first mentioned operator or his personal representative shall deliver to that person upon demand the logbook relating to that engine or propeller;
  - (c) any person in respect of whom a record has been kept by the first mentioned operator in accordance with this regulation becomes a flight crew member of an aircraft registered in United Republic engaged in commercial air transport operations in the United Republic and operated by another person, the first mentioned operator or his personal representative shall deliver those records to that other person upon demand:

Provided that, it shall be the duty of the other person referred to in paragraphs (a), (b) and (c) to deal with the documents or records delivered to him as if he were the first mentioned operator.

Insurance

**16.-(1)** A person shall not fly or cause any other person to fly an aircraft unless there is in force an insurance policy in respect of third-party risks.

(2) The insurance policy for commercial air transport aircraft shall cover insurance in respect of passengers' liability, cargo, baggage and mail risks.

(3) The minimum sum of insurance in respect of any aircraft insured in accordance with subregulation (2) shall be notified by the Authority.

Stowaways

**17.** A person shall not hide himself in an aircraft for the purpose of being carried in the aircraft without the consent of either the operator or the pilot-in-command thereof or of any other person entitled to give consent to his being carried in the aircraft.

Co-ordination of activities potentially hazardous to civil aircraft

**18.-(1)** A person shall not carry out activities potentially hazardous to a civil aircraft whether flying over United Republic or over the territorial waters of United Republic without approval from the Authority.

(2) Without prejudice to the generality of subregulation (1)-

- (a) a person shall not intentionally project, or cause to be projected, a laser beam or other directed high intensity light at an aircraft in such a manner as to create a hazard to aviation safety, damage to the aircraft or injury to its crew or passengers;
- (b) a person using or planning to use lasers or other directed high intensity lights outdoors in such a manner that the laser beam or other light beam may enter navigable airspace with sufficient power to cause an aviation hazard shall provide written notification to the competent authority;
- (c) a pilot-in-command shall not deliberately operate an aircraft into a laser beam or other directed high intensity light unless flight safety is ensured:

Provided that, the use of laser beam or other directed high intensity light shall require a mutual agreement between the operator of the laser emitter or light source, the pilot-in-command, and the competent Authority.

(3) A person shall not release into the atmosphere any radioactive material or toxic chemicals which may affect the safety of aircraft operating within United Republic airspace.

Power to prohibit or restrict flying or landing or taking-off

**19.-(1)** Where the Authority deems it necessary in the public interest to restrict or prohibit-

(a) flying over any area of the United Republic or along any route therein; or

(b) landing or take off at any place in the United Republic by reason of-

(i) the intended gathering or movement of a large number of persons;

(ii) the intended holding of an aircraft race contest or of an exhibition of flying; or

(iii) national security or any reason affecting public interest, may make orders prohibiting, restricting or imposing conditions on flight by any aircraft-

(aa) whether or not registered in United Republic, in any airspace over the United Republic; and

(bb) by an aircraft registered in United Republic, in any other airspace, being airspace in respect of which the United Republic has in pursuance of international arrangements undertaken to provide navigation services for aircraft.

(2) Orders referred under this regulation may apply either generally or in relation to any class of aircraft:

Provided that, it shall be an offence to contravene or permit the contravention of or fail to comply with any orders made hereunder.

(3) Where the pilot-in-command becomes aware that he is flying in contravention of any regulation which have been made for any of the reasons referred to in subregulation (1)(b)(iii) he shall, unless otherwise instructed pursuant to subregulation (4), cause the aircraft to leave the area to which the order relate by flying to the least possible extent over such area and the aircraft shall not begin to descend while over such an area.

(4) The pilot-in-command flying either within an area for which orders have been made for any of the reasons referred to in subregulation (1)(b)(iii) or within airspace notified as a danger area shall forthwith comply with instructions given by radio by the appropriate air traffic services unit or by, or on behalf of, the person responsible for safety within the relevant airspace.

Balloons, kites  
and airships

**20.**-(1) A person shall not, within the United Republic -

- (a) fly a captive balloon or kite at a height of more than 200 feet above the ground level or within 200 feet of any vessel, vehicle or structure;
- (b) fly a captive balloon within an aerodrome traffic zone;
- (c) fly a balloon exceeding 6 feet in any linear dimension at any stage of its flight, including any basket or other equipment attached to the balloon, in controlled airspace;
- (d) fly a kite within an aerodrome traffic zone;
- (e) moor an airship; or
- (f) fly a free balloon at night, without the permission in writing of the Authority, and in accordance with any conditions subject to which the permission may be granted.

(2) A captive balloon when in flight shall not be left unattended unless it is fitted with a device which ensures automatic deflation if it breaks.

(3) An unmanned free balloon shall be operated in such a manner as to minimise hazards to persons, property or other aircraft.

Compliance by  
foreign  
operator with  
laws,  
regulations  
and procedures  
of Authority

**21.**-(1) When the Authority identifies a case of non-compliance or suspected non-compliance by a foreign operator with laws, regulations and procedures applicable within the United Republic, 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 Authority and the State of registry are different, the notification under subregulation (1) shall

also be made to the State of registry, if the issue falls within the responsibilities of that State and warrants a notification.

(3) In the case of notification to States as specified in subregulations (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.

Surveillance of operations by foreign operator

**22.-(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 the applicable international Standards and the regulations relating to commercial air transport operations by foreign air operator in and out of the United Republic.

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

(3) An air operator shall meet and maintain the requirements established by the Authority of the state in which the operations are conducted.

Safety management

**23.-(1)** An air operator of an aeroplane of a maximum 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) An air operator may contract the operation of a flight data analysis programme to another party while retaining overall responsibility for the maintenance of such a programme.

(3) A flight data analysis programme referred to under this regulation shall be non-punitive and contain adequate safeguards to protect the source of the data.

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

(5) The Authority shall not allow the use of recordings or transcripts of Cockpit Voice Recorder (CVR), Cockpit Audio Recording System (CARS), Class A

Airborne Image Recorder (AIR) and Class A Airborne Image Recording System (AIRS) for purposes other than the investigation of an accident or incident, except where the recordings or transcripts are-

- (a) related to a safety related event identified in the context of a safety management system or are restricted to the relevant portions of a deidentified transcript of the recording, and are subject to the protections accorded by the Civil Aviation (Safety Management Systems) Regulations;
- (b) 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 the Civil Aviation (Safety Management Systems) Regulations; or
- (c) used for inspections of flight recorder systems as provided in the regulations relating to civil aviation instruments and equipment.

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(6) The Authority shall not allow the use of recordings or transcripts of Flight Data Recorder (FDR), Aircraft Data Recording System (ADRS) as well as Class B and Class C AIR and AIRS for purposes other than the investigation of an accident or incident as per Accident and Investigation Regulations, except where the recordings or transcripts are subject to the protections accorded by Civil Aviation (Safety Management Systems) Regulations and are-

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- (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 under this regulation;
- (c) sought for use in proceedings not related to an event involving an accident or incident investigation;
- (d) de-identified; and disclosed under secure procedures.

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

Imperiling  
safety of  
persons and  
property

**24.** A person shall not willfully, recklessly, or negligently cause or permit an aircraft to endanger any life or property.

Use of  
psychoactive  
substances

**25.-(1)** A flight crew member shall not perform any function specified in the privileges applicable to his licence if he is under the influence of any psychoactive substance which may render him unable to perform such functions in a safe and proper manner.

(2) A safety sensitive personnel whose function is critical to the safety of aviation shall not 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 subregulations (1) and (2) shall not use any kind of psychoactive use of substances.

Aircraft  
tracking

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

(2) An air operator shall track the position of an aeroplane through automated reporting at least every fifteen minutes for the 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 fifteen-minute intervals.

(3) An air operator shall track the position of an aeroplane through automated reporting at least every fifteen minutes for the portions of the in-flight operations that is planned in an oceanic area 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 air traffic services unit obtains aeroplane position information at greater than fifteen-minute intervals.

(4) Notwithstanding the provisions in subregulations (2) and (3), the Authority based on the results of an approved risk assessment process implemented by the operator, may allow for variations to automated reporting intervals.

(5) The risk assessment process 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 air traffic services 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 air operator shall establish procedures, approved by the Authority, for the retention of aircraft tracking data to assist search and rescue in determining the last known position of the aircraft.

### PART III FLIGHT OPERATIONS

Operating  
considerations  
and facilities

**27.-(1)** An air operator shall ensure that a flight will not be commenced 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 air operator shall ensure that a flight will not commence or continue as planned unless it has been ascertained by every reasonable means available that the airspace containing the intended route from aerodrome of

departure to aerodrome of arrival, including the intended take-off, destination and en-route alternate aerodromes, can be safely used for the planned operation.

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

(4) An air 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 air operator shall, as part of its safety management system, assess the level of rescue and firefighting services 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 rescue and firefighting services protection referred to in subregulation (4) which is deemed acceptable by the operator shall be contained in the operations manual.

Operational  
certification  
and  
supervision

**28.-(1)** 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.

(2) An air operator shall develop policies and procedures for third parties that perform work on its behalf.

Air operator  
certificate

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

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

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(3) The continued validity of an air operator certificate shall depend upon the operator maintaining the requirements in regulation 28(1) under the supervision of the Authority.

(4) An air operator certificate shall contain at least the following information and be in the form prescribed in First Schedule of the Civil Aviation (Air Operator Certification and Administration) Regulations-

- (a) the Authority 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.

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(5) The operations specifications associated with the air operator certificate shall contain at least the following information and be in the form prescribed in the Second Schedule of the Civil Aviation (Air Operator Certification and Administration) Regulations-

- (a) each aircraft model in the operator's fleet, identified by aircraft make, model and series, the list of authorisations, conditions and limitations shall be included;
- (b) issuing authority contact details;
- (c) operator name and aircraft operator certificate number;
- (d) date of issue and signature of the authority representative;
- (e) aircraft model, types and area of operations; and
- (f) special limitations and authorisations.

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(6) The Authority shall establish a system for both the certification and the continued surveillance of the operator and the Civil Aviation (Safety Management) Regulations to ensure that the required standards of operations established in this regulation are maintained.

Surveillance of  
operations by  
foreign  
operator  
GN. No.  
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**30.**-(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 the applicable Standards specified in these Regulations and in the Civil Aviation (Safety Management) Regulations.

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

(3) A foreign operator shall meet and maintain the requirements established by the Authority in which the operations are conducted.

Operations  
manual

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**31.**-(1) An air operator shall provide, for the use and guidance of operations personnel concerned, an operation manual in accordance with the Third Schedule of the Civil Aviation (Air Operator Certification and Administration) Regulations.

(2) The operations manual shall be amended or revised as is necessary to ensure that the information contained therein is kept up to date.

(3) All such amendments or revisions shall be issued to all personnel that are required to use the manual.

(4) The Authority shall establish a requirement for the operator to provide a copy of the operations manual together with all amendments or revisions, for review and acceptance and, where required, approval.

(5) An air operator shall incorporate in the operations manual such mandatory material as the Authority may require.

Operating  
instructions-  
general

**32.**-(1) An air operator shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities.

(2) An aeroplane shall not be taxied on the movement area of an aerodrome unless the person at the controls-

- (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, marking, lights, air traffic control signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.

(3) An air 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.

In-flight simulation of emergency situations

**33.** An air operator shall ensure that when passengers or cargo are being carried in an aircraft, emergency or abnormal situations are not simulated.

Checklists

**34.-(1)** The normal, abnormal and emergency procedures checklists shall be used by flight crews prior to, during and after all phases of operations, and in an emergency, to ensure compliance with the operating procedures specified 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 design and utilisation of checklists shall observe human factors principles.

Altimeter settings

**35.** A person operating an aircraft registered in the United Republic shall set the aircraft altimeters to maintain the cruising altitude for flight level reference in accordance with the procedure notified by-

- (a) the State where the aircraft may be; or
- (b) the aeronautical information publication.

Operation of radio in aircraft

**36.-(1)** The radio station in an aircraft shall not be operated, whether or not the aircraft is in flight, except in accordance with the conditions of the licence issued in

respect of that station under the law of the State of registry, and by a person duly licensed or otherwise permitted to operate the radio station under that law.

(2) Subject to subregulations (3) and (4), whenever an aircraft is in flight in such circumstances that it is required by or under these Regulations to be equipped with radio communications apparatus, a continuous radio watch shall be maintained by a member of a flight crew listening to the signals transmitted upon the frequency notified, or designated by a message received from an appropriate aeronautical radio station, for use by that aircraft.

(3) The radio watch may be discontinued or continued on another frequency to the extent that a message as aforesaid so permits.

(4) The watch may be kept by a device installed in the aircraft where the appropriate aeronautical radio station has been informed to that effect and has raised no objection; and that station is notified, or in the case of a station situated in a State other than United Republic, otherwise designated as transmitting a signal suitable for that purpose.

(5) Whenever an aircraft is in flight in such circumstances that it is required by or under these Regulations to be equipped with radio or radio navigation equipment a member of the flight crew shall operate that equipment in such a manner as he may be instructed by the appropriate air traffic control unit or as may be notified in relation to any notified airspace in which the aircraft is flying.

(6) The radio station in an aircraft shall not be operated so as to cause interference, that impairs the efficiency of aeronautical telecommunications or navigational services, and in particular emissions shall not be made except as follows:

- (a) emission of the class and frequency for the time being in use, in accordance with general international aeronautical practice, in the airspace in which the aircraft is flying;
- (b) distress, urgency and safety messages and signals, in accordance with general international aeronautical practice;

- (c) messages and signals relating to the flight of the aircraft, in accordance with general international aeronautical practice; and
- (d) such public correspondence messages as may be permitted by or under the aircraft radio station licence referred in subregulation (1).

(7) In any aircraft registered in United Republic, which is engaged on a flight for the purpose of commercial air transport operations, the pilot and the flight engineer, if any, shall not make use of a hand-held microphone, whether for the purpose of radio communication or of intercommunication within the aircraft, whilst the aircraft is flying in controlled airspace below flight level 150 or is taking-off or landing.

(8) An aircraft which is equipped with a radio station having a defect such as to impair the safety of the aircraft shall not undertake any flight until the aircraft has been rendered safe, or where such defect occurs during flight, shall land as soon as possible unless the radio station can be and is speedily rendered safe for flight.

Minimum  
flight altitudes

**37.-(1)** An air 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 that State.

(2) An air 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.

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(3) The minimum flight altitudes determined in accordance with method provided under this regulation shall not be lower than specified in the Civil Aviation (Rules of the Air) Regulations and be approved by the Authority.

(4) 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 use;
- (c) the characteristics of the terrain, including sudden changes in the elevation;
- (d) the probability of encountering unfavorable meteorological conditions, including severe turbulence and descending air currents;
- (e) possible inaccuracies in aeronautical charts; and
- (f) airspace restrictions.

Aerodrome  
operating  
minima

**38.-(1)** The operator shall establish aerodrome operating minima for each aerodrome to be used in operations:

Provided that, the method of determination of such minima is approved by the Authority.

(2) The minima referred to in subregulation (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 for operations with advanced aircraft.

(4) Where the operational credit relates to low visibility operations, the Authority shall issue a specific approval which shall not affect the classification of the instrument approach procedure.

(5) For the purpose of this regulation “Operational credit” includes:

- (a) in case, of an approach ban, minima or dispatch considerations, a minimum below the aerodrome operating minima;
- (b) reducing or satisfying the visibility requirements; or
- (c) requiring fewer ground facilities as compensated for by airborne capabilities.

(6) 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;
- (g) operator has instituted appropriate procedures in respect of continuing airworthiness (maintenance and repair) practices and programmes.

(7) For operations with operational credit with minimal above those related to low visibility operations, the Authority shall establish criteria for the safe operation of the aeroplane.

(8) Instrument approach operations shall be classified based on the designed lowest operating minima below which an approach operation shall be classified as follows:

- (a) in the case of Type A, with a minimum descent height or decision height at or above 75 metre or 250 foot; and
- (b) in the case of Type B, with a decision height below 75 metre or 250 foot which are categorised as follows:
  - (i) Category I (CAT I), with a decision height not lower than 60 metre or 200 foot and with either a visibility not less than 800 metre or a runway visual range not less than 550 metre;
  - (ii) Category II (CAT II), with a decision height lower than 60 metre or 200 foot

but not lower than 30 metre or 100 foot and a runway visual range not less than 300 metre; and

- (iii) Category III (CAT III), with a decision height lower than 30 metre or 100 foot or no decision height and a runway visual range less than 300 metre or no runway visual range limitations.

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

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

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

(12) The operating minima for 2D instrument approach operations using instrument approach procedures shall be determined by establishing a minimum descent altitude or minimum descent height, minimum visibility and, if necessary, cloud conditions.

(13) The operating minima for 3D instrument approach operations using instrument approach procedures shall be determined by establishing a decision altitude or decision height and the minimum visibility or RVR.

Category II  
and III  
operations  
general  
operating rules

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**39.-(1)** A person shall not operate an aircraft in a Category II or III operations unless-

- (a) the pilot-in-command and co-pilot of the aircraft hold the appropriate authorisations and ratings prescribed in the Civil Aviation (Personnel Licensing) Regulations;
- (b) each flight crew member has adequate knowledge of, and familiarity with, the aircraft and the procedures to be used;
- (c) the instrument panel in front of the pilot who is controlling the aircraft has appropriate instrumentation for the type of flight control guidance system that is being used;

- (d) authorised by the Authority, each ground component required for that operation and the related airborne equipment is installed and operating; and
- (e) the operation is conducted in accordance with air operator certificate holder's specific operations specifications.

(2) Where the approach procedure being used provides for and requires the use of a decision height or decision altitude, the authorised decision height or decision altitude includes the following:

- (a) prescribed by the approach procedure;
- (b) prescribed for the pilot-in-command;
- (c) for which the aircraft is equipped.

(3) Unless otherwise authorised by the Authority, a pilot operating an aircraft in a Category II or Category III approach that provides and requires use of a decision height or decision altitude shall not continue the approach below the authorised decision height unless-

- (a) the aircraft is in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal maneuvers, and where that descent rate shall allow touchdown to occur within the touchdown zone of the runway of intended landing;
- (b) at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot-
  - (i) the approach light system, except that the pilot shall not descend below 100 feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable;
  - (ii) the threshold or the threshold marking;
  - (iii) the threshold lights;
  - (iv) the touchdown zone or touchdown zone markings;
  - (v) the touchdown zone lights.

(4) Unless otherwise authorised by the Authority, a pilot operating an aircraft shall immediately execute an appropriate missed approach procedure whenever, prior to touchdown, the requirements of subregulation (3) are not met.

(5) A person operating an aircraft using a Category III approach without decision height shall not land that aircraft except in accordance with the provisions of the letter of authorisation issued by the Authority.

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(6) Subregulations (1) to (5) shall not apply to operations conducted by air operator certificate holders issued with a certificate under the Civil Aviation (Air Operator Certification and Administration) Regulations.

(7) A person shall not operate an aircraft in a Category II or Category III operations conducted by an air operators certificate holder unless.

Category II  
and category  
III: operations  
manual

**40.-(1)** A person shall not operate an aircraft in a Category II or a Category III operation unless-

- (a) there is available in the aircraft a current and approved Category II or Category III manual, as appropriate, for that aircraft;
- (b) the operation is conducted in accordance with the procedures, instructions, and limitations in the appropriate manual; and
- (c) the instruments and equipment listed in the manual that are required for a particular Category II or Category III operation have been inspected and maintained in accordance with the maintenance programme contained in the manual.

(2) An air operator shall keep a current copy of each approved manual at its principal base of operations and shall make each manual available for inspection upon request by the Authority.

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(3) Subregulations (1) and (2) shall not apply to operations conducted by an air operator certificate holder issued a certificate under the Civil Aviation (Air Operator Certification and Administration) Regulations.

(4) An applicant for approval of a Category II or III operations manual or an amendment to an approved

Category II operations manual shall submit the proposed manual or amendment to the Authority.

(5) Where the application made under these Regulations is a request for an evaluation programme, the application shall include the following-

- (a) the location of the aircraft and the place where the demonstrations are to be conducted; and
- (b) the date the demonstrations are to commence, at least ten days after filing the application.

(6) A Category II or III operations manual shall contain-

- (a) the registration number, make, and model of the aircraft to which it applies;
- (b) a maintenance programme; and
- (c) the procedures and instructions related to-
  - (i) recognition of decision height or decision altitude;
  - (ii) use of runway visual range information;
  - (iii) approach monitoring;
  - (iv) the decision region, which is the region between the middle marker and the decision height or decision altitude;
  - (v) the maximum permissible deviations of the basic instrument landing system indicator within the decision region;
  - (vi) a missed approach procedure;
  - (vii) use of airborne low approach equipment;
  - (viii) minimum altitude for the use of the autopilot;
  - (ix) instrument and equipment failure warning system;
  - (x) instrument failure; and
  - (xi) other procedures, instructions, and limitations as the Authority may deem necessary.

Threshold  
crossing height  
for 3D  
instrument  
approach  
operations

**41.** An air 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.

Fuel and oil records

**42.**-(1) An air operator shall maintain fuel records to enable the Authority to ascertain that, for each flight, the requirements under regulation 85 have been complied with.

(2) An air 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 three months.

Crew

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

(2) The air 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 for each flight of an aeroplane above 15000 m (49 000 ft.).

Pre-flight action

**44.** A pilot-in-command of an aircraft registered in United Republic shall satisfy himself before the flight is commenced that-

(a) the flight can safely be made, taking into account the latest information available as to the route and aerodromes to be used, the weather reports and forecasts available, and any alternative cause of action which can be adopted in case the flight cannot be completed as planned;

(b) the equipment, including radio apparatus, required by these Regulations to be carried is carried and is in a fit condition for use;

(c) the aircraft is in every way fit for the intended flight, and that, where a certificate of release to service is required by the Civil Aviation (Airworthiness) Regulations, to be in force, is in force and will not cease to be in force during the intended flight;

(d) the load carried by the aircraft is of such weight, and is so distributed and secured, that it may safely be carried on the intended flight.

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Loading of  
aircraft

**45.-(1)** An air operator certificate holder shall not cause or permit an aircraft to be loaded for a flight for the purpose of commercial air transport except under the supervision of a person who the operation is conducted in accordance with that aircraft operator certificate holder's specific operations specifications. holder has caused to be furnished with written instructions as to the distribution and securing of the load so as to ensure that-

- (a) the load may safely be carried on the flight; and
- (b) any condition subject to which the certificate of airworthiness in force in respect of the aircraft was issued or rendered valid, being conditions relating to the loading of the aircraft are complied with.

(2) The instructions shall indicate the mass of the aircraft prepared for service, that is, the aggregate of the basic mass and the mass of such additional items in or on the aircraft as the operator thinks fit to include.

(3) The instructions referred to in subregulation (2) shall indicate the additional items included in the mass of the aircraft prepared for service, and shall show the position of the centre of gravity of the aircraft at that mass.

(4) The provisions of subregulations (2) and (3) shall not apply in relation to a flight where-

- (a) the aircraft's authorised maximum take-off mass does not exceed 1,150 kg; or
- (b) the aircraft's authorised maximum take-off mass does not exceed 2,730 kg. and the flight is not intended to exceed sixty minutes in duration and is either a flight-
  - (i) solely for training persons to perform duties in an aircraft; or
  - (ii) intended to begin and end at the same aerodrome.

(5) A person supervising the loading of the aircraft shall, before the commencement of a flight prepare and sign a load sheet in duplicate:

Provided that, the air operator is the pilot-in-command of the aircraft, submit the load sheet for examination by the pilot-in-command of the aircraft who

upon being satisfied that the aircraft is loaded in the manner required by subregulation (1), sign his name thereon.

(6) The requirements of subregulation (5) shall not apply where-

- (a) the load and the distributing and securing thereof upon the next intended flight are to be unchanged from the previous flight and the pilot-in-command of the aircraft makes and signs an endorsement to that effect upon the load sheet for the previous flight, indicating the date of the endorsement, the place of departure upon the next intended flight and the next intended destination; or
- (b) the instructions prescribed in subregulations (2), (3) and (4) shall not apply in relation to the flight.

(7) A pilot operating an aircraft shall ensure that one copy of the load sheet be carried in the aircraft when so required until the flights to which the load sheet relates have been completed and be preserved by the operator until the expiration of a period of six months thereafter.

(8) A load sheet required under subregulation (5) shall contain the following information:

- (a) the nationality and registration marks of the aircraft to which the load sheet relates; particulars of the flight to which the load sheet relates;
- (b) particulars of the flight to which the load sheet relates;
- (c) the total mass of the aircraft as loaded for the flight;
- (d) the mass of the several items from which the total mass of the aircraft, as so loaded, has been calculated including in particular the mass of the aircraft prepared for service and the respective total mass of the passengers, crew, baggage and cargo intended to be carried on the flight;
- (e) the manner in which the load is distributed and the resulting position of the centre of gravity of the aircraft which may be given approximately

if and to the extent that the relevant certificate of airworthiness so permits; and

- (f) at the foot or end of the load sheet, a certificate signed by the person referenced in subregulation (1) as responsible for the loading of the aircraft, stating that the aircraft has been loaded in accordance with the written instructions furnished to him by the operator of the aircraft pursuant to that subregulation.

(9) For the purpose of calculating the total mass of the aircraft, the respective total mass of the passengers and crew entered in the load sheet shall be computed from the actual mass of each person, and for that purpose each person shall be separately weighed unless subregulations (10), (11) and (13) applies.

(10) An air operator shall ensure that passengers' personal belongings and hand baggage are included and such weighing must be conducted immediately prior to boarding and at an adjacent location when determining the actual mass by weighing.

(11) An air operator shall compute the mass of passengers and checked baggage using the standard mass values specified in Tables 1 and 2 except where the number of passenger seats available is less than 10.

(12) The standard masses values include hand baggage and the mass of any infant below two years of age carried by an adult on one passenger seat and infants occupying separate passenger seats must be considered as children for the purpose of this regulation.

(13) In cases where the number of passenger seats available is less than 10, passenger mass may be established by use of a verbal statement by or on behalf of each passenger and adding to it a predetermined constant to account for hand baggage and clothing.

(14) The procedure specifying when to select actual or standard masses and the procedure to be followed when using verbal statements must be included in the operations manual.

(15) On flights where no hand baggage is carried in the cabin or where hand baggage is accounted for separately, 6 kg may be deducted from the male and female

masses in Table 1 below and articles including an overcoat, an umbrella, a small handbag or purse, reading material or a small camera are not considered as hand baggage for the purpose of this regulation:

**Table 1 - Computation of Mass of Passengers**

Passenger seats	1-5	6-9	10-19	20 and more	30 and more
Male	104	96	92	88	84
Female	86	78	74	70	84
children	35	35	35	35	35

(16) Where the total number of passenger seats available on the aircraft is 20 or more the standard mass values given in Table 2 are applicable for each piece of checked baggage and for aircraft with less than 20 passenger seats the actual mass of checked baggage, determined by weighing, shall be used.

**Table 2 – Standard Mass Value**

Type of flight	Baggage standard mass
Domestic	11kgs
Regional	13kgs
Intercontinental	15kgs
All others	13kgs

(17) Where subregulations (10), (11) and (13) is applied, the load sheet shall bear a notation to that effect.

(18) Where subregulations (10), (11) and (13) may apply, the PIC shall, if the standard masses described in subregulation 10 appear to be inapplicable or doing so is in the interests of safety of the aircraft, require any or all of the passengers, crew and cargo to actually be weighed for the purpose of the entry to be made in the load sheet.

Stowage of  
baggage and  
cargo

**46.-(1)** An air operator shall establish procedures to ensure that only hand baggage is taken into the passenger cabin as can be adequately and securely stowed.

(2) An air operator shall establish procedures to ensure that all baggage and cargo on board, which might cause injury or damage, or obstruct aisles and exits if displaced, is placed in storages designed to prevent its movement.

(3) The procedure referred to in subregulation (2) shall take account:

- (a) each item carried in cabin shall be stowed only in a location that is capable of restraining it;
- (b) mass limitations placarded on or adjacent to stowages shall not be exceeded;
- (c) under seat stowages shall not be used unless the seat is equipped with a restraint bar and the baggage is of such size that it may adequately be restrained by this equipment;
- (d) items shall not be stowed in toilets or against bulkheads that are incapable of restraining articles against movement forwards, sideways or upwards and unless the bulkheads carry a placard specifying the greatest mass that may be placed there;
- (e) baggage and cargo placed in lockers shall not be of such size that they prevent latched doors from being closed securely;
- (f) baggage and cargo shall not be placed where it can impede access to emergency equipment; and
- (g) checks shall be made before take-off, before landing and whenever the fasten seat belts signs are illuminated or it is otherwise so ordered to ensure that baggage is stowed where it cannot impede evacuation from the aircraft or cause injury by falling or other movement, as may be appropriate to the phase of flight.

Passengers

**47.-(1)** An air operator shall ensure that passengers are made familiar with the location and use of-

- (a) seat belts;

- (b) emergency exits;
- (c) life jackets, if the carriage of life jackets is prescribed;
- (d) oxygen dispensing equipment, if 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) An air operator shall inform the passengers of the location and general manner of use of the principal emergency equipment carried for collective use.

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

(4) An air operator shall ensure that, during takeoff 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.

Required  
passenger  
briefings

**48.-(1)** A pilot-in-command shall not commence a takeoff unless the passengers are briefed prior to take off in accordance with the air operator certificate holder's operations manual procedures on-

- (a) smoking limitations and prohibitions;
- (b) emergency exit location and use;
- (c) use of safety belts;
- (d) emergency floatation means location and use;
- (e) location and the general manner of use of the principal emergency equipment for collective use;
- (f) fire extinguisher location and operation;
- (g) placement of seat backs;
- (h) if flight is above 12,000 feet above mean sea level, the normal and emergency use of oxygen; and
- (i) the passenger briefing card.

(2) Pilot-in-command shall ensure that the passengers are briefed to keep their seat belts fastened while

seated immediately before or after turning the seat belt sign off.

(3) The pilot-in-command before take-off shall ensure that persons of reduced mobility are personally briefed on the-

- (a) route to the most appropriate exit; and
- (b) time to begin moving to the exit in event of an emergency.

(4) A pilot-in-command operating a commercial air transport operations flight shall ensure that the briefing specified in this regulation contains all the objects approved for the specific operations conducted as included in the relevant operations manual.

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

Carriage of persons with reduced mobility

**49.** A person shall not allow a person of reduced mobility to occupy seats where his presence may-

- (a) impede the crew in their duties;
- (b) obstruct access to emergency equipment; or
- (c) impede the emergency evacuation of the aircraft.

Exit row seating

**50.-(1)** A pilot-in-command shall ensure that no passenger sits in an emergency exit row if the pilot-in-command determines that it is likely that the passenger would be unable to understand and perform the functions necessary to open an exit and to exit rapidly.

(2) A pilot-in-command shall ensure that a person is not seated in a passenger exit seat if it is likely that the person would be unable to perform one or more of the applicable functions listed below-

- (a) lacks sufficient mobility, strength, or dexterity in both arms and hands, and both legs to-

- (i) reach upward, sideways, and downward to the location of emergency exit and exit-slide operating mechanisms;
  - (ii) grasp and push, pull, turn, or otherwise manipulate those mechanisms;
  - (iii) push, shove, pull, or otherwise open emergency exits;
  - (iv) lift out, hold, deposit on nearby seats, or manoeuvre over the seatbacks to the next row objects the size and weight of overwing window exit doors;
  - (v) remove obstructions of size and weight similar over-wing exit doors;
  - (vi) reach the emergency exit expeditiously;
  - (vii) maintain balance while removing obstructions;
  - (viii) exit expeditiously;
  - (ix) stabilise an escape slide after deployment; and
  - (x) assist others in getting off an escape slide;
- (b) is less than fifteen years of age or lacks the capacity to perform one or more of the applicable functions listed in this regulation without assistance;
- (c) lacks the ability to read and understand instructions required by this regulation and related to emergency evacuation provided by the air operator certificate holder in printed or graphic form or the ability to understand oral crew commands;
- (d) lacks sufficient visual capacity to perform one or more of the functions specified in paragraph (a) up to (c) without the assistance of visual aids beyond contact lenses or eyeglasses;
- (e) lacks sufficient aural capacity to hear and understand instructions given by cabin crew members, without assistance beyond a hearing aid;
- (f) lacks the ability to adequately impart information orally to other passengers; or

(g) has a condition or responsibilities, such as caring for small children, that might prevent the person from performing one or more of the functions listed above or a condition that might cause the person harm if he performs one or more of the functions listed above.

(3) Determination by a crew member as to the suitability of each person permitted to occupy an exit seat shall be made by the cabin crew members.

(4) Where a cabin crew member determines that a passenger assigned to an exit seat would be unable to perform the emergency exit functions, or where a passenger requests a non-exit seat, the cabin crew member shall expeditiously relocate the passenger to a non-exit seat.

(5) In the event of full booking in the non-exit seats, and where necessary to accommodate a passenger being relocated from an exit seat, the cabin crew member shall move a passenger who is willing and able to assume the evacuation functions, to an exit seat.

(6) An air operator certificate holder shall ensure that a ticket agent-

(a) assign seats consistent with the passenger selection criteria and the emergency exit functions, to the maximum extent feasible, prior to boarding;

(b) makes available for inspection by the public at all passenger loading gates and ticket counters at each aerodrome where it conducts passenger operations, written procedures established for making determinations in regard to exit row seating.

(7) A cabin crew member shall include in the passenger briefings-

(a) a request for a passenger to identify himself so as to allow reseating where the passenger-

(i) cannot meet the selection criteria;

(ii) has a non-discernible condition that shall prevent them from performing the evacuation functions;

(iii) may suffer bodily harm as the result of performing one or more of those functions; or

(iv) does not wish to perform emergency exit functions;

(b) a reference to the passenger information cards and the functions to be performed in an emergency.

(8) A passenger shall comply with instructions given by a crew member or other authorised employee of the air operator certificate holder implementing exit seating restrictions.

(9) A pilot-in-command shall not allow taxi or pushback of an aircraft unless at least one required crew member has verified that all exit rows and escape paths are unobstructed and that no exit seat is occupied by a person the crew member determines is likely to be unable to perform the applicable evacuation functions.

(10) An air operator certificate holder in order to comply with this regulation shall-

(a) establish procedures that address the requirements of this regulation; and

(b) submit their procedures for preliminary review and approval to the Authority.

(11) The procedures required by this regulation shall not become effective until final approval is granted by the Authority, provided that the approval shall be based solely upon the safety aspects of the air operator certificate holder's procedures.

Passenger seat  
belts

**51.-**(1) A passenger occupying a seat or berth shall fasten his safety belt and keep it fastened while the sign is lighted or, in aircraft not equipped with such a sign, whenever instructed by a pilot-in-command.

(2) A passenger safety belt shall not be used by more than one occupant during take-off and landing.

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

(4) A person who is not two years of age may be held by an adult who is occupying a seat or berth.

(5) A berth, such as a multiple lounge or divan seat, may be occupied by two persons provided it is equipped with an approved safety belt for each person and is used during en-route flight only.

Passenger seat  
backs

**52.**-(1) A pilot-in-command shall not allow the take-off or landing of an aircraft unless each passenger seat back is in the upright position.

(2) Without prejudice subregulation (1) exceptions to this requirement shall only be made in accordance with procedures in the air operator certificate holder's operations manual provided the seat back does not obstruct any passenger's access to the aisle or to any emergency exit.

Stowage of  
food, beverage  
and passenger  
service

**53.** A pilot-in-command shall not allow the movement of an aircraft on the surface, take-off or landing-

- (a) when any food, beverage or tableware furnished by the air operator certificate holder is located at any passenger seat; and
- (b) unless each food and beverage tray and seat back tray table is in the stowed position.

Securing of  
items of mass  
in passenger  
compartment

**54.** A person shall not allow-

- (a) the take-off or landing of an aircraft unless each item of mass in the passenger cabin is properly secured to prevent it from becoming a hazard during taxi, takeoff and landing and during turbulent weather conditions; or
- (b) an aircraft to move on the surface, takeoff or land unless each passenger serving cart is secured in its stowed position.

Unacceptable  
conduct

**55.** A person on board an aircraft shall not-

- (a) interfere with a crew member in the performance of that crew members' duties;
- (b) refuse to fasten his seat belt and keep it fastened while the seat belt sign is lighted;
- (c) wilfully, recklessly or negligently act or omit to act-

- (i) so as to endanger an aircraft or persons and property therein; and
- (ii) so as to cause or permit an aeroplane to endanger any person or property;
- (d) secrete himself nor secrete cargo on board an aircraft;
- (e) smoke while the no-smoking sign is lighted;
- (f) smoke in any aircraft lavatory;
- (g) tamper with, disable or destroy any smoke detector installed in any aircraft lavatory; or
- (h) willfully, recklessly or negligently imperil the safety of an aircraft or any person on board, whether by interference with any crew member, or by tampering with the aircraft or its equipment, or by disorderly conduct by any other means.

Alcohol or drugs

**56.-(1)** An officer in-charge shall not permit any person who appears to be intoxicated or who demonstrates, by manner or physical indications, that that person is intoxicated to-

- (a) board an aircraft; or
  - (b) while on board the aircraft be served alcohol.
- (2) A person shall not-
- (a) board an aircraft while intoxicated or under the influence of drugs; or
  - (b) while on board the aircraft, be intoxicated or under the influence of drugs.

Carriage of munitions of war

**57.-(1)** An aircraft shall not carry munitions of war.

(2) A person shall not take or cause to be taken on board an aircraft or deliver or cause to be delivered for carriage thereon, any goods which that person knows or has reason to believe or suspect to be munitions of war.

(3) Without prejudice to subregulations (1) and (2), a person shall not carry or have in his charge any weapon on board an aircraft registered in United Republic, provided that a weapon, not being munitions of war, may be carried as passenger's baggage if it is stowed in the part of the aircraft inaccessible to passengers and, in the case of a firearm, it is not loaded.

(4) A weapons or ammunition shall not be taken or carried on board an aircraft if the weapons or ammunition may, under the law of the State in which the aircraft is registered, be lawfully taken or carried on board for the purpose of ensuring the safety of the aircraft or of the persons on board.

(5) For the purpose of this regulation, “munitions of war” means such weapons, ammunition, articles, materials or devices as are intended or adapted for use in warfare.

Prohibition  
against  
carriage of  
weapons

**58.** A person shall not, while on board an aircraft being operated in commercial air transport operation, carry a deadly or dangerous weapon, either concealed or unconcealed.

Least-risk  
bomb location  
and stowage of  
weapons

**59.-(1)** Specialised means of attenuating and directing the blast shall be provided for use at the least-risk bomb location by the State of design.

(2) Where an operator accepts the carriage of weapons removed from passengers, the aeroplane shall stowing such weapons in a place which is inaccessible to any other person during flight time.

Passenger  
compliance  
with  
instructions

**60.** A passenger on a commercial air transport operation flight shall comply with instructions given by a crew member in accordance with these Regulations.

Denial of  
transportation

**61.** An air operator certificate holder may deny transportation to a passenger who-

- (a) refuses to comply with the instructions regarding exit seating restrictions prescribed by the Authority; or
- (b) has a handicap that can be physically accommodated only through causing an obstruction to the safe evacuation of other passengers from the aircraft as provided for in regulation 60.

Passenger  
information  
signs

**62.** A pilot-in-command of an aircraft shall turn on required passenger information signs during any movement

on the surface, for each take off and each landing, and when otherwise considered to be necessary.

Carriage of persons without compliance with passenger-carrying requirements

**63.** A pilot-in-command or an air operator shall not allow a person to be carried without compliance to the passenger carrying requirements unless there is an approved seat with an approved seat belt for that person, and-

- (a) the seat is so located that the occupant is not in any position to interfere with the flight crew members performing their duties;
- (b) there is unobstructed access from the approved seat to the flight deck or a regular or emergency exit;
- (c) there is a means for notifying that person when smoking is prohibited and when seat belts shall be fastened; and
- (d) that person has been orally briefed by a crew member on the use of emergency equipment and exits.

Evacuation capability

**64.** A pilot-in-command or other person assigned by the air operator certificate holder shall ensure that, when passengers are on board the aircraft prior to movement on the surface, at least one floor level exit provides for egress of passengers through normal or emergency means.

Flight preparation

**65.-(1)** A flight shall not be commenced 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 are on board the aeroplane;
- (b) the instruments and equipment prescribed under the relevant regulations of civil aviation relating to the 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 the Civil Aviation (Air Operator Certification and Administration) Regulations has been issued in respect of the aeroplane;

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- (d) the mass of the aeroplane and center 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 regulation 66 have been complied with.

(2) The completed flight preparation forms referred to under this regulation shall be kept for a period of three months by the operator.

Operational  
flight planning

**66.-**(1) An operational flight plan shall be completed 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 operations officer 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.

Enroute  
limitations of  
all engines  
operating

**67.-**(1) A pilot-in-command shall not commence a flight in a reciprocating engine powered aeroplane used in commercial air transport operation at a weight that does not allow a rate of climb of at least 6.9  $V_{so}$  with all engines operating, at an altitude of at least 300 m (1,000 ft.) above all terrain and obstructions within ten miles of each side of the intended track.

(2) For the purpose of this regulation, the term “6.9  $V_{so}$ ” means the number of feet per minute obtained by multiplying the aircraft's minimum steady flight speed by 6.9.

Enroute  
limitations of  
one engine  
inoperative

**68.**-(1) An air operator shall ensure that the one engine inoperative en-route net flight path data shown in the aeroplane flight manual, appropriate to the meteorological conditions expected for the flight, complies with either subregulation (2) or (3) at all points along the route.

(2) The net flight path shall have a positive gradient at 1500 ft. above the aerodrome where the landing is assumed to be made after engine failure, in meteorological conditions requiring the operation of ice protection systems, the effect of their use on the net flight path must be taken into account.

(3) The gradient of the net flight path shall be positive at least 1000 ft. above all terrain and obstructions along the route within 9.3 km (5 nm) on either side of the intended track.

(4) The net flight path shall permit the aeroplane to continue flight from the cruise altitude to an aerodrome where a landing can be made, the net flight path clearing vertically, by at least 2000 ft. all terrain and obstructions along the route within 9.3 km (5 nm) on either side of the intended track in accordance with the following:

- (a) the engine is assumed to fail at the most critical point along the route;
- (b) account is taken of the effects of winds on the flight path;
- (c) fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, if a safe procedure is used; and
- (d) the aerodrome where the aeroplane is assumed to land after engine failure shall meet the following criteria:
  - (i) the performance requirements at the expected landing mass are met; and
  - (ii) weather reports or forecasts or any combination thereof, and field condition reports indicate that a safe landing can be accomplished at the estimated time of landing.

(5) An air operator shall increase the width margins

of subregulation (4) to 18.5 km (10 nm) where the navigational accuracy does not meet the 95% containment level.

En-route  
limitations of  
three or more  
engines, two  
engines  
inoperative

**69.-(1)** A pilot-in-command shall not take-off an aeroplane used in commercial air transport operation having three or more engines at such a weight where there is no suitable landing aerodrome within 90 minutes at any point along the intended route, with all engines operating at cruising power, unless that aircraft can, in the event of simultaneous power failure of two critical engines at the most critical point along that route, continue to a suitable landing aerodrome while complying with the requirements of subregulations (2) up to (6).

(2) The two engines inoperative en-route net flight path data shall permit the aeroplane to continue the flight, in the expected meteorological conditions, from the point where two engines are assumed to fail simultaneously, to an aerodrome at which it is possible to land and come to a complete stop when using the prescribed procedure for a landing with two engines inoperative.

(3) The net flight path referred to in subregulation (2) shall clear vertically, by at least 2,000 ft all terrain and obstacles along the route within 9.3 km (5 nm), on either side of the intended track.

(4) At altitudes and in meteorological conditions requiring ice protection systems to be operable, the effect of their use on the net flight path data must be taken into account, and where the navigational accuracy does not meet the 95% containment level, an operator must increase the width margin given above to 18.5 km (10 nm).

(5) The two engines are assumed to fail at the most critical point of that portion of the route where the aeroplane is more than ninety minutes, at all engines long range cruising speed at standard temperature in still air, away from an aerodrome at which the performance requirements applicable at the expected landing mass are met.

(6) The net flight path shall have a positive gradient at 1,500 ft above the aerodrome where the landing is assumed to be made after the failure of two engines.

(7) Fuel jettisoning in an aeroplane referred to in

this regulation is permitted to an extent consistent with reaching the aerodrome with the required fuel reserves, where a safe procedure is used.

(8) The expected mass of the aeroplane at the point where the two engines are assumed to fail shall not be less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at least 1,500 ft directly over the landing area and thereafter to fly level for fifteen minutes.

Alternate  
aerodromes

**70.-(1)** A take-off alternate aerodrome shall be selected and specified in the operational flight plan if 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 ISA and still-air conditions using the actual take-off mass;
- (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 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 approved 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.

(4) En-route alternate aerodromes, required under regulation 70 for extended diversion time operations by aeroplanes with two turbine engines shall be selected and specified in the operational and air traffic services flight plans.

(5) 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 air traffic services 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; or

(b) the aerodrome is isolated, operations into isolated aerodromes do not require the selection of a destination alternate aerodrome and shall be planned in accordance with this regulation;

(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.

(6) Two destination alternate aerodromes shall be selected and specified in the operational and air traffic services 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.

(7) Notwithstanding subregulations (1), (2) and (3), 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; and
- (f) specific mitigation measures.

Maximum distance from adequate aerodrome for two-engined aeroplanes without extended diversion time operations approval

**71.-(1)** Unless specifically granted an extended diversion time operations approval by the Authority, an air operator certificate holder shall not operate a twin engine aeroplane over a route which contains a point further from an adequate aerodrome than-

- (a) in the case of large, turbine engine powered aeroplanes, the distance flown in sixty minutes at the one-engine-inoperative cruise speed determined in accordance with subregulation (2) with either-
  - (i) a maximum approved passenger seating configuration of twenty or more; or
  - (ii) a maximum take-off mass of 45,360 kg or more;
- (b) in the case of reciprocating engine powered aeroplanes-

- (i) the distance flown in 120 minutes at the one-engine-inoperative cruise speed determined in accordance with subregulation (2); or
- (ii) three hundred nautical miles, whichever is less.

(2) An air operator certificate holder shall determine a speed for the calculation of the maximum distance to an adequate aerodrome for each two-engined aeroplane type or variant operated, not exceeding  $V_{mo}$  based upon the true airspeed that the aeroplane can maintain with one-engine-inoperative under International Standard Atmosphere and level flight.

(3) For the purposes of subregulation (2), the level flight determination of speed shall be as follows:

- (a) for turbine engine powered aeroplanes at-
  - (i) flight level 170; or
  - (ii) at the maximum flight level to which the aeroplane, with one engine inoperative, can climb, and maintain, using the gross rate of climb specified in the aeroplane flight manual, whichever is less;
- (b) for propeller driven aeroplanes-
  - (i) flight level 80; or
  - (ii) at the maximum flight level to which the aeroplane, with one engine inoperative, can climb, and maintain, using the gross rate of climb specified in the aeroplane flight manual, whichever is less;
- (c) maximum continuous thrust or power on the remaining operating engine;
- (d) an aeroplane mass not less than that resulting from-
  - (i) take-off at sea-level at maximum take-off mass until the time elapsed since take-off is equal to the applicable threshold prescribed in subregulation (1);
  - (ii) all engines climb to the optimum long range cruise altitude until the time elapsed since take-off is equal to the

applicable threshold prescribed in subregulation (1); and

- (iii) all engines cruise at the long range cruise speed at this altitude until the time elapsed since take-off is equal to the applicable threshold prescribed in subregulation (1).

(3) An air operator certificate holder shall ensure that the following data, specific to each type or variant, is included in the operations manual-

- (a) the one-engine-inoperative cruise speed determined in accordance with subregulation (2); and
- (b) the maximum distance from an adequate aerodrome determined in accordance with subregulations (1) and (2).

(4) The speeds and altitudes specified in this regulation shall only be used for establishing the maximum distance from an adequate aerodrome.

Extended diversion time operations

**72.-(1)** An air operator certificate holder shall not conduct operations beyond the threshold distance determined in accordance with regulation 113, unless approved to do so by the Authority.

(2) An air operator certificate holder shall ensure that a suitable extended diversion time operation enroute alternate is available prior to conducting an extended diversion time operation flight, within either the approved diversion time or a diversion time based on minimum equipment list generated serviceability status of the aeroplane, whichever is shorter.

Requirements for operations beyond sixty minutes to en-route alternate aerodrome

**73.-(1)** An air operator conducting operations beyond sixty minutes from a point on a route to an en-route alternate aerodrome shall ensure that-

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

(b) for aeroplanes with two turbine engines, the most up-to-date information provided to the flight crew indicates that conditions at identified enroute alternate aerodromes will be at or above the operator's established aerodrome operating minima for the operation at the estimated time of use.

(2) An air operator shall ensure that overall level of the operational control and flight dispatch procedures, operating procedures and training programmes are taken into account, subject to the requirements of subregulation (1) and such other safety requirements under these Regulations.

Requirements  
for extended  
diversion time  
operations

**74.-(1)** 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 unless the operation has been specifically approved by the Authority.

(2) The Authority shall approve the maximum diversion time for an operator of a particular aeroplane type engaged in extended diversion time operations.

(3) When approving the appropriate maximum diversion time for an operator of a particular aeroplane type engaged in extended diversion time operations, the Authority shall ensure that-

(a) for all aeroplanes: the most limiting extended diversion time operation 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 extended diversion time operation certified.

(4) Notwithstanding the provisions of subregulation (3)(a) the Authority may, based on the results of a specific safety risk assessment conducted by an operator which demonstrates how an equivalent level of safety will be maintained, approve operations beyond the time limits of the most time-limited system, and the assessment shall include the:

- (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.

(5) For aeroplanes engaged in extended diversion time operation, the additional fuel required shall include the fuel necessary to comply with the extended diversion time operation critical fuel scenario as established by the State of the operator.

(6) An air operator shall not proceed with a flight beyond the threshold time in accordance with subregulation (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.

(7) Where any conditions are identified in accordance with subregulation (6) that would preclude a safe approach and landing at that aerodrome during the estimated time of use, an alternative course of action shall be determined.

(8) The Authority shall, when approving 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 the Civil Aviation (Airworthiness) Regulations:

- (a) reliability of the propulsion system;
- (b) airworthiness certification for extended diversion time operation of the aeroplane type; and

- (c) extended diversion time operation maintenance programme.

Time  
capability of  
cargo  
compartment  
fire  
suppression  
system

**75.** An air operator shall ensure that, all flights are planned so that the diversion time to an aerodrome where a safe landing could be made does not exceed the cargo compartment fire suppression time capability of the aeroplane, when one is identified in the relevant aeroplane documentation, reduced by an operational safety margin specified by the State of the operator.

Operation in  
RNP, MNPS  
or RVSM  
airspace

**76.-(1)** A person shall not operate an aircraft in defined portions of airspace or on routes where a required navigation performance, (RNP) type has been prescribed, unless-

- (a) the aircraft is provided with navigation equipment which will enable it to operate in accordance with the prescribed RNP type; and  
(b) he is authorised by the State of the registry for operations in such airspace.

(2) A person shall not operate an aircraft in defined portions of airspace where, based on regional air navigation agreement, minimum navigation performance specifications (MNPS) are prescribed, without a written authorisation issued by the State of the operator for MNPS operations.

(3) For flights in defined portions of airspace where, minimum navigation performance specifications (MNPS) are prescribed, an aircraft shall be 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 State of the operator for MNPS operations concerned.

(4) A person shall not operate an aircraft in defined portions of airspace where, based on regional air navigation agreement, a reduced vertical separation minimum (RVSM) of 300 m (1,000 ft) is applied between flight level 290 and flight level 410 inclusive, unless-

- (a) authorised by the State of the operator in the airspace concerned and
- (b) the aircraft is 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.

(5) The State of the operator, prior to granting the reduced vertical separation minimum (RVSM) approval required in subregulation (4), shall be satisfied that-

- (a) the vertical navigation performance capability of the aircraft satisfies the requirements of the altimetry system performance for operations in RVSM airspace as set out in the First Schedule;
- (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.

Reports of  
height-keeping  
performance

**77.-(1)** The operator who has received an RVSM approval shall establish a requirement which ensures that a minimum of two aeroplanes of each aircraft type grouping of the operator 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.

(2) Where an owner or operator aircraft type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.

Electronic navigation data management

**78.**-(1) An air operator shall not employ electronic navigation data products that have been processed for application in the air and on the ground unless the-

- (a) State of the operator has approved the operator's procedures; or
- (b) process applied and the products delivered meets acceptable standards of integrity and such products are compatible with the equipment to which they are intended to be used.

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

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

Compliance with visual and electronic glide slopes

**79.**-(1) A pilot-in-command of an aircraft approaching to land on a runway served by a visual approach slope indicator or precision approach path indicator shall maintain an altitude at or above the glide slope until a lower altitude is necessary for a safe landing.

(2) A pilot-in-command of a turbojet, turbofan, or large aircraft approaching to land on a runway served by an instrument landing system shall fly that aircraft at or above the glide slope from the point of interception of the glide slope to the decision height.

Restriction or suspension of operations of commercial air transport

**80.** Where a pilot-in-command or an air operator certificate holder knows of conditions, including aerodrome and runway conditions, that are a hazard to safe operations, shall restrict or suspend all commercial air transport operations to such aerodromes and runways as necessary until those conditions are corrected or have improved.

Continuation of flight when destination aerodrome is temporarily restricted of commercial air transport

**81.** A pilot-in-command shall not allow a flight to continue toward any aerodrome of intended landing where commercial air transport operations is restricted or suspended, unless-

- (a) in the opinion of the pilot-in-command, the conditions that are a hazard to safe operations

may reasonably be expected to be corrected or have improved by the estimated time of arrival;  
or

(b) there is no safer procedure.

Meteorological conditions-  
VFR Flights

**82.** A flight to be conducted in accordance with visual flight rules (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.

Meteorological conditions of  
IFR Flights

**83.** A flight to be conducted in accordance with the instrument flight rules (IFR) 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 Regulation 70, 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.

Visibility and cloud base

**84.-(1)** An air 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 an air operator for the estimated time of use of an aerodrome.

Icing  
conditions

**85.-(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, if necessary, has been given appropriate de-icing or anti-icing treatment.

(3) Accumulation of ice or other naturally occurring contaminants shall be removed so that the aeroplane is kept in an airworthy condition prior to take-off.

Fuel  
requirements

**86.-(1)** An aeroplane shall carry a 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 be based on-

(a) the following data:

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

(ii) if 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) notices to airmen;

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

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

(v) 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 subregulation (2);
  - (c) contingency fuel, which shall be the amount of fuel required to compensate for unforeseen factors and it shall be five per cent of the planned trip fuel or of the fuel required from the point of in-flight re-planning based on the consumption rate used to plan the trip fuel but, in any case, shall not be lower than the amount required to fly for five minutes at holding speed at 450 m (1 500 ft) above the destination aerodrome in standard conditions;
  - (d) destination alternate fuel-
    - (i) where a destination alternate aerodrome is required, the amount of fuel required to enable the aeroplane to-
      - (aa) perform a missed approach at the destination aerodrome;
      - (bb) climb to the expected cruising altitude;
      - (cc) fly the expected routing;
      - (dd) descend to the point where the expected approach is initiated; and
      - (ee) conduct the approach and landing at the destination alternate aerodrome;
    - (ii) where two destination alternate aerodromes are required, the amount of fuel, as calculated in subparagraph (i), required to enable the aeroplane to proceed to the destination alternate aerodrome which requires the greater amount of alternate fuel;

- (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-
  - (aa) for a reciprocating engine aeroplane, the amount of fuel required to fly for 45 minutes plus 15 per cent of the flight time planned to be spent at cruising level, including final reserve fuel, or two hours, whichever is less; or
  - (bb) 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;
- (e) 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 forty - five 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 thirty minutes at holding speed at four hundred and fifty meters (1,500 ft) above aerodrome elevation in standard conditions;
- (f) additional fuel, which shall be the supplementary amount of fuel required where

the minimum fuel calculated in accordance with subregulation (3) 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;
- (aa) fly for fifteen-minutes at holding speed at four hundred and fifty meter (1,500 ft.) above aerodrome elevation in standard conditions; and
- (bb) 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;
- (g) discretionary fuel, which shall be the extra amount of fuel to be carried at the discretion of the pilot-in-command.

(4) An air 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 flight shall not commence unless the usable fuel on board meets the requirements in subregulation (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 subregulation (3) if required.

(6) Notwithstanding the provisions in subregulation (3), 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
  - (iii) 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.

In-flight fuel  
management

**87.**-(1) An air 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 air traffic controller when unanticipated circumstances may 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 air traffic controller 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.

Refuelling  
with  
passengers on  
board

**88.**-(1) An aeroplane shall not be refuelled when passengers are embarking, on board or disembarking unless it is properly attended by qualified personnel ready to initiate and direct an evacuation of the aeroplane by the most practical and expeditious means available.

(2) When refueling 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 refueling and the qualified personnel on board the aeroplane

(3) Additional precautions are required when refueling with fuels other than aviation kerosene or when refueling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used.

Oxygen supply

**89.**-(1) The approximate altitudes in the standard atmosphere corresponding to the values of absolute pressure are prescribed in the following Table 3:

**Table 3 – Absolute Pressure**

Absolute pressure	Meters	Feet
700 hPa	3,000	10,000
620 hPa	4,000	13,000
376 hPa	7,600	25,000

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

- (a) all crew members and ten per cent of the passengers for any period in excess of thirty minutes that the pressure in compartments occupied by them will be between seven hundred hPa and six hundred and twenty hPa; and
- (b) the crew and passengers for any period that the atmospheric pressure in compartments occupied by them will be less than six hundred and twenty 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 seven hundred hPa.

(4) where an aeroplane is operated at flight altitudes at which the atmospheric pressure is less than three hundred seventy-six hPa, or which, if operated at flight altitudes at which the atmospheric pressure is more than three hundred seventy six hPa and cannot descend safely within four minutes to a flight altitude at which the atmospheric pressure is equal to six hundred and twenty hPa, there shall be no less than a ten minute supply for the occupants of the passenger compartment.

Time  
capability of  
cargo  
compartment  
fire  
suppression  
system

**90.** All flights shall be planned so that the diversion time to an aerodrome where a safe landing could be made does not exceed the cargo compartment fire suppression time capability of the aeroplane, when one is identified in the relevant aeroplane documentation, reduced by an operational safety margin specified by the Authority.

In-flight  
procedures for  
aerodrome  
operating  
minima

**91.-(1)** A flight shall not be continued towards the aerodrome of intended landing, unless the latest available information indicates that at the expected time of arrival, a landing can be effected at that aerodrome or at least one destination alternate aerodrome in compliance with this regulation.

(2) An instrument approach shall not be continued below three hundred meters (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.

(3) Where, after entering the final approach segment or after descending below three hundred meters (1,000 ft) above the aerodrome elevation, the reported visibility or controlling RVR falls below the specified minimum, the approach may be continued to DA/H or

MDA/H. In any case, an aeroplane shall not continue its approach-to-land at any aerodrome beyond a point at which the limits of the operating minima specified for that aerodrome would be infringed.

Meteorological observations

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

Hazardous flight conditions

**93.-(1)** Hazardous flight conditions encountered, other than those associated with meteorological conditions, shall be reported to the appropriate aeronautical station as soon as possible.

(2) The reports so rendered shall give such details as may be pertinent to the safety of other aircraft.

Flight crew members at duty stations

**94.-(1)** All flight crew members required to be on flight deck duty shall be at their stations during take-off and landing.

(2) All flight crew members required to be on flight deck duty shall remain at their stations during the enroute face of flight, 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.

(4) A flight crew member occupying a pilot's seat shall keep the safety harness fastened during the take-off and landing phases.

(5) 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 must remain fastened.

Use of oxygen

**95.-(1)** All flight crew members, when engaged in performing duties essential to the safe operation of an aeroplane in flight, shall use breathing oxygen continuously whenever the circumstances prevail for which its supply has been required in regulation 89.

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

Safeguarding of cabin crew and passengers in pressurised aeroplanes in event of loss of pressurisation

**96.**-(1) Cabin crew shall be safeguarded 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 should have such means of protection as will enable them to administer first aid to passengers during stabilised flight following the emergency.

(2) Passengers shall be safeguarded by such devices or operational procedures as will ensure reasonable probability of their surviving the effects of hypoxia in the event of loss of pressurisation.

In-flight operational instructions

**97.** Operational instructions involving a change in the air traffic services flight plan shall, when practicable, be coordinated with the appropriate air traffic services unit before transmission to the aeroplane.

Instrument flight procedures

**98.**-(1) The Authority shall approve and promulgate one or more instrument approach procedures designed to support instrument approach operations in which the aerodrome is located to serve each instrument runway or aerodrome utilised for instrument flight operations.

(2) All aeroplanes operated in accordance with instrument flight rules shall comply with the instrument flight procedures approved by the Authority in which the aerodrome is located.

Instrument flight rules take-off minima

**99.** A pilot operating an aircraft in commercial air transport operations shall not accept a clearance to take off from an aerodrome under Instrument flight rules unless authorised by the Authority:

Provided that, weather conditions are at or above-

- (a) for aircraft, having two engines or less: one thousand five hundred metres; or
- (b) for aircraft having more than two engines, eight hundred metres.

Instrument approach procedures and instrument flight rules landing minima

**100.**-(1) A pilot shall not make an instrument approach at an airport except in accordance with instrument flight rules weather minima and instrument approach procedures set out in the air operator certificate holder's operations specifications.

(2) One or more instrument approach procedures designed in accordance with the classification of instrument approach and landing operations shall be approved and promulgated by the Authority in which the aerodrome is located to serve each instrument runway or aerodrome utilised for instrument flight operations.

(3) All aeroplanes operated in accordance with instrument flight rules shall comply with the instrument flight procedures approved by the Authority in which the aerodrome is located.

Commencing instrument approach

**101.**-(1) A pilot shall not continue an approach past the final approach fix, or where a final approach fix is not used, begin the final approach segment of an instrument approach procedure, at any aerodrome unless-

- (a) a source approved by the Authority issues a weather report for that aerodrome;
- (b) the latest weather report for that aerodrome indicates the visibility to be equal to or more than the visibility minima prescribed for that procedure; and
- (c) for instrument approach and landing operations, eight-hundred meter visibility should not be authorised unless RVR information is provided.

(2) Where a pilot begins the final approach segment of an instrument approach procedure and subsequently receives a weather report indicating below minimum conditions, the pilot may continue the approach to decision height or minimum descent altitude.

(3) For the purpose of this regulation-

(a) the final approach segment begins at the final approach fix or facility prescribed in the instrument approach procedure; and

(b) “the final approach segment” means the segment of an instrument approach procedure in which alignment and descent for landing are accomplished.

(4) When a final approach fix is not prescribed for a procedure that includes a procedure turn, the final approach segment begins at the point where the procedure turn is completed and the aircraft is established inbound toward the aerodrome on the final approach course within the distance prescribed in the procedure.

(5) One or more instrument approach procedures to serve each final approach and take-off area or heliport utilised for instrument flight operations shall be approved and promulgated by the State in which the heliport is located, or by the State which is responsible for the heliport when located outside the territory of any State.

Threshold crossing height for precision approaches

**102.** An air operator shall establish operational procedures designed to ensure that aircraft being used to conduct precision approaches crosses the threshold by a safe margin with the aircraft in the landing configuration and altitude.

Operation below decision height or minimum descent altitude

**103.-(1)** Where a decision height or minimum descent altitude is applicable, a pilot shall not operate an aircraft at any aerodrome below the authorised minimum descent altitude, or continue an approach below the authorised decision height unless-

(a) the aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres;

(b) a descent rate shall allow touchdown to occur within the touchdown zone of the runway of intended land;

(c) the flight visibility is not less than the visibility prescribed in the standard instrument approach being used;

(d) at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot-

- (i) the approach light system, except that the pilot shall not descend below one hundred feet above the touchdown zone elevation using the approach lights as a reference unless the red terminating bars or the red side row bars are also distinctly visible and identifiable;
- (ii) threshold or the threshold markings;
- (iii) threshold lights;
- (iv) the runway end identifier lights;
- (v) the visual approach slope indicator system; or precision approach path indicator;
- (vi) the touchdown zone or touchdown zone markings;
- (vii) the touchdown zone lights;
- (viii) the runway or runway markings; or
- (ix) the runway lights.

(2) The visual references set out in subregulation (1)(d) shall not apply to category II and III operations.

(3) The required visual references under Category II and III operations shall be provided in the air operator certificate holder's operations specifications or a special authorisation prescribed by the Authority.

Landing during instrument meteorological conditions

**104.** A pilot operating an aircraft shall not land that aircraft when the flight visibility is less than the visibility prescribed by the Authority in the standard instrument approach procedure being used.

Execution of missed approach procedure

**105.** A pilot operating an aircraft shall immediately execute an appropriate missed approach procedure when either of the following conditions exist:

- (a) whenever the required visual reference criteria is not met in the following situations:

- (i) when the aircraft is being operated below minimum descent altitude (MDA); or
- (ii) upon arrival at the missed approach point, including a DH where a DH is specified and its use is required, and at any time after that until touchdown; or
- (b) whenever an identifiable part of the aerodrome is not distinctly visible to the pilot during a circling maneuver at or above MDA, unless the inability to see an identifiable part of the aerodrome results only from a normal bank of the aircraft during the circling approach.

Minimum altitudes for use of autopilot

**106.**-(1) A pilot shall not use an autopilot en-route, including climb and descent, at an altitude above the terrain that is less than twice the maximum altitude loss specified in the aircraft flight manual for malfunction of the autopilot under cruise conditions, or less than five hundred feet, whichever is higher, except as provided in subregulations (2), (3) and (4).

(2) A person shall not use an autopilot at an altitude above the terrain that is less than twice the maximum altitude loss specified in the aircraft flight manual for a malfunction of the autopilot under approach conditions, or less than fifty feet below the approved minimum descent altitude or decision height for the facility, whichever is higher, when using an instrument approach facility, except-

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- (a) when reported weather conditions are less than the basic visual flight rules as specified in the Civil Aviation (Rules of the Air) Regulations, a person shall not use an autopilot with an approach coupler for instrument landing system approaches at an altitude above the terrain that is less than fifty feet higher than the maximum altitude loss specified in the aircraft flight manual for the malfunction of the autopilot with approach coupler under approach conditions; and

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- (b) when reported weather conditions are equal to or better than the basic visual flight rules (VFR)

minima as specified in the Civil Aviation (Rules of the Air) Regulations, a person shall not use an autopilot with an approach coupler for instrument landing system approaches at an altitude above the terrain that is less than the maximum altitude loss specified in the aircraft flight manual for the malfunction of the autopilot with approach coupler under approach conditions, or fifty feet, whichever is higher.

(3) Notwithstanding subregulation (1) or (2), the Authority shall issue operation specifications to allow the use, to touchdown, of an approved flight control guidance system with automatic capability, in any case in which-

- (a) the system does not contain any altitude loss (above zero) specified in the aircraft flight manual for malfunction of the autopilot with approach coupler; and
- (b) the Authority finds that the use of the system to touchdown will not otherwise affect the safety standards required by this regulation.

(4) Notwithstanding subregulation (1), the Authority shall issue operation specifications to allow the use of an approved autopilot system with automatic capability below the altitude specified in subregulation (1) during the take-off and initial climb phase of flight provided-

- (a) the aircraft flight manual specifies a minimum altitude engagement certification restriction;
- (b) the system is not engaged prior to the minimum engagement certification restriction specified in the aircraft flight manual or an altitude specified by the Authority, whichever is higher; and
- (c) the Authority finds that the use of the system will not otherwise affect the safety standards required by this regulation.

(5) 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, may do so at a

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rate less than 8 m/sec or 1,500 ft./min (depending on the instrumentation available) throughout the last three hundred 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, unless otherwise specified in the Civil Aviation (Air Traffic Services) Regulations.

Minimum  
flight altitudes

**107.**-(1) An air 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, provided that minimum flight altitudes shall not be less than those established by that State.

(2) An air operator shall specify the procedure 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 and shall include this procedure in the operations manual.

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(3) The minimum flight altitudes determined in accordance with subregulation (2) shall not be lower than specified in the Civil Aviation (Rules of Air) Regulations.

(4) An air operator shall submit to the Authority for approval such method only after careful consideration of the probable effects of the following factors on the safety of the operation in question-

- (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;
- (d) the probability of encountering unfavourable meteorological conditions;
- (e) possible inaccuracies in aeronautical charts; and
- (f) airspace restrictions.

Receiver  
failure

**108.**-(1) Where an aircraft radio station is unable to establish communication due to receiver failure, that aircraft shall transmit-

- (a) reports at the scheduled times, or positions, on the frequency in use, preceded by the phrase

“TRANSMITTING BLIND DUE TO RECEIVER FAILURE”; and

(b) the intended message, following this by a complete repetition, during this procedure, the aircraft shall also advise the time of its next intended transmission.

(2) An aircraft which is provided with air traffic control service or advisory service shall, in addition to complying with subregulation (1), transmit information regarding the intention of the pilot-in-command with respect to the continuation of the flight of the aircraft.

(3) Where a pilot-in-command is unable to establish communication due to airborne equipment failure he shall, when the aircraft is so equipped, select the appropriate secondary surveillance radar (SSR) code 7600 to indicate radio failure.

Aeroplane operating procedures for noise abatement  
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**109.**-(1) Aeroplane operating procedures for noise abatement shall comply with the provisions of the Civil Aviation (Air Traffic Services) Regulations.

(2) Noise abatement procedures specified by an air operator for any one aeroplane type should be the same for all aerodromes.

Aeroplane operating procedures for rates of climb, descent and landing performance

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**110.**-(1) To avoid unnecessary airborne collision avoidance system (ACAS II) resolution advisories in aircraft at or approaching adjacent altitudes or flight levels, operators should specify procedures by which an aeroplane climbing or descending to an assigned altitude or flight level, especially with an autopilot engaged, may do so at a rate less than 8 m/sec or 1 500 ft./min (depending on the instrumentation available) throughout the last three hundred meters (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, unless otherwise specified in the Civil Aviation (Air Traffic Services) Regulations.

(2) An approach to land shall not be continued below three hundred meters (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.

Duties of Pilot  
in command

**111.**-(1) A Pilot in command shall be responsible for the safety of all crew members, passengers and cargo on board when the doors are closed.

(2) A pilot-in-command shall also 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 used as primary propulsion units are shut down.

(3) A pilot-in-command shall ensure that the checklists specified in these Regulations are complied with.

(4) A pilot-in-command shall 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.

(5) A pilot-in-command shall be responsible for reporting all known or suspected defects in the aeroplane, to the operator, at the termination of the flight.

(6) The pilot-in-command shall be responsible for the journey log book or the general declaration containing the information listed in Regulation 211.

(7) A pilot-in-command shall submit a report to the Authority of any accident which occurred while that pilot-in-command was responsible for the flight.

Duties of flight  
operations  
officer  
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**112.**-(1) A flight operations officer in conjunction with a method of control and supervision of flight operations in accordance with the Civil Aviation (Air Operator Certification and Administration) Regulations 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 air traffic services flight plans, sign when applicable and file the air traffic services flight plan with the appropriate air traffic services 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 air traffic services unit when the position of the aeroplane cannot be determined by an aircraft tracking capability, and attempts to establish communication are unsuccessful.
- (2) A flight operations officer in the event of an emergency, shall-
- (a) initiate such procedures as outlined in the operations manual while avoiding taking any action that would conflict with air traffic services 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 amendments to the flight plan that become necessary in the course of the flight.

Additional requirements for operations by aeroplanes with turbine engines beyond sixty minutes

**113.-(1)** An air operator conducting operations beyond sixty 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) Subject to subregulation (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.

(3) An aeroplane with two or more turbine engines shall not be operated, unless the operation has been specifically approved by the Authority, 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 that Authority.

(4) 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.

(5) When approving 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 extended diversion time operations 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 extended diversion time operation approved.

(6) Notwithstanding the provisions of subregulation (5)(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.

(7) The specific safety risk assessment as provided in subregulation (6) 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.

(8) For aeroplanes engaged in extended diversion time operations, the additional fuel shall include the fuel necessary to comply with the extended diversion time operations critical fuel scenario as established by the Authority.

(9) A flight shall not proceed beyond the threshold time in accordance with subregulation (3) 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.

(10) Where any conditions are identified that would preclude a safe approach and landing at that aerodrome during the estimated time of use, an alternative course of action shall be determined by the operator.

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(11) The Authority shall, when approving 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 the Civil Aviation (Airworthiness) Regulations:

- (a) reliability of the propulsion system;
- (b) airworthiness certification for extended diversion time operations of the aeroplane type; and
- (c) extended diversion time operations maintenance programme.

(12) An aeroplane type with two turbine engines which, prior to 25 March 1986, was authorised and operating on a route where the flight time at one-engine-inoperative cruise speed to a non-route alternate aerodrome exceeded the threshold time established for such operations in accordance with subregulation (3) shall give

consideration to permitting such an operation to continue on that route after that date.

Carry-on  
baggage

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

Additional  
requirements  
for single pilot  
operations  
under  
instrument  
flight rules  
(IFR) or at  
night

**115.**-(1) An aeroplane shall not be operated under instrument flight rules or at night by a single pilot unless approved by the Authority.

(2) An aeroplane shall not be operated under instrument flight rules or at night by a single pilot unless-

- (a) the flight manual does not require a flight crew of more than one;
- (b) the aeroplane is propeller-driven;
- (c) the maximum approved passenger seating configuration is not more than nine;
- (d) the maximum certificated take-off mass does not exceed five thousand seven hundred kg;
- (e) the aeroplane is equipped as described in the regulations relating to Civil Aviation Instruments and equipment; and
- (f) the pilot-in-command has satisfied requirements of experience, training, checking and recency described under this regulation.

Fatigue  
management

**116.**-(1) An air operator shall comply with the requirements prescribed in the relevant regulations relating to civil aviation fatigue and risk management system for the purpose of managing fatigue of flight and cabin crew members.

(2) An air operator shall establish either-

- (a) flight time, flight duty period, duty period and rest period limitations that are within the prescriptive fatigue management regulations established by the Authority;
- (b) a fatigue risk management system (FRMS) in compliance with subregulations (1); or
- (c) an FRMS in compliance with subregulation (4) for part of its operations and the requirements of paragraph (a) for the remainder of its operations.

(3) Where the operator adopts prescriptive fatigue management regulations for part or all of its operations, the Authority may approve, in exceptional circumstances, variations to these Regulations on the basis of a risk assessment provided by the operator.

(4) Approved variations shall provide a level of safety equivalent to, or better than that achieved through the prescriptive fatigue management regulations.

(5) The Authority shall approve the operator's FRMS before it may take the place of any or all of the prescriptive fatigue management regulations.

(6) An approved FRMS shall provide a level of safety equivalent to, or better than, the prescriptive fatigue management regulations.

(7) When approving the operator's FRMS and establishing a process to ensure that an FRMS provides a level of safety equivalent to, or better than, the prescriptive fatigue management regulations the Authority shall-

(a) Require that the operator establish maximum values for flight times or flight duty periods and duty period, and minimum values for rest periods. These values shall be based upon scientific principles and knowledge, subject to safety assurance processes, and acceptable to the State of the Operator;

(b) Mandate a decrease in maximum values and an increase in minimum values in the event that the operator's data indicates these values are too high or too low, respectively; and

(c) Approve any increase in maximum values or decrease in minimum values only after evaluating the operator's justification for such changes, based on accumulated FRMS experience and fatigue-related data.

(8) Where an air operator implements an FRMS to manage fatigue-related safety risks, an operator shall include-

(a) incorporate scientific principles and knowledge within the FRMS;

(b) identify fatigue-related safety hazards and the resulting risks on an ongoing basis;

- (c) ensure that remedial actions, necessary to effectively mitigate the risks associated with the hazards, are implemented promptly;
  - (d) provide for continuous monitoring and regular assessment of the mitigation of fatigue risks achieved by such actions;
  - (e) provide for continuous improvement to the overall performance of the FRMS; and
  - (f) ensure that FRMS is integrated with the operator's SMS.
- (9) An air operator shall maintain records for all its flight and cabin crew members of flight time, flight duty periods, duty periods, and rest periods for a period of time specified by the Authority.

#### PART IV

#### AEROPLANE PERFORMANCE OPERATING LIMITATIONS

General  
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**117.**-(1) Aeroplanes shall be operated in accordance with a type certification acceptance prescribed in the Civil Aviation (Airworthiness) Regulations.

(2) 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, except as provided in subregulation (1).

(3) For aeroplanes exempted by the Authority which are not applicable because of the exemption provided for in Article 41 of the Chicago Convention 1944 on existing Standards of Airworthiness, the operator shall ensure that the level of performance specified in this regulation is met as far as practicable.

Applicability  
and  
compliance

**118.**-(1) This regulation shall apply to large aeroplanes to which aeroplanes certificated between 13<sup>th</sup> June, 1960 and 2<sup>nd</sup> March, 2004.

(2) The level of performance defined by the appropriate parts of the comprehensive and type certification referred to in regulation 117(1) for the aeroplanes designated in subregulation (1) shall be at least

substantially equivalent to the overall level embodied in these Regulations.

(3) 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 regulation.

(5) A flight shall not be commenced unless the performance information provided in the flight manual, supplemented as necessary with other data acceptable to the Authority, indicates that this regulation can be complied with for the flight to be undertaken.

(6) In applying the standards of this regulation, an operator shall take into account all factors that significantly affect the performance of the aeroplane, including the mass of the aeroplane, the operating procedures, the pressure altitude appropriate to the elevation of the aerodrome, the ambient temperature, the wind, the runway slope, and surface conditions of the runway such as, presence of snow, slush, water, or ice for landplanes, water surface condition for seaplanes.

(7) The factors in subregulation (6) shall be taken into account directly as operational parameters or indirectly by means of allowances or margins, which may 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.

Mass  
limitations

**119.**-(1) The mass of the aeroplane at the start of take-off-

- (a) shall not exceed the mass at which subregulation (2) is complied with, or the mass at subregulations (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

- subregulations (6) and (7) and, in respect of alternate aerodromes, paragraph (c) and (7);
- (b) shall not exceed the maximum take-off mass specified in the flight manual for the pressure-altitude appropriate to the elevation of the aerodrome, and, if used as a parameter to determine the maximum take-off mass, any other local atmospheric condition;
  - (c) shall 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 if 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 and at any destination alternate aerodrome, shall 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) The aeroplane shall be able, in the event of a critical engine failing, or for other safety reasons, at any point in the take-off, either to discontinue the take-off and stop within the accelerate-stop distance available, or to continue the takeoff 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 subregulation (6).

(3) When determining the resulting take-off obstacle accountability area, the operating conditions, such as the crosswind component and navigation accuracy shall be taken into account.

(4) In determining the length of the runway available, account shall be taken of the loss, if any, of

runway length due to alignment of the aeroplane prior to take-off.

(5) En route - one engine inoperative: the aeroplane shall, in the event of the critical engine becoming inoperative at any point along the route or planned diversions there from, be able to continue the flight to an aerodrome at which the requirement of subregulation (7) can be met without flying below the minimum flight altitude at any point.

(6) En route-two engines inoperative: In the case of aeroplanes having three or more engines, on any part of a route where the location of en-route alternate aerodromes and the total duration of the flight are such that the probability of a second engine becoming inoperative must be allowed for if the general level of safety implied by the standards of these Regulations is to be maintained, 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.

(7) Landing: the pilot-in-command shall, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available.

(8) 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.

Obstacle data

**120.**-(1) The Authority shall provide obstacle data to enable an operator to develop procedures to comply with regulation 119(5).

(2) An air operator shall take account of charting accuracy when assessing compliance with regulation 119(5).

Additional requirements for operations of single-engine turbine-powered

**121.**-(1) In approving operations by single-engine turbine-powered aeroplanes at night or in IMC, 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 these Regulations and

- aeroplanes at night or in instrument meteorological conditions (IMC)
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- the Civil Aviation (Airworthiness) Regulation as provided by-
- (a) the reliability of the turbine engine;
  - (b) an operator's maintenance procedures, operating practices, flight dispatch procedures and crew training programs; and
  - (c) equipment and other requirements provided in accordance with the regulations relating to civil aviation instrument and equipment.
- (2) 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.
- (3) Additional requirements for operations of single-engine turbine-powered aeroplanes at night or in instrument meteorological conditions (IMC) shall be as set out in the Second Schedule.

Aeroplane instruments, equipment and flight documents

**122.** The provisions of aeroplane instruments, equipment and flight documents shall be as prescribed in the regulations relating to civil aviation instrument and equipment.

PART V  
AEROPLANE CONTINUING AIRWORTHINESS

- Operator's continuing airworthiness responsibilities
- 123.**-(1) Subject to procedures acceptable to the Authority, operators shall ensure that-
- (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.
- (2) An air operator shall not operate an aeroplane unless it is maintained and released to service by an organisation approved in accordance with regulation 129 or

under an equivalent system, either of which shall be acceptable to the Authority.

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

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(a) an organisation complying with Civil Aviation (Aircraft Maintenance Organisation) Regulations that is either approved by the Authority of the aeroplane or is approved by another contracting State and is accepted by the Authority; or

(b) a licensed aircraft maintenance engineer in accordance with procedures that are authorised by the Authority, and there is a maintenance release in relation to the maintenance carried out.

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(4) Where the Authority accepts an equivalent system, the person signing the maintenance release shall be licensed in accordance with the Civil Aviation (Personnel Licensing) Regulations.

(5) An air operator shall-

(a) employ a qualified person or group of persons to ensure that all maintenance is carried out in accordance with the maintenance control manual; and

(b) ensure that the maintenance of its aeroplanes is performed in accordance with the maintenance programme.

Operator's  
maintenance  
control manual

**124.**-(1) An air 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 regulation 209, and the design of the manual shall observe human factors principles.

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

(3) 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.

(4) An air operator shall provide the Authority and the State of registry with a copy of the operator's maintenance control manual, together with all amendments or revisions to it and shall incorporate in it such mandatory material as the Authority or the State of registry may require.

Maintenance programme

**125.**-(1) An air 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 under regulation 209.

(2) The design and application of an operator's maintenance programme shall observe human factors principles.

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

Continuing airworthiness records

**126.**-(1) An air operator shall ensure that the following records are kept for the periods mentioned in these Regulations-

- (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 records referred to in subregulation (1)(a) to (f) shall be kept for a minimum period of ninety days after the unit to which they refer has been permanently withdrawn from service, and the records in subregulation (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.

(4) In the event of any permanent change of operator, the records shall be transferred to the new operator.

(5) Records kept and transferred in accordance with this regulation shall be maintained in a form and format that ensures readability, security and integrity of the records at all times.

Continuing  
airworthiness  
information

**127.**-(1) An air operator of an aeroplane over 5700 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 State of Registry and report through the system specified in regulations governing airworthiness.

(2) An air operator of an aeroplane over 5700 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 State of registry.

Modifications  
and repairs

**128.**-(1) All modifications and repairs shall comply with airworthiness requirements acceptable to the Authority.

(2) Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.

Approved  
maintenance  
organisation  
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**129.** An approved maintenance organisation shall comply with the Civil Aviation (Aircraft Maintenance Organisation) Regulations on aircraft Maintenance organisation approval.

Issue of approval

**130.**-(1) The issue of a maintenance organisation approval by a State shall be dependent upon the applicant demonstrating compliance with the requirements of regulation 65 and the relevant provisions contained in the SMS regulations for such organisations.

(2) The approval document shall contain at least the following:

- (a) organisation's name and location;
- (b) date of issue and period of validity; and
- (c) terms of approval.

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(3) The continued validity of the approval shall depend upon the organisation remaining in compliance with the requirements of regulation 65 and with the relevant provisions contained in the Civil Aviation (Safety Management) Regulations for an approved maintenance organisation.

Maintenance organisation's procedures manual

**131.**-(1) The maintenance organisation shall, for purposes of use and guidance of maintenance personnel concerned, provide a procedures manual which may be issued in separate parts containing the following information:

- (a) a general description of the scope of work authorised under the organisation's terms of approval;
- (b) a description of the organisation's procedures and quality or inspection system in accordance with regulation 69;
- (c) a general description of the organisation's facilities;
- (d) names and duties of the person or persons required by regulation 71;
- (e) a description of the procedures used to establish the competence of maintenance personnel as required by regulation 71;
- (f) a description of the method used for the completion and retention of the maintenance records required by regulation 72;

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- (g) a description of the procedures for preparing the maintenance release and the circumstances under which the release is to be signed;
- (h) the personnel authorised to sign the maintenance release and the scope of their authorisation;
- (i) a description, when applicable, of the additional procedures for complying with the operator's maintenance procedures and requirements;
- (j) a description of the procedures for complying with the service information reporting requirements of the Civil Aviation (Approved Maintenance Organisation) Regulations; and
- (k) a description of the procedure for receiving, assessing, amending and distributing within the maintenance organisation all necessary airworthiness data from the type certificate holder or type design organisation.

(2) The maintenance organisation shall ensure that the procedures manual is amended as necessary to keep the information contained therein up to date.

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

Safety  
management  
GN. No.  
757 of 2018

**132.** All approved maintenance organisations shall implement safety management provisions in accordance with the Civil Aviation (Safety Management) Regulations.

Maintenance  
procedures and  
quality  
assurance  
system

**133.-(1)** The maintenance organisation shall establish procedures, acceptable to the Authority to ensure good maintenance practices and compliance with all relevant requirements of these Regulation.

(2) The maintenance organisation shall ensure compliance with these Regulations by either establishing an independent quality assurance system to monitor compliance with and adequacy of the procedures, or by providing a system of inspection to ensure that all maintenance is properly performed.

Facilities

**134.**-(1) The facilities and working environment shall be appropriate for the task to be performed.

(2) The maintenance organisation shall have the necessary technical data, equipment, tools and material to perform the work for which it is approved.

(3) Storage facilities shall be provided for parts, equipment, tools and material.

(4) Storage conditions shall be such as to provide security and prevent deterioration of and damage to stored items.

Personnel  
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**135.**-(1) The maintenance organisation shall nominate a person or group of persons whose responsibilities include ensuring that the maintenance organisation is in compliance with the requirements of regulation 65 of the Civil Aviation (Approved Maintenance Organisation) Regulations.

(2) The maintenance organisation shall employ the necessary personnel to plan, perform, supervise, inspect and release the work to be performed.

(3) The competence of maintenance personnel shall be established in accordance with a procedure and to a level acceptable to the Authority. The person signing a maintenance release shall be qualified in accordance with Personnel licensing regulations.

(4) The maintenance organisation shall ensure that all maintenance personnel receive initial and continuation training appropriate to their assigned tasks and responsibilities.

(5) The training programme established by the maintenance organisation shall include training in knowledge and skills related to human performance, including coordination with other maintenance personnel and flight crew.

Records

**136.**-(1) The maintenance organisation shall retain detailed maintenance records to show that all requirements for the signing of a maintenance release have been met.

(2) The records required by this regulation shall be kept for a minimum period of one year after the signing of the maintenance release.

Maintenance  
release

**137.-(1)** Maintenance release shall-

- (a) be completed and signed to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data and the procedures described in the maintenance organisation's procedures manual;
- (b) contain a certification including-
  - (i) basic details of the maintenance carried out including detailed reference of the approved data used;
  - (ii) the date such maintenance was complete;
  - (iii) when applicable, the identity of the approved maintenance organisation; and
  - (iv) the identity of the qualified person or persons signing the release.

(2) 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 the airworthiness of aircraft regulations.

(3) When maintenance is not carried out by an approved maintenance organisation, the maintenance release shall-

- (a) be completed and signed by a person appropriately licensed in accordance with personnel licensing regulations to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data and procedures acceptable to the Authority;
- (b) include the following:
  - (i) basic details of the maintenance carried out including detailed reference of the approved data used;
  - (ii) the date such maintenance was completed; and
  - (iii) the identity of the qualified person or persons signing the release.

PART VI  
AEROPLANE FLIGHT CREW

Composition  
of flight crew

**138.**-(1) An aircraft shall not fly unless it carries a flight crew of the number and description required by the law of the State of registry.

(2) An aircraft registered in United Republic shall carry a flight crew adequate in number and description to ensure the safety of the aircraft and of at least the number and description specified in the aircraft flight manual.

(3) The number and composition of the flight crew of an aircraft registered in United Republic and flying for the purpose of commercial air transport operations, shall not be less than that number specified in the operator's operations manual.

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

(5) An aircraft registered in United Republic and flying for the purpose of commercial air transport operations, having a maximum mass of over 5,700 kg shall carry not less than two pilots as members of the flight crew thereof.

(6) Without prejudice to the preceding provisions of this regulation, an operator shall ensure that-

- (a) all flight crew members hold an applicable and valid licence acceptable to the Authority and are suitably qualified and competent to conduct the duties assigned to them;
- (b) procedures are established, acceptable to the Authority, to prevent the crewing together of inexperienced flight crew members;
- (c) one pilot amongst the flight crew, qualified as a pilot-in-command (PIC) is designated as the PIC who may delegate the conduct of the flight to another suitably qualified pilot; and

(d) when a dedicated system panel operator is required by the aeroplane or rotorcraft flight manual, the flight crew includes one crew member who holds a flight engineer's licence or is a suitably qualified flight crew member and acceptable to the Authority

Radio operator

**139.** A 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.

Flight engineer

**140.** 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.

One pilot qualified to perform flight engineer functions

**141.** An air operator certificate holder shall ensure that, on all flights requiring a flight engineer, there is assigned at least one other flight crew member qualified to perform the flight engineer duties in the event the flight engineer becomes incapacitated.

Flight crew member emergency duties

**142.-(1)** An air 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) The annual training in accomplishing these functions in subregulation (1) shall be contained in an 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.

Flight crew member training programmes

**143.-(1)** An air operator shall establish and maintain a ground and flight training programme, approved by the Authority, designed to ensure that all flight crew members

are adequately trained to perform their assigned duties, including skills related to human performance.

(2) 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 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.

(3) 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 that State for that purpose; or
- (b) the completion within the appropriate period of the proficiency check required by regulation 156 in that type of aeroplane.

**144.** A flight crew member shall not-

Duties during critical phases of flight

- (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.

Manipulation of controls

**145.-(1)** A pilot-in-command shall not allow an unqualified person to manipulate the controls of an aircraft during commercial air transport operations.

(2) A person shall not 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.

Power to inspect

**146.-(1)** A 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 pilot-in-command in order to conduct an inspection.

(2) A pilot-in-command may refuse an inspector access to the cockpit where, in his opinion, the safety of the aircraft may be endangered.

Recent experience - pilot-in-command and co-pilot

**147.-(1)** An air 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 for at least three take-offs and landings within the preceding ninety 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 this regulations for each variant or each type of aeroplane can be combined.

(3) The take-offs and landings required by subregulation (1) may be performed in a visual synthetic

flight trainer approved by the Authority to include take-off and landing maneuvers and any person who fails to make the three required take-offs and landings within any consecutive ninety-day period shall re-establish recency of experience as provided in subregulation (3).

(4) A required flight crew member who has not met the requirements of subregulation (1) shall re-establish recency of experience in addition to meeting all applicable training and checking requirements of these Regulations, as follows:

- (a) under the supervision of a check pilot, make at least three take-offs and landings in the type of aircraft in which that person is to serve or if an advanced synthetic flight trainer is used, the requirements of subregulation (4) shall be met; and
- (b) the take-offs and landings required in this paragraph shall include at least one-
  - (i) take-off with a simulated failure of the most critical engine;
  - (ii) landing from an instrument landing system approach to the lowest instrument landing system minimum authorised for the certificate holder; and
  - (iii) landing to a full stop.

(5) A required flight crew member who performs the maneuvers prescribed in subregulation (3) in a visual synthetic flight trainer shall-

- (a) have previously logged one hundred hours of flight time in the same aircraft type in which the pilot is to serve; and
- (b) be observed on the first two 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 must be made in weather minima that are not less than those contained in the air operator certificate holder's operation specifications for Category I operations, and shall be made within forty-five days following completion of synthetic flight trainer training.

(6) When using a synthetic flight trainer to accomplish any of the requirements of subregulation (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 subregulations (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 maneuvers that are determined necessary to make this certifying statement.

Pilot operating  
limitations and  
pairing  
requirements

**148.**-(1) Where a co-pilot has fewer than one hundred 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 air operator certificate 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 one thousand two hundred meters;
- (ii) the Runway Visual Range (RVR) for the runway to be used is at or below 4,000 feet;
- (iii) the runway to be used has water, snow, slush or similar conditions that may adversely affect aircraft performance;
- (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 it to be prudent

to exercise the pilot-in-command prerogative.

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(2) A pilot shall not conduct operations under the Civil Aviation (Air Operator Certification and Administration) Regulations unless, for that type aircraft, either the pilot-in-command or the co-pilot has at least seventy-five hours of line operating flight time, either as pilot-in-command or co-pilot.

(3) The Authority may, upon application by the air operator certificate holder, authorise exemptions from the requirements of this regulation by an appropriate amendment to the operations specifications in any of the following circumstances-

- (a) a newly certificated air operator certificate holder does not employ any pilots who meet the minimum requirements of this regulation;
- (b) an existing air operator certificate 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.

Recent  
experience -  
cruise relief  
pilot

**149.**-(1) An air 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 ninety 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) Where 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 these Regulations for each variant or each type of aeroplane can be combined.

Pilot-in-command area, route and aerodrome qualification

**150.**-(1) An air operator shall not utilise 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 this regulation.

(2) The pilot referred to in subregulation (1) shall demonstrate to an operator an adequate knowledge of-

- (a) the route to be flown, and the aerodromes which are to be used. 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;
- (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
- (c) that portion of the demonstration relating to arrival, departure, holding and instrument approach procedures may be accomplished in an appropriate 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;
- (b) the descent from the initial approach altitude can be made by day in visual meteorological conditions;
- (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) An air 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) An air operator shall not continue to utilise a pilot as a pilot-in-command on a route or within an area specified by an operator and approved by the Authority unless, within the preceding twelve 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) if 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 twelve 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 requalify in accordance with this regulation.

Pilot-in-command  
aeronautical  
experience  
small aircraft

**151.** An operator shall ensure that-

(a) a Commercial pilot licence holder does not operate as a pilot-in-command certificated in the aircraft flight manual for single pilot operations unless-

(i) when conducting passenger carrying operations under visual flight rules outside a radius of fifty nm from an aerodrome of departure, the pilot has a minimum of five hundred hours total flight time on aeroplanes or holds a valid instrument rating; or

(ii) when operating on a multi-engine type under instrument flight rules (IFR), the pilot has a minimum of 700 hours total flight time on aeroplanes which includes 400 hours as Pilot in Command of which one hundred hours have been under IFR including forty hours multi-engine operation; and

(iii) the four hundred hours referred to subparagraph (ii) are substituted by hours operating as co-pilot on the basis that two hours co-pilot is equivalent to one hour as PIC if such hours were gained within an established multi-pilot crew system prescribed in the Operations Manual specified in the Civil Aviation (Air Operator Certification and Administration) Regulations;

(b) in addition to paragraph (a)(ii), when operating under IFR as a single pilot, requirements prescribed in regulation 157 are satisfied; and

(c) in multi-pilot crew operations, in addition to paragraph (a), and prior the pilot operating as pilot-in-command, the command course

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prescribed in the Operations Manual specified in the Civil Aviation (Air Operator Certification and Administration) Regulations is completed.

Co-pilot licence requirements

**152.** A pilot shall not act as co-pilot of an aircraft in commercial air transport operations unless that pilot holds-

- (a) a commercial pilot licence with appropriate category, class and type ratings for the aircraft operated; and
- (b) an instrument rating.

Pilot age restriction

**153.** A person or an air operator certificate holder shall not serve or use a person as a required pilot on an aircraft engaged in international commercial air transport operations if that person has attained the age of sixty-five years.

Pilot-in-command licence requirements: turbojet, turbofan or large aircraft

**154.** A pilot shall not act as pilot-in-command of a turbojet, turbofan or large aircraft in commercial air transport operations unless that pilot holds an airline transport pilot licence and a type rating for that aircraft.

Pilot -in-command licence requirements: turbojet, turbofan or small aircraft

**155.** A pilot shall not act as pilot-in-command of a non-turbojet or turbofan small aircraft in commercial air transport operations during-

- (a) instrument flight rules operations unless that pilot holds a commercial pilot licence (CPL) with appropriate category and class ratings for the aircraft operated, and an instrument rating and meets the experience requirements for operation; or
- (b) day visual flight rules operations unless that pilot holds a CPL with appropriate category and class ratings for the aircraft operated.

Pilot proficiency checks

**156.-(1)** An air 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 the Authority.

(3) Pilot proficiency checks shall be performed twice within any period of one year.

(4) Any two pilot proficiency checks which are similar and which occur within a period of four consecutive months shall not alone satisfy this requirement.

(5) Flight simulation training devices approved by the Authority may be used for those parts of the checks for which they are specifically approved.

(6) 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 this regulation for each variant or each type of aeroplane can be combined.

Single pilot operations under instrument flight rules or at night

**157.-(1)** An air operator shall comply with prescribed requirements of experience, recency and training applicable to single pilot operations intended to be carried out under the Instrument flight rule or at night.

(2) Pilot-in-command shall:

- (a) for operations under the instrument flight rule or at night, have accumulated at least fifty hours flight time on the class of aeroplane, of which at least ten hours shall be as pilot-in-command;
- (b) for operations under the instrument flight rule, have accumulated at least twenty-five hours flight time under the instrument flight rule on the class of aeroplane, which may form part of the fifty hours flight time in paragraph (a);
- (c) for operations at night, have accumulated at least fifteen hours flight time at night, which may form part of the fifty hours flight time in paragraph (a);
- (d) for operations under the instrument flight rule, have acquired recent experience as a pilot

engaged in a single pilot operation under the instrument flight rule of-

- (i) at least five instrument flight rule flights, including three instrument approaches carried out during the preceding ninety days on the class of aeroplane in the single pilot role; or
- (ii) an instrument flight rule instrument approach check carried out on such an aeroplane during the preceding ninety days;
- (e) for operations at night, have made at least three 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 regulation 175, 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 regulations 175 and 191 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.

Pilot  
authorisation  
in lieu of type  
rating

**158.** The Authority may authorise a pilot to operate an aircraft requiring a type rating without a type rating for a period not exceeding sixty 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 the United Republic 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.

Licences  
required

**159.**-(1) A person shall not act as pilot-in-command or in any other capacity as a required flight crew member of an aircraft-

- (a) registered in United Republic unless that person carries in his personal possession the appropriate and current 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 and current 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 radio telephony 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.

Pilot  
qualifications

**160.**-(1) A person shall not operate an aircraft in commercial air transport or aerial work unless that person is qualified for the specific operation and in the specific type of aircraft used.

(2) An air operator or owner of the aircraft shall ensure that flight crew engaged in civil aviation operations speak and understand the English Language.

Fitness of crew  
members

**161.**-(1) A person shall not act as a required crew member at any time when that person is aware of any decrease in the medical fitness 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 required crew member is incapacitated from performing duties by any cause such as injury, sickness, fatigue, the effects of alcohol or drugs; or
- (b) continued beyond the nearest suitable aerodrome if a flight crew members capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness or lack of oxygen.

Special  
authorisation  
required for  
Category II or  
III operations

**162.**-(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 air operator certificate holder which has operations specifications approving Category II or III operations.

Recording of  
flight time

**163.**-(1) A pilot shall record and keep details of all flights he has flown in a logbook format acceptable to the Authority.

- (2) An air operator certificate holder:
  - (a) may record details of flights flown by a pilot in an acceptable computerised format maintained by the air operator certificate 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 subregulations (1) and (2) shall contain the following information:

- (a) personal details: name and address of the holder;

- (b) for each flight:
  - (i) name of the pilot-in-command;
  - (ii) date, day, month and year 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, and registration of aircraft;
  - (v) single engine or multi-engine;
  - (vi) total time of flight;
  - (vii) accumulated total time of flight;
  - (viii) a remarks column to give details of specific functions such as student pilot-in-command time, pilot-in-command under supervision time, pilot-in-command instrument flight time;
- (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;
  - (iii) date, month and year;
  - (iv) total time of session; and
  - (v) accumulated total time;
- (d) operational conditions-
  - (i) night; or
  - (ii) instrument flight rules.
- (4) Logging of time shall be as follows:
  - (a) in the case of pilot-in-command flight time:
    - (i) the holder of a licence may log as pilot-in-command time all of the flight time during which he is the pilot-in-command;
    - (ii) the applicant for or the holder of a pilot licence may log as pilot-in-command time all solo flight time and flight time as student pilot-in-command provided that such student pilot-in-command time is countersigned by the instructor;
    - (iii) the holder of an instructor rating may log as pilot-in-command all flight time

- during which he acts as an instructor in an aeroplane;
- (iv) the holder of an examiner's authorisation may log as pilot-in-command all flight time during which he occupies a pilot's seat and acts as an examiner in an aeroplane;
  - (v) a co-pilot acting as pilot-in-command under the supervision of the pilot-in-command 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 pilot-in-command time under supervision is countersigned by the Pilot in Command; 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) in the case of 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) in the case of 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) in the case of 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;

(e) in the case of pilot-in-command under supervision, a co-pilot may log as pilot-in-command under supervision flight time flown as pilot-in-command under supervision, when all of the duties and functions of pilot-in-command on that flight were carried out, such that the intervention of the pilot-in-command 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 shall be as follows:

- (a) the 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 authorisations.

Completion of  
technical  
logbook  
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**164.** 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.

Reporting  
mechanical  
irregularities

**165.** 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) for general aviation operations, 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.

Reporting of  
facility and

**166.-(1)** An air operator shall report, without delay, any inadequacy or irregularity of a facility or navigational

navigation aid  
inadequacies      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.

Pilot privileges  
and limitations  
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**167.** A pilot shall not conduct flight operations unless the operations are within the privileges and limitations of each licence he holds as specified in the Civil Aviation (Personnel Licensing) Regulations.

Flight crew  
equipment

**168.** A flight crew member assessed as fit to exercise the privileges of a licence, subject to the use of suitable correcting lenses, shall have a spare set of the correcting lenses readily available when exercising those privileges.

Crew resource  
management  
training

**169.-(1)** A person or an air operator certificate holder shall not serve or 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 air operator certificate 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.

Initial  
emergency  
equipment  
drills

**170.-(1)** A person or an air operator certificate holder shall not serve or 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 onetime emergency drills:

- (a) protective breathing equipment or fire-fighting drill which shall include-
  - (i) locating the source of fire or smoke for an actual or simulated fire;
  - (ii) implementing procedures for effective crew co-ordination and communication, including notification of flight crew members about the fire situation;

- (iii) donning and activating 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) identifying the class of fire;
  - (vii) selecting the appropriate extinguisher;
  - (viii) properly removing the extinguisher from the securing device;
  - (ix) preparing, operating and discharging the extinguisher properly; and
  - (x) utilising the correct fire-fighting techniques for type of fire;
- (b) emergency evacuation drill which shall include-
- (i) recognising and evaluating an emergency;
  - (ii) assuming the appropriate protective position;
  - (iii) commanding passengers to assume protective position;
  - (iv) implementing crew co-ordination procedures;
  - (v) ensuring activation of emergency lights;
  - (vi) assessing aircraft condition;
  - (vii) initiating evacuation, dependent on signal or decision;
  - (viii) commanding passengers to release their seatbelts and evacuate;
  - (ix) assessing exit and redirect passengers, if necessary, to open exits, including deploying slides and commanding helpers to assist;
  - (x) commanding the passengers to evacuate at exit and run away from the aircraft;
  - (xi) assisting special need passengers, such as handicapped, elderly, and persons in a state of panic; and

- (xii) exiting 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 which shall include:
  - (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) disarming and open each type of door exit in normal mode;
  - (iii) closing each type of door exit in normal mode;
  - (iv) arming each type of door exit in emergency mode;
  - (v) opening each type of door exit in emergency mode;
  - (vi) using the manual slide inflation system to accomplish or ensure slide or slide raft inflation;
  - (vii) opening each type of window exit;
  - (viii) removing the escape rope and position it for use;
- (b) hand fire extinguisher drill which shall include:
  - (i) pre-flight each type of hand fire extinguisher;
  - (ii) locating the source of fire or smoke and identify class of fire;
  - (iii) selecting the appropriate extinguisher and remove from securing device;
  - (iv) preparing the extinguisher for use;

- (v) physically operating and discharging each type of installed hand fire extinguisher;
  - (vi) utilising correct fire-fighting techniques for the type of fire; and
  - (vii) implementing procedures for effective crew coordination and communication, including notification of crew members about the type of fire situation;
- (c) emergency oxygen system drill which shall include:
- (i) actually operate portable oxygen bottles, including masks and tubing;
  - (ii) verbally demonstrating operation of chemical oxygen generators;
  - (iii) preparing for use and properly operate an oxygen device, including donning and activation;
  - (iv) administering oxygen to self, passengers, and to those persons with special oxygen needs;
  - (v) utilising proper procedures for effective crew coordination and communication;
  - (vi) activating protective breathing equipment;
  - (vii) manually opening each type of oxygen mask compartment and deploy oxygen masks;
  - (viii) identifying compartments with extra oxygen masks;
  - (ix) implementing immediate action decompression procedures; and
  - (x) reset the oxygen system, if applicable;
- (d) flotation device drill which shall include:
- (i) donning and inflate life vests;
  - (ii) removing and use flotation seat cushions; and
  - (iii) demonstrating swimming techniques using a seat cushion;
- (e) ditching drill, if 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 including:

- (i) implementing crew coordination procedures, including a briefing with the captain to obtain pertinent ditching information and briefing cabin crew members;
- (ii) coordination time-frame for cabin and passenger preparation;
- (iii) adequately briefing passengers on ditching procedures;
- (iv) ensuring the cabin is prepared, including the securing of carry-on baggage, lavatories, and galleys;
- (v) demonstrating how to properly deploy and inflate slide rafts;
- (vi) removing, position and attach slide rafts to aircraft;
- (vii) inflating the rafts;
- (viii) using escape ropes at over wing exits;
- (ix) commanding any helpers to assist;
- (x) using slides and seat cushions as flotation devices;
- (xi) removing appropriate emergency equipment from the aircraft;
- (xii) boarding rafts properly;
- (xiii) initiating 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) initiating 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) using heaving line to rescue persons in the water;
- (xvi) tying slide rafts or rafts together;
- (xvii) using life line on edge of slide raft or raft as a handhold; and
- (xviii) securing 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 which shall include:

- (a) life raft removal and inflation drill, if applicable-
  - (i) removing of a life raft from the aircraft or training device; and
  - (ii) inflation of a life raft;
- (b) slide raft transfer drill which shall include:
  - (i) transferring each type of slide raft pack from an unusable door to a usable door;
  - (ii) disconnecting the slide raft at an unusable door;
  - (iii) redirecting passengers to the usable slide raft; and
  - (iv) installing and deploying the slide raft at a usable door;
- (c) slide and slide raft deployment, inflation, and detachment which shall include:
  - (i) engaging slide girt bar in floor brackets;
  - (ii) inflating slides with and without quick-release handle, manually and automatically;
  - (iii) disconnecting slide from aircraft for use as a flotation device;
  - (iv) arming slide rafts for automatic inflation; and
  - (v) disconnecting slide raft from the aircraft;
- (d) emergency evacuation slide drill which shall include:
  - (i) opening armed exit with slide or slide raft deployment and inflation; and

- (ii) egressing from aircraft via the evacuation slide and run away to a safe distance.

Initial aircraft  
ground  
training: flight  
crew

**171.**-(1) A person or an air operator certificate holder shall not serve or 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 air operator certificate 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) air operator certificate 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;
  - (vii) low visibility;
- (d) normal and emergency communications procedures and navigation equipment including the air operator certificate holder's communications procedures and air traffic control clearance requirements;

- (e) navigation procedures used in area departure, en-route, area arrival, approach and landing phases;
- (f) approved crew resource management training;
- (g) air traffic control systems, procedures, and phraseology;
- (h) 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 air operator certificate 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) in the case of 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) in the case of power plants-
  - (i) basic engine description;
  - (ii) engine thrust ratings;
  - (iii) engine components such as accessory drives, ignition, oil, fuel control, hydraulic, and bleed air features;

- (c) in the case of electrical-
  - (i) sources of aircraft electrical power, such as engine driven generators, auxilliary power unit generator, and external power;
  - (ii) electrical buses;
  - (iii) circuit breakers;
  - (iv) aircraft battery;
  - (v) standby power systems;
- (d) in the case of hydraulic-
  - (i) hydraulic reservoirs, pumps, accumulators, filters, check valves, interconnects and actuators;
  - (ii) other hydraulically operated components;
- (e) in the case of fuel-
  - (i) fuel tanks, including location and quantities;
  - (ii) engine driven pumps;
  - (iii) boost pumps;
  - (iv) system valves and crossfeeds;
  - (v) quantity indicators;
  - (vi) quantity indicators;
  - (vii) provisions for fuel jettisoning;
- (f) in the case of pneumatic-
  - (i) bleed air sources, auxiliary power unit or external ground air;
  - (ii) means of routing, venting and controlling bleed air via valves, ducts, chambers, and temperature and pressure limiting devices;
- (g) in the case of air conditioning and pressurisation-
  - (i) heaters, air conditioning packs, fans, and other environmental control devices;
  - (ii) pressurisation system components such as outflow and negative pressure relief valves;

- (iii) automatic, standby, and manual pressurisation controls and annunciations;
- (h) in the case of 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;
  - (iv) redundancy devices;
- (i) in the case of landing gear-
  - (i) landing gear extension and retraction mechanism including the operating sequence of struts, doors, and locking devices, and brake and antiskid systems, if applicable;
  - (ii) steering, including nose or body steering gear;
  - (iii) bogie arrangements;
  - (iv) air or ground sensor relays;
  - (v) visual downlock indicators;
- (j) in the case of ice and rain protection-
  - (i) rain removal systems;
  - (ii) anti-icing or de-icing systems affecting flight controls, engines,
  - (iii) pitot static probes, fluid outlets, cockpit windows, and aircraft structures;
- (k) in the case of 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;
  - (ix) non-emergency equipment and furnishings;

- (l) in the case of 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;
  - (xi) cathode ray tube or computer generated displays of aircraft position and navigation information;
- (m) in the case of auto flight system-
  - (i) autopilot;
  - (ii) auto throttles;
  - (iii) flight director and navigation systems;
  - (iv) automatic approach tracking;
  - (v) auto land;
  - (vi) automatic fuel and performance management systems;
- (n) in the case of flight instruments-
  - (i) panel arrangement;
  - (ii) flight instruments, including attitude indicator, directional gyro, magnetic compass, airspeed indicator, vertical speed indicator, altimeters, standby instruments;

- (iii) instrument power sources, and instrument sensory sources, such as pitot static pressure;
- (o) in the case of display systems-
  - (i) weather radar;
  - (ii) other Cathode Ray Tube (CRT) displays, such as checklist, vertical navigation or longitudinal navigation displays;
- (p) in the case of 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;
  - (v) aircraft communication addressing and reporting system (ACARS);
- (q) in the case of warning systems-
  - (i) aural, visual, and tactile warning systems, including the character and degree of urgency related to each signal;
  - (ii) warning and caution annunciator systems, including ground proximity and take-off warning systems;
- (r) in the case of 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;
  - (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) in the case of 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;
- (vi) servicing requirements;
- (t) in the case of lighting-
  - (i) cockpit, cabin, and external lighting systems;
  - (ii) power sources;
  - (iii) switch positions;
  - (iv) spare light bulb locations;
- (u) in the case of 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;
  - (viii) hatches, ladders and movable stairs;
- (v) in the case of auxiliary power unit-
  - (i) electric and bleed air capabilities;
  - (ii) interfaces with electrical and pneumatic systems;
  - (iii) inlet doors and exhaust ducts;
  - (iv) fuel supply.

(6) An air operator certificate 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) in the case of use of checklist-
  - (i) safety chocks;
  - (ii) cockpit preparation (switch position and checklist flows);
  - (iii) checklist callouts and responses;
  - (iv) checklist sequence;
- (b) in the case of flight planning-
  - (i) performance limitations, including meteorological, weight, minimum

- equipment list and configuration deviation list items;
- (ii) required fuel loads;
- (iii) weather planning, lower than standard take-off minimums or alternate requirements;
- (c) in the case of navigation systems-
  - (i) pre-flight and operation of applicable receivers;
  - (ii) onboard navigation systems;
  - (iii) flight plan information input and retrieval;
- (d) in the case of auto flight: autopilot, auto thrust, and flight director systems, including the appropriate procedures, normal and abnormal indications, and enunciators;
- (e) in the case of 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 air operator certificate 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.

Initial aircraft  
ground  
training: cabin  
crew

**172.-(1)** A person or an air operator certificate holder shall not serve or 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 air operator certificate 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) in the case of aircraft familiarisation-
  - (i) aircraft characteristics and description;
  - (ii) cockpit configuration;
  - (iii) cabin configuration;
  - (iv) galleys;
  - (v) lavatories;
  - (vi) stowage areas;
- (b) in the case of 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;
  - (vii) aircraft placards;
- (c) in the case of 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);
  - (v) water system;
- (d) in the case of 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;
  - (iv) window exits;
- (e) in the case of crew member communication and coordination-
  - (i) authority of pilot-in-command;
  - (ii) routine communication signals and procedures;

- (iii) crew member briefing;
- (f) in the case of 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) in the case of 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 training.

(4) An air operator certificate 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) in the case of 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) in the case of 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; and
- (c) in the case of 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, if applicable; and
  - (ix) emergency evacuation slide drill, if applicable.

(5) An air operator certificate 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 air operator certificate holder shall ensure that initial ground training for cabin crew members consists of at least the following programmed hours of instruction:

- (a) in the case of multi-engine turbine, thirty-two hours; and
- (b) in the case of multi-engine reciprocating, sixteen hours.

(7) An air 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) An air operator certificate holder shall ensure that each cabin crew member is-

- (a) competent to execute those safety duties and functions that the cabin crew 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.

Competence  
checks: cabin  
crew members

**173.**-(1) A person or an air operator certificate holder shall not serve or 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, and demonstrated knowledge of-

- (a) emergency equipment, emergency communication and notification systems including:
  - (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);  
exits with tail cones (emergency operation);
  - (vi) cockpit exits (emergency operation);
  - (vii) ground evacuation and ditching equipment;
  - (viii) first-aid equipment;
  - (ix) portable oxygen systems (oxygen bottles, chemical oxygen generators, protective breathing equipment (PBE));
  - (x) fire-fighting equipment;
  - (xi) emergency lighting systems; and
  - (xii) additional emergency equipment;
- (b) emergency procedures including:
- (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;
  - (xii) other unusual situations;
- (c) emergency drills including:
- (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;
  - (v) actual handling of fire extinguishers;
- (d) crew resource management including:

- (i) decision making skills-
- (ii) briefings and developing open communication;
- (iii) inquiry, advocacy and assertion training;
- (iv) workload management;
- (e) dangerous goods including:
  - (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 including:
  - (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.

Initial training  
of flight  
operations  
officer

**174.-(1)** A person or an air operator certificate holder shall not serve or use a person as a flight operations officer unless that person has completed the initial training approved by the Authority.

(2) Aircraft initial flight operations officer 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) An air operator certificate holder 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 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 operations officers.

(4) An air operator certificate holder shall provide initial aircraft training for flight operations officers that include instruction in at least the following aircraft characteristics:

- (a) general operating characteristics of the air operator certificate 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 air operator certificate holder shall provide initial aircraft training for flight operations officers 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 air operator certificate holder shall ensure that initial ground training for flight operations officers

includes a competence check given by an appropriate supervisor or ground instructor that demonstrates the required knowledge and abilities.

Initial flight training of flight crew member

**175.-(1)** A person or an air operator certificate holder shall not serve or 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 maneuvering and safe operation of the aircraft in accordance with air operator certificate holder's normal, abnormal and emergency procedures.

(3) An air operator certificate 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 maneuvers.

(5) An air operator certificate holder shall ensure that pilot initial flight training includes at least the following:

- (a) in the case of preparation training-
  - (i) visual inspection, and use authorised of pictorial display for aircraft with a flight engineer;
  - (ii) pre-taxi procedures; and
  - (iii) performance limitations;
- (b) in the case of surface operation:
  - (i) pushback;
  - (ii) powerback taxi, if applicable to type of operation to be conducted;
  - (iii) starting;
  - (iv) taxi; and
  - (v) pre-take-off checks;
- (c) in the case of take-off-
  - (i) normal;
  - (ii) crosswind;
  - (iii) rejected;

- (iv) power failure after; and
- (v) lower than standard minimum, if applicable to type of operation to be conducted;
- (d) in the case of climb-
  - (i) normal; and
  - (ii) one-engine inoperative during climb to en-route altitude;
- (e) in the case of en-route-
  - (i) steep turns;
  - (ii) approaches to stalls (take-off, en-route, and landing configurations);
  - (iii) flight power plant shutdown;
  - (iv) in-flight power plant restart;
  - (v) in-flight power plant restart; and
  - (vi) high speed handling characteristics;
- (f) in the case of descent:
  - (i) normal; and
  - (ii) maximum rate;
- (g) in the case of approaches:
  - (i) visual flight rules (VFR) procedures;
  - (ii) visual approach with 50% loss of power on one-engine (2 engines inoperative on 3-engine aircraft for pilot-in-command only);
  - (iii) visual approach with slat or flap malfunction;
  - (iv) instrument flight rules (IFR) 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 (NDB) normal and VHF omni-directional radio range beacon (VOR) normal;
  - (vi) non-precision approach with one engine inoperative (localiser backcourse procedures, SDF or localiser 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;
- (h) in the case of 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;
- (i) in the case of after landing:
  - (i) parking;
  - (ii) emergency evacuation; and
  - (iii) docking, mooring, and ramping, seaplanes only;
- (j) in the case of other flight procedures during any airborne phase:
  - (i) holding;
  - (ii) ice accumulation on airframe;
  - (iii) air hazard avoidance; and
  - (iv) wind shear or microburst;
- (k) in the case of normal, abnormal and alternate systems procedures during any phase-
  - (i) pneumatic or pressurisation;
  - (ii) air conditioning;
  - (iii) fuel and oil;
  - (iv) electrical;

- (v) hydraulic;
- (vi) flight controls;
- (vii) anti-icing and de-icing systems;
- (viii) autopilot;
- (ix) flight management guidance systems and automatic or other approach and landing aids;
- (x) stall warning devices, stall avoidance devices, and stability augmentation systems;
- (xi) airborne weather radar;
- (xii) flight instrument system malfunction;
- (xiii) communications equipment; and
- (xiv) navigation systems;
- (l) in the case of 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;
- (m) procedures for upset prevention and recovery training in a flight simulation training device as contained in the Procedures for Air Navigation Services.
- (6) An air operator certificate 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 regulation 156.

Initial  
specialised  
operations  
training

**176.**-(1) A person or an air operator certificate holder shall not serve or 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 air operator certificate 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, including:

- (a) in the case of 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) in the case of Category II and CAT III operations approaches-
  - (i) special equipment, procedures and practice;
  - (ii) a demonstration of competency;
- (c) in the case of 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.

Aircraft  
differences  
training

**177.-(1)** A person or an air operator certificate holder shall not serve or use a person as a crew member on an aircraft of a type for which a differences curriculum is included in the air operator certificate 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) familiarisation 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; and
- (c) the operator referred to in subregulation (1) shall specify in the operations manual when such differences training or familiarisation training is required.

(3) An air operator certificate 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 which shall include:
  - (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-
  - (aa) ground hold and central flow control procedures; and
  - (bb) radiotelephony procedures; and
- (b) emergency procedures which shall include:
  - (i) actions taken to aid the flight crew; and
  - (ii) air operator certificate holder and Authority notification.

Use of  
synthetic flight  
trainers

**178.** 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.

Aircraft and instrument proficiency checks

**179.**-(1) A person or an air operator certificate holder shall not serve or use a person-

- (a) as a 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;
- (b) 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.

(2) A flight crew member may complete the requirements of subregulation (1) simultaneously in a make and model of the aircraft.

(3) The completion of an approved operator training programme for the particular aircraft type and the satisfactory completion of a pilot-in-command proficiency

check, shall satisfy the requirement for an aircraft type rating practical test provided that the proficiency check-

(a) includes all maneuvers and procedures required for a type rating practical test; and

(b) is conducted by an examiner.

(4) Aircraft and instrument proficiency checks for pilot- in-command and co-pilot shall include the following operations and procedures listed in Table 4.

**Table 4 - Operations and Procedures**

Nonprecision approach	PIC/Co-Pilot	
Second nonprecision approach	PIC/Co-Pilot	
Missed approach from an ILS	PIC/Co-Pilot	
Second missed approach	PIC only	
Circling approach	PIC/Co-Pilot	Only when authorized in the AOC holder's Operations Manual. May be waived.
<b>Inflight Maneuvers</b>		
Steep turns	PIC only	May be waived.
Specific flight characteristics	PIC/Co-Pilot	
Approaches to stalls	PIC/Co-Pilot	May be waived.
Powerplant failure	PIC/Co-Pilot	
2 engine inoperative approach (3 and 4 engine aircraft)	PIC/Co-Pilot	
Normal landing	PIC/Co-Pilot	
Landing from an ILS	PIC/Co-Pilot	
Crosswind landing	PIC/Co-Pilot	
Landing with engine-out	PIC/Co-Pilot	
Landing from circling approach	PIC/Co-Pilot	Only if authorized in Operations Manual. May be waived.
Normal And Non-Normal Procedures	PIC/Co-Pilot	
Rejected landing	PIC/Co-Pilot	
2 engine inoperative landing (3 and 4 engine aircraft)	PIC only	
Other Events	PIC or Co-Pilot	Examiner's discretion.

(5) Examiners or check pilots may waive certain events on the proficiency check based on an assessment of the pilot's demonstrated level of performance.

(6) The oral and flight phases of a proficiency check shall not be conducted simultaneously.

(7) When the examiner or check pilot determines that a pilot's performance is unsatisfactory, may immediately terminate it.

(8) Where the proficiency check shall 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.

(9) At least one of the two annual proficiency checks shall be conducted by an examiner.

(10) The other proficiency check may be conducted by a check pilot or the Authority.

Introduction of  
new  
equipment or  
procedures

**180.** A person or an air operator certificate holder shall not serve or use a person as a flight crew unless such person attend the air operator certificate holder's approved training programme to both the crew member position and the particular variant of that aircraft.

Flight engineer  
proficiency  
checks

**181.-(1)** A person or an air operator certificate holder shall not serve or use a person as a flight engineer on an aircraft unless within the preceding twelve calendar months he has-

- (a) a proficiency check in accordance with the requirements prescribed by the Authority; or
- (b) 50 hours flight time for the air operator certificate 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) in the case of 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 pressurisation;
  - (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) in the case of abnormal and emergency procedures-
- (i) troubleshooting;
  - (ii) knowledge of checklist;
  - (iii) crew coordination;
  - (iv) minimum equipment list (MEL);
  - (v) configuration deviation list (CDL); and
  - (vi) emergency or alternate operation of aircraft flight systems.

Competence  
checks of  
flight  
operations  
officer

**182.**-(1) A person or an air operator certificate holder shall not serve or use a person as a flight operations officer unless, within the preceding twelve 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 subregulation (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 authorised 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) An authorised 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 other special operations authorised by the Authority unless that flight operations officer submits special operations competency checks to the Authority.

Supervised  
line flying of  
pilots

**183.**-(1) A pilot initially qualifying as a pilot-in-command shall complete a minimum of ten flights performing the duties of a pilot-in-command under the supervision of a check pilot.

(2) A pilot-in-command transitioning to a new aircraft type shall complete a minimum of five flights performing the duties of a pilot in command under the supervision of a check pilot.

(3) A pilot qualifying for duties other than pilot-in-command shall complete a minimum of five flights performing those duties under the supervision of a check pilot.

(4) During the time that a qualifying pilot-in-command is acquiring operating experience, an authorised instructor who is also serving as the pilot in command shall occupy a co-pilot station.

(5) In the case of a transitioning pilot-in-command, the check pilot serving as pilot in command 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 authorised instructor that he is qualified to perform the duties of a pilot-in-command for that type of aircraft.

Supervised  
line flying of  
flight  
engineers

**184.** 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.

Supervised  
line experience  
of cabin crew

**185.** 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.

Line  
observations  
of flight  
operations  
officer

**186.** A person or an air operator certificate holder shall not serve or 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 which that person is assigned duties.

Route and area  
checks of pilot  
qualification

**187.-(1)** A person or an air operator certificate holder shall not serve or 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 pilot-in-command 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 air operator certificate holder within the past twelve months.

(3) A pilot-in-command of an aircraft shall demonstrate special operational competency by navigation over the route or area as pilot-in-command 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.

Low  
minimums  
authorisation  
of pilot-in-  
command

**188.** Where a pilot- in-command has not completed-

- (a) fifteen flights performing pilot- in-command duties in an aircraft type, including five approaches to landing using Category I or II operations procedures, that pilot-in-command shall not plan for or initiate an instrument approach when the ceiling is less than three hundred feet and the visibility is less than two thousand meters; and
- (b) twenty flights performing pilot-in-command duties in an aircraft including five approaches and landing using Category III operations procedures, that pilot-in-command 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).

Designated  
special  
aerodromes  
pilot- in-  
command

**189.**-(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 or use a person as pilot-in-command for operations at special airport qualifications aerodromes unless within the preceding twelve months the pilot-in-command-

- (a) has been qualified by the air operator certificate holder through a pictorial means acceptable to the Authority for that aerodrome; or
- (b) has made a take-off and landing at that aerodrome or while serving as a flight crew member for the air operator certificate holder.

Designated special airport qualifications aerodrome limitations

**190.** Designated special airport qualifications aerodrome limitations are not applicable where 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.

Recurrent training and checking of flight crew members

**191.**-(1) An operator shall ensure that-

- (a) a flight crew member undergoes recurrent training listed in subregulation (2) and checking in subregulation (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.
- (2) Recurrent training referred to in subregulation (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 authorised instructor or in the case of the synthetic flight trainer content schedule, a synthetic flight trainer authorised instructor provided that the authorised instructor or synthetic flight trainer authorised 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 trainer acceptable to the Authority who may be assisted by experts in order to address specific areas.
- (3) The recurrent checking referred to in subregulation (1) shall be conducted by the following personnel:
- (a) operator proficiency check: by a check pilot or flight engineer authorised by the air operator certificate holder and accepted by the Authority, as appropriate, or, where the check is conducted in a synthetic flight trainer training device, by check pilot or authorised 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.
- (4) 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) where 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.
- (5) 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.
- (6) The period of validity of a line check referred to in subregulation shall be-

- (a) twelve months, in addition to the remainder of the month of issue; or
- (b) where 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.

(7) An operator shall ensure that each flight crew member undergoes training and checking on the location and use of emergency and safety equipment carried.

(8) The period of validity of an emergency and safety equipment check referred to in subregulation (7) shall be-

- (a) twelve months in addition to the remainder of the month of issue; or
- (b) where 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.

(9) 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.

(10) 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.

Recurrent  
training: cabin  
crew members

**192.**-(1) An air 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 this regulation.

(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) Without prejudice to subregulation (2), where 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 air operator shall ensure-

- (a) recurrent training required under this regulation is conducted by suitably qualified persons;
- (b) that every twelve months, the programme of practical training is conducted and 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 exits 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;
  - (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:
    - (aa) 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
    - (bb) the donning and use of protective breathing equipment by each cabin crew member in an enclosed, simulated smoke-filled environment;
  - (iv) use of pyrotechnics, actual or representative devices; and
  - (v) 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.

Recurrent  
training of  
flight  
operations  
officers

**193.**-(1) A person or an air operator certificate holder shall not serve or 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 air operator certificate holder shall-

- (a) establish and maintain a recurrent training programme, approved by the Authority and established in the air operator certificate 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) 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 air operator certificate holder.

Check pilot  
training

**194.**-(1) A person or an air operator certificate holder shall not serve or use a person as 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.

(2) An air operator certificate holder shall ensure that initial ground training for check pilots includes-

- (a) check pilot duties, functions, and responsibilities;
- (b) applicable regulations and the air operator certificate 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-
  - (i) improper and insufficient training;
  - (ii) personal characteristics of an applicant that could adversely affect safety;
- (e) appropriate corrective action in the case of unsatisfactory checks; and
- (f) 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 air operator certificate holder shall ensure that the initial and transition flight training for check pilots in an aircraft includes:

- (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 this regulation.

(5) An air operator certificate 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.

Authorised instructor or synthetic flight trainer and authorised instructor training

**195.-(1)** A person or an air operator certificate holder shall not serve or 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 authorised instructor or a synthetic flight trainer authorised instructor training, as appropriate; and
  - (b) within the preceding twenty-four months, that person satisfactorily conducts instruction under the observation of an authorised person, an air operator certificate holder's check pilot, an authorised flight engineer, as appropriate, or an examiner employed by the air operator certificate holder.
- (2) An air operator certificate holder shall-
- (a) accomplish the observation check for an authorised 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 air operator certificate holder's policies and procedures;
- (iii) appropriate methods, procedures, and techniques for conducting the required checks;
- (iv) proper evaluation of trainee performance including the detection of-
  - (aa) improper and insufficient training; and
  - (bb) 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-
  - (aa) the fundamental principles of the teaching-learning process;
  - (bb) teaching methods and procedures; and
  - (cc) 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 authorised 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-
  - (aa) 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
  - (bb) the safety measures to be taken from either pilot seat for emergency situations that are likely to develop during instruction; and
- (iv) 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.

Authorised  
instructor  
qualifications

**196.** A person or an air operator certificate holder shall not serve or use a person 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 pilot-in-command 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 pilot-in-command 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 pilot-in-command 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.

Check pilot  
and authorised  
flight engineer  
qualifications

**197.** A person or an air operator certificate holder shall not serve or use a person as a check pilot or flight engineer authorised by the air operator certificate 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 pilot-in-command 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 pilot-in-command or a flight engineer;
- (c) has satisfactorily completed the appropriate proficiency, competency and recency of experience checks that are required to serve as a pilot- in-command 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.

Check pilot designation, authorisations and limitations

**198.**-(1) A person or an air operator certificate holder shall not serve or 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) 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 air operator certificate 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 licenses 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 air operator certificate holder all training, qualification and line observation requirements under these Regulations applicable to the position and flight operations being checked.

(2) For purposes of subregulation (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.

Synthetic flight trainer approval

**199.** An air operator certificate holder shall not use a synthetic flight trainer for-

- (a) training or checking unless that synthetic flight trainer has been specifically approved for the air operator certificate holder in writing by the Authority; or
- (b) any purpose other than that specified in the Authority's approval.

Line qualification: check pilot and instructor

**200.** 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.

Termination of proficiency, competence or line check

**201.** 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.

Recording of crew member qualifications

**202.-(1)** An 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 this regulation.

(2) A pilot may complete the curricula required by this regulation concurrently or intermixed with other required curricula, but completion of each of these curricula shall be recorded separately.

Monitoring of training and checking activities

**203.**-(1) An air operator certificate holder shall submit 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 air operator certificate 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 subregulation (1) may invalidate the training or check and the Authority may require that it be repeated for observation purposes.

Eligibility period

**204.**-(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 three-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 VII FLIGHT OPERATIONS OFFICER

Flight operations officer

**205.** An Operator engaging flight operations officers employed in conjunction with an approved method of control and supervision of flight operations shall be licensed in accordance with the provisions of the Civil Aviation (Personnel Licensing) Regulations.

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Persons  
qualified in  
flight release

**206.**-(1) 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.

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(2) The Authority, in accordance with the approved method of control and supervision of flight operations, in accepting proof of qualifications other than the option of holding of a flight operations officer licence, shall require that, such persons meet the requirements specified in the Civil Aviation (Personnel Licensing) Regulations for the flight operations officer license.

(3) A flight operations officer 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 27;
- (b) made, within the preceding twelve months, at least two qualification flights in the flight crew compartment of an aeroplane over any area for which that individual is authorised 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;
  - (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 authorised 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 111.

(4) A flight operations officer assigned to duty shall maintain complete familiarisation with all features of the operation which are pertinent to such duties, including knowledge and skills related to human performance.

(5) A flight operations officer shall not be assigned to duty after twelve consecutive months of absence from such duty, unless the provisions of this regulation are met.

Company  
procedures  
indoctrination

**207.-(1)** A person or an air operator certificate holder shall not serve or 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 air operator certificate holder shall ensure that all operations personnel are provided with company indoctrination training that covers the following areas:

- (a) air operator certificate 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) air operator certificate holder policies and procedures;
- (d) applicable crew member manuals; and

(e) appropriate portions of the air operator certificate holder's operations manual.

(3) An air operator certificate holder shall provide a minimum of forty programmed hours of instruction for basic indoctrination training unless a reduction of the hours of instruction is approved by the Authority.

## PART VIII MANUALS, LOGS AND RECORDS

Flight manual  
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**208.**-(1) An air operator shall ensure that a flight manual contains the information specified in the Civil Aviation (Airworthiness) Regulations.

(2) The flight manual shall be updated by implementing changes made mandatory by the Authority.

Operator's  
maintenance  
control manual

**209.**-(1) The operator's maintenance control manual provided in accordance with regulation 124, which may be issued in separate parts, shall contain the following information:

- (a) a description of the procedures required by these Regulations including, when 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 organisation;
- (b) names and duties of the qualified person or persons required by regulation 124;
- (c) a reference to the maintenance programme required by regulation 125;
- (d) a description of the methods used for the completion and retention of the operator's maintenance records required by regulation 127;

- (e) a description of the methods used for the completion and retention of the operator's continuing airworthiness/maintenance records required by regulation 127;
  - (f) a description of the procedures for monitoring, assessing and reporting maintenance and operational experience required by regulation 127;
  - (g) a description of the procedures for complying with the service information reporting requirements of the regulations governing airworthiness regulations;
  - (h) a description of procedures for assessing continuing airworthiness information and implementing any resulting actions, as required by regulation 127;
  - (i) a description of the procedures for implementing action resulting from mandatory continuing airworthiness information;
  - (j) 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;
  - (k) a description of aircraft types and models to which the manual applies;
  - (l) a description of procedures for ensuring that unserviceability's affecting airworthiness are recorded and rectified; and
  - (m) a description of the procedures for advising the Authority of significant in-service occurrences.
- (2) The operator shall provide, for the use and guidance of maintenance and operational personnel concerned, a maintenance control manual, acceptable to the State of registry and the design of the manual shall observe human factors principles.
- (3) The 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) The 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 or revisions to it and shall incorporate in it such mandatory material as the State of the operator or the State of registry may require.

(6) The operator's maintenance control manual shall contain the information provided in the relevant regulations relating to civil aviation air operator certification.

Maintenance programme

**210.**-(1) An air operator shall ensure that maintenance programme for each aeroplane as required by regulation 126 contains 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) a continuing structural integrity programme, when applicable;
- (c) procedures for changing or deviating from paragraphs (a) and (b); and
- (d) when applicable, condition monitoring and reliability programme descriptions for aircraft systems, components and engines.

(2) An operator shall identified the maintenance tasks and intervals that have been specified as mandatory in approval of the type design.

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

(5) Electronic Aircraft Maintenance Records (EAMR) may be used in accordance with the Civil Aviation (Approved Maintenance Organisation) Regulations that

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address the existence and use of EAMR digital and other paperless forms of maintenance records.

Journey log  
book

**211.**-(1) The pilot-in-command shall be responsible for the journey log book or the general declaration containing the following information:

- (a) aeroplane nationality and registration;
- (b) date;
- (c) names of crew members;
- (d) duty assignments of crew members;
- (e) place of departure;
- (f) place of arrival;
- (g) time of departure;
- (h) time of arrival;
- (i) hours of flight;
- (j) nature of flight (private, aerial work, scheduled or non-scheduled);
- (k) incidents, observations, if any; and
- (l) 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 two years of operations.

Records of  
emergency and  
survival  
equipment  
carried

**212.**-(1) Operators 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 of their aeroplanes engaged in air navigation.

(2) The information shall include, as applicable, the number, color and type of life rafts and pyrotechnics, details of emergency medical supplies, water supplies and the type and frequencies of the emergency portable radio equipment.

Portable  
electronic  
devices

**213.** A pilot-in-command 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 pilot-in-command allows such a device prior to its use; or
- (b) for commercial air transport operations, the air operator certificate holder makes a determination of acceptable devices and publishes that information in the operations manual for the crew members use; and
- (c) the pilot-in-command informs passengers of the permitted use.

Flight recorder records

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**214.** An air operator shall ensure that-

- (a) 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, if 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;
- (b) all aeroplanes of a maximum take-off mass of over 27000 kg for which the application for type certification is submitted to a contracting State [on or after 1 January 2023] are 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;
- (c) all aeroplanes of a maximum take-off mass of over 5700 kg, up to and including 27000 kg, for which the application for type certification is submitted to a contracting State (on or after 1 January 2023) are equipped with a crash-protected flight recorder which should record the information displayed to the flight crew from electronic displays, as well as the operation of switches and selectors by the flight crew;

- (d) the minimum flight crew-machine interface recording duration shall be at least for the last two hours;
- (e) flight crew-machine interface recordings are able to be correlated to the recorded cockpit audio.

**PART IX  
CABIN CREW**

Assignment of emergency duties

**215.**-(1) An air 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) An air operator shall assign the functions referred to in subregulation (1) for each type of aeroplane.

Cabin crew at emergency evacuation stations

**216.** Each cabin crew member assigned to emergency evacuation duties shall occupy a seat provided in accordance with the relevant regulations relating to civil aviation instruments and equipment during take-off and landing and whenever the pilot-in-command so directs.

Arming of automatic emergency exits

**217.** 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.

Accessibility of emergency exits and equipment

**218.** 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.

Stops where passengers remain on board

**219.** A pilot-in-command 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) Where refueling with passengers on board, the pilot-in-command or a designated air operator certificate holder's representative shall ensure that the air operator certificate holder's operations manual procedures are followed.

Protection of  
cabin crew  
during flight

**220.** 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

**221.**-(1) An air 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 subregulation (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 three thousand meters (10,000 ft.),

- knowledgeable as regards the effect of lack of oxygen and, in the case of pressurised aeroplanes, as regards physiological phenomena accompanying a loss of pressurisation;
- (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.

## PART X SECURITY

Security of  
flight crew  
compartment

**222.**-(1) 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-

- (a) of a maximum certificated take-off mass in excess of 54,500 kg;
- (b) of a maximum certificated take-off mass in excess of 45,500 kg with a passenger seating capacity greater than 19; or
- (c) with a passenger seating capacity greater than 60,

shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorised persons, and the door shall be 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 this regulation-

- (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 behavior 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.

Aeroplane  
search  
procedure  
checklist

**223.**-(1) An air 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 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.

Training  
programmes

**224.**-(1) An air operator shall establish and maintain an approved security training programme which ensures crew members act in the most appropriate manner to minimise the consequences of acts of unlawful interference.

(2) 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.

(3) An air operator shall also establish and maintain a training programme to acquaint appropriate employees with preventive measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aeroplane so that they contribute to the prevention of acts of sabotage or other forms of unlawful interference.

Reporting acts of unlawful interference

**225.** A pilot-in-command shall submit without delay, a report an act of unlawful interference to the designated local authority.

Miscellaneous

**226.** 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:

Provided that the specialised means of attenuating and directing the blast shall be used at the least-risk bomb location.

## PART XI DANGEROUS GOODS

Operators with no operational approval to transport dangerous goods as cargo.

**227.**-(1) The Authority shall ensure that operators not approved to transport dangerous goods have-

(a) established a dangerous goods training programme that meets-

(i) the requirements of the relevant regulations relating to transport of dangerous goods by air;

(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;

(b) established dangerous goods policies and procedures in its operations manual to meet, at a minimum, the requirements of the relevant regulations relating to transport of dangerous goods by air; and the Technical Instructions to allow operator personnel to-

(i) identify and reject undeclared dangerous goods, including COMAT classified as dangerous goods; and

(ii) report to the appropriate authorities of the State in which it occurred any-

(aa) occasions when undeclared dangerous goods are discovered in cargo or mail; and

(bb) dangerous goods accidents and incidents.

Operators transporting dangerous goods as cargo

**228.**-(1) The Authority shall approve 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 the relevant regulations relating to transport of dangerous goods by air; as appropriate;

(b) includes details of the dangerous goods training programme 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 the relevant regulations relating to transport of dangerous goods by air; and the Technical Instructions to enable operator personnel to-

- (i) identify and reject undeclared or mis-declared dangerous goods, including COMAT classified as dangerous goods;
- (ii) report to the appropriate authorities of the State in which it occurred any-
  - (aa) occasions when undeclared or mis-declared dangerous goods are discovered in cargo or mail; and
  - (bb) dangerous goods accidents and incidents;
- (d) reports to the appropriate authorities of 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) information having been provided to the pilot-in- command;
- (e) accepts, handles, stores, transport, load and unload dangerous goods, including COMAT classified as dangerous goods as cargo on board an aircraft; and
- (f) provides 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

**229.** An air 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 operational approval and limitations with regard to the transport of dangerous goods.

## PART XII CARGO COMPARTMENT SAFETY

Transport of items in the cargo compartment

**230.**-(1) The Authority shall ensure that the operator establishes policies and procedures for the transport of items in the cargo compartment, which include the conduct of a specific safety risk assessment.

(2) The risk assessment shall include at least the following:

- (a) hazards associated with the properties of the items to be transported;
- (b) capabilities of the operator;
- (c) operational considerations (e.g. area of operations, diversion time);
- (d) capabilities of the aeroplane and its systems (e.g. cargo compartment fire suppression capabilities);
- (e) containment characteristics of unit load devices;
- (f) packing and packaging;
- (g) safety of the supply chain for items to be transported; and
- (h) quantity and distribution of dangerous goods items to be transported.

Fire protection

**231.** The elements of the cargo compartment fire protection system, as approved by the Authority 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.

### PART XIII EXEMPTIONS

Requirement for exemption.

**232.**-(1) A person may apply to the Authority for an exemption from any provision these Regulations.

(2) An application for exemption shall be submitted at least sixty days in advance of the proposed effective date.

(3) A request for an exemption shall contain the applicant's-

- (a) name;
- (b) physical address and mailing address;
- (c) telephone number;
- (d) fax number if available; and

(e) email address if available.

(4) Application shall be accompanied by a fee specified by the Authority, for technical evaluation.

Request for exemption

**233.**-(1) An application for an exemption shall contain:

- (a) a citation of the specific requirement from which the applicant seeks exemption;
- (b) an explanation of why the exemption is needed;
- (c) a description of the type of operations to be conducted under the proposed exemption;
- (d) the proposed duration of the exemption;
- (e) an explanation of how the exemption would be in the public interest, that is, benefit the public as a whole;
- (f) a detailed description of the alternative means by which the applicant will ensure a level of safety equivalent to that established by the regulation in question;
- (g) a review and discussion of any known safety concerns with the requirement, including information about any relevant accidents or incidents of which the applicant is aware; and
- (h) where the applicant seeks to operate under the proposed exemption outside the United Republic airspace, the application must indicate whether the exemption would contravene any provision of the standards and recommended Practices of ICAO as well as the Regulations pertaining to the airspace in which the operation may occur.

(2) Where the applicant seeks emergency processing, the application shall contain supporting facts and reasons that the application was not timely filed, and the reasons it is an emergency.

(3) The Authority may deny an application, where the Authority finds that the applicant has not justified the failure to apply for an exemption in a timely fashion.

Initial review  
by Authority

**234.**-(1) The Authority shall review the application for accuracy and compliance with the requirements of regulations 232 and 233.

(2) Where the application appears on its face to satisfy the provisions of this regulation and the Authority determines that a review of its merits is justified, the Authority shall publish a detailed summary of the application in the Aeronautical Information Circular for comment and specify the date by which comments shall be received by the Authority for consideration.

(3) Where the filing requirements of regulations 232 and 233 have not been met, the Authority shall notify the applicant and take no further action until and unless the applicant corrects the application and re-files it in accordance with these Regulations.

(4) Where the request is for emergency relief, the Authority shall publish the application or the Authority's decision as soon as possible after processing the application.

Evaluation of  
request

**235.**-(1) Where the filing requirements have been satisfied after initial review, the Authority shall conduct an evaluation of the request to include-

- (a) determination of whether an exemption would be in the public interest;
- (b) a determination, after a technical evaluation of whether the applicant's proposal would provide a level of safety equivalent to that established by the regulation, although where the Authority decides that a technical evaluation of the request would impose a significant burden on the Authority's technical resources, the Authority may deny the exemption on that basis;
- (c) a determination of whether a grant of the exemption would contravene the applicable ICAO Standards and Recommended Practices; and
- (d) a recommendation based on the preceding elements, of whether the request should be granted or denied, and of any conditions or limitations that should be part of the exemption.

(2) The Authority shall notify the applicant by letter and publish a detailed summary of its evaluation and decision to grant or deny the request.

(3) The summary referred to in subregulation (2) shall specify the duration of the exemption and any conditions or limitations of the exemption.

(4) Where the exemption affects a significant population of the aviation community of the United Republic, the Authority shall publish the summary in the Aeronautical Information Circular.

PART XIV  
GENERAL PROVISIONS

Possession of  
licence,  
certificate,  
approval or  
authorisation

**236.**-(1) A holder of a licence, certificate, approval or authorisation issued by the Authority shall have in his 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 physical possession or at the workstation when exercising the privileges of that licence, certificate, approval or authorisation.

Inspection of  
licences,  
certificates,  
approval or  
authorisation

**237.** 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 authorised by the Authority.

Drug and  
alcohol testing  
and reporting

**238.**-(1) A person who performs any function related to operation of aircraft under these Regulations may be tested for drug or alcohol usage.

- (2) The Authority shall prohibit any person who-
- (a) tests positive for drug or alcohol usage;
  - (b) refuses to submit to a test; or
  - (c) refuses to furnish or to authorise the release of the test results requested by the Authority from carrying out the functions related to operation of aircraft.

Change of  
name

**239.**-(1) A holder of a licence, certificate, authorisation or other document issued under by the Authority may apply to change the name on a licence, certificate, authorisation or such other document.

(2) The holder shall include with any such request-

(a) a court order, or other legal document verifying the name change; and

(b) the current licence, certificate, authorisation or such other document sought to be amended.

(3) The Authority may change the licence, certificate, authorisation or such other document and issue a replacement thereof.

(4) The Authority shall return to the holder the original documents specified in subregulation (2)(b) and retain copies thereof and return the replaced licence, certificate or authorisation with the appropriate endorsement.

(5) A licence, certificate, authorisation or such other document issued to a person under these Regulations is not transferable.

Change of  
address

**240.** 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;

Replacement  
of documents

**241.** A person may apply to the Authority in the prescribed form for replacement of documents issued under these Regulations if the documents are lost or destroyed.

Suspension  
and  
revocation of  
licence,  
certificate,  
approval or  
authorisation

**242.**-(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

**243.**-(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) 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 authorised 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

**244.**-(1) A person who knows of a violation of the Act, any rule, Regulation or order made thereunder, 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

**245.**-(1) A person who fails to comply with any direction given to him by the Authority or by any authorised 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 referred to in subregulation (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.

Aeronautical  
user fees

**246.**-(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 subregulation (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.

Flights over  
any foreign  
country

**247.**-(1) The operator or pilot-in-command pilot-in-command of an aircraft registered in the United Republic or, where the operator's principal place of business or permanent residence is in the United Republic, any other aircraft which is being flown over any foreign State shall not allow that aircraft to be used for a purpose which is prejudicial to the security, public order or public health of, or to the safety of air navigation in relation to that State.

(2) A person shall not contravene subregulation (1) where that person neither knew nor had reasons to suspect that the aircraft was being or was to be used for a purpose referred to in subregulation (1).

(3) The operator or pilot-in-command of an aircraft registered in United Republic or, if the operator's principal place of business or permanent residence is in the United Republic, any other aircraft which is being flown over any foreign State shall comply with any directions given by the appropriate aeronautical authorities of that State whenever-

- (a) the flight has not been duly authorised;
- (b) there are reasonable grounds for the appropriate aeronautical authorities to believe that the aircraft is being or will be used for a purpose which is prejudicial to the security, public order or public health of, or to the safety of air navigation in relation to that State:

Provided that, the lives of persons on board or the safety of the aircraft would thereby be endangered.

(4) A person does not contravene subregulation (3) where he neither knew nor suspected that the directions were being given by the appropriate aeronautical authorities.

(5) The requirement in subregulation (3) shall not prejudice the need to comply with other requirements or directions of aeronautical authority.

(6) In this regulation "appropriate aeronautical authorities" includes any person, whether a member of a country's military or civil authorities, authorised under the law of the foreign State to issue directions to aircraft flying over that State.

## PART XV OFFENCES AND PENALTIES

Contravention  
of Regulations

**248.** The Authority may revoke or suspend a certificate, licence, registration, approval, authorisation or such other document where the holder thereof contravenes any provision of these Regulations.

Offences and  
penalties

**249.-(1)** A person who contravenes any provision of these Regulations commits an offence and on conviction shall be liable to a fine of not less than the equivalent in Tanzanian shillings of United States dollars one thousand

or imprisonment for a term not less than twelve months, or to both.

(2) In the case of a continuing contravention, each day of the contravention shall constitute a separate offence and shall be liable to an additional fine of not less than the equivalent in Tanzanian Shillings of United States dollars five hundred for each day the offence continues.

(3) 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 was due to any cause not avoidable by the exercise of reasonable care by that person, the act or omission shall not be deemed as a contravention by that person of that provision.

#### PART XVI REVOCATION AND SAVINGS

Revocation  
GN. No.  
74 of 2017

**250.** The Civil Aviation (Operation of Aircraft) Regulations, 2017 are hereby revoked.

Savings

**251.** A licence, certificate or registration approval issued to an operator prior to the commencement of these Regulations shall continue in force as if it was issued under these Regulations until it expires or cancelled by the Authority.

FIRST SCHEDULE

*(Made under regulation 76)*

GENERAL AVIATION SPECIFIC APPROVAL

REDUCED VERTICAL SEPARATION MINIMUM (RVSM)

1 DEFINITIONS

"altimetry system error (ASE)" means 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; and

"total vertical error (TVE)" means the vertical geometric difference between the actual pressure altitude flown by an air craft and its assigned pressure altitude (flight level).

2 REQUIREMENTS

- 2.1 To qualify for RVSM operational approval, an aeroplane shall be equipped in accordance with the Civil Aviation (General Aviation-Operations) Regulations.
- 2.2 The operator shall also comply with the airworthiness aspects of operation approval requirements set out in Civil Aviation (Airworthiness) Regulations.
- 2.3 The operator seeking RVSM operational approval shall also demonstrate to the satisfaction of the Authority that the vertical navigation performance capability of the aeroplane meets the MASPS requirements in paragraph 3 of this appendix.

3 MINIMUM AIRCRAFT SYSTEMS PERFORMANCE SPECIFICATION (MASPS)

- 3.1 The altimetry system performance for operation in RVSM airspace 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 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  $28 - 0.013z^2$  for  $0 \leq z \leq 25$  when z is the magnitude of the mean TVE in metres, or  $92 - 0.004 z^2$  for  $0 \leq z \leq 80$  where z is in feet.
- 3.2 In addition, the components of TVE shall have the following characteristics-
  - (i) The mean altimetry system error (ASE) of the group shall not exceed 25 m (80 ft) in magnitude;
  - (ii) 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
  - (iii) The differences between cleared flight level and the indicated pressure altitude actually flown shall be symmetric about a mean of 0 m (0 ft), 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.
- 3.3 In respect of aeroplanes for which the characteristics of the air frame and altimetry system fit are unique and so cannot be classified as belonging to a group of aeroplanes encompassed by paragraphs 3.1 and 3.2, 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 difference between the cleared flight level and the indicated pressure Altitude actually flown shall be symmetric about a mean of 0 m (0 ft), 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.

4.0 CONTINUING COMPLIANCE OF MASPS

- 4.1 With effect from 18th November, 2010, the operator with RVSM operational approval shall set in place a programme to ensure that a minimum of two aeroplanes of each aeroplane-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 the longer.
- 4.2 If the operator's aeroplane-type grouping consists of a single aeroplane, monitoring of That aeroplane shall be accomplished within the specified period.

SECOND SCHEDULE

*(Made under regulation 121)*

ADDITIONAL REQUIREMENTS FOR APPROVED OPERATIONS BY SINGLE-ENGINE TURBINE-POWERED AEROPLANES AT NIGHT AND/OR IN INSTRUMENT METEOROLOGICAL CONDITIONS (IMC)

Airworthiness and operational requirements shall satisfy the following-

1.0 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.

1.2 The operator shall be responsible for engine trend monitoring.

1.3 To minimise 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.

2.0 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:-
  - (i) 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;
  - (ii) lower the flaps and landing gear, if applicable;
  - (iii) provide power to one pitot heater, which must serve an air speed indicator clearly visible to the pilot;
  - (iv) provide for operation of the landing light specified in paragraph 2 (j);
  - (v) provide for one engine restart, if applicable; and
  - (vi) 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 pressurised 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.

### 3.0 MINIMUM EQUIPMENT LIST

The Authority shall require the minimum equipment list of the operator approved in accordance with Civil Aviation (Air Operator Certificate) Regulations to specify the operating equipment required for night and/or IMC operations, and for day/VMC operations.

### 4.0 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.

### 5.0 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 Authority who in turn will notify the State of design.
- 5.2 The Authority 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 Authority will notify major events or trends of particular concern to the appropriate type certificate holder and the State of design.

### 6.0 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;
  - (c) other criteria and limitations as specified by the Authority.
- 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.

**7.0 FLIGHT CREW EXPERIENCE, TRAINING AND CHECKING**

7.1 The Authority 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.

**8.0 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.

**9.0 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 Authority.

Dodoma,  
15<sup>th</sup> December, 2023

MAKAME M. MBARAWA,  
*Minister for Transport*