Statutory Instrument No. 64 of 2022

CIVIL AVIATION ACT
(Cap. 71:01)

CIVIL AVIATION (AIR OPERATOR CERTIFICATION AND ADMINISTRATION) REGULATIONS, 2022

(Published on 13th June, 2022)

ARRANGEMENT OF REGULATIONS

PART IV — *Aircraft*

PART V — *Facilities and Operations Schedule*

PART VI — *Air Operations Certificate Flight Operations Management*

IN EXERCISE of the powers conferred on the Minister of Transport and Public Works by section 89 of the Civil Aviation Act and on the recommendation of the Civil Aviation Authority, the following Regulations are hereby made —

PART I — *Preliminary*

Citation

1. These Regulations may be cited as the Civil Aviation (Air Operator Certification and Administration) Regulations, 2022.

Interpretation

2. In these Regulations, unless the context otherwise requires —

"act of unlawful interference" means an act or attempted act which is intended or likely to jeopardise the safety of civil aviation;

"acceptance" means a State may accept a matter submitted to it for review as being in compliance with the applicable standards if the State does not specifically reject all or a portion of the matter under review;

"accountable executive" means a person who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the Authority, and any additional requirements defined by the operator;

"aerodrome operating minima" means the limits of usability of an aerodrome for —

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

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

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

"aeroplane" 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 state of the operator, containing normal, abnormal and emergency procedures, checklists, limitations, performance information, details of the aircraft systems, and other material relevant to the operation of the aircraft;

"aircraft technical log" means the documentation for an aircraft that includes the maintenance record for the aircraft and a record for each flight made by 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" or "AOC" means a certificate authorising an operator to carry out specified commercial air transport operations;

"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;

"approval" means an active response by the State to a matter submitted for its review and constitutes a finding or determination of compliance with applicable standards and is evidenced by the signature of the approving official, the issuance of a document or certificate, or some other formal action taken by the State.

"cabin crew member" means a crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-in-command of the aircraft but who shall not act as a flight crew member;

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

"competency in civil aviation" means that an individual has technical qualification and management experience acceptable to the Authority for that specific position;

"Configuration Deviation List" or "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 is contaminated when a significant portion of the runway surface area (whether in isolated areas or not) within the length and width being used is covered by one or more of the substances listed in the runway surface condition descriptors;

"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 record" means records which are related to the continuing airworthiness status of an aircraft, engine, propeller or associated parts;

"crew member" means a person assigned by an operator to duty on an aircraft during a flight duty period;

"damp lease" means a wet leased aircraft that includes a cockpit crew but not cabin attendants;

"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;

"duty" means any task that flight or cabin crew members are required by the operator to perform including, for example, flight duty, administrative work, training, positioning and standby when it is likely to induce fatigue;

"dry lease" means a lease where the aircraft is provided without crew;

"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;

"engine" means a unit used or intended to be used for aircraft propulsion and consists of at least those components and equipment necessary for functioning and control, but excludes the propeller/rotors, if applicable;

"enhanced vision system" or "EVS" means a system to display electronic real-time images of the external scene achieved through the use of image sensors;

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

"fatigue risk management system" or "FRMS" means a data driven means of continuously monitoring and managing fatigue-related safety risks, based upon scientific principles and knowledge as well as operational experience that aims to ensure relevant personnel are performing at adequate levels of alertness;

"flight operations officer/flight dispatcher" 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 the safe conduct of the flight.

(Cap. 71:01 (Sub. Leg.))

"head-up display" or "HUD" means a display system that presents flight information into the pilots forward external field of view;

"human factor 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;

"Instrument Flight Rules" or "IFR" means rules that govern the procedures for conducting flight under instrument meteorological conditions;

"Instrument Meteorological Conditions" or "IMC" means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions;

"interchange agreement" means a leasing agreement which permits an air carrier to dry lease and take or relinquish operational control of an aircraft at an airport;

"large aircraft" means —

(i) an aeroplane of a maximum certificated take-off mass of 5700 kg or more; or

(ii) a helicopter which has a maximum certified take-off mass of 3175 kg or more;

"Maintenance Control Manual" or "MCM" means a document that 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;

"Maintenance Organisations Procedures Manual" means a document endorsed by the head of a 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 release" means a document which contains a certification confirming that the maintenance work to which it relates has been completed in a satisfactory manner in accordance with appropriate airworthiness requirements;

"Master Minimum Equipment List" 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 and may be associated with special operating conditions, limitations or procedures;

"Minimum Equipment List" or "MEL" means a list which provides for the operation of the aircraft, subject to specified conditions, with particular equipment inoperative, prepared by an operator in conformity with, or more restrictive than, the Master Minimum Equipment List established for the aircraft type;

"operational control" means the exercise of authority over the initiation, continuation, diversion or termination of a flight in the interest of safety of the aircraft and the regularity and efficiency of the flight;

"operational flight plan" means the operator's plan for the safe conduct of the flight based on consideration of aeroplanes performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes concerned;

"operational personnel" means persons employed by the operator to ensure that the aircraft flight is conducted in a safe manner and may consist of crew members;

"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 authorisation, conditions and limitations associated with the AOC and subject to the condition in the operations manual;

"operator" means a person, organisation or enterprise engaged in or offering to engage in an aircraft operation;

"passenger aircraft" means an aircraft that carries any person other than a crew member, an operator's employee in an official capacity, an authorised representative of an appropriate national authority or a person accompanying a consignment or other cargo;

"Pilot-In-Command" or "PIC" 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 operation of a flight;

"quality control" means the regulatory inspection process through which actual performance is compared with standards such as the maintenance of standards of manufactured aeronautical products;

"quality system" means the organisational structure, responsibilities, procedures, processes and resources for implementing quality management;

"safety manager" means the manager accountable to the Authority and who is responsible for the development and maintenance of an effective Safety Management System;

"Safety Management System" or "SMS" means a systematic approach to managing safety, including the necessary organisational structures, accountability, responsibility, policies and procedures;

"state of design" means the state that has jurisdiction over the organisation responsible for the type design;

"state of operator" means the state in which the operator's principal place of business is located, or if there is no such business, the operator's permanent place of residence;

"state of registry" means the state on whose register the aircraft is entered;

"training to proficiency" means the process of the check airman administering each prescribed manoeuvre and procedure to a pilot as necessary until it is performed successfully during the training period;

"Visual Flight Rules" or "VFR" means rules that govern the procedures for conducting flight under visual meteorological conditions;

"Visual Meteorological Conditions" or "VMC" means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima; and

"wet lease" means a lease where the aircraft is provided with crew.

Application

3. (1) These Regulations apply to air operators carrying passengers, cargo or mail for remuneration or hire whose principal place of business or permanent residence is located in Botswana.

(2) These Regulations apply to all commercial air transport operations by air operator certificate holders for which Botswana is the state of the operator, except where specifically stated.

(3) These Regulations prescribe requirements for the original certification and continued validity of an AOC issued by the Authority.

PART II — *Air Operator Certificate*

Air Operator Certificate

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

(2) A person shall not operate an aircraft in commercial air transport operations which are not authorised by the terms and conditions of the AOC.

(3) An air operator certificate holder shall at all times, operate in compliance with the terms, conditions of issuance and maintenance requirements of an AOC.

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

(5) The AOC and its associated operations specifications shall follow the layout set out in Schedule 1.

(6) An AOC and its associated operations specifications shall define the operations for which the operator is authorised.

Certification and surveillance of Air Operator Certification

5. The Authority shall establish a system for both the certification and the continued surveillance of the operator to ensure that the required standards of operations established in these Regulation are maintained.

Application for an air operator certificate

6. (1) Any person who wishes to apply for an AOC shall do so in the manner and form specified under Form B set out in Schedule 1.

(2) The certification process shall follow a five phase approach, the —

(*a*) Pre-application phase;

(*b*) Formal application phase;

(*c*) Document evaluation phase;

(*d*) Demonstration and inspection phase; and

(*e*) Certification phase.

(3) The formal application phase shall be made in a manner determined by the Authority.

(4) An application for an AOC shall be made to the Authority at least 180 days before the date of intended operation.

(5) An application shall be accompanied by an application fee as set out in Schedule 2.

(6) Any person who operates an aircraft in commercial air transport without a valid AOC commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Issue of Air Operator Certificate

7. (1) An applicant under this regulation may be issued with an AOC as set out in Form A of Schedule 1 if, after investigation, the Authority is satisfied that the applicant —

(*a*) has atleast 51 per cent of its voting rights held, and effective control exercised by citizens of Botswana or by Government department, agency or a parastatal or entity which is under any Government department;

(*b*) has its principal place of business and its registered office, if any, located in Botswana;

(*c*) meets the applicable regulations and standards for being issued with an AOC; and

(*d*) is properly and adequately equipped for safe operations in commercial air transport and maintenance of the aircraft.

(2) The Authority may refuse an application for an air operator certificate where —

(*a*) the applicant is not properly or adequately equipped or is not able to conduct safe operations in commercial air transport;

(*b*) the applicant previously held an air operator certificate which was revoked; or

(*c*) an individual that contributed to the circumstances causing the revocation process of an AOC obtains a substantial ownership or is employed in a senior management position.

(3) The issue of an AOC 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, extent of the operations specified, and payment of a fee set out in Schedule 2.

(4) An air operator certificate holder may apply in writing to the Authority for the issue of a duplicate certificate where the AOC is lost, destroyed or mutilated subject to payment of a fee set out in Schedule 2.

Requirement of carrying certified true copies

8. (1) An aeroplane being operated under an AOC issued under these Regulations shall carry a certified true copy of the original AOC and a certified true copy of the original operations specifications relevant to the aeroplane type, issued in conjunction with the certificate.

(2) When 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.

Contents of Air Operator Certificate

9. (1) The AOC shall contain at least the following information and shall follow the layout set out under Part I of Schedule 1 —

(*a*) the state of the operator and the issuing authority;

(*b*) the AOC 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.

(2) The operations specifications associated with the AOC shall contain information listed in Schedule 1, and shall follow the layout of Schedule 1, Part II – Operations Specifications.

Duration of Air Operator Certificate

10. (1) An AOC or any portion thereof issued by the Authority shall be valid for 24 months unless —

(*a*) it is amended, suspended, revoked or otherwise terminated by the Authority under this Part;

(*b*) surrendered to the Authority by the holder; or

(*c*) the air operator certificate holder suspends operations for more than 60 days.

(2) The continued validity of an AOC shall depend upon the operator maintaining the requirements of these Regulations under the supervision of the Authority.

Amendment of Air Operator Certificate

11. (1) The Authority may amend any AOC on payment of a fee set out in Schedule 2 and if —

(*a*) the Authority determines that safety in commercial air transport and the public interest require the amendment; or

(*b*) the air operator certificate holder applies for an amendment, and the Authority determines that safety in commercial air transport and the public interest allows the amendment.

(2) Where the Authority stipulates, by a notice in writing, that an emergency exists that requires immediate amendment of the AOC, such an amendment shall be effective without stay on the date the air operator certificate holder receives the notice.

(3) An air operator certificate holder may appeal the amendment provided for under subregulation (2), but shall operate in accordance with it, until such a time the amendment is withdrawn.

(4) Any amendments proposed by the Authority, other than emergency amendments shall become effective 30 days after notice to the air operator certificate holder, except where the air operator certificate holder appeals the proposal in writing prior to the effective date.

(5) Any amendments proposed by the air operator certificate holder shall be made at least 30 days prior to the intended date of any operation under that amendment.

(6) A person shall not perform a commercial air transport operation for which an AOC amendment is required unless the person has received notice of the approval from the Authority.

(7) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding ten years, or to both.

Renewal of Air Operator Certificate

12. (1) An air operator certificate holder may apply for renewal of an AOC at least 60 days before the date of expiry of the certificate, as set out in Form A of Schedule 1.

(2) Where an application for renewal is made within a period not exceeding six months after the expiry of the AOC, the Authority may renew the AOC subject to the payment of a fee as set out in Schedule 2.

(3) A fee payable in accordance with subregulation (2) shall be a sum equal to one quarter of the renewal fee multiplied by the number of months which have elapsed since the date on which the validity of the AOC expired, calculated to the nearest pula.

(4) An application for the renewal of an AOC that expired six months or more prior to the application for renewal shall be treated as an application for a new AOC and the provisions of regulation 6 shall apply.

Suspension of Air Operator Certificate

13. The Authority may suspend an AOC or a part thereof, where —

(*a*) an inspection made for the purpose of ascertaining whether the operator remains compliant has shown that the operator is not compliant;

(*b*) the operator has contravened any of the provisions of the Act; or

(*c*) the operator has failed to comply with any other condition specified by the Authority.

Revocation of Air Operator Certificate

14. The Authority may revoke an AOC where —

(*a*) the continuous operations of the operator are against public interest;

(*b*) the air operator certificate holder has been convicted of an offence under the Act;

(*c*) any inspection made for the purpose of ascertaining whether the operator remains compliant has shown that the operator is not compliant; and

(*d*) the air operator certificate holder fails to comply with regulation 12 (1).

Access for inspection

15. (1) An air operator certificate holder shall, for purposes of determining compliance with these Regulations —

(*a*) grant the Authority access to and co-operation with any of its organisations, facilities and aircraft;

(*b*) ensure that the Authority is granted access to and co-operation with any organisation or facilities that it has contracted for services associated with commercial air transport operations and maintenance; and

(*c*) grant the Authority free and uninterrupted access to the flight deck of the aircraft during flight operations.

(2) An air operator certificate holder shall provide to the Authority, a forward observer's seat on each of the air operator certificate holder's aircraft from which the flight crew's actions and conversations may be easily observed and heard.

(3) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Conducting tests and inspections

16. (1) The Authority shall conduct on-going validation of the air operator certificate holder's continued eligibility to hold its AOC and associated approvals.

(2) An air operator certificate holder shall allow the Authority to conduct tests and inspections, at any time or place, to determine whether an air operator certificate holder is compliant with any written laws and AOC terms and conditions.

(3) An air operator certificate holder shall make available at its principal base of operations —

(*a*) all portions of its current AOC;

(*b*) all portions of its Operations and Maintenance Manuals; and

(*c*) a current listing that includes the location and individual positions responsible for each record, document and report required to be kept by the air operator certificate holder under the applicable laws or standards.

(4) The failure by any air operator certificate holder to make available to the Authority upon request, all portions of the AOC, Operations and Maintenance Manuals and any required record, document or report shall form grounds for suspension of all or part of the AOC.

PART III — *Air Operator Certification and Continued Validity*

Base of operations

17. (1) An air operator certificate holder that is not authorised to conduct maintenance under its AOC shall maintain a principal base of operations.

(2) An air operator certificate holder that is authorised to conduct maintenance under its AOC shall maintain a principal base of operations and maintenance.

(3) An air operator certificate holder may establish a main operations base and a main maintenance base at the same location or at separate locations.

(4) An air operator certificate holder shall give the Authority atleast 30 days written notice of its intention to establish or change the location of its base.

Management personnel required for commercial air transport services

18. (1) An air operator certificate holder shall have an accountable executive, approved by the Authority, who has corporate authority for ensuring that all flight operations and maintenance activities can be financed and carried out to the highest degree of safety standards required by the Authority.

(2) When conducting commercial air transport operations, the air operator certificate holder shall have qualified personnel, with proven competency in civil aviation, available and serving full-time in the following positions or their equivalent —

(*a*) Operations Manager;

(*b*) Chief Pilot;

(*c*) Safety Manager;

(*d*) Maintenance Manager; and

(*e*) Quality Manager.

(3) The Authority may approve positions or a number of positions, other than those listed at subregulation (2), if the air operator certificate holder is able to show that it can perform the operation with the highest degree of safety under the direction of fewer or different categories of management personnel due to the —

(*a*) the kind of operations involved;

(*b*) the number of aircraft used; and

(*c*) the area of operation.

(4) An air operator certificate holder shall comply with management personnel requirements as set out in Schedule 3.

(5) A person who serves in any of the positions required or approved under this regulation and anyone in a position to exercise control over operations conducted under the AOC shall —

(*a*) be qualified through training, experience, and expertise; and

(*b*) discharge their duties to meet applicable legal requirements and to maintain safe operations.

(6) A person who serves in the positions at subregulations (2) and (3) shall have a full understanding of the following materials with respect to their air operator certificate holder's operation —

(*a*) aviation safety standards and safe operating practices;

(*b*) the air operator certificate holder's operations specifications;

(*c*) all appropriate maintenance and airworthiness requirements in these Regulations; and

(*d*) the manuals required under these Regulations.

(7) An air operator certificate holder shall —

(*a*) state in the general policy provisions of the operations manual the duties, responsibilities and authority of personnel required under this regulation;

(*b*) list in the operations manual the names and business addresses of the individuals assigned to those positions; and

(*c*) notify the Authority in writing, within 10 days of any vacancy in any position listed under subregulation (2).

(8) An air operator certificate holder shall not effect any changes without the written approval of the Authority with respect to —

(*a*) the accountable executive; and

(*b*) any of the management personnel specified in the operations manual.

(9) Any person who contravenes subregulation (8) commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Quality system

19. (1) An air operator certificate holder shall establish a quality system and designate a quality manager to monitor compliance with, and adequacy of, procedures required to ensure safe operational practices and airworthy aircraft.

(2) Compliance monitoring shall include a feedback system to the Accountable executive to ensure corrective action as necessary.

(3) An air operator certificate holder shall ensure that the quality system includes a quality assurance programme that contains procedures designed to verify that all operations are being conducted in accordance with all applicable requirements, standards and procedures.

(4) The Authority shall approve an air operator certificate holders quality system and quality manager.

(5) An air operator certificate holder shall describe the quality system in relevant documentation as specified in Schedule 4.

(6) Notwithstanding subregulation (1), the Authority may accept the nomination of two Quality Managers, one for operations and one for maintenance, provided that the operator has designated one Quality Management Unit to ensure that the quality system is applied uniformly throughout the entire operation.

(7) Where the air operator certificate holder is also an approved maintenance organisation, the air operator certificate holder's quality management system may be combined with the requirements of an approved maintenance organisation and submitted for approval to the Authority, and state of registry for aircraft not registered in Botswana.

Submission and revision of policy and procedure manual

20. (1) A manual required under these Regulations shall —

(*a*) include instructions and information necessary to allow the personnel concerned to perform their duties and responsibilities with a high degree of safety;

(*b*) be in a form that is easy to revise and contains a system which allows personnel to determine the current revision status of each manual;

(*c*) have a date of the last revision on each page concerned;

(*d*) not be contrary to any applicable Regulations and the air operator certificate holder's operations specifications; and

(*e*) include a reference to appropriate civil aviation regulations.

(2) A person shall not cause the use of any policy and procedure for flight operations or airworthiness function without coordinating with the Authority.

(3) An air operator certificate holder shall submit to the Authority, the proposed policy or procedure 30 days before date of intended implementation.

(4) A person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Retention of record

21. (1) An air operator certificate holder shall keep —

(*a*) flight and duty records;

(*b*) flight crew records;

(*c*) other air operator certificate holder personnel for which a training program is required;

(*d*) fuel and oil records;

(*e*) maintenance records of the aircraft;

(*f*) operational flight plan;

(*g*) Flight Preparation forms listed below —

(i) completed load manifests,

(ii) mass and balance records,

(iii) dispatch releases,

(iv) flight plans,

(v) passenger manifests, and

(vi) weather reports;

(*h*) aircraft technical logbook, including —

(i) journey records section, and

(ii) maintenance records section;

(*i*) flight recorder records;

(*j*) quality system records;

(*k*) dangerous goods transport document;

(*l*) dangerous goods acceptance checklist;

(*m*) records on cosmic and solar radiation dosage; and

(*n*) such other records as may be required by the Authority,

for a period as set out in Schedule 5 of these Regulations.

(2) An air operator certificate holder shall maintain —

(*a*) current records which detail the qualifications and training of all its employees, and contract employees, involved in the operational control, flight operations, ground operations and maintenance of the air operator; and

(*b*) detailed records of employees performing crew member or flight operations officer duties in order to determine whether the employees meet the required experience and qualification for duties in commercial air transport operations,

of the records under subregulation (1).

(3) An air operator certificate holder shall maintain records in a manner approved by the Authority and an air operator certificate holder who fails to comply with this requirement commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Cockpit voice and flight data recorder record

22. (1) An air operator certificate holder shall keep —

(*a*) the most recent flight data recorder calibration, including the recording medium from which the calibration is derived; and

(*b*) the flight data recorder correlation for one aircraft of any group of aircraft operated by the air operator certificate holder —

(i) that are of the same type,

(ii) on which the model flight recorder and its installation are the same, and

(iii) on which there is no difference in type design with respect to the original installation of instruments associated with the recorder.

(2) In the event of an accident or incident requiring immediate notification of the Authority, the air operator certificate holder shall preserve all related flight recorder records and if necessary, the associated flight recorders and ensure their retention in safe custody for at least 60 days or, if requested by the Authority, for a longer period.

(3) The flight data recorder calibration and the flight data recorder correlation shall be kept as part of the maintenance records for aircraft and its components.

(4) The recordings or transcripts of CVR, CARS, Class A AIR and Class A AIRS shall not be used for purposes other than the investigation of an accident or incident as per Civil Aviation (Accident Investigation) Regulations except where the recordings or transcripts are — (Cap. 71:01 (Sub. Leg.))

(*a*) are related to a safety-related event identified in the context of a safety management system; are restricted to the relevant portions of a de-identified transcript of the recording; and are subject to the protections accorded by safety management system;

(*b*) are 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 safety management system;

(*c*) subject to the protections accorded by Civil Aviation (Safety Management) Regulations; (Cap. 71:01 (Sub. Leg.))

(*d*) 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 Civil Aviation (Safety Management) Regulations; or

(Cap. 91:01 (Sub. Leg.))

(*e*) used for inspections of flight recorder systems as required by the Authority.

(5) The recordings or transcripts of FDR, ADRS as well as Class B and Class C AIR and AIRS shall not be used for purposes other than the investigation of an accident or incident as per Civil Aviation (Accident Investigation) Regulations, except where the recordings or transcripts are subject to the protections accorded Civil Aviation (Safety Management) Regulations and —

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

(*b*) are used by the operator in the operation of a flight data analysis programme required in this regulation;

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

(*d*) are de-identified; or

(*e*) are disclosed under secure procedures.

(6) An air operator certificate holder who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Power to inspect and copy record

23. (1) An authorised person shall have power to inspect and copy any of the records referred to in regulations 21 and 22.

(2) A person who refuses an authorised person access to any of the records referred to under regulation 21 or 22 commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Aircraft tracking

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

(2) An air operator certificate holder shall track the position of an aeroplane through automated reporting every 15 minutes for the portions of the in-flight operation that is planned in oceanic areas under the following conditions —

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

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

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

(4) The process in subregulation (3) shall demonstrate how risks to the operation, resulting from such variations, can be managed and shall include the following —

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

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

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

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

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

(*f*) specific mitigation measures and contingency procedures.

(5) An air operator certificate holder shall establish procedures, approved by the Authority, for the retention of aircraft tracking data to assist SAR in determining the last known position of the aircraft.

Aircraft operated by air operator certificate holder

25. (1) The air operator certificate holder shall maintain, in the operation specification, a current list of all aircraft it operates.

(2) The operation specification referred to under subregulation (1) shall contain information for each aircraft in the operator's fleet, identified by aircraft make, model, series and master series as specified in Part II of Form A set out in Schedule 1.

(3) An air operator certificate holder shall apply in writing to the Authority, for an amendment to its operation specification 60 days before any intended change of aircraft.

(4) An aircraft of another certificate holder operated under an interchange agreement shall be incorporated to the operations specifications as required under subregulation (2).

Aircraft technical log

26. An air operator certificate holder shall carry on an aircraft, a technical log which contains a journey records section and an aircraft maintenance record section.

Company procedures indoctrination

27. (1) A person or any air operator certificate holder's employee shall not perform or serve in the air operator certificate holder's company unless the person or the employee has completed the company indoctrination curriculum approved by the Authority, appropriate to that person or employee's duties and responsibilities.

(2) The indoctrination curriculum shall include training in knowledge and skills related to human performance and co-ordination with other air operator certificate personnel.

Flight safety document system

28. (1) An air operator certificate holder shall establish a flight safety document system, approved by the Authority, for the use and guidance of operational personnel.

(2) The development and organisation of a flight safety document system shall contain the minimum elements specified in Schedule 6.

Safety Management System

29. (1) An air operator certificate holder shall establish and maintain a Safety Management System approved by the Authority that, as a minimum —

(*a*) identifies safety hazards;

(*b*) ensures that remedial action necessary to maintain an acceptable level of safety is implemented;

(*c*) provides for continuous monitoring and regular assessment of the safety level achieved;

(*d*) aims to make continuous improvement to the overall level of safety;

(*e*) clearly defines lines of safety accountability throughout the operator's organisation, including direct accountability for safety on the part of senior management; and

(*f*) is periodically reviewed to ensure safety levels on the operator operations.

(2) An air operator certificate holder that operates an aircraft with a maximum certificated take-off mass of more than 20 000 kg shall include a flight data monitoring programme as part of its Safety Management System.

(3) An operator of an aeroplane of a maximum certificated take-off mass in excess of 27 000 kg shall establish and maintain a flight data analysis programme as part of its Safety Management System.

(4) An air operator certificate holder's flight data analysis programme shall be non-punitive and contain adequate safeguards to protect the sources of the data.

(5) An air operator certificate holder's Safety Management System shall include a flight safety documents system for the use and guidance of its operational personnel, as part of its safety management system.

(6) The Safety Management System shall be established in accordance with the Civil Aviation (Safety Management) Regulations.

(7) An 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.

(8) An operator's flight data analysis programme specified in subregulations (1) and (2) shall contain adequate safeguards to protect the sources of the data in accordance with the Civil Aviation (Safety Management) Regulations.

Continuing airworthiness information

30. An AOC holder who, operates a large aircraft, 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 approved by the Authority.

Maintenance and operational experience

(Cap. 71:01 (Sub. Leg.))

31. (1) An operator of a large aircraft 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 the Civil Aviation (Airworthiness) Regulations.

(2) An operator and maintenance organisation shall report to the Authority, the service information of large aircraft required by the Authority according to the procedure, established by the Authority.

(3) An operator and maintenance organisation shall transmit to the organisation responsible for the type design of aircraft in respect of large aircraft information on faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft.

PART IV — *Aircraft*

Authorised aircraft

32. (1) A person shall not operate an aircraft in commercial air transport unless that aircraft has a current airworthiness certificate, is in an airworthy condition, and meets the applicable airworthiness requirements for these operations, including those related to identification and equipment.

(2) A person shall not operate an aircraft in commercial air transport until the aircraft has completed satisfactory initial certification, which includes the issuance of an AOC listing for that type of aircraft.

(3) A person shall not operate an additional or replacement aircraft of a type for which it is currently authorised unless he or she can show that each aircraft has completed an evaluation process for inclusion in the air operator certificate holder's fleet.

(4) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Dry leasing of registered aircraft

33. (1) An air operator certificate holder may dry-lease a registered aircraft for commercial air transport where authorised by the Authority.

(2) A person shall not operate a registered aircraft unless there is an agreement between the Authority and the state of registry that —

(*a*) while the aircraft is operated by a Botswana air operator certificate holder, these Regulations shall apply;

(*b*) while the aircraft is operated by the air operator certificate holder, the Airworthiness Regulations of the state of registry shall apply; or

(*c*) if the state of registry agrees to transfer some or all of the responsibility for airworthiness to the Authority under Article 83 bis of the Chicago Convention, the Civil Aviation (Airworthiness) Regulations shall apply to the extent agreed upon by the Authority and the state of registry.

(3) An agreement under this regulation is an acknowledgement that the Authority shall have free and uninterrupted access to the aircraft at any place and time and any person who refuses any authorised person such access commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

(4) An air operator certificate holder shall comply with all the requirements for aircraft dry lease as set out in Schedule 7.

(5) A person who operates an aircraft without the authority required under this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Aircraft interchange

34. (1) An air operator certificate holder shall not interchange aircraft with another air operator certificate holder without the approval of the Authority.

(2) An air operator certificate holder shall comply with all the requirements for aircraft interchange set out in Schedule 8.

Wet leasing

35. (1) An air operator certificate holder shall not conduct wet-lease operations on behalf of another air operator except in accordance with these Regulations or the applicable laws of the State in which the operation occurs and the restrictions imposed by the Authority.

(2) An air operator certificate holder shall not allow another entity or air operator to conduct wet-lease operations on its behalf unless —

(*a*) that air operator holds an AOC or its equivalent from a Contracting State that authorises those operations; and

(*b*) the air operator certificate holder advises the Authority of such operations and provides a copy of the AOC under which the operation was conducted.

(3) An air operator certificate holder shall comply with all the requirements for the wet-leasing of aircraft set out in Schedule 9.

Damp lease

36. (1) The Authority may where applicable, approve a damp lease upon request by the operator.

(2) The Authority shall ensure that both flight and cabin crew are trained to use common communications and emergency procedures, and that the cabin crew receives training on common communication, safety and emergency procedures, standard operating procedures and knowledge of flight and duty limitation.

(3) An air operator shall comply with all the requirements for the damp leasing of aircraft as set out in Schedule 9.

Emergency evacuation demonstration

37. (1) An air operator certificate holder shall not use an aircraft type and model in commercial air transport passenger-carrying operations unless the AOC has first conducted, for the Authority, an actual full capacity emergency evacuation demonstration for the configuration in 90 seconds or less.

(2) The demonstration referred to in subregulation (1) may not be required where the air operator certificate holder provides evidence that —

(*a*) a satisfactory full capacity emergency evacuation for the aircraft to be operated was demonstrated during the aircraft type certification or during the certification of another air operator; or

(*b*) there is an engineering analysis which shows that an evacuation is still possible within the 90 seconds under subregulation (1) if the air operator certificate holder's aircraft configuration differs with regard to number of exits or exit type or number of cabin crew members or location of the cabin crew members.

(3) Where a full capacity demonstration is not required, a person shall not use an aircraft type and model in commercial air transport passenger-carrying operations unless it has first demonstrated to the Authority that its available personnel, procedures, and equipment can provide sufficient open exits for evacuation in 15 seconds or less.

(4) A person shall not use a land plane in extended overwater operations unless he or she has first demonstrated to the Authority that the land plane has the ability and equipment to efficiently carry out its ditching procedures.

(5) An air operator certificate holder shall comply with all the requirements for the emergency evacuation demonstration set out in Schedule 10.

Demonstration flight

38. (1) An air operator certificate holder shall not operate an aircraft type in commercial air transport unless the air operator certificate holder first conducts satisfactory demonstration flights for the Authority in that aircraft type.

(2) An air operator certificate holder shall not operate an aircraft in a designated special area, or using a specialised navigation system, unless it has conducted a demonstration flight to the satisfaction of the Authority.

(3) A demonstration flight required under subregulation (1) shall be conducted in accordance with the regulations applicable to the type of operation and aircraft type used.

(4) A demonstration flight required under subregulation (1) shall be conducted for each type of aircraft, including those aircraft materially altered in design, and for each kind of operation the air operator certificate holder intends to conduct.

(5) The type of demonstration and the total number of demonstration flight hours shall be determined by the Authority and shall be dependent upon the complexity of the type of intended operation.

(6) A person shall not carry passengers in an aircraft during demonstration flights, except for those needed to make the demonstration flight and those designated by the Authority.

(7) The Authority shall determine the necessity and extent of demonstration flights for those operators operating aircraft with a maximum certificated take-off mass of 5,700kg or less.

PART V — *Facilities and Operations Schedules*

Facilities

39. (1) An air operator certificate holder shall maintain operational and airworthiness support facilities at the main operating base, appropriate for the area and type of operation.

(2) An air operator certificate holder shall arrange appropriate ground handling facilities at each aerodrome used to ensure the safe servicing and loading of its flights.

Operating schedule

40. (1) An air operator certificate holder conducting scheduled operations shall in establishing flight operations schedules —

(*a*) allow enough time for the proper servicing of aircraft at intermediate stops; and

(*b*) consider the prevailing winds en-route and cruising speed for the type of aircraft.

(2) The cruising speed referred to under subregulation (1) shall not be more than that resulting from the specified cruising output of the engines.

PART VI — *Air Operator Certificate Flight Operations Management*

Operation manual

41. (1) An air operator certificate holder shall provide for the use and guidance of operations personnel concerned, an operations manual in accordance with Schedule 11 to these regulations approved by the Authority and such amendments or revisions shall be issued to all personnel that are required to use this manual.

(2) An air operator certificate holder shall prepare and keep a current operations manual which contains the air operator certificate holder's procedures and policies for the use and guidance of its personnel.

(3) The operations manual shall contain the overall general company policies and procedures regarding the flight operations it conducts.

(4) An air operator certificate holder shall issue the operations manual, or pertinent portions, together with all amendments and revisions to all personnel that are required to use it.

(5) An air operator certificate holder shall not provide for use of its personnel in commercial air transport, any operations manual or portion thereof which has not been reviewed and approved for the air operator certificate holder by the Authority.

(6) An air operator certificate holder shall ensure that, depending on the size and complexity of operations, the contents of the operations manual includes at least those subjects designated by the Authority that are applicable to the air operator holder's operations such as —

(*a*) the holder's general policies;

(*b*) duties and responsibilities of personnel;

(*c*) operational control policy and procedures;

(*d*) instructions and information necessary to permit flight and ground personnel to perform their duties to the level of safety acceptable to the Authority; and

(*e*) any other subjects.

(7) An air operator certificate holder shall provide an operations manual approved by the Authority containing information on —

(*a*) operations administration and supervision;

(*b*) accident prevention and flight safety programmes;

(*c*) personnel training;

(*d*) flight crew and cabin crew member fatigue;

(*e*) flight time limitations;

(*f*) flight operations including operational flight planning, aeroplane performance, routes, guides and charts;

(*g*) minimum flight altitudes;

(*h*) aerodrome operating minima;

(*i*) search and rescue;

(*j*) dangerous goods; and

(*k*) navigation, communications, security, and human factors.

(8) An operations manual may be published in parts, as a single document, or as a series of volumes and shall be organised with the following structure —

(*a*) General;

(*b*) Aircraft operating information;

(*c*) Areas, routes and aerodromes; and

(*d*) Training.

(9) Subjects under this regulation shall be —

(*a*) Aircraft Operating Manual;

(*b*) Minimum Equipment List and Configuration Deviation List;

(*c*) Training Programme;

(*d*) Aircraft Performance Planning Manual;

(*e*) Route Guide;

(*f*) Dangerous Goods Procedures;

(*g*) Accident Reporting Procedures;

(*h*) Security Procedures;

(*i*) Aircraft Loading and Handling Manual; and

(*j*) Cabin crew member manual, if required.

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

(11) An operations manual shall conform to the outline and structure set out in Schedule 11.

Training programme

42. (1) An air operator certificate holder shall ensure that all operations personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole.

(2) An air operator certificate holder shall have a training programme approved by the Authority containing the general training, checking, and record keeping policies.

(3) An air operator certificate holder shall get the approval of the Authority prior to using a training curriculum for the purpose of qualifying a crew member, or person performing operational control functions, for duties in commercial air transport.

(4) An air operator certificate holder shall submit to the Authority any revision to an approved training programme, and shall receive written approval from the Authority before that revision can be used.

(5) The Training Programme shall conform to the outline set out in Schedule 12.

Aircraft operating manual

43. (1) An air operator certificate holder shall provide operations staff and flight crew with an aircraft operating manual, for each aircraft type operated, containing the normal, abnormal and emergency procedures relating to the operation of the aircraft.

(2) The manual design and utilisation shall observe human factors principles and include details of the aircraft systems and checklists to be used.

(3) An air operator certificate holder or applicant shall submit proposed aircraft operating manuals for each type and variant of aircraft operated, containing the normal, abnormal, and emergency procedures relating to the operation of the aircraft for approval by the Authority.

(4) An aircraft operating manual shall be based upon the aircraft manufacturer's data for the specific aircraft type and variant operated by the air operator certificate holder and shall include specific operating parameters, details of the aircraft systems, and of the checklists applicable to the operations of the air operator certificate holder that are approved by the Authority.

(5) The checklists provided in accordance with subregulation (2) shall be used by flight crews prior to, during and after all phases of operations, and in emergency, to ensure compliance with the operating procedures contained in the aircraft operating, and flight manuals or other documents associated with the certificate of airworthiness and otherwise in the operations manual are followed and the design and utilisation of checklists shall observe human factors principles.

(6) The aircraft operating manual shall be issued to the flight crew members and persons assigned operational control functions to each aircraft operated by the air operator certificate holder.

(7) The Aircraft operating manual shall conform to the outline set out in Schedule 13.

Journey log book

44. (1) An air operator certificate holder shall use an aircraft journey log book for each flight, which includes the —

(*a*) aircraft 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, non-scheduled);
(*k*) incidents, observations, if any; and
(*l*) signature of person in charge.

(2) Any entry in the journey logbook shall be made currently and in ink or indelible pencil.

(3) An air operator certificate holder shall retain completed journey log books of the last two years operations.

(4) The Authority may waive the requirement of subregulation (1) if the relevant information is available in the aircraft technical logbook.

(5) An operator shall maintain a journey log book for every aeroplane engaged in international air navigation in which shall be entered particulars of the aeroplane, its crew and each journey.

(6) The pilot-in-command shall be responsible for the journey log book containing the information listed in this regulation.

Designation of pilot-in-command

45. An air operator certificate holder shall —

(*a*) designate one pilot as the pilot-in-command for each commercial air transport operation; and
(*b*) maintain records for each flight of an aeroplane above 15 000 m (49 000 ft.) so that the total cosmic radiation dose received by each crew member over a period of 12 consecutive months can be determined.

Required cabin crew members

46. (1) An air operator certificate holder shall establish, to the satisfaction of the Authority —

(*a*) 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 off the aeroplane; and
(*b*) the necessary functions to be performed in an emergency or a situation requiring emergency evacuation.

(2) The operator shall assign the functions under subregulation (1) (*b*) for each type of aeroplane.

(3) The number of cabin crew members shall not be less than the minimum specified by the Authority in the air operator certificate holder's operations specifications and —

(*a*) for a seating capacity of 20 to 50 passengers, one cabin crew member; and

(*b*) one additional cabin crew member for each unit, or part of a unit, of 50 passenger seat capacity.

(4) When passengers are on board a parked aircraft, the minimum number of flight attendants shall be one-half of what is required for the flight operation, but there shall be one cabin crew member or another person qualified in the emergency evacuation procedures for the aircraft.

(5) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Carriage of special situation passengers

47. (1) An air operator certificate holder shall not allow the transportation of special situation passengers except —

(*a*) where provided for in the air operator certificate holder's operations manual procedures; and

(*b*) with the knowledge and concurrence of the pilot-in-command.

(2) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Crew member checking and standardisation programme

48. (1) An air operator certificate holder shall have a programme approved by the Authority of checking and the standardisation of crew members to address the air operator certificate holder's unique fleet differences and compliance method.

(2) An air operator certificate holder shall check pilots' proficiency on those manoeuvres and procedures that are specified by the Authority for pilot proficiency checks, which shall include emergency procedures and, where applicable, instrument flight rules.

(3) An air operator certificate holder shall not use a person for checks unless he or she has completed the curricula approved by the Authority.

(4) An air operator certificate holder shall ensure that initial ground training for check personnel includes —

(*a*) check personnel duties, functions, and responsibilities;

(*b*) regulations and the air operator certificate holders policies and procedures;

(*c*) methods, procedures, and techniques for conducting the required checks;

(*d*) evaluation of student performance including the detection of –

(i) improper and insufficient training, and

(ii) personal characteristics of an applicant that could adversely affect safety,

(*e*) 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.

(5) Any transition ground training for all check personnel, shall include the approved methods, procedures, and limitations for performing the required normal, abnormal, and emergency procedures applicable to the aircraft to which the person is in transition.

Cockpit check procedures

49. (1) An air operator certificate holder shall issue to the flight crews and make available on each aircraft, the checklist procedures approved by the Authority appropriate for the type and variant of aircraft.

(2) An air operator certificate holder shall ensure that approved procedures include each item necessary for flight crew members to check for safety before starting engines, taking off, or landing, and for engine and systems abnormalities and emergencies.

(3) An air operator certificate holder shall ensure that the checklist procedures are designed so that a flight crew member does not need to rely upon his or her memory for items to be checked.

(4) An air operator certificate holder shall make the approved procedures readily useable in the cockpit of each aircraft and the flight crew shall be required to follow them when operating the aircraft.

Minimum Equipment List and Configuration Deviation List

50. (1) An air operator certificate holder shall provide for the use of the flight crew members, maintenance personnel and persons assigned operational control functions during the performance of their duties, a MEL approved by the Authority.

(2) The MEL shall be specific to the aircraft type and variant which contains the circumstances, limitations and procedures for release or continuance of flight of the aircraft with inoperative components, equipment or instruments.

(3) An air operator certificate holder may provide, for the use of flight crew members, maintenance personnel and persons assigned operational control functions during the performance of their duties a CDL specific to the aircraft type if one is provided and approved by the state of design.

(4) An air operator certificate holder operations manual shall contain those procedures approved by the Authority for operations in accordance with the CDL requirements.

(5) The operator shall include in the operations manual a MEL, approved by the Authority which will enable the pilot-in-command to determine whether a flight may be commenced or continued from any intermediate stop should any instrument, equipment or systems become inoperative.

(6) The MEL prepared by an operator shall be in conformity with the Master Minimum Equipment List established for the aircraft type.

(7) The following instruments and equipment shall not be included in the MEL referred to in this regulation —

(*a*) instruments and equipment that are either specifically or otherwise required by the airworthiness certification requirements and which are essential for safe operations under all operating conditions;

(*b*) instruments and equipment required to be in operable condition by an Airworthiness Directive, unless the airworthiness directive provides otherwise; and

(*c*) instruments and equipment required for specific operations.

(8) Where the state of operator is not the state of registry, the state of the operator shall ensure that the MEL does not affect the aeroplane`s compliance with airworthiness requirements applicable in the state of registry.

(9) The Authority shall require the MEL of the operator approved in accordance with Civil Aviation (Operation of Aircraft) Regulations. (Cap. 71:01 (Sub. Leg.))

(10) Any air operator certificate holder who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Performance planning manual

51. (1) An air operator certificate holder shall provide for the use of the flight crew members and persons assigned operational control functions during the performance of their duties, a performance planning manual approved by the Authority.

(2) The performance planning manual shall be specific to the aircraft type and variant and shall contain adequate performance information to accurately calculate the performance in all normal phases of flight operation.

(3) The performance planning manual shall include 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.

Performance data control system

52. (1) An air operator certificate holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current performance data for each aircraft, route and airport that it uses.

(2) The system approved by the Authority under subregulation (1) shall provide current obstacle data for departure and arrival performance calculations.

(3) The manufacturer shall provide obstacle data to enable the operator to develop procedure to comply with the Civil Aviation (Operation of Aircraft) Regulations, En- route limitation- One engine inoperative.

Aircraft loading and handling manual

53. (1) An air operator certificate holder shall provide for the use of the flight crew members, maintenance personnel, ground handlers, handling agents and persons assigned operational control functions during the performance of their duties, an aircraft handling and loading manual approved by the Authority.

(2) The manual referred to under subregulation (1) shall contain procedures and limitations for servicing, fuelling, loading and unloading, pre-flight preparation and post-flight securing, applicable to the aircraft type and variant.

Mass and balance data control system

54. (1) An air operator certificate holder shall ensure that during any phase of operation, the loading, mass and centre of gravity of the aeroplane complies with the limitations specified in the approved Aeroplane Flight Manual, or the operations manual, if more restrictive.

(2) An air operator certificate holder shall establish the mass and centre of gravity of any aeroplane by weighing the aeroplane prior to initial entry into service and thereafter at intervals of four years.

(3) The accumulated effects of modifications and repairs on the mass and balance shall be accounted for and properly documented and an aeroplane shall be reweighed if the effect of modifications on the mass and balance is not accurately known.

(4) An air operator certificate holder shall determine the mass of all operating items and crew members included in the aeroplane dry operating mass by weighing or by using standard masses so that the influence of their position on the aeroplane's centre of gravity can be determined.

(5) An air operator certificate holder shall establish the mass of the traffic load, including any ballast, by weighing or determine the mass of the traffic load in accordance with standard passenger and baggage masses as specified in Schedule 14.

(6) An air operator certificate holder shall determine the mass of the fuel load by using the actual density or, if not known, the density calculated in accordance with a method specified in the operations manual.

(7) An air operator certificate holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current information regarding the mass and balance of each aircraft operated.

Cabin crew member manual

55. (1) An air operator certificate holder shall issue to the cabin crew members and provide to passenger agents during the performance of their duties, a cabin crew member manual approved by the Authority.

(2) A cabin crew member manual shall contain operational policies and procedures applicable to cabin crew members and the carriage of passengers.

(3) An air operator certificate holder shall issue to the cabin crew members a manual containing the —

(*a*) specific aircraft type and variant which contains the details of their normal, abnormal and emergency procedures and the location and operation of emergency equipment; and

(*b*) normal, abnormal and emergency procedures to be used by the cabin crew, the checklists relating thereto and aircraft systems information as required, including a statement related to the necessary procedures for the coordination between flight and cabin crew.

Passenger briefing cards

56. (1) An air operator certificate holder shall carry on each passenger carrying aircraft, in convenient locations for the use of each passenger, printed cards in the English and Setswana language supplementing the oral briefing and containing —

(*a*) diagrams and methods of operating the emergency exits;

(*b*) other instructions necessary for use of the emergency equipment; and

(*c*) information regarding the restrictions and requirements associated with sitting in an exit seat row as specified in Schedule 15.

(2) An air operator certificate holder shall ensure that each card contains information that is pertinent only to the type and variant of aircraft used for that flight.

Aeronautical data control system

57. (1) An air operator certificate holder shall have a system approved by the Authority for obtaining, maintaining and distributing to appropriate personnel current aeronautical data for each route and aerodrome that it uses.

(2) The specific aerodrome information to be contained in the aeronautical data control system shall conform to the Schedule 16.

Route guide

58. (1) An air operator certificate holder shall provide for the use of the flight crew members and persons assigned operational control functions during the performance of their duties, a route guide to ensure that the flight crew shall have, for each flight, information relating to communication facilities, navigation aids, aerodromes, instrument approaches, instrument arrivals and instrument departures as applicable for the operation, and such other information as the operator may deem necessary for the proper conduct of flight operations.

(2) A route guide shall contain at least the following information in current form —

(*a*) the minimum flight altitudes for each route to be flown;

(*b*) aerodrome operating minima for each of the aerodromes that are likely to be used as aerodromes of intended landing or as alternate aerodromes;

(*c*) the increase of aerodrome operating minima in case of degradation of approach or aerodrome facilities;

(*d*) the necessary information for compliance with all flight profiles required by these Regulations, including but not limited to, the determination of —

(iii) take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by system failures which affect the take-off distance,

(iv) take-off climb limitations,

(v) en-route climb limitations,

(vi) approach climb limitations and landing climb limitations,

(vii) landing runway length requirements for dry, wet and contaminated conditions, including systems failures which affect the landing distance, and

(viii) supplementary information, such as tyre speed limitations; and

(*e*) instructions for determining aerodrome- operating minima for instrument approaches using HUD and EVS.

(3) The route guide shall be a component of the air operator certificate holder's operations manual.

Minimum flight altitudes

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

(2) The operator shall specify the method by which it is intended to determine minimum flight altitudes for operations conducted over routes for which minimum flight altitudes have not been established by the State flown over or the responsible State, and shall include this method in the operations manual and the minimum flight altitudes determined in accordance with the above method shall not be lower than specified in Civil Aviation (Rules of the Air) Regulations.

(Cap. 71:01 (Sub. Leg.))

(3) The Authority shall approve the method for establishing the minimum flight altitudes.

(4) The Authority shall approve the method for establishing the minimum flight altitudes 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.

Weather reporting sources

60. (1) An air operator certificate holder shall use sources approved by the Authority for the weather reports and forecasts used for decisions regarding flight preparation, routing and terminal operations.

(2) An air operator certificate holder engaged in passenger carrying operations, shall have an approved system for obtaining forecasts and reports of adverse weather phenomena that may affect safety of flight on each route to be flown and the airport to be used.

(3) The sources of weather reports referred to under subregulation (1) shall conform to the outline set out in Schedule 17.

De-icing and anti-icing programme

61. (1) An air operator certificate holder planning to operate an aircraft in conditions where frost, ice, or snow may reasonably be expected to adhere to the aircraft shall —

(*a*) use only aircraft adequately equipped for such conditions;

(*b*) ensure flight crew is adequately trained for such conditions; and

(*c*) have an approved ground de-icing and anti-icing programme.

(2) An air operator certificate holder shall follow the de-icing and anti-icing requirements set out under Schedule 18.

Flight supervision and monitoring system

62. (1) An air operator certificate holder shall have an adequate monitoring system approved by the Authority for proper dispatch and monitoring of the progress of the flights.

(2) The dispatch and monitoring system shall have enough dispatch centres, adequate for the operations to be conducted, located at points necessary to ensure adequate flight preparation, dispatch and in-flight contact with the flight operations.

(3) An air operator certificate holder shall provide enough qualified flight operations officers at each dispatch centre to ensure proper operational control of each flight.

(4) An air operator certificate holder shall follow the flight monitoring system set out in Schedule 19.

Communications facilities

63. (1) An air operator certificate holder's flights shall have a two-way radio communication with all air traffic control facilities along the routes and alternate routes to be used.

(2) An air operator certificate holder shall have rapid and reliable radio communication with all flights over the air operator certificate holder's entire route structure under normal operating conditions.

(3) The radio communication system shall be independent from the air traffic control system.

(4) An air operator certificate holder engaged in international air navigation shall at all times, have available, for immediate communication to rescue coordination centres, information on the emergency and survival equipment carried on board any of their aeroplanes including, as applicable —

(*a*) the number, colour and types of life rafts and pyrotechnics;

(*b*) details of emergency water and medical supplies; and

(*c*) the type and frequencies of the emergency portable radio equipment.

Routes and areas of operations

64. (1) An air operator certificate holder may conduct operations only along such routes and within such areas for which —

(*a*) ground facilities and services, including meteorological services, are provided which are adequate for the planned operation;

(*b*) the performance of the aircraft intended to be used is adequate to comply with minimum flight altitude requirements;

(*c*) the equipment of the aircraft intended to be used meets the minimum requirements for the planned operation;

(*d*) appropriate and current maps and charts are available;

(*e*) adequate airports are available within the time or distance limitations if a two-engine aircraft is used;

(*f*) surfaces are available which permit a safe forced landing to be executed if a single engine aircraft is used; and

(*g*) the nature of the terrain to be flown, including the potential for carrying out a safe forced landing in the event of an engine failure or major malfunction.

(2) A person shall not conduct commercial air transport operations on any route or area of operation unless those operations are in accordance with any restrictions imposed by the Authority.

(3) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Navigational accuracy

65. (1) An air operator certificate holder shall ensure, for each proposed route or area, that the navigational systems and facilities it uses are capable of navigating the aircraft —

(*a*) within the degree of accuracy required for air traffic control; and

(*b*) to the airports in the operational flight plan within the degree of accuracy necessary for the operation involved.

(2) In situations without adequate navigation systems reference, the Authority may authorise day VFR operations that can be conducted safely by pilotage because of the characteristics of the terrain.

(3) The Authority shall list in the air operator certificate holder's operations specifications, non-visual ground aids required for approval of routes outside of controlled airspace except for those navigational aids required for routes to alternate airports.

(4) Non-visual ground aids referred to under sub regulation (3) shall not be required for night VFR operations on routes that the air operator certificate holder shows have reliably lighted landmarks which are adequate for safe operation.

(5) The Authority shall approve operations on route segments where the use of performance-based navigation, celestial navigation or other specialised means of navigation is required.

(6) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Mandatory occurrence reporting

66. (1) An occurrence report shall be made of any event which constitutes a reportable occurrence in terms of subregulation (2) to the Authority by —

(*a*) an operator;

(*b*) a pilot-in-command;

(*c*) a person carrying on the business of manufacturing, repairing, overhauling, modifying an aircraft, equipment or any part of the aircraft;

(*d*) a person who signs an airworthiness report or a certificate of release to service in respect of an aircraft, equipment or part of the aircraft;

(*e*) an air traffic controller;

(*f*) a flight information service officer;

(*g*) an aerodrome certificate holder;

(*h*) a manager;

(*i*) a person responsible for flight checking or inspection of air navigation facilities; and

(*j*) any person who performs a function in respect of ground handling of an aircraft.

(2) For purposes of this regulation, a reportable occurrence means —

(*a*) any incident relating to a defect or malfunction in an aircraft, part or equipment of the aircraft which endangered or which will endanger occupants of that aircraft or any other person if not corrected; or

(*b*) any defect or malfunction of any facility on the ground used or intended to be used in the operation of the aircraft such that if the defect or malfunction is not corrected it is likely to endanger the aircraft or any of its occupants.

(3) An occurrence report is intended for the prevention of accidents and incidents and shall not be used to attribute blame or liability to any person for any accident or incident.

(4) For purposes of this regulation a reportable occurrence shall not be a substitute for the requirement to report an accident or incident under the Civil Aviation (Accident Investigation) Regulations. (Cap. 71:01 (Sub. Leg.))

(5) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Fatigue management

67. (1) An air operator certificate holder shall, for purposes of managing fatigue related safety risks, establish —

(*a*) flight time, flight duty period, duty period and rest period limitations that are within the prescriptive fatigue management standards specified in these Regulations;

(*b*) a Fatigue Risk Management System or FRMS in compliance with subregulation (5) for all operations; or

(*c*) a FRMS in accordance with subregulation (5) for part of its operations and the requirements of subregulation 1 (*a*) for the remainder of its operations.

(2) Where the operator adopts the prescriptive fatigue management standards for part or all of its operations, the Authority may approve, in exceptional circumstances, variations from these Regulations on the basis of a risk assessment provided by the operator and the approved variations shall provide a level of safety equivalent to, or better than that achieved through the prescriptive fatigue management standards.

(3) The operator's FRMS shall be approved by the Authority before it takes the place of any or all of the prescriptive fatigue management standards specified in these Regulations.

(4) The approved FRMS shall provide a level of safety equivalent to, or better than, the prescriptive fatigue management standards.

(5) The Authority shall establish a process to ensure that a FRMS provides a level of safety equivalent to, or better than, the prescriptive fatigue management standards and shall ensure that the operator —

(*a*) establishes maximum values for flight times or flight duty periods and duty period, and minimum values for rest periods based on scientific principles and knowledge, subject to safety assurance processes, and approved to the Authority;

(*b*) obtains approval for any 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*) provides justification for such changes, based on accumulated FRMS experience and fatigue-related data.

(6) Where the operator implements a FRMS to manage fatigue-related safety risks, the operator shall, as a minimum —

(*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; and

(*e*) provide for continuous improvement to the overall performance of the FRMS.

(7) Where an air operator certificate holder has established a FRMS, it shall be integrated with the operator's SMS.

(8) Notwithstanding the provisions of this regulation, the maximum flight and duty time limits shall be as per regulations 67, 68 and 69.

(9) An operator shall maintain a record for all flights and cabin crew members of flight time, flight duty periods, duty periods, and rest period as determined by the Authority.

Maximum flight duty periods for crew members

68. (1) A person shall not fly in an aircraft as a crew member in the course of any duty period of that person after more than the specified time has elapsed.

(2) For purposes of subregulation (1), the expression "specified time" means —

(*a*) in relation to a pilot, whenever paragraph (b) does not apply, 11 hours; except that, if during the duty period there has been a period of not less than five continuous hours throughout which that person has not flown in any aircraft to which this regulation applies, or performed any duties, this paragraph shall have effect as if 12 hours were substituted for 11 hours;

(*b*) in relation to a person who, at all times when that person flies as a pilot in the course of his or her duty period, is one of two or more persons carried as pilots of an aircraft undertaking —

(i) an international flight or service – 15 hours,

(ii) a flight within Botswana – 12 hours; except that if during the duty period there has been a period of not less than five continuous hours throughout which that person has not flown in any aircraft to which this regulation applies or performed any duties, this paragraph shall have effect as if 15 hours were substituted for 12 hours and 20 hours were substituted for 15 hours if that person is one of three or more persons carried as pilots of the aircraft and the following conditions are fulfilled —

(*aa*) at least two of the pilots are qualified to act as pilot-in-command in the circumstances both by their respective licences and in accordance with the requirements of regulation 47 (except in respect of their knowledge of the aerodromes of take-off and landing and any alternate aerodromes);

(*bb*) at least one of the pilots is carried in addition to those flight crew members who are required to be carried in the circumstances by or under these Regulations;

(*cc*) one suitable bunk is always available for the use only of pilots; and

(*dd*) each of the pilots has, during the duty period, been afforded opportunities of resting for a reasonable time;

(*c*) in relation to a flight engineer - 15 hours; except that this paragraph shall have effect as if 24 hours were substituted for 15 hours in relation to a person who, at all times when that person flies as a flight engineer in the course of his duty period, is one of two or more persons carried as flight engineers of the aircraft, if the following conditions are fulfilled —

(i) at least one of the flight engineers is carried in addition to the crew members who are required to be carried in the circumstances by or under these Regulations,

(ii) one suitable bunk is always available for the use only of flight engineers, and

(iii) each of the flight engineers has, during the duty period, been afforded opportunities of resting for a reasonable time; and

(*d*) in relation to a cabin crew, 15 hours; which shall apply to a cabin crew member as it applies to a flight engineers.

(3) The maximum total hours associated with the duty periods undertaken by any crew member shall not exceed 160 hours during any period of 28 days; except that whenever a crew member exceeds 120 hours "non-flying time" that member shall not, because of this, be disqualified from further flying duties providing all other requirements are met.

Minimum rest periods for crew members

69. (1) Notwithstanding regulation 67, a person shall not fly in an aircraft to which this regulation applies as a crew member unless immediately before the duty period in the course of which that person makes that flight the person has had a sufficient rest period as set out in the Schedule 20.

(2) Where a rest period is taken by a crew member at a place which is not within fifty miles of that crew member's ordinary place of residence, it shall be deemed to be a sufficient rest period if it includes a period of eight hours falling between 2200 and 0800 hours local time.

(3) The length of the duty periods established in this regulation shall be adjusted to allow for duty time before and after a flight or series of flights which make up one duty period.

Duty and rest periods for flight operations officers

70. (1) An air operator certificate holder shall not schedule a flight operations officer for more than ten consecutive hours of duty within a 24 hour consecutive period, unless that person is given an intervening rest period of at least eight hours at or before the end of the ten hours duty.

(2) An air operator certificate holder shall establish the daily duty period for a flight operations officer so as to include time that allows the officer to become thoroughly familiar with existing and anticipated weather conditions along the route before that flights operations officer dispatches any aircraft.

Records of flight times and duty periods

71. (1) An operator of an aircraft shall not cause or permit any person to fly as a crew member unless the operator is in possession of an accurate and up-to-date record maintained by him or her or by another operator of an aircraft in respect of that person and in respect of the 28 days immediately preceding the flight showing —

(*a*) the times of the beginning and end of each flight in any aircraft made by that person as a crew member in the course of any of his or her duty periods;

(*b*) the times of the beginning and end of each duty period of that person in the course of which he or her made a flight as a crew member;

(*c*) the times of the beginning and end of each duty period of that person ending within a period of 72 hours immediately preceding the beginning of any duty period of that person in the course of which he or she made a flight in any aircraft as a crew member; and

(*d*) brief particulars of the nature of the work or other duties carried out by that person during each of the crew member's duty periods of which a record is required to be kept under this subregulation (3).

(2) The Authority may determine the form and manner in which any records required to be kept under subregulation (1) shall be kept and, where the Authority has so determined, the records shall be kept accordingly.

(3) An operator shall maintain records for all its flight and cabin crew members of flight time, flight duty period, duty period, and rest period for a period of two years.

Maximum flight times for crew member

72. (1) A person shall not fly in any aircraft registered in Botswana, as a crew member at any time on any day after the aggregate of all his flight times, whether arising from flight in an aircraft or in any other aircraft, during the period of 8 hours a day, 32 hours a week, and 100 hours in 28 consecutive days and 900 hours a year.

(2) The provisions of subregulation (1) shall not apply —

(*a*) to a flight made in an aircraft of which the maximum total weight authorised does not exceed 1 600 kg and which is not flying for the purpose of commercial air transport or aerial work; or

(*b*) to a flight made in an aircraft not flying for the purpose of commercial air transport but excluding aerial work if at the time of the flight the aggregate of all the flight times of the person making the flight since the person was last medically examined under these Regulations and found fit does not exceed 150 hours.

Provision for particular cases

73. (1) Notwithstanding anything contained in these Regulations, a person shall be deemed not to have contravened any of the provisions of these Regulations by reason of a flight made at any time by that person or by another person if the first mentioned person proves that —

(*a*) it was due to an unavoidable delay in the completion of the flight that the person so flying was flying at that time; and

(*b*) the first mentioned person could not reasonably be expected to have foreseen before the flight began that the delay was likely to occur.

(2) Notwithstanding these Regulations, a pilot- in- command of an aircraft may make, or authorize any other person to make, and that other person if so authorized may make, a flight in that aircraft which he or she would, but for this subregulation, be prohibited from making by virtue of any provision contained in these regulations, if —

(*a*) it appears to the pilot-in- command that —

(i) arrangements had been made for the flight to be made with such a crew member so as to begin and end at such times that no crew member would have been prohibited from making the flight in accordance with those arrangements by any provision contained in these regulations, and that since those arrangements were made the flight has been or will be prevented from being in accordance with those arrangements by reason of circumstances which were not foreseen as likely to prevent that flight from being so made, or

(ii) the flight is one which ought to be carried out in the interest of the safety or health of any person; and

(*b*) the pilot- in-command is satisfied that the safety of the aircraft on that flight will not be endangered if the pilot- in- command or that other person makes that flight.

(3) Where a pilot-in-command or any other person makes a flight in an aircraft make under sub-regulation (2), a report in writing shall, as soon as reasonably practical be made by the pilot-in-command to the operator of the aircraft and in any other event by the operator to the Authority giving full particulars of the circumstances the flight was made and the reasons thereof.

(4) A pilot-in-command or the operator shall furnish any Authority with such further information in his or her possession relating to the flight and the circumstances in which the flight was made as the Authority may require.

(5) Notwithstanding this Regulations, where a scheduled service has an unavoidable and prolonged delay en route, subject to the discretion of the pilot- in- command, a reduced rest period may be taken, and such period shall include at least six hours between 2000 and 0600 hours local time and shall be of a duration of not less than that set out in Schedule 21.

Duties of operators to prevent excessive fatigue of crew members

74. An operator of an aircraft shall ensure, in respect of each person flying as a crew member, that —

(*a*) the period during which that person is required or permitted by that operator to carry out any work or other duties is limited in length and frequency; and

(*b*) that person is afforded such period for rest, that his work and duties are not likely to cause him such fatigue while the person is flying in the aircraft, in respect of flight crew, as may endanger the safety thereof, and in respect of other crew members, as may impair their efficiency to adequately perform their duties in relation to the possible evacuation or control of passengers or the provision of assistance in the event of an emergency situation.

PART VII — *Air Operator Certificate Maintenance Requirements*

Maintenance responsibility

75. (1) An air operator certificate holder shall ensure that, in accordance with procedures acceptable to the Authority —

(*a*) each aeroplane operated 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 operated remains valid.

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

(*a*) an organization complying with Annex 8, Part II, Chapter 6 that is either approved by the state of registry of the aeroplane or is approved by another Contracting State and is accepted by the state of registry; or

(*b*) a person or organization in accordance with procedures that are authorized by the state of registry; and there is a maintenance release in relation to the maintenance carried out.

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

(4) An air operator certificate holder shall ensure that the maintenance of its aeroplanes is performed in accordance with the maintenance programme.

Approval and acceptance of Air Operator Certificate maintenance systems and programmes

76. (1) An air operator certificate holder shall not operate an aircraft, unless it is maintained and released to service by an approved maintenance organisation that is approved by the state of registry and is accepted or approved by the Authority.

(2) An approved maintenance organisation for aircraft registered in Botswana shall be approved by the Authority.

(3) An approved maintenance organisation for aircraft not registered in Botswana shall be approved by the state of registry of the aircraft, and such approval may be accepted by the Authority.

(4) An approved maintenance organization shall comply with the requirements of the Civil Aviation (Airworthiness) Regulations.

(5) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Maintenance control manual

77. (1) An air operator certificate holder shall provide to the Authority, and to the state of registry of the aircraft, if different from the Authority, the air operator certificate holder's maintenance control manual and subsequent amendments, for the use and guidance of maintenance and operational personnel concerned, containing details of the organisation's structure including —

(*a*) the accountable executive and designated person responsible for the maintenance system as required by the Authority;

(*b*) procedures to be followed to satisfy the maintenance responsibility, except where the air operator certificate holder is an approved maintenance organisation, and has the quality functions under regulation 19; and

(*c*) procedures for the reporting of failures, malfunctions and defects to the Authority, state of registry and the state of design within 72 hours of discovery; in addition, items that warrant immediate notification to the Authority with a written follow-on report as soon as possible but no later than within 72 hours of discovery, are —

(i) primary structural failure,

(ii) control system failure,

(iii) fire in the aircraft,

(iv) engine structure failure, or

(v) any other condition considered an imminent hazard to safety.

(2) An air operator certificate holder's maintenance control manual shall contain a description of the procedures for complying with the service information reporting requirements of regulation 31 (2) and (3).

(3) The design of the manual shall observe human factors principles.

(4) An air operator certificate holder shall —

(*a*) ensure that the maintenance control manual is amended as necessary to keep the information contained therein up to date;

(*b*) furnish, promptly to all organisations or persons to whom the manual has been issued, copies of all amendments to the operators maintenance control manual; and

(*c*) provide the state of the operator and the state of registry, a copy of the operators maintenance control manual, together with all amendments or revisions to it and shall incorporate in it such mandatory material as the state of operator or state of registry may require.

(5) An air operator certificate holder's maintenance control manual shall contain the following information which may be issued in separate parts —

(*a*) a description of the procedures required by regulation 75 (1) including, where applicable a description of the —

(i) administrative agreements between the air operator certificate holder and the approved maintenance organisation, or

(ii) 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 person or persons required by regulation 74 (5);

(*c*) a reference to the maintenance programme;

(*d*) a description of the methods used for the completion and retention of the operators continuing airworthiness records;

(*e*) a description of the procedures for monitoring, assessing and reporting maintenance and operational experience required by regulation 30;

(*f*) a description of the procedures for complying with the service information reporting required by regulation 31;

(*g*) a description of procedures for assessing continuing airworthiness information and implementing any resulting actions as required by regulation 30;

(*h*) a description of the procedures for implementing action resulting from mandatory continuing airworthiness information;

(*i*) a description of establishing and maintaining a system of analysis and continued monitoring of the performance and efficacy of the maintenance programme, in order to correct any deficiency in that programme;

(*j*) a description of aircraft types and models to which the manual applies;

(*k*) a description of procedures for ensuring that unserviceability`s affecting airworthiness are recorded and rectified; and

(*l*) a description of the procedures for advising the state of registry of significant in-service occurrences.

Maintenance management

78. (1) An air operator certificate holder, approved as an approved maintenance organisation, shall carry out the requirements of regulation 83.

(2) Where an air operator certificate holder is not an approved maintenance organisation, the air operator certificate holder shall meet the maintenance requirements and responsibilities specified under regulation 75 —

(*a*) by using an equivalent system of maintenance approved by the Authority; or

(*b*) through an arrangement with an approved maintenance organisation with a written maintenance contract agreed between the air operator certificate holder and the contracting approved maintenance organisation detailing the required maintenance functions and defining the support of the quality functions approved by the Authority.

(3) An air operator certificate holder shall employ a person or group of persons, approved by the Authority, to ensure that all maintenance is carried out to an approved standard such that the maintenance requirements of regulation 83 and requirements of the air operator certificate holder's maintenance control manual are satisfied, and to ensure the functioning of the quality system under regulation 19.

(4) An air operator certificate holder shall provide suitable office accommodation at appropriate locations for the personnel referred to in subregulation (3).

(5) An air operator certificate holder shall establish a safety program for the maintenance of aircraft in accordance with regulation 29 approved by the Authority.

Maintenance records

79. (1) An air operator certificate holder shall establish a system to keep records, in a form approved by the Authority, including —

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

(*e*) the current aircraft status of compliance with the maintenance programme; and

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

(2) An air operator certificate holder shall keep the records under subregulation (1) for a minimum of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records shall be kept for the periods set out in Schedule 5 after the signing of the maintenance release.

(3) An air operator certificate holder shall provide, in the event of temporary change of operator, the records specified in subregulation (1) to the new operator.

(4) An air operator certificate holder shall ensure that when an aircraft is permanently transferred from one operator to another operator, the records specified in subregulation (1) are also transferred.

(5) Any air operator certificate holder who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Aircraft technical log entries – maintenance record section

80. (1) An air operator certificate holder shall use an aircraft technical log which includes an aircraft maintenance record section containing the following information for each aircraft —

(*a*) information about each previous flight necessary to ensure continued flight safety;

(*b*) the current aircraft maintenance release;

(*c*) the current inspection status of the aircraft, to include inspections due to be performed on an established schedule and inspections that are due to be performed that are not on an established schedule, except that the Authority may agree to the maintenance statement being kept elsewhere;

(*d*) the current maintenance status of the aircraft, to include maintenance due to be performed on an established schedule and maintenance that is due to be performed that is not on an established schedule except that the Authority may agree to the maintenance statement being kept elsewhere; and

(*e*) all deferred defects that affect the operation of the aircraft.

(2) The aircraft technical log and any subsequent amendment shall be approved by the Authority.

(3) A person who takes action in the case of a reported or observed failure or malfunction of an aircraft or aeronautical product that is critical to the safety of flight shall make a record of that action in the maintenance section of the aircraft technical log.

(4) An air operator certificate holder shall have a procedure for keeping adequate copies of required records to be carried aboard, in a place readily accessible to each flight crew member and shall put that procedure in the air operator certificate holder's operations manual.

(5) The records required to be kept under this regulation shall be retained for the periods set out in Schedule 5 and any person who fails to do so commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Release to service – maintenance

81. (1) Where maintenance is carried out by an approved maintenance organization, the maintenance release shall be issued by the approved maintenance organization in accordance with the Civil Aviation (Airworthiness) Regulations.

(2) Where maintenance is not carried out by an approved maintenance organization, the maintenance release shall —

(*a*) be completed and signed by a person appropriately licensed in accordance with Annex 1 to certify that the maintenance work performed has been completed satisfactorily and in accordance with approved data procedures acceptable to the state of registry; and

(*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 person or persons signing the release.

Modifications and repairs

82. (1) All modifications and repairs shall comply with the airworthiness requirements acceptable to the state of Registry.

(2) An operator shall establish procedures to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.

(3) An air operator certificate holder may be authorised to perform maintenance, preventive maintenance, and modifications of any aircraft, airframe, aircraft engine, propeller, appliance, component, or part thereof, under the AOC, provided —

(*a*) it is performed under a maintenance system, acceptable to the state of registry, that is equivalent to that of an approved maintenance organisation established in accordance with the Civil Aviation (Approved Maintenance Organisation) Regulations; and

(*b*) it is performed in accordance with the air operators certificate holder's operations specifications.

(4) An air operator certificate holder using a maintenance system approved by the Authority and equivalent to that of an approved maintenance organisation that wishes to approve for return to service major repairs or major modifications to an aircraft registered in Botswana shall use a current and valid licensed aircraft maintenance technician with an airframe and power plant rating.

(5) An air operator certificate holder shall, promptly upon its completion, prepare a report of each major modification or major repair of an airframe, aircraft engine, propeller, or appliance of an aircraft that it operates.

(6) An air operator certificate holder shall submit a copy of each report of a major modification to the Authority, and shall keep a copy of each report of a major repair available for inspection.

(7) The Authority may issue an approval for the design of a modification, of a repair or of a replacement part shall do so on the basis of satisfactory evidence that the aircraft is in compliance with airworthiness requirements used for the issuance of the type certificate, its amendments or later requirements when determined by the State.

(8) A major modification or repair to an aircraft shall be accomplished in accordance with design data approved by, or on behalf of, or approved by the Authority, such that the modification or repair design conforms to applicable standards of airworthiness.

(9) For purposes of this Part —

"major modification" means a type design change not listed in the aircraft, aircraft engine or propeller specifications that might appreciably affect the mass and balance limits, structural strength, performance, power plant operation, flight characteristics or other qualities affecting airworthiness or environmental characteristics, or that will be embodied in the product according to non-standard practices;

"major repair" means any repair of aeronautical product that might appreciably affect the structural strength, performance, power plant, operation flight characteristics or other qualities affecting airworthiness or environmental characteristics, or what is embodied in the product using non-standard practices;

"minor modification" means a modification other than a major modification;

"minor repair" means a repair other than a major repair;

"modification" means an alteration of an aircraft or aeronautical product in conformity with an approved standard; and

"repair" means a design change to an aeronautical product intended to restore it to an airworthy condition and to ensure that the aircraft continues to comply with the design aspects of the airworthiness requirements used for the issuance of a type certificate for the aircraft type after it has been damaged or subjected to wear.

(10) A major repair to an aeronautical product shall be carried out in accordance with design data approved by, or on behalf of, or accepted by the Authority of the state of registry such that the repair or modification design conforms to applicable standards of airworthiness.

(11) A person or organisation repairing an aircraft or component shall assess the damage and repair it against the published repair data of the organisation responsible for the type design and the actions shall be taken if the damage is beyond the limits or outside the scope of such data in which case the repair shall be performed, requesting technical support from the type certificate holder and final approval by the Authority of the particular repair data.

(12) A supplementary type certificate shall be issued for all major design changes to type certificated products when the change is not so extensive as to require a new type certificate.

(13) A minor modification shall be performed in accordance with the airworthiness requirements of the organisation responsible for the type design.

(14) The approval procedures for a modification to an aeronautical product are intended to permit the Authority to agree that the applicant has considered the appropriate airworthiness and environmental standards and demonstrate that the design change complies with those standards.

Aircraft maintenance programme

83. (1) An operator shall provide for use and guidance of maintenance and operational personnel concerned, a maintenance programme, approved by the state of registry, containing the information required under subregulations (5) and (6).

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

(3) An air operator certificate holder's aircraft maintenance programme and any subsequent amendment shall be submitted for approval to the Authority, and copies of the amendment shall be promptly furnished to all organisations or persons to whom the maintenance programme has been issued.

(4) The Authority's approval shall be based on prior approval by the state of design, or where appropriate, upon the air operator certificate holder complying with recommendations provided by the Authority.

(5) An air operator certificate holder shall ensure that each aircraft is maintained in accordance with the air operator certificate holder's approved maintenance programme which shall include —

(*a*) maintenance tasks and the intervals in which these are to be performed, taking into account the anticipated utilisation of the aircraft;

(*b*) when applicable, a continuing structural integrity programme;

(*c*) procedures for changing or deviating from paragraphs (*a*) and (*b*); and

(*d*) when applicable, condition monitoring and reliability programme for aircraft systems, components, and power plants.

(6) Maintenance tasks and intervals that have been specified as mandatory in approval of the type design shall be identified as such.

(7) An air operator certificate holder shall not provide for use by its personnel in commercial air transport a maintenance programme or a portion thereof, which has not been reviewed and approved for the air operator certificate holder by the Authority.

(8) An approval by the Authority of an air operator certificate holder's maintenance programme and any subsequent amendments shall be noted in the AOC.

(9) An air operator certificate holder who contravenes this regulation commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Reliability programme

84. (1) A maintenance programme for each aircraft shall contain where applicable, condition monitoring and reliability programme descriptions for aircraft systems, components and power plants.

(2) A reliability program shall be required where —

(*a*) the aircraft maintenance programme is based upon MSG-3 logic;

(*b*) the aircraft maintenance programme includes condition monitored components;

(*c*) aircraft maintenance programme does not include overhaul time periods for all significant system components, the failure of which could hazard the aircraft safety; or

(*d*) when specified by the manufacturer's Maintenance Planning Document MPD or Maintenance Review Board MRB.

(3) A reliability program shall not be developed for aircraft not considered as large aircraft or that contain overhaul time periods for all significant aircraft system components.

(4) The purpose of a reliability program shall be to ensure that the aircraft maintenance program tasks are effective and their periodicity is adequate.

(5) A reliability program shall provide an appropriate means of monitoring the effectiveness of the maintenance programme and where a reliability program is required and it results in —

(*a*) the escalation or deletion of a maintenance task; or

(*b*) the de-escalation or addition of a maintenance task,

the air operator certificate holder shall carry out the necessary tasks to ensure amendment of the maintenance programme with the approval of the Authority.

Authority to perform and approve maintenance, preventive maintenance, modifications

85. (1) An air operator certificate holder who is not approved as an approved maintenance organisation may perform and approve maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or a part thereof for return to service, if approved in the operations specifications, as provided in its maintenance programme and maintenance control manual.

(2) An air operator certificate holder may make arrangements with an approved maintenance organisation, appropriately rated, for the performance of maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or part thereof as provided in its maintenance programme and maintenance control manual.

(3) An air operator certificate holder who is not approved as an approved maintenance organisation shall use an individual appropriately licensed and rated by the Authority to approve maintenance, preventive maintenance, or modifications of any aircraft, airframe, aircraft engine, propeller, or appliance for return to service after performing or supervising in accordance with technical data approved by the Authority.

Licence requirements for a technician- Air Operator Certificate holder using equivalent system

86. (1) A person who is directly in charge of maintenance, preventive maintenance, or modification, of any aircraft, airframe, aircraft engine, propeller, appliance, or component, or part thereof and each person performing required inspections and approving for return to service the maintenance performed shall be a technician or repair specialist appropriately licensed and rated by the Authority.

(2) A person who is directly in charge of maintenance, preventive maintenance, or modification, of any aircraft, airframe, aircraft engine, propeller, appliance, or component or part thereof shall be on site but need not physically observe and direct each worker constantly, but shall be available for consultation and decision on matters requiring instruction or decision from higher authority than that of the persons performing the work.

(3) For purposes of this regulation "a person directly in charge" means person assigned to a position in which he is responsible for the workshop or station that performs maintenance, preventive maintenance, modifications or other functions affecting aircraft airworthiness.

Rest and duty limitations for persons performing maintenance functions

87. (1) A person shall not assign or perform maintenance functions for aircraft certified for commercial air transport, unless that person has had a minimum rest period of 8 hours prior to the start of duty.

(2) A person shall not be scheduled to perform maintenance functions for aircraft certified for commercial air transport for more than 12 consecutive hours of duty.

(3) A person performing maintenance functions for aircraft certified for commercial air transport may be continued on duty for —

(*a*) up to 16 consecutive hours; or

(*b*) 20 hours in 24 consecutive hours,

in situations involving unscheduled aircraft unserviceability.

(4) A person performing maintenance functions for aircraft following an unscheduled duty period shall have a mandatory rest period of 10 hours.

(5) An air operator certificate holder shall relieve a person performing maintenance functions from all duties for 24 consecutive hours during any seven consecutive day period.

PART VIII — *Air Operator Certificate Holder's Security Management*

Security requirements

88. (1) An air operator certificate holder shall ensure that all personnel are familiar, and comply with, the relevant requirements of the national aviation security programmes of the Authority.

(2) The requirements of the national aviation security programmes and the subsequent operator's security programme shall apply to all commercial aircraft operations whether domestic or international.

Security training programmes

89. (1) An air operator certificate holder shall establish and maintain a training programme to acquaint employees with preventive measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aeroplane so that they contribute to the prevention of acts of sabotage or other forms of unlawful interference.

(2) The minimum security training programme shall include —

(*a*) determination of the seriousness of any occurrence;

(*b*) crew communication and coordination;

(*c*) appropriate self-defence responses;

(*d*) use of non-lethal protective devices assigned to crew members, whose use is authorised by the state of the operator;

(*e*) live situational training exercises regarding various threat conditions;

(*f*) flight deck procedures to protect the aircraft;

(*g*) aircraft search procedures and guidance on least-risk bomb locations where practicable;

(*h*) crew preventative measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aircraft; and

(*i*) an understanding of terrorists behaviour so as to facilitate the ability of crew members to cope with hijacker behaviour and passenger responses.

(3) An air operator certificate holder shall provide specialised means of attenuating and directing the blast for use at the least-risk bomb location.

(4) Where the operator accepts the carriage of weapons removed from passengers, the aeroplane should have provision for stowing such weapons in a place so that they are inaccessible to any person during flight time.

Reporting acts of unlawful interference

90. A pilot-in-command or, in his or her absence, an air operator certificate holder shall submit, without delay, a report of an act of unlawful interference on board an aircraft to the designated local authority of the State over whose territory the act of unlawful interference was committed and to the Authority.

Aircraft search procedures checklist

91. (1) An air operator certificate holder 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 an aeroplane 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 under subregulation (1) shall be supported by guidance on the appropriate course of action to be taken should a bomb or suspicious object be found and information on the least-risk bomb location specific to the aeroplane.

Flight crew compartment doors-security procedures

92. (1) A flight crew compartment door on aircraft operated for the purpose of carrying passengers shall be capable of being locked from within the compartment in order to prevent unauthorised access.

(2) An air operator certificate holder shall have an approved means by which the cabin crew can discreetly notify the flight crew in the event of suspicious activity or security breaches in the cabin.

(3) A passenger carrying aircraft shall, where practicable, 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.

(4) The flight crew compartment 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.

(5) Means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

Flight crew compartment doors, large aeroplanes-security procedures

93. (1) A passenger carrying aeroplane —

(*a*) of a maximum certificated take-off mass in excess of 54 500 kg; or

(*b*) of a maximum certified take-off mass in excess of 45 500 kg; 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, grenade shrapnel, resist forcible intrusion by unauthorised persons, and shall be capable of being locked and unlocked from either pilots station.

(2) A flight crew compartment 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.

(3) Means shall be provided for monitoring from either pilot's station the entire door area outside the flight crew compartment to identify persons requesting entry and to detect suspicious behaviour or potential threat.

PART IX — *Foreign Air Operations*

Authorisation for foreign air operator to operate in Botswana

94. (1) A foreign air operator shall not perform any operations in Botswana except in accordance with an AOC that has been issued by the Authority or validated in accordance with this Part.

(2) A foreign air operator shall make an application for validation accompanied by a fee as set out in Schedule 2.

(3) Any person who operates an aircraft in commercial air transport without a validation certificate issued by the Authority under regulation 96 commits an offence and is liable to a fine not exceeding P5 000 000, or to imprisonment for a term not exceeding 10 years, or to both.

Surveillance of operations by foreign operator

95. (1) The Authority shall recognise as valid an AOC 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.

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

(3) The operator shall meet and maintain the requirements established by the States in which the operations are conducted.

Application for authority to operate in Botswana

96. (1) An application by a foreign air operator for approval to operate in Botswana shall be made in a manner determined by the Authority and shall be accompanied by the following —

(*a*) the AOC and associated operations specifications issued by the authority of the state of the operator;

(*b*) current registration and airworthiness certificates issued or validated by the state of registry;

(*c*) insurance certificate; and

(*d*) operational procedures and practices of the operator.

(2) In the case of a wet-leased aircraft, the application shall be accompanied by a copy of the approval of the authority of the state of the operator, with identification of the operator that exercises operational control of the aircraft.

Issue of validation certificate

97. (1) The Authority may issue a validation certificate to a foreign air operator in Form A set out in the Schedule 22 to operate within Botswana upon payment of fees as set out in Schedule 2 where it is satisfied —

(*a*) that the holder of the validation certificate shall conduct operations into, within or from Botswana;

(*b*) that the foreign AOC issued by the other contracting state was issued under the applicable standards specified in Annex 6;

(*c*) with the safety oversight capabilities and record of the state of the operator;

(*d*) with operational procedures and practices of the operator; and

(*e*) in the case of an operator providing scheduled international air services, that there is an air services agreement, with a safety clause, allowing the foreign air operator to operate in Botswana.

(2) Where an air operator certificate holder that is engaged in operations under a validation certificate issued by the Authority has its AOC or its associated operations specifications suspended, revoked or its validity affected in any similar manner, or provisions related to operations in the state of the operator amended, the foreign air operator shall inform the Authority in writing within 30 days of the effective date of such action.

(3) A validation certificate shall contain —

(*a*) the operator's full name;

(*b*) the date of issue and duration of the validation certificate;

(*c*) the operator's principal business address and contact details for operational management;

(*d*) the operator's business address and contact details in Botswana;

(*e*) a statement authorising the foreign air operator to operate in Botswana; and

(*f*) any limitations.

Conditions of validation certificate

98. The Authority shall issue the validation certificate with the following Conditions —

(*a*) a statement that the validation certificate is issued on the basis of an AOC that is in effect and that notification of any changes to the original AOC or related conditions or limitations affecting operations by the operator in Botswana shall be submitted by the foreign air operator in writing to the Authority within 30 days of such a change;

(*b*) a statement that the validation certificate ceases to have effect upon the expiry, suspension or revocation or any similar action in respect of the foreign air operator's certificate; and

(*c*) a statement that the foreign air operator shall comply with the authorisations, conditions and limitations of its AOC operations specifications while operating in Botswana.

Duration of validation certificate

99. (1) A validation certificate shall remain in force subject to regulations 85 and 86 and as long as the foreign AOC on which it is based remains valid unless it is suspended or revoked by the authority in the State of issue.

(2) A validation certificate shall expire at the end of the 12th month following the last commercial air transport operation in Botswana to which the validation applies.

Issue of duplicate validation certificate

100. A foreign air operator whose validation certificate is lost, destroyed or mutilated may, by application to the Authority, and on payment of the fees set out in Schedule 2, obtain a duplicate validation certificate.

Suspension of validation certificate

101. The Authority may suspend a validation certificate where —

(*a*) there exists any condition or information which is subject to verification; or

(*b*) it is established that the certificate holder does not meet the requirements of these Regulations.

Revocation of validation certificate

102. A validation certificate shall be revoked by the Authority where —

(*a*) the aircraft is destroyed or it is permanently withdrawn from use;

(*b*) there is termination of a charter, lease or hire purchase agreement resulting in the change of ownership of the air operator;

(*c*) the holder of the validation certificate has been convicted of an offence under the Act or under these Regulations;

(*d*) the foreign air operator applies for such revocation for purposes of carrying out commercial air operations in another State or for any other purpose; or

(*e*) the Authority establishes that the certificate holder does not meet the requirements of these Regulations.

Surrender of validation certificate

103. The holder of an expired, suspended or revoked validation certificate shall surrender the validation certificate to the Authority within 14 days from its expiry, suspension or revocation.

Exemptions

104. The Authority may exempt a foreign air operator engaged in commercial air transport operations under an AOC issued by the state of the operator from compliance with a provision of this Part in respect of the aircraft where —

(*a*) it is satisfied that under the foreign air operator's AOC and operations specifications it is required to comply with an equivalent provision of no less a standard in respect of the safe operation of the aircraft than the provision of this Part from which an exemption is sought; and

(*b*) the operation is conducted on an infrequent and non-scheduled basis.

105. A foreign air operator of an aircraft on which a flight recorder is carried shall preserve the original recorded data for recorder recordings flight recorders within the meaning of Annex 13 for a period of 60 days unless otherwise directed by the Authority.

Preservation, production and use of flight recorder recordings

106. A foreign air operator shall ensure that any person authorised by the Authority is permitted at any time, without prior notice, to board any foreign aircraft within Botswana operated for commercial air transportation, to —

Authority to inspect

(*a*) inspect the documents and manuals required by;
(*b*) conduct an inspection of the aircraft; or
(*c*) take appropriate action when necessary to preserve safety when the aircraft being inspected has sustained or it was ascertained that it sustained damage in Botswana.

107. (1) A foreign air operator shall —

Documents, manuals and records

(*a*) allow persons authorised by the Authority access to any documents, manuals and records which are related to flight operations and maintenance; and
(*b*) produce such documents, manuals and records, when requested to do so by the Authority within a reasonable period of time.

(2) A pilot-in-command shall show, after a reasonable period of time, the documentation, manuals and records requested by the Authority and required by the Convention to be carried on board the aircraft.

PART X — *General Provisions*

108. (1) The state of the operator shall ensure that operators with no specific approval to transport dangerous goods have established a dangerous goods —

Dangerous goods carriage (Cap. 71:01 (Sub. Leg.))

(*a*) training programme that meets the requirements of Civil Aviation (Dangerous Goods) Regulations, the applicable requirements of the Technical Instructions, Part 1, Chapter 4, and the requirements of the State's regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals; and
(*b*) policies and procedures in its operations manual to meet, at a minimum, the requirements of Civil Aviation (Dangerous Goods) Regulations, the Technical Instructions and the State's regulations 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 of the operator and the State in which it occurred any —
    (*aa*) occasions when undeclared dangerous goods are discovered in cargo or mail;
    (*bb*) dangerous goods accidents and incidents; and
    (*cc*) procedures relating to exceptions related to dangerous goods carried by passengers (duty free items, medical equipment and oxygen tanks amongst others)

(2) The state of the operator shall issue a specific approval for the transport of dangerous goods and ensure that the operator establishes a dangerous goods —

(*a*) training programme that meets the requirements in the Technical Instructions, Part 1, Chapter 4, Table 1-4, and the requirements of the State regulations, as appropriate. Details of the dangerous goods training programme shall be included in the operator's operations manuals; and

(*b*) policies and procedures in its operations manual to meet, at a minimum, the requirements of Civil Aviation (Dangerous Goods) Regulations, the Technical Instructions and the State's regulations to enable operator personnel to —

(i) identify and reject undeclared or misdeclared dangerous goods, including COMAT classified as dangerous goods, and

(ii) report to the appropriate authorities of the state of the operator and the state in which it occurred any —

(*aa*) occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail; and

(*bb*) dangerous goods accidents and incidents;

(iii) report to the appropriate authorities of the state of the operator and the state of origin any occasions when dangerous goods are discovered to have been carried,

(*aa*) when not loaded, segregated, separated or secured in accordance with the Technical Instructions, Part 7, Chapter 2; and

(*bb*) without information having been provided to the pilot-in-command;

(iv) accept, handle, store, transport, load and unload dangerous goods, including COMAT classified as dangerous goods as cargo on board an aircraft; and

(v) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo.

(3) The operator shall ensure that all personnel, including third-party personnel, involved in the acceptance, handling, loading and unloading of cargo are informed of the operator's specific approval and limitations with regard to the transport of dangerous goods.

(4) The Civil Aviation (Dangerous Goods) Regulations shall to all aircraft operated for commercial purposes for the carriage of passengers.

Advertising and marketing information

109. An air operator certificate holder shall ensure that all advertising and marketing information regarding the provision of services under the air operator certificate is complete, factual and accurate.

Search and copy of documents

110. Any person who wishes to search and make a copy of any certificate, validation or any other document shall pay a fee as set out in Schedule 2.

In-flight fuel management

111. (1) The operator shall establish policies and procedures, approved by the state of the operator, to ensure that in-flight fuel checks and fuel management are performed.

(2) A 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) A pilot-in-command shall request delay information from ATC 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) A pilot-in-command shall advise ATC of a minimum fuel state by declaring minimum fuel when, having committed to land at a specific aerodrome, the pilot calculates that any change to the existing clearance to that aerodrome may result in landing with less than the planned final reserve fuel.

(5) A 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

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

Oxygen supply

113. (1) The approximate altitudes in the international standard atmosphere corresponding to the values of absolute pressure used in the text shall be —

(*a*) 700 hPa : 3 000 : 10 000;

(*b*) 620 hPa : 4 000 : 13 000; and

(*c*) 376 hPa : 7600 : 25 000.

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

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

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

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

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

Transport of items in the cargo compartment

114. (1) The Authority shall ensure that an operator establishes policies and procedure for the transport of items in the cargo compartment, which include the conduct of a specific safety risk assessment.

(2) The safety risk assessment referred to in subregulation (1) shall include —

(*a*) hazards associated with the properties of the items to be transported;

(*b*) capabilities of the operator;
(*c*) operational considerations;
(*d*) capabilities of the aeroplane and its systems;
(*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

115. (1) The elements of the cargo compartment fire protection system, as approved by the state of design or state of registry, and a summary of the demonstrated cargo compartment fire protection certification standards, shall be provided in the aeroplane flight manual or other documentation supporting the operation of the aeroplane.

(2) An operator shall establish policy and procedure that addresses the items to be transported in the cargo compartment.

(3) The policy and procedure referred to in subregulation (2) shall ensure that, in the event of a fire involving the items referred to in subregulation (2), the fire can be detected and suppressed or contained by the elements of the aeroplane design associated with cargo compartment fire protection, until the aeroplane makes a safe landing.

Time capability of cargo compartment fire suppression system

116. (1) A flight 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 state of the operator.

(2) A cargo compartment fire suppression time capabilities shall be identified in the relevant aeroplane documentation when it is to be considered for the operation.

Penalties

117. Any person who contravenes any of the provisions of these Regulations for which a penalty is not provided commits an offence and is liable to a fine not exceeding P5 000 000, or a term of imprisonment for a term not exceeding 10 years, or to both.

Revocation of S.I. No. 19 of 2013

118. The Civil Aviation (Air Operator Certification and Administration) Regulations, 2013 are hereby revoked.

Savings and transitional provisions

119. Any certificate or approval issued under the revoked Regulations shall have the same effect as if issued under these Regulations or until it expires.

SCHEDULES

SCHEDULE 1
(Regulation 4 (5), 7 (1), 9 (1) (2), 12 (1) and 25 (2))

FORM A – AIR OPERATOR CERTIFICATE

Part I — Air Operator Certificate		
1	[2]The Government of Botswana [3]Civil Aviation Authority of Botswana	
[4]AOC No.: [5]Expiry Date:	[6]Operator's Name: [7]Dba trading name: [8]Operator Address: [9]Telephone: [10]Fax: E-mail:	Operational Points of Contact: Contact details, at which operational management can be contacted without undue delay, are listed: [11] _____ _____ _____
This certificate certifies that [12]_____ is authorised to perform commercial air operations, as defined in the attached operations specifications, in accordance with the operations manual and the[13]		
[14]Date of issue:	[15]Name and Signature: Title:	

Notes.—

1. For use of the Authority.
2. Replace by the name of the Authority.
3. Replace by the identification of the issuing authority of the state of the operator.
4. Unique AOC number, as issued by the state of the operator.
5. Date after which the AOC ceases to be valid (dd-mm-yyyy).
6. Replace by the operator's registered name.
7. Operator's trading name, if different. Insert "dba" before the trading name (for "doing business as").
8. Operator's principal place of business address.
9. Operator's principal place of business telephone and fax details, including the country code. E-mail to be provided if available.
10. The contact details include the telephone and fax numbers, including the country code, and the e-mail address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew competency, dangerous goods and other matters as appropriate.

11. Insert the controlled document, carried on board, in which the contact details are listed, with the appropriate paragraph or page reference, e.g.: "Contact details are listed in the operations manual, Gen/Basic, Chapter 1, 1.1" or "... are listed in the operations specifications, page 1" or "... are listed in an attachment to this document".
12. Operator's registered name.
13. Insertion of reference to the appropriate civil aviation regulations.
14. Issuance date of the AOC (dd-mm-yyyy).
15. Title, name and signature of the authority representative. In addition, an official stamp may be applied on the AOC.

PART II – OPERATIONS SPECIFICATIONS
(subject to the approved conditions in the operations manual)

CAAB CONTACT DETAILS

Telephone:_____ Fax:_____ Email: _____

AOC#: _____ Operator name: _____ Date: _____

Signature: _____

Aircraft Model: _____

Types of operation: Commercial air transportation ☐ Passengers ☐ Cargo ☐
Other: _____

Area(s) of operation:

Special limitations:

SPECIFIC APPROVAL	YES	NO	DESCRIPTION	REMARKS
Dangerous goods	☐	☐		
Low visibility operations				
Approach and landing	☐	☐	CAT:__ RVR: ___ m DH: ___ ft.___	
Take-off	☐	☐	RVR: ___ m___	
RVSM ☐ N/A	☐	☐		
EDTO ☐ N/A	☐	☐	Threshold time: ___ minutes Maximum diversion time: ____ minutes	

AR navigation specifications for PBN operations	☐	☐		
Continuing airworthiness	☒	☒		
EFB	☒	☒		
Other	☐	☐		

Notes.—

1. Telephone and fax contact details of the authority, including the country code. Email to be provided if available.
2. Insert the associated AOC number.
3. Insert the operators ' registered name and the operators' trading name, if different. Insert "dba" before the trading name (for "doing business as").
4. Issuance date of the operations specifications (dd-mm-yyyy) and signature of the authority representative.
5. Insert the Commercial Aviation Safety Team (CAST)/ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232).
6. Other type of transportation to be specified (e.g. emergency medical service).
7. List the geographical area(s) of authorized operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries).
8. List the applicable special limitations (e.g. VFR only, day only).
9. List in this column the most permissive criteria for each approval or the approval type (with appropriate criteria).
10. Insert the applicable precision approach category (CAT II, IIIA, IIIB or IIIC). Insert the minimum RVR in metres and decision height in feet. One line is used per listed approach category.
11. Insert the approved minimum take-off RVR in metres. One line per approval may be used if different approvals are granted.
12. List the airborne capabilities (i.e. automatic landing, HUD, EVS, SVS, and CVS) and associated operational credit(s) granted.
13. Not applicable (N/A)" box may be checked only if the aircraft maximum ceiling is below FL 290.
14. If extended diversion time operations (EDTO) approval does not apply based on the provisions in Chapter 4, 4.7, select "N/A". Otherwise, a threshold time and maximum diversion time must be specified.
15. The threshold time and maximum diversion time may also be listed in distance (NM), as well as the engine type.
16. Performance-based navigation (PBN): one line is used for each PBN AR navigation specification approval (e.g. RNP AR APCH), with appropriate limitations listed in the "Description" column.
17. Insert the name of the person/organization responsible for ensuring that the continuing airworthiness of the aircraft is maintained and the regulation that requires the work, i.e. within the AOC regulation or a specific approval (e.g. EC2042/2003, Part M, and Subpart G).
18. List the EFB functions with any applicable limitations.
19. Other authorizations or data can be entered here, using one line (or one multi-line block) per authorization (e.g. special approach authorization, MNPS, approved navigation performance).

FORM B
PROSPECTIVE OPERATOR'S PRE-ASSESSMENT STATEMENT

(Regulation 6 (1))

Prospective Operator's Pre-assessment Statement (POPS)
To be completed by Air Operator

Section 1A. to be completed by all applicants

1. Name and mailing address of the company (include business name if different from company name)	2. Address of the principal (main) base where operations will be conducted, include address of secondary base of operation if appropriate (do not use a post office box).
3. Proposed start-up date (dd/mm/yyyy):	4. Requested company identifier in order of preference 1. 2. 3.

5. Management and key staff personnel

Name (surname) (first name/s)	Title	Telephone and address if different from company (include country code)

Section 1B. to be completed by air operator and/or approved maintenance organization

6. ☐ Air Operator intends to perform its maintenance as an AMO (complete block 7 & 8)

☐ Air Operator intends to arrange for maintenance and inspections of aircraft and associated equipment to be performed by others (complete blocks 7 & 11)

☐ Air Operator intends to perform maintenance under an equivalent system (complete blocks 7 & 11)

☐ Approved Maintenance Organization (complete block 8)

7. Proposed type of operation (check as many as applicable)	8. Proposed type of Maintenance Organization Rating
Air Operator Certificate – Part 8/9 ☐ Passenger ☐ Cargo Only	Approved Maintenance Organization ☐ Air Frame ☐ Computers ☐ Power plant ☐ Instruments

☐ Scheduled Operations ☐ Charter Flight Operations	☐ Propellers ☐ Accessories ☐ Avionics ☐ Specialized Services

Section 1C. Blocks 9 & 10 to be completed by Air Operator		
9. Aircraft Data (For foreign registered aircraft, please provide a copy of the lease agreement)		10. Geographic area of intended operations and proposed route structure
Numbers and types of aircraft (by make model & series)	Number of passenger seats and/ or cargo capacity	

Section 1.D to be completed by all applicants		
11. additional information that provides a better understanding of the proposed operation or business (attach additional sheets if necessary)		
12. proposed training (aircraft or Simulator)		
13. the statement on this form denotes an intent to apply for a CAAB certificate		
Type of Organization:		
Signature:	Date (dd/mm/yyyy):	Name and Title:
Section 2. to be completed by CAAB Official		
Received by (Name and Office):	Date received (dd/mm/yyyy):	
Date forwarded to Director Flight Safety (dd/mm/yyyy):		For: ☐ Action ☐ Information only
Remarks:		
Section 3. to be completed by the office of the Director Flight Safety		
Received by:	Pre-application number:	
Date (dd/mm/yyyy):	Assigned Certification number:	
Local office assigned responsibility:	Date forwarded to local office (dd/mm/yyyy):	
Remarks:		

Instructions for completing POPS Form

Section 1A. All applicants shall complete this section.

1. Enter the company's official name and mailing address. Include any other business name (if different from the company name).
2. This address shall be the physical location where primary operating activities are based. It is where the offices of management required by regulations are located. Include secondary business address of operation and identify the type of operation conducted.
3. Enter the estimated date when operations or services will begin.
4. This information will be used to assign a company identification number. You may indicate up to three-letter identifiers, such as ABC, XYZ, etc. If all choices have been assigned to other operators or maintenance organizations, a randomly selected number will be assigned.
5. Enter the names, titles and telephone numbers of management personnel required by the regulations/ as required.

Note: management personnel qualification requirements are specified in the Regulations.

Section 1B. All applicants shall complete this section.

1. Indicate if the air operator intends to perform maintenance as an Approved Maintenance Organization (AMO) or intends to contract out all or part of its maintenance, or perform its maintenance using an equivalent system.
2. The proposed type of operation shall be indicated. Check as many boxes as applicable to the intended operation.
3. The proposed type of maintenance organization and ratings shall be indicated. Check as many boxes as applicable to the intended operation.

Section 1C. Air Operators shall complete Blocks 9 & 10.

1. The aircraft data is to be provided here. Indicate number and types of aircraft by make, model, series and number of passenger seats and/or cargo payload capacity. For foreign registered aircraft, provide a copy of the lease agreement, all aircraft documentation (C of A, C of R, etc) proof of trained crew.
2. Indicate geographic areas of intended operation and proposed route structure.

Section 1D. All applicants shall complete this section.

1. Show any information that would assist CAAB personnel in understanding the type and scope of operation or services to be performed by the applicant. If an air operator intends to arrange for maintenance and inspections of its aircraft and/or associated equipment identify the AMO selected and a list of the maintenance or inspections it proposes to perform. Also provide all written contracts with this form, if applicable.
2. Identify the type of aircraft and/or simulators.
   For AOC's identify the type of aircraft and/or simulators intended to be used.
   For AMO's identify the type of aircraft by make and model. In addition identify the type of training that the Quality Assurance staff, certifying staff and maintenance personnel will receive based on the ratings requested.
3. The POPS Form denotes an intent to seek CAAB certification as an air operator or maintenance organization. It must be signed as follows:

Type of operation:	Authorized signature:
Individual, Partnership, Company, Corporation, Association,	Owner, At least one partner At least one Authorized Officer

The accountable executive must sign the POPS Form. If another individual who is not the accountable executive signs the POPS Form, the Accountable executive must submit with the POPS Form a letter addressing his or her authority to do so.

Sections 2 and 3. For CAAB use.

SCHEDULE 2

(Regulation 6 (5), 7 (3) (4), 11 (1), 12 (2), 94 (2), 97 (1), 100 and 110)

FEES

		P
Regulation 6 (5)	Application for certificate	5500
Regulation 7 (3)	Issue of AOC	82.50 for every 100kg or part thereof of the aggregate weight of all aircraft to be operated under the certificate
Regulation 7 (4)	Duplicate of AOC	30 for every 100kg or part thereof of the aggregate weight of all aircraft to be operated under the certificate
Regulation 11 (1)	Amendment of AOC	27.50 for every 100kg or part thereof
Regulation 12 (2)	Renewal of AOC	82.50 for every 100kg or part thereof of the aggregate weight of all aircraft to be operated under the certificate
Regulation 94 (2)	Application for validation	7500
Regulation 97 (1),	Issue or renewal of validation or for use of foreign registered aircraft for commercial air transport operations.	82.50 for every 100kg or part thereof of the aggregate weight of all aircraft to be operated under the certificate
Regulation 100	Duplicate of validation	30 for every 100kg or part thereof of the aggregate weight of all aircraft to be operated under the certificate
	aircraft not exceeding 5,700 kg (weight)	500 per month, or part thereof
	aircraft exceeding 5,700 kg (weight)	800 per month, or part thereof
Regulation 110	Searches and copies of documents/ certificates or excerpts of documents	100

SCHEDULE 3
(Regulation 18 (4))

MANAGEMENT PERSONNEL REQUIRED FOR COMMERCIAL AIR TRANSPORT OPERATIONS

(*a*) Each air operator certificate holder shall make arrangements to ensure continuity of supervision if operations are conducted in the absence of any required management personnel.

(*b*) Required management personnel shall be contracted to work sufficient hours such that the management functions are fulfilled.

(c) A person serving in a required management position for an air operator certificate holder may not serve in a similar position for any other air operator certificate holder, unless an exemption is issued by the Authority.

(*d*) The minimum initial qualifications for an Operations Manager are —

(i) an Airline Transport Pilot Licence (ATPL), and

(ii) 3 years' experience as Pilot In Command (PIC) in commercial air transport operations of large aircraft if the air operator certificate holder operates large aircraft, or either large or small aircraft if the air operator certificate holder operates only small aircraft,

Notwithstanding (d) above the Authority may accept a commercial pilot licence with instrument rating in lieu of the ATPL if the PIC requirements for the operations conducted require only a commercial pilots' licence.

(*e*) The minimum qualifications for a Chief Pilot are —

(i) an ATPL with the appropriate ratings for at least one of the aircraft used in the air operator certificate holder's operations, and

(ii) 3 years' experience as PIC in commercial air transport operations in large aircraft if the air operator certificate holder operates large aircraft, or in either large or small aircraft if the air operator certificate holder operates only small aircraft,

Notwithstanding (e) above the Authority may accept a commercial pilot licence with instrument rating in lieu of the ATPL if the PIC requirements for the operations conducted require only a commercial pilots' licence.

(*f*) The qualifications and attributes of a Safety Manager shall include —

(i) broad operational knowledge and experience in the function of the organisation including training management, aircraft operations, air traffic management, aerodrome operations and maintenance organisation management,

(ii) sound knowledge of safety management principles and practices,

(iii) good written and verbal communication skills,

(iv) well-developed interpersonal skills,

(v) computer literacy,

(vi) ability to relate to all levels, both inside and outside the organisation,

(vii) organisational ability,

(viii) ability to work unsupervised,

(ix) good analytical skills,

(x) leadership skills and an authoritative approach, and

(xi) worthy of respect from peers and management.

(*g*) The minimum entry qualifications for a Maintenance Manager are —

(i) an Aviation Maintenance Technician (AMT) licence with airframe and powerplant ratings;

(ii) 3 years' experience in maintaining the same category and class of aircraft used by the air operator certificate holder including 1 year in the capacity of returning aircraft to service; and

(iii) 1 year supervisory experience maintaining the same category and class of aircraft used by the air operator certificate holder.

(*h*) An air operator certificate holder may employ a person who does not meet the appropriate airman qualification or experience if the Authority issues an exemption finding that that person has comparable experience and can effectively perform the required management functions.

SCHEDULE 4
(Regulation 19 (5))

QUALITY SYSTEM

In order to show compliance with Regulation 16, an air operator certificate holder should establish its quality system in accordance with the instruction and information contained in the following paragraphs.

1. General

1.1Terminology

The terms used in the context of the requirement for an AOC's quality system have the following meaning —

"accountable executive" means the person approved by the Authority who has corporate authority for ensuring that all operations and maintenance activities can be financed and carried out to the standard required by the Authority, and any additional requirements defined by the operator.

"Quality assurance" as distinguished from quality control, involves activities in the business, systems, and technical audit areas and includes a set of predetermined, systemic actions which are required to provide adequate confidence that a product or service satisfies quality requirements.

1.2 Quality Policy

1.2.1 An operator shall establish a formal, written quality policy statement that is a commitment by the accountable executive as to what the quality system is intended to achieve. The quality policy should reflect the achievement and continued compliance with the [Model Regulations] together with any additional standards specified by the operator.

1.2.2 The accountable executive is an essential part of the operator's management organisation. With regard to the text in regulation 19(2) the term "accountable executive" is intended to mean the Chief Executive/President/Managing Director/ General Manager, etc. of the operator's organisation, who by virtue of his or her position has overall responsibility (including financial) for managing the organisation.

1.2.3 The accountable executive will have overall responsibility for the operator's quality system, including the frequency, format and structure of the internal management evaluation activities as prescribed in paragraph 3.9 below.

1.3 Purpose of the Quality System.

1.3.1 The quality system should enable the operator to monitor compliance with these Regulations, the operator's manual system, and any other standards specified by the operator, or the Authority, to ensure safe operations and airworthy aircraft.

1.4 Quality Manager

1.4.1 The function of the quality manager to monitor compliance with, and the adequacy of, procedures required to ensure safe operational practices and airworthy aircraft as required by these Regulations may be carried out by more than one person by means of different, but complementary, quality assurance programs.

1.4.2 The primary role of the quality manager is to verify, by monitoring activity in the fields of flight operations, maintenance, crew training and ground operations, that the standards required by the Authority, and any additional requirements defined by the operator, are being carried out under the supervision of the relevant required management personnel.

1.4.3 The quality manager should be responsible for ensuring that the quality assurance programme is properly established, implemented and maintained.

1.4.4 The quality manager should —

(*a*) report to the accountable executive;
(*b*) not be one of the required management personnel; and
(*c*) have access to all parts of the operator's, and as necessary, any sub contractor's organisation.

1.4.5 In the case of small/very small operators, the posts of the Accountable Manager and quality manager may be combined.

2. Quality System

2.1 Introduction.

2.1.1 The operator's quality system should ensure compliance with and adequacy of operational and maintenance activities requirements, standards, and operational procedures.

2.1.2 The operator should specify the basic structure of the quality system applicable to the operation.

2.1.3 The quality system should be structured according to the size and complexity of the operation to be monitored.

2.2 Scope

2.2.1 As a minimum, the quality system should address the following —

(*a*) the provisions of these Regulations;
(*b*) the operator's additional standards and operating practices;
(*c*) the operator's quality policy;
(*d*) the operator's organisational structure;
(*e*) responsibility for the development, establishment and management of the quality system;
(*f*) documentation, including manuals, reports and records;
(*g*) quality procedures;
(*h*) quality assurance program;
(*i*) the required financial, material and human resources; and
(*j*) training requirements.

2.2.2 The quality system should include a feedback system to the accountable manager to ensure that corrective actions are both identified and promptly addressed. The feedback system should also specify who is required to rectify discrepancies and non-compliance in each particular case, and the procedure to be followed if corrective action is not completed within an appropriate time scale.

2.3 Relevant Documentation

2.3.1 Relevant documentation includes the relevant part of the operator's manual system.

2.3.2 In addition, relevant document should include the following —

(*a*) quality policy;
(*b*) terminology;
(*c*) specified operational standards;
(*d*) a description of the organisation;
(*e*) the allocation of duties and responsibilities;
(*f*) operational procedures to ensure regulatory compliance;
(*g*) accident prevention and flight safety programme;
(*h*) the quality assurance programme, reflecting;
(*i*) schedule of the monitoring process;
(*j*) audit procedures;
(*k*) reporting procedures;
(*l*) follow-up and corrective action procedures;
(*m*) recording system;
(*n*) the training syllabus; and
(*o*) document control.

3. Quality Assurance Programme

3.1 Introduction

3.1.1 The quality assurance programme should include all planned and systematic actions necessary to provide confidence that all operations and maintenance are conducted in accordance with all applicable requirements, standards and operational procedures.

3.1.2 When establishing a quality assurance programme, consideration shall be given to at least the following —

(*a*) quality inspection;
(*b*) audit;
(*c*) auditors;
(*d*) auditor's independence;
(*e*) audit scope;
(*f*) audit scheduling;
(*g*) monitoring and corrective action; and
(*h*) management evaluation.

3.2 Quality Inspection

3.2.1 The primary purpose of a quality inspection is to observe a particular event/action/ document, etc. in order to verify whether established operational procedures and requirements are followed during the accomplishment of that event and whether the required standard is achieved.

3.2.2 Typical subject areas for quality inspections are —
(i) actual flight operations,
(ii) ground de-icing/anti-icing,
(iii) flight support services,
(iv) load control,
(v) maintenance,
(vi) technical standards, and
(vii) training standards.

3.2.3 Typical methods for quality inspections for maintenance include —
(*a*) product sampling – the part inspection of a representative sample of the aircraft fleet;
(*b*) defect sampling – the monitoring of defect rectification performance;
(*c*) concession sampling – the monitoring of any concession to not carry out maintenance on time;
(*d*) on time maintenance sampling - the monitoring of when (flying hours/ calendar time/flight cycles, etc.) aircraft and their components are brought in for maintenance; and
(*e*) sample reports of unairworthy conditions and maintenance errors on aircraft and components.

3.3 Audit

3.3.1 An audit is a systematic, and independent comparison of the way in whichman operation is being conducted against the way in which the published operational procedures say it should be conducted.

3.3.2 Audits should include at least the following quality procedures and processes —

(*a*) a statement explaining the scope of the audit;
(*b*) planning and preparation;
(*c*) gathering and recording evidence; and
(*d*) analysis of the evidence.

3.3.2 Techniques that contribute to an effective audit are —

(*a*) interviews or discussions with personnel;
(*b*) a review of published documents;
(*c*) the examination of an adequate sample of records;
(*d*) the witnessing of the activities that make up the operation; and
(*e*) the preservation of documents and the recording of observations.

3.4 Auditors

3.4.2 An operator should decide, depending upon the complexity of the operations, whether to make use of a dedicated audit team or a single auditor. In any event, the auditor or audit team should have relevant operational and/or maintenance experience.

3.4.3 The responsibilities of the auditors should be clearly defined in the relevant documentation.

3.5 Auditor's Independence

3.5.2 Auditors should not have any day-to-day involvement in the area of the operation and/ or maintenance activity that is to be audited. An operator may, in addition to using the services of full-time dedicated personnel belonging to a separate quality department, undertake the monitoring of specific areas or activities by the use of part-time auditors. An operator whose structure and size does not justify the establishment of full-time auditors, may undertake the audit function by the use of part-time personnel from within its own organisation or from an external source under the terms of an agreement approved by the Authority. In all cases the operator should develop suitable procedures to ensure that persons directly responsible for the activities to be audited are not selected as part of the auditing team. Where external auditors are used, it is essential that any external specialist is familiar with the type of operation and/or maintenance conducted by the operator.

3.5.3 The operator's quality assurance programme shall identify the persons within the company who have the experience, responsibility and authority to —

(*a*) perform quality inspections and audits as part of ongoing quality assurance;
(*b*) identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings;
(*c*) initiate or recommend solutions to concerns or findings through designated reporting channels;
(*d*) verify the implementation of solutions within specific time scales; and
(*e*) report directly to the quality manager.

3.6 Audit scope

3.6.2 Operators are required to monitor compliance with the operational and maintenance procedures they have designed to ensure safe operations, airworthy aircraft and the serviceability of both operational and safety equipment. In doing so they should as a minimum, and where appropriate, monitor the —

(*a*) organisation;
(*b*) plans and company objectives;
(*c*) operational procedures;
(*d*) flight safety;
(*e*) operator certification (AOC/operations specifications);
(*f*) supervision;
(*g*) aircraft performance;

(*h*) all weather operations;
(*i*) communications and navigational equipment and practices;
(*j*) mass, balance and aircraft loading;
(*k*) instruments and safety equipment;
(*l*) manuals, logs, and records;
(*m*) flight and duty time limitations, rest requirements, and scheduling;
(*n*) aircraft maintenance/operations interface;
(*o*) use of the MEL;
(*p*) maintenance programmes and continued airworthiness;
(*q*) airworthiness directives management;
(*r*) maintenance accomplishment;
(*s*) defect deferral;
(*t*) flight crew;
(*u*) cabin crew;
(*v*) dangerous goods;
(*w*) security; and
(*x*) training.

3.7 Audit Scheduling

3.7.2 A quality assurance program should include a defined audit schedule and a periodic review cycle area by area. The schedule should be flexible, and allow unscheduled audits when trends are identified. Follow-up audits should be scheduled when necessary to verify that corrective action was carried out and that it was effective.

3.7.3 An operator should establish a schedule of audits to be completed during a specified calendar period. All aspects of the operation should be reviewed within every 12 month period in accordance with the programme unless an extension to the audit period is accepted as explained below. An operator may increase the frequency of audits at its discretion but should not decrease the frequency without the agreement of the Authority. Audit frequency should not be decreased beyond a 24 month period interval.

3.7.4 When an operator defines the audit schedule, significant changes to the management, organisation, operation, or technologies should be considered as well as changes to the regulatory requirements.

3.8 Monitoring and Corrective Action

3.8.1 The aim of monitoring within the quality system is primarily to investigate and judge its effectiveness and thereby to ensure that defined policy, operational, and maintenance standards are continuously complied with. Monitoring activity is based upon quality inspections, audits, corrective action and follow-up. The operator should establish and publish a quality procedure to monitor regulatory compliance on a continuing basis. This monitoring activity shall be aimed at eliminating the causes of unsatisfactory performance.

3.8.2 Any non-compliance identified as a result of monitoring should be communicated to the manager responsible for taking corrective action or, if appropriate, the accountable executive. Such non-compliance should be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of appropriate corrective action.

3.8.3 The quality assurance programme should include procedures to ensure that corrective actions are taken in response to findings. These quality procedures should monitor such actions to verify their effectiveness and that they have been completed. Organisational responsibility and accountability for the implementation of corrective action resides with the department cited in the report identifying the finding. The accountable executive will have the ultimate responsibility for resourcing the corrective active action and ensuring, through the quality manager, that the corrective action has re-established compliance with the standard required by the Authority, and any additional requirements defined by the operator.

3.8.4 Corrective action. Subsequent to the quality inspection/audit, the operator shall establish —

(*a*) the seriousness of any findings and any need for immediate corrective action;
(*b*) the origin of the finding;
(*c*) what corrective actions are required to ensure that the non-compliance does not recur;
(*d*) a schedule for corrective action;
(*e*) the identification of individuals or departments responsible for implementing corrective action; and
(*f*) allocation of resources by the accountable executive, where appropriate.

3.8.5 The quality manager should —

(*a*) verify that corrective action is taken by the manager responsible in response to any finding of non-compliance;
(*b*) verify the corrective action includes the elements outlined in paragraph 3.8.4 above;
(*c*) monitor the implementation and completion of corrective action;
(*d*) provide management with an independent assessment of corrective action; implementation and completion; and
(*e*) evaluate the effectiveness of corrective action through follow-up process.

3.9 Management Evaluation

3.9.1 A management evaluation is a comprehensive, systematic, documented review by the management of the quality system, operational policies and procedures, and should consider —

(*a*) the results of quality inspections, audits and any other indicators; and
(*b*) the overall effectiveness of the management organisation in achieving stated objectives.

3.9.2 A management should identify and correct trends, and prevent, where possible, future non-conformities. Conclusions and recommendations made as a result of an evaluation should be submitted in writing to the responsible manager for action. The responsible manager should be an individual who has the authority to resolve issues and take action.

3.9.3 The accountable executive should decide upon the frequency, format and structure of internal management evaluation activities.

3.10 Recording

3.10.1 Accurate, complete and readily accessible records documenting the results of the quality assurance programme should be maintained by the operator. Records are essential data to enable an operator to analyse and determine the root causes of non-conformity, so that areas of non-compliance can be identified and addressed.

3.10.2 The following records should be retained for a period of five years —
(*a*) audit schedules;
(*b*) quality inspection and audit reports;
(*c*) responses to findings;
(*d*) corrective action reports;
(*e*) follow-up and closure reports; and
(*f*) management evaluation reports.

4. Quality Assurance Responsibility for Sub-Contractors

4.1 Sub-Contractors

4.1.1 Operators may decide to sub-contract out certain activities to external agencies for the provision of services related to areas such as —
(*a*) ground de-icing/anti-icing;
(*b*) maintenance;
(*c*) ground handling;
(*d*) flight support (including performance calculations, flight planning, navigation database and dispatch);
(*e*) training; and
(*f*) manual preparation.

4.1.2 The ultimate responsibility for the product or service provided by the sub-contractor always remains with the operator. A written agreement should exist between the operator and the sub-contractor clearly defining the safety related services and quality to be provided. The sub-contractor's safety related activities relevant to the agreement should be included in the operator's quality assurance programme.

4.1.3 The operator should ensure that the sub-contractor has the necessary authorisation/ approval when required and commands the resources and competence to undertake the task.

5. Quality System Training

5.1 General

5.1.1 An operator should establish effective, well planned and resourced quality related briefing for all personnel.

5.1.2 Those responsible for managing the quality system should receive training covering —

(*a*) an introduction to the concept of the quality system;
(*b*) quality management;
(*c*) the concept of quality assurance;
(*d*) quality manuals;
(*e*) audit techniques;
(*f*) reporting and recording; and
(*g*) the way in which the quality system will function in the company.

5.1.3 Time should be provided to train every individual involved in quality management and for briefing the remainder of the employees. The allocation of time and resources should be governed by the size and complexity of the operation concerned.

5.2 Sources of Training

5.2.1 Quality management courses are available from the various National or International Standards Institutions, and an operator should consider whether to offer such courses to those likely to be involved in the management of quality systems. Operators with sufficient appropriately qualified staff should consider whether to carry out in-house training.

6. Organisations with 20 or Less Full-Time Employees

6.1 Introduction.

6.1.1 The requirement to establish and document a quality system, and to employ a quality manager applies to all operators. References to large and small operators elsewhere in these Regulations are governed by aircraft capacity (i.e. more or less than 20 seats) and by mass (i.e. greater or less than 10 tonnes maximum take-off mass). Such terminology is not relevant when considering the scale of an operation and the quality system required. In the context of quality systems therefore, operators should be categorised according to the number of full time staff employees.

6.2 Scale of Operation

6.2.1 Operators who employ 5 or less full time staff are considered to be "very small" while those employing between 6 and 20 full time employees are regarded as "small" operators as far as quality systems are concerned. Full-time in this context means employed for not less than 35 hours per week excluding vacation periods.

6.2.2 Complex quality systems could be inappropriate for small or very small operators and the clerical effort required to draw up manuals and quality procedures for a complex system may stretch their resources. It is therefore accepted that such operators should tailor their quality systems to suit the size and complexity of their operation and allocate resources accordingly.

6.3 Quality System for Small/Very Small Operators

6.3.1 For small and very small operators it may be appropriate to develop a quality assurance programme that employs a checklist. The checklist should have a supporting schedule that requires completion of all checklist items within a specified timescale, together with a statement acknowledging completion of a periodic review by top management. An occasional independent overview of the checklist content and achievement of the quality assurance should be undertaken.

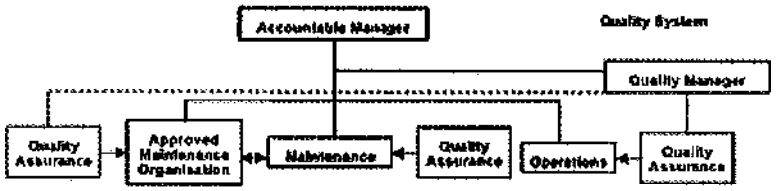
6.3.2 The "small" operator may decide to use internal or external auditors or a combination of the two. In these circumstances it would be acceptable for external specialists and or qualified organisations to perform the quality audits on behalf of the quality manager.

6.3.3 If the independent quality audit function is being conducted by external auditors, the audit schedule should be shown in the relevant documentation.

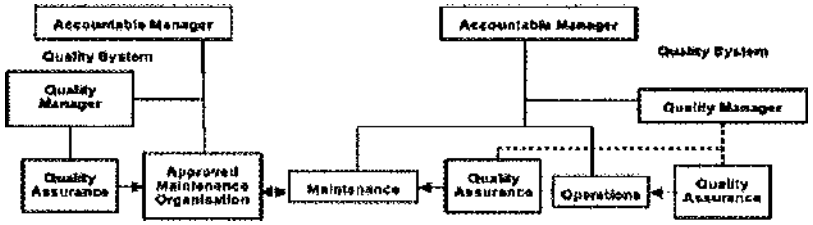
6.3.4 Whatever arrangements are made, the operator retains the ultimate responsibility for the quality system and especially the completion and follow-up of corrective actions.

7. Quality System

Organisation Examples —
The following diagrams illustrate two typical examples of Quality Organisations.
Quality System within the air operator certificate holder's organisation when the air operator certificate holder also holds an approval for maintenance.



Quality Systems related to an air operator certificate holder's organisation where aircraft maintenance is contracted out to an approved organisation which is not integrated with the air operator certificate holder.



Note: Quality System and Quality Audit Programme of the air operator certificate holder should assure that the maintenance carried out by the approved organisation is in accordance with requirements specified by the air operator certificate holder.

SCHEDULE 5
(Regulation 21 (1), 79 (2) and 80 (2))

VALIDITY PERIODS FOR RETENTION OF RECORDS

An operator shall ensure that the following information or documentation is retained for the periods shown in the table below.

Table of Record Retention

Flight Crew Records	
Flight, duty and rest time	2 years
Licence and medical certificate	Until 12 months after the flight crew member has left the employ of the operator
Ground and flight training (all types)	Until 12 months after the flight crew member has left the employ of the operator
Route and aerodrome/heliport qualification training	Until 12 months after the flight crew member has left the employ of the operator
Dangerous good training	Until 12 months after the flight crew member has left the employ of the operator
Security training	Until 12 months after the flight crew member has left the employ of the operator
Proficiency and qualification checks (all types)	Until 12 months after the flight crew member has left the employ of the operator
Cabin Crew Records	
Flight, duty and rest time	2 years
Licence, if applicable	Until 12 months after the cabin crew member has left the employ of the operator
Ground and flight training (all types) and qualification checks	Until 12 months after the cabin crew member has left the employ of the operator
Dangerous good training	Until 12 months after the cabin crew member has left the employ of the operator
Security training	Until 12 months after the cabin crew member has left the employ of the operator
Competency checks	Until 12 months after the cabin crew member has left the employ of the operator

Records for other AOC Personnel	
Training/qualification of other personnel for whom an approved training program is required in these Regulations	Until 12 months after the employee has left the employ of the operator.
Licence, if required, and medical certificate if required	Until 12 months after the employee has left the employ of the operator.
Proficiency or competency checks, if required	Until 12 months after the employee has left the employ of the operator.
Flight Preparation Forms	
Completed load manifest	3 months after the completion of the flight.
Mass and balance reports	3 months after the completion of the flight.
Dispatch releases	3 months after the completion of the flight.
Flight plans	3 months after the completion of the flight.
Passenger manifests	3 months after the completion of the flight.
Weather reports	3 months after the completion of the flight.
Flight Recorder Records	
Cockpit voice recordings	Preserved after an accident or incident for 60 days or longer if requested by the Authority.
Flight data recordings	Preserved after an accident or incident for 60 days or longer if requested by the Authority.
Aircraft Technical Logbook	
Journey records section	2 years
Maintenance records section	2 years
Maintenance Records of the Aircraft	
Total time in service (hours, calendar time and cycles, as appropriate) of the aircraft all life-limited components	3 months after the unit to which they refer has been permanently withdrawn from service

Current status of compliance with all mandatory continuing airworthiness information	3 months after the unit to which they refer has been permanently withdrawn from service
Appropriate details of modifications and repairs to the aircraft and its components	3 months after the unit to which they refer has been permanently withdrawn from service
Total time in service (hours, calendar time and cycles, as appropriate) since the last overhaul of the aircraft or its components subject to a mandatory overhaul life	3 months after the unit to which they refer has been permanently withdrawn from service
The detailed maintenance records to show all requirements for a maintenance release have been met	1 year after signing of the maintenance release
Other Records	
Operational flight plan	3 months after the completion of the flight
Quality system records	5 years
Dangerous goods transport document	6 months after the completion of the flight
Dangerous goods acceptance checklist	6 months after the completion of the flight
Records on cosmic and solar radiation dosage, if the air operator certificate holder operates aircraft that fly above 15 000 m (49 000 ft)	Until 12 months after the crew member has left the employ of the air operator certificate holder

SCHEDULE 6
(Regulation 28 (2))

FLIGHT SAFETY DOCUMENTS SYSTEM

The following outline addresses the major elements of an operator's flight safety documents system development process, with the aim of ensuring compliance with these Regulations.

1 Organisation

1.1 A flight safety documents system shall be organised according to criteria, which ensure easy access to information, required for flight and ground operations contained in the various operational documents comprising the system and which facilitate management of the distribution and revision of operational documents.

1.2 Information contained in a flight safety documents system shall be grouped according to the importance and use of the information as —

(*a*) time critical information, e.g., information that can jeopardise the safety of the operation if not immediately available;
(*b*) time sensitive information, e.g. information that can affect the level of safety or delay the operation if not available in a short time period;
(*c*) frequently used information;
(*d*) reference information, e.g., information that is required for the operation but does not fall under (*b*) or (*c*) above; and
(*e*) information that can be grouped based on the phase of operation in which it is used.

1.3 Time critical information shall be placed early and prominently in the flight safety documents system.

1.4 Time critical information, time sensitive information, and frequently used information shall be placed in cards and quick-reference guides.

2 Validation

2.1 A flight safety documents system shall be validated before deployment, under realistic conditions. Validation shall involve the critical aspects of the information use, in order to verify its effectiveness. Interactions among all groups that can occur during operations shall also be included in the validation process.

3 Design

3.1 A flight safety documents system shall maintain consistency in terminology and in the use of standard terms for common items and actions.

3.2 Operational documents shall include a glossary of terms, acronyms and their standard definition, updated on a regular basis to ensure access to the most recent terminology. All significant terms, acronyms and abbreviations included in the flight documents system shall be defined.

3.3 A flight safety documents system shall ensure standardisation across document types, including writing style, terminology, use of graphics and symbols, and formatting across documents. This includes a consistent location of specific types of information, consistent use of units of measurement and consistent use of codes.

3.4 A flight safety documents system shall include a master index to locate, in a timely manner, information included in more than one operational document.

Note: The master index must be placed in the front of each document and consist of no more than three levels of indexing. Pages containing abnormal and emergency information must be tabbed for direct access.

3.5 A flight safety documents system shall comply with the requirements of the operator's quality system, if applicable.

4 Deployment

4.1 Operators shall monitor deployment of the flight safety documents system, to ensure appropriate and realistic use of the documents, based on the characteristics of the operational environment and in a way which is both operationally relevant and beneficial to operational personnel. This monitoring shall include a formal feedback system for obtaining input from operational personnel.

5 Amendment

5.1 Operators shall develop an information gathering, review, distribution and revision control system to process information and data obtained from all sources relevant to the type of operation conducted, including, but not limited to, the state of the operator, state of design, state of registry, manufacturers and equipment vendors.

Note: Manufacturers provide information for the operation of specific aircraft that emphasises the aircraft systems and procedures under conditions that may not fully match the requirements of operators. Operators shall ensure that such information meets their specific needs and those of the local authority.

5.2 Operators shall develop an information gathering, review and distribution system to process information resulting from changes that originate within the operator, including —

(*a*) changes resulting from the installation of new equipment;
(*b*) changes in response to operating experience;
(*c*) changes in an operator's policies and procedures;
(*d*) changes in an operator certificate; and
(*e*) changes for purposes of maintaining cross fleet standardisation.

Note: Operators shall ensure that crew coordination philosophy, policies and procedures are specific to their operation.

5.3 A flight safety documents system shall be reviewed —

(*a*) on a regular basis (at least once a year);
(*b*) after major events (mergers, acquisitions, rapid growth, downsizing, etc.);
(*c*) after technology changes (introduction of new equipment); and
(*d*) after changes in safety regulations.

5.4 Operators shall develop methods of communicating new information. The specific methods shall be responsive to the degree of communication urgency.

Note: As frequent changes diminish the importance of new or modified procedures, it is desirable to minimise changes to the flight safety documents system.

5.5 New information shall be reviewed and validated considering its effects on the entire flight safety documents system.

5.6 The method of communicating new information shall be complemented by a tracking system to ensure currency by operational personnel. The tracking system shall include a procedure to verify that operational personnel have the most recent updates.

SCHEDULE 7
(Regulation 33 (4))

DRY LEASE

1. An AOC holder may be approved by the Authority to dry-lease a foreign-registered aircraft for commercial air transport in accordance with the regulatory requirements.

2. To be eligible for dry lease the foreign registered aircraft shall —

   (*a*) have an appropriate airworthiness certificate issued, in accordance with ICAO Annex 8, by the country of registration and meets the registration and identification requirements of that country;
   (*b*) be of a type design that complies with all of the requirements that would be applicable to that aircraft which is registered in Botswana, including the requirements which shall be met for issuance of a Botswana airworthiness certificate (including type design conformity, condition for safe operation, and the noise, fuel venting, and engine emission requirements);
   (*c*) be maintained according to a maintenance program approved by the State of Registry and acceptable to the Authority; and
   (*d*) be operated by qualified crewmembers employed by the AOC holder.

3. The Authority shall determine the extent of the State of Registry's arrangements for continuing airworthiness and find that these arrangements are adequate for the type of operation.

4. The Authority will have free and uninterrupted access, both in Botswana and at any international location, to the —

   (*a*) aircraft on the ramp and during flight time;
   (*b*) maintenance and operations facilities;
   (*c*) maintenance and operations personnel; and
   (*d*) training facilities and simulators used.

5. The aircraft must be operated in accordance with the regulations applicable to Botswana AOC holders.

6. The maintenance arrangements must result in the aircraft always complying with the State of Registry requirements and the maintenance requirements applicable to Botswana AOC holders.

7. Dry Leasing of Botswana Registered Aircraft

   7.1 An AOC holder may be approved by Authority to dry lease an aircraft for the purpose of commercial air transportation provided that the following minimum conditions are met —
      (*a*) the AOC holder provides the Authority with a copy of the dry lease agreement to be executed;
      (*b*) the AOC holder has operational control of the aircraft during the period of the lease;

(*c*) dispatch and/or flight watch functions are performed by the AOC holder;
(*d*) the flight and cabin crewmembers are trained, qualified and scheduled by the AOC holder; and
(*e*) the maintenance arrangements are acceptable to the Authority.

7.2 At a minimum, the dry lease agreement shall be explicit concerning the —
(*a*) entity that has operational control, with the authority for initiating and terminating flights;
(*b*) responsibility for crew training, qualification and scheduling;
(*c*) maintenance and servicing of aircraft, including the Maintenance Program that will used; and
(*d*) minimum Equipment List that will be used.

SCHEDULE 8
(Regulation 34 (2))

AIRCRAFT INTERCHANGE

1. Before operating under an interchange, each Aircraft Operator Certificate holder shall show that —

   (*a*) the procedures for the interchange operation conform with safe operating practices;
   (*b*) required crew members and flight operations officers meet approved training requirements for the aircraft and equipment to be used and are familiar with the communications and dispatch procedures to be used;
   (*c*) maintenance personnel meet training requirements for the aircraft and equipment, and are familiar with the maintenance procedures to be used;
   (*d*) flight crew members and flight operations officers meet appropriate route and airport qualifications;
   (*e*) the aircraft to be operated are essentially similar to the aircraft of the air operator certificate holder with whom the interchange is affected; and
   (*f*) the arrangement of flight instruments and controls that are critical to safety are essentially similar, unless the authority determines that the air operator certificate holder has adequate training programs to ensure that any potentially hazardous dissimilarities are safely overcome by flight crew familiarisation.

2. Each air operator certificate holder conducting an interchange agreement shall include the pertinent provisions and procedures of the agreement in its manuals.

3. The air operator certificate holders shall amend their operations specifications to reflect the interchange agreement.

4. The air operator certificate holder shall comply with the applicable regulations of the state of registry of an aircraft involved in an interchange agreement while it has operational control of that aircraft.

SCHEDULE 9
WET LEASING

(Regulation 35 (3) and 36 (3))

1. Each air operator certificate holder shall provide the Authority with a copy of the wet lease to be executed.

2. The Authority will determine which party to a wet lease agreement has operational control considering the extent and control of certain operational functions such as —

   (*a*) initiating and terminating flights;
   (*b*) maintenance and servicing of aircraft;
   (*c*) scheduling crew members;
   (*d*) paying crew members; and
   (*e*) training crew members.

3. Each air operator certificate holder engaged in a wet leasing arrangement shall amend its operations specifications to contain —

   (*a*) the names of the parties to the agreement and the duration of the agreement;
   (*b*) the make, model, and series of each aircraft involved in the agreement;
   (*c*) the kind of operation;
   (*d*) the expiration date of the lease agreement;
   (*e*) a statement specifying the party deemed to have operational control; and
   (*f*) any other item, condition, or limitation the Authority determines necessary.

SCHEDULE 10
(Regulation 37 (5))

EMERGENCY EVACUATION DEMONSTRATION

1. Each air operator certificate holder shall conduct a partial emergency evacuation and ditching evacuation, observed by the Authority, which demonstrates the effectiveness of its crew member emergency training and evacuation procedures.

2. Prior to conducting an emergency evacuation demonstration, the air operator certificate holder shall apply for and obtain approval from the Authority.

3. Cabin crew members used in the emergency evacuation demonstrations shall —

   (*a*) be selected at random by the Authority;
   (*b*) have completed the air operator certificate holder's Authority-approved training programme for the type and model of aircraft; and
   (*c*) have passed the drills and competence check on the emergency equipment and procedures.

4. To conduct the partial emergency evacuation demonstration, the air operator certificate holder's assigned cabin crew members shall, using the air operator certificate holder's line operating procedures —

   (*a*) demonstrate the opening of 50 percent of the required floor-level emergency exits and 50 percent of the required non-floor-level emergency exits (whose opening by a cabin crew member is defined as an emergency evacuation duty) and deployment of 50 percent of the exit slides, selected by the Authority; and
   (*b*) prepare for use those exits and slides within 15 seconds.

5. To conduct the ditching evacuation demonstration, the air operator certificate holder's assigned cabin crew members shall —

   (*a*) demonstrate their knowledge and use of each item of required emergency equipment;
   (*b*) prepare the cabin for ditching within 6 minutes after the intention to ditch is announced;
   (*c*) remove each life raft from storage (one life raft, selected by the Authority, shall be launched and properly inflated or one slide life raft properly inflated); and
   (*d*) enter the raft (the raft shall include all required emergency equipment) and completely set it up for extended occupancy.

SCHEDULE 11
(Regulation 41 (1), (11))

OPERATIONS MANUAL

An AOC holder shall ensure that the contents and structure of the operations manual are in accordance with rules and regulations of the Authority and are relevant to the area(s) and type(s) of operation.

An AOC holder may design a manual to be more restrictive than the Authority's requirements.

The general section (Part A: General) of the operations manual may be based upon the following outline —

1. Administration and Control of Operations Manual

1.1 Introduction

(*a*) a statement that the manual is current, valid and complies with all applicable Authority regulations and requirements and with the terms and conditions of the applicable Air Operator Certificate;
(*b*) a statement that the manual contains operational instructions that are to be complied with by the relevant personnel in the performance of their duties;
(*c*) a list and brief description of the various operations manual parts, their contents, applicability and use; and
(*d*) explanations and definitions of terms and words used in the manual.

1.2 System of Amendment and Revision

(*a*) an operations manual shall describe who is responsible for the issuance and insertion of amendments and revisions;
(*b*) a record of amendments and revisions with insertion dates and effective dates is required;
(*c*) a statement that hand-written amendments and revisions are not permitted except in situations requiring immediate amendment or revision in the interest of safety;
(*d*) a description of the system for the annotation of pages and their effective dates;
(*e*) a list of effective pages and their effective dates;
(*f*) a date of issue;
(*g*) annotation of changes (on text pages and as practicable, on charts and diagrams);
(*h*) a system for recording temporary revisions;
(*i*) a description of the distribution system for the manuals, amendments and revisions; and
(*j*) a statement of who is responsible for notifying the Authority of proposed changes and working with the Authority on changes requiring Authority approval.

2. Organization and Responsibilities

2.1 Organizational Structure

A description of the organizational structure including the general company organization and operations department organization. The relationship between the operations department and the other departments of the company. In particular, the subordination and reporting lines of all divisions, departments etc., which pertain to the safety of flight operations, shall be shown.

2.2 Responsible Manager

The name of each manager responsible for flight operations, the maintenance system, crew training and ground operations shall be listed. A description of their function and responsibilities shall be included.

2.3 Responsibilities and Duties of Operations Management Personnel

A description of the duties, responsibilities and authority of operations management personnel pertaining to the safety of flight operations and with compliance with applicable regulations shall be listed.

2.4 Authority, Duties and Responsibilities of a PIC

A statement defining the authority, duties and responsibilities of the PIC shall be listed.

2.5 Duties and Responsibilities of Crew Members Other Than the PIC

A statement defining the authority, duties, and responsibilities of all required aircraft crew members shall be listed.

3. Operational Control And Supervision

3.1 Supervision of the Operation by the AOC Holder

A description of the system for supervision of the operation by the AOC holder shall be listed. This description shall show how the safety of flight operations and the qualifications of personnel involved in all such operations are supervised and monitored. In particular, the procedures related to the following items shall be described —

(*a*) license and qualified validity;
(*b*) specifications for the operational flight plan;
(*c*) competence of operations personnel; and
(*d*) control, analysis and storage of records, flight documents, additional information, and safety related data.

3.2 System of Promulgation of Additional Operational Instructions and Information

A description of any system for promulgating information which may be of an operational nature but is supplementary to that in the operations manual. The applicability of this information and the responsibilities for its promulgation shall be included.

3.3 Safety Management System (SMS) —

A description of the main aspects of the SMS programme required by Civil Aviation Regulations, including —

(*a*) safety Policy: General Expectations;
(*b*) safety Risk Management: General Expectations;
(*c*) safety Assurance: General Expectations; and
(*d*) safety Promotion: General Expectations.

3.4 Operational Control

A description of the objectives, procedures and responsibilities necessary to exercise operational control with respect to flight safety.

3.4.1 Procedure and responsibility with respect to flight —

(*a*) initiation;
(*b*) continuation;
(*c*) diversion; and
(*d*) termination.

3.4.2 An operator shall have procedures for the preparation and dissemination of the integrated aeronautical information package to flight crew and operational personnel, at an aerodrome authorised in the AOC and corresponding operations specifications, pre-flight aeronautical information essential for safety which includes —

(*a*) Aeronautical Information Publication (AIP);
(*b*) Aeronautical Information Circular (AIC);
(*c*) Notices to Airmen (NOTAM);
(*d*) Aeronautical Information Regulation and Control (AIRAC);
(*e*) weather reports; and
(*f*) maps and charts for the intended routes and alternates.

3.4.3 Power of Authority

A description of the powers of the Authority and guidance to staff on how to facilitate inspections by Authority personnel.

3.5 Quality System

A description of the quality system adopted including —

(*a*) safety and quality policy;
(*b*) description of the organisation of the quality system;
(*c*) the process for identifying safety hazards and for evaluating and managing the associated risks; and
(*d*) documentation of all key system processes.

4. Crew

4.1 Crew Composition

An explanation of the method for determining crew compositions taking into account the following —

(*a*) the type of aeroplane being used;
(*b*) the area and type of operation being undertaken;
(*c*) the phase of the flight;
(*d*) the minimum crew requirement and flight duty period planned;
(*e*) experience (total and on type), recency and qualification of the crew members;
(*f*) the designation of the PIC and, if required by the duration of the flight, the procedures for the relief of the PIC or other members of the flight crew;
(*g*) the designation of the senior cabin crew member and, if necessitated by the duration of the flight, the procedures for the relief of the senior cabin crew member and any other member of the cabin crew; and
(*h*) the flight crew for each type of operation including the designation of the succession of command.

4.2 Designation of the PIC

The rules applicable to the designation of a PIC.

4.3 Flight Crew Incapacitation

Instructions on the succession of command in the event of flight crew incapacitation.

4.4 Crew Composition

A statement indicating which aeroplane is considered as one type for the purpose of –
(*a*) flight crew scheduling; and
(*b*) cabin crew scheduling.

5. Flight Crew, Cabin Crew, Flight Operations Officer, and Other Operations Personnel

5.1 Qualifications

A description of the required license rating(s), qualification/competency (e.g. for routes and aerodromes) experience, training, checking and recency of experience for operations personnel to conduct their duties. Consideration shall be given to the aircraft type, kind of operation, and composition of the crew.

5.2 Flight Crew

(*a*) Commander;
(*b*) pilot relieving the Commander;
(*c*) co-pilot;
(*d*) pilot under supervision; and
(*e*) operation on more than one type or variant.

5.3 Cabin Crew

(*a*) senior cabin crew member;
(*b*) cabin crew member;
(*c*) required cabin crew member;
(*d*) additional cabin crew member;
(*e*) cabin crew member during familiarization flights;
(*f*) operation on more than one type or variant;
(*g*) pilot relieving the Commander
(*h*) co-pilot; and
(*i*) pilot under supervision.

5.4 Other Operations Personnel

5.4.1 Training, Checking and Supervisory Personnel
(*a*) for flight crew; and
(*b*) for cabin crew.

6. Fatigue Management

6.1 Flight and Duty Time Limitations and Rest Schemes

An operator shall have policies for flight, cabin crew members and flight operations officer or flight dispatcher in accordance with Regulations pertaining to —

(*a*) flight time;
(*b*) flight duty period;
(*c*) duty period; and
(*d*) rest period.

7. FRMS

Where applicable, policy and documentation pertaining to the operator's FRMS in accordance with the Regulations

8. Crew Health

8.1 Crew Health Precautions

The relevant regulations and guidance for crew members concerning health including —

(*a*) alcohol and other intoxicating liquor;
(*b*) narcotics;
(*c*) drugs;
(*d*) sleeping tablets;
(*e*) pharmaceutical preparations;
(*f*) immunization;
(*g*) SCUBA diving;
(*h*) blood donation;
(*i*) meal precautions prior to and during flight;
(*j*) sleep and rest; and
(*k*) surgical operations.

8.2 Communicable Disease

Policies and procedure for the crew to evaluate a traveler with a suspected communicable disease, based on the presence of a fever and certain other signs or symptoms? Policies and procedures for the pilot-in-command to report promptly to air traffic control (ATC) a suspected communicable disease, with transmission of the following information —

(*a*) aircraft identification;
(*b*) departure aerodrome;
(*c*) destination aerodrome;
(*d*) estimated time of arrival;
(*e*) number of persons on board;
(*f*) number of suspected case(s) on board; and
(*g*) nature of the public health risk, if known.

9. Operating Procedures

9.1 Flight Preparation Instructions

As applicable to the operation.

9.2 Criteria for Determining the Usability of Aerodromes

The method for determining minimum flight altitudes.

9.3 En-route Operating Minima for VFR Flights

A description of en route operating minima for VFR flights or VFR portions of a flight and, where single-engine aircraft are used, instructions for route selection with respect to the availability of surfaces which permit a safe forced landing.

9.4 Presentation and Application of Aerodrome and En-route Operating Minima
The methods for establishing aerodrome and en-route operating minima shall include —

(*a*) the method for establishing aerodrome operating minima for IFR flights, reference must be made to procedures for the determination of the visibility or runway visual range and for the applicability of the actual visibility observed by the pilots, the reported visibility and the reported runway visual range, for category II and III refer to AWO checklist CAAB OPS CL-013;
(*b*) authorization of minima;
(*c*) capability of the aeroplane and its equipment;
(*d*) suitability for use of the aerodrome;
(*e*) qualification of the flight crew; and
(*f*) adequacy of the operation.

9.5 Interpretation of Meteorological Information

Explanatory material on the decoding of MET forecasts and MET reports relevant to the area of operations, including the interpretation of conditional expressions.

9.6 Determination of the Quantities of Fuel, Oil and Water Methanol Carried

The specific instructions and methods by which the quantities of fuel, oil and water methanol to be carried are determined and monitored in flight. This section shall also include instructions on the measurement and distribution of the fluid carried on board. Such instructions shall take account of all circumstances likely to be encountered on the flight, including the possibility of in-flight replanning and of failure of one or more of the aircraft's power plants, and possible loss of pressurisation. The system for maintaining fuel and oil records shall also be described.

10. Mass and Centre of Gravity

The general principles of mass and centre of gravity including —

(*a*) the policy for using either standard and/or actual masses;
(*b*) the method for determining the applicable passenger, baggage and cargo mass; and
(*c*) the applicable passenger and baggage masses for various types of operations and aircraft type;
(*d*) general instruction and information necessary for verification of the various types of mass;
(*e*) balance documentation in use;
(*f*) last minute changes procedures;
(*g*) specific gravity of fuel, oil and water methanol; and
(*h*) seating policy/procedures.

10.1 List of documents, forms and additional Information to be carried during a flight

An exhaustive list of all documents, including the requirement for certified true copies of the AOC Certificate and Operations Specifications and all leasing documentation (including any transfer agreement of supervisory functions and duties pursuant to Article 83 bis of the Chicago Convention) that are required to be carried on all aircraft operated by the operator including leased aircraft.

10.2 ATS Flight Plan

Procedures and responsibilities for the preparation and submission of the air traffic services flight plan. Factors to be considered include the means of submission for both individual and repetitive flight plans.

10.3 Operational Flight Plan

Procedures and responsibilities for the preparation and acceptance of the operational flight plan. The use of the operational flight plan must be described, including samples of the operational flight plan formats in use.

10.4 Operator's Aircraft Technical Log

The responsibilities and the use of the operator's aircraft technical log must be described, including samples of the format used.

11. Ground Handling Instructions

11.1 Fueling Procedures

A description of fueling procedures, including —

(*a*) safety precautions during refueling and defueling including when an APU is in operation or when a turbine engine is running and, if applicable, the propeller brakes are on;
(*b*) refueling and de-fueling when passengers are embarking, on board or disembarking;
(*c*) precautions to be taken to avoid mixing fuels; and
(*d*) method to ensure the required amount of fuel is loaded.

11.2 Aircraft, Passengers and Cargo Handling Procedures Related to Safety

A description of the handling procedures to be used when allocating seats and embarking and disembarking passengers and when loading and unloading the aircraft. Further procedures, aimed at achieving safety whilst the aircraft is on the ramp, shall also be given. Handling procedures shall include —

(*a*) children, sick passengers and persons with reduced mobility;
(*b*) transportation of inadmissible passengers, deportees or persons in custody;
(*c*) permissible size and weight of hand baggage;
(*d*) loading and securing of items in the aircraft;
(*e*) special loads and classification of load compartments (i.e., dangerous goods, live animals, etc.);
(*f*) positioning of ground equipment;
(*g*) operation of aircraft doors;
(*h*) safety on the ramp, including fire prevention, blast and suction areas;
(*i*) start-up, ramp departure and arrival procedures;
(*j*) servicing of aircraft;
(*k*) documents and forms;
(*l*) multiple occupancy of aircraft seats.

12. Procedures for the Refusal of Embarkation

Procedures to ensure that persons who appear to be intoxicated or who demonstrate by manner or physical indications that they are under the influence of alcohol or drugs, except medical patients under proper care, are refused embarkation.

13. Deicing and Anti-Icing on the Ground

A description of the deicing and anti-icing policy and procedures for aircraft on the ground. These shall include descriptions of the types and effects of icing and other contaminants on aircraft while stationary, during ground movements and during take-off. In addition, a description of the fluid types used shall be given including —

(*a*) proprietary or commercial names;

(*b*) characteristics;
(*c*) effects on aircraft performance; and
(*d*) precautions during usage.

13.1 Flight Procedures and Flight Navigation Equipment

A description of flight procedures, including —
(*a*) standard operating procedures (SOP) for each phase of flight;
(*b*) instructions on the use of normal checklists and the timing of their use;
(*c*) departure contingency procedures;
(*d*) instructions on the maintenance of altitude awareness and the use of automated or flight crew altitude call-outs;
(*e*) instructions on the use of autopilots and auto-throttles in IMC;
(*f*) instructions on the clarification and acceptance of ATC clearances, particularly where terrain clearance is involved;
(*g*) departure and approach briefings;
(*h*) procedures for familiarization with areas, routes and aerodrome;
(*i*) stabilized approach procedure;
(*j*) limitation on high rates of descent near the surface;
(*k*) conditions required to commence or to continue an instrument approach;
(*l*) instructions for the conduct of precision and non-precision instrument approach procedures;
(*m*) allocation of flight crew duties and procedures for the management of crew workload during night and IMC instrument approach and landing operations;
(*n*) the circumstances in which a radio listening watch is to be maintained;
(*o*) instructions and training requirements for the use of head-up-displays (HUD) and enhanced vision systems (EVS) equipment as applicable; and
(*p*) instructions and training requirements for the use of the EFB, as applicable.

14. Navigation Equipment

A list of the navigational equipment to be carried including any requirements relating to operations where performance-based navigation is prescribed. Instructions and training requirements for the use of head-up displays (HUD) and enhanced vision systems (EVS) equipment as applicable.

15. Navigation Procedures

A description of all navigation procedures relevant to the type and area of operation. Consideration shall be given to —

(*a*) standard navigational procedures including policy for carrying out independent cross-checks of keyboard entries where these affect the flight path to be followed by the aircraft;
(*b*) MNPS and POLAR navigation and navigation in other designated areas;
(*c*) RNAV;
(*d*) in-flight re-planning;
(*e*) procedures in the event of system degradation;
(*f*) RVSM;
(*g*) where relevant to the operations, the long-range navigation procedures, engine failure procedure for EDTO and the nomination and utilization of diversion aerodromes;

(*h*) instructions and training requirements for the avoidance of controlled flight into terrain and policy for the use of the ground proximity warning system (GPWS);
(*i*) policy, instructions, procedures and training requirements for the avoidance of collisions and the use of the airborne collision avoidance system (ACAS);
(*j*) information and instructions relating to the interception of civil aircraft including —
(i) procedures, as prescribed in Annex 2, for pilots-in-command of intercepted aircraft; and
(ii) visual signals for use by intercepting and intercepted aircraft, as contained in ICAO Annex 2.

16. Policy and Procedures for In-flight Fuel Management

16.1 Adverse and Potentially Hazardous Atmospheric Conditions

Procedures for operating in, and/or avoiding, potentially hazardous atmospheric conditions including —

(*a*) thunderstorms;
(*b*) icing conditions;
(*c*) turbulence;
(*d*) wind shear;
(*e*) jet stream;
(*f*) volcanic ash clouds;
(*g*) heavy precipitation;
(*h*) sand storms;
(*i*) mountain waves; and
(*j*) significant temperature inversions.

16.2 Operating Restrictions —

(*a*) cold weather operations;
(*b*) take-off and landing in turbulence;
(*c*) low-level wind shear operations;
(*d*) cross-wind operations; (including tail wind components)
(*e*) high temperature operations; and
(*f*) high altitude operations.

17. Incapacitation of Crew Members

Procedures to be followed in the event of incapacitation of crewmembers in flight. Examples of the types of incapacitation and the means for recognizing them shall be included.

18. Cabin safety requirements

18.1 Cabin safety requirements procedures covering —

(*a*) cabin preparation for flight, in-flight requirements and preparation for landing including procedures for securing cabin and galleys;

(*b*) procedures to ensure that passengers are seated where, in the event that an emergency evacuation is required, they may best assist and not hinder evacuation from the aircraft;
(*c*) procedures to be followed during passenger embarkation and disembarkation;
(*d*) procedures for fueling with passengers on board, embarking, or disembarking;
(*e*) smoking on board; and
(*f*) use of portable electronic equipment and cellular telephones.

18.2 Passenger Briefing Procedures
The contents, means and timing of passenger briefing.

18.3 Procedures for aeroplanes operated whenever required cosmic or solar radiation detection equipment is carried —
(*a*) procedures for the use of cosmic or solar radiation detection equipment and for recording its readings including actions to be taken in the event that limit values specified in the operations manual are exceeded. In addition, the procedures, including ATC procedures, to be followed in the event that a decision to descend or re-route is taken;
(*b*) information which will enable the pilot to determine the best course of action to take in the event of exposure to solar cosmic radiation; and
(*c*) procedures for use of cosmic or solar radiation detection equipment aeroplanes intended to be operated above 15 000m (49 000 ft.);
(*d*) altimeter setting procedures including use, where appropriate, of metric altimetry and conversion tables, and QFE operating procedures;
(*e*) altitude alerting system procedures; and
(*f*) ground proximity warning system or terrain avoidance warning system and CFIT —
(*i*) procedures and instructions required for the avoidance of controlled flight into terrain, including limitations on high rate of descent near the surface (the related training requirements must be covered in Part D).

18.4 Procedures in the event that a decision to descend is taken, covering —

(*a*) the necessity of giving the appropriate ATS unit prior warning of the situation and of obtaining a provisional descent clearance; and
(*b*) the action to be taken in the event that communication with the ATS unit cannot be established or is interrupted.

19. Policy and Procedures for the use of TCAS/ACAS comprehensive procedure on the action required by crew regarding the following —
(*a*) traffic advisory;
(*b*) resolution advisory;
(*c*) clear of conflict; and
(*d*) internal reporting.

20. Wake turbulence

Wake turbulence separation criteria, taking into account aeroplane types, wind conditions and runway location.

21. Policy and procedures for flight crew to record and report on routine meteorological observation during en-route and climb-out phases of the flight and special and other non-routine observations including volcanic activity during any phase of the flight.

21.1 Policy on the use of autopilot and auto-throttle

22. Crew members at their stations

The requirements for crew members to occupy their assigned stations or seats during the different phases of flight or whenever deemed necessary in the interest of safety and also include procedures for controlled rest on the flight deck.

23. Use of safety belts for crew and passengers

The requirements for crew members and passengers to use safety belts and/or harnesses during the different phases of flight or whenever deemed necessary in the interest of safety.

24. Admission to flight deck

The conditions for the admission to the flight deck of persons other than the flight crew. The policy regarding the admission of inspectors from the Authority must also be included.

25. Use of vacant crew seats

The conditions and procedures for the use of vacant crew seats.

26. All Weather Operations

A description of the operational procedures associated with all-weather operations.

27. Use of the Minimum Equipment and Configuration Deviation List(s)

An explanation of the use of the minimum equipment and configuration deviation list where applicable.

28. Non-Revenue Flights

Procedures and limitations for —

(*a*) training flights;
(*b*) test flights;
(*c*) delivery flights;
(*d*) ferry flights;
(*e*) demonstration flights; and
(*f*) positioning flights, including the kind of persons who may be carried on such flights.

29. Oxygen Requirements

An explanation of the conditions under which oxygen shall be provided and used in accordance with these regulations.

29.1 The oxygen requirements specified for —
(*a*) flight crew;
(*b*) cabin crew; and
(*c*) passengers.

30. Flight Data Recorders

30.1 Instructions for the preservation of flight recorder records and associated flight recorders in the event that the aircraft becomes involved in an accident or incident.

30.2 Procedures for the retention of flight recorder records and flight recorders in safe custody pending their disposition as determined in accordance with Annex 13.

30.3 Procedures for the establishment and maintenance of a flight data analysis programme.

31. Dangerous Goods and Weapons

31.1 For Operators who do not carry dangerous goods

Does the operator have —

(*a*) a procedure/policy for identify and reject undeclared dangerous good;
(*b*) a policy to not transport spare parts for maintenance purposes that should be categorised as dangerous goods Company Material (COMAT);
(*c*) procedures to report incident involving undeclared dangerous goods to the appropriate authorities of the State of the Operator and the State in which it occurred (in-flight and on the ground);
(*d*) occasions when undeclared dangerous goods are discovered in cargo or mail;
(*e*) dangerous goods accidents and incidents; and
(*f*) procedure for passengers to be warned as to the types of dangerous goods that are prohibited or restricted from transporting aboard an aircraft;

31.2 Operator Transporting Dangerous Goods

Information, instructions and general guidance to Operators with Operational approval to transport dangerous goods including —

(*a*) AOC holders policy on the transport of dangerous goods;
(*b*) identify and reject undeclared dangerous good, and policy to not transport spare parts for maintenance purposes that should be categorized as dangerous goods Company Material [COMAT];
(*c*) guidance on the requirements for accepting, labelling, handling, stowage transport, loading, unloading, segregation and security of dangerous goods, including COMAT classified as dangerous goods;

(*d*) special notification requirements in the event of an accident or occurrence when dangerous goods are being carried;
(*e*) procedures for responding to in-flight emergency situations involving dangerous goods;
(*f*) procedures for retaining the NOTOC on the ground and readily accessible to the aerodromes of last departure and next scheduled arrival for each of its flights on which dangerous goods are carried;
(*g*) a procedure to ensure that handling responsibilities if subcontracted to an external handling company and that the air operator provides subcontractor with appropriate documents and manuals;
(*h*) duties of all personnel involved; and
(*i*) report to the appropriate authorities of the State of the Operator and the State in which it occurred any —
(*a*) occasions when undeclared or misdeclared dangerous goods are discovered in cargo or mail;
(*b*) dangerous goods accidents and incidents;
(*c*) report to the appropriate authorities of the State of the Operator and the State of origin any occasions when dangerous goods are discovered to have been carried without information having been provided to the pilot-in-command;
(*d*) goods as cargo on board an aircraft; and
(*e*) provide the pilot-in-command with accurate and legible written or printed information concerning dangerous goods that are to be carried as cargo; and
(*f*) instructions on the carriage of the AOC holder's employees.

31.2 The conditions under which weapons, munitions of war and sporting weapons may be carried.

32. Security Instructions and Guidance

32.1 Security Policies and Procedures (Parts of the security instructions and guidance may be kept confidential)
A description of security policies and procedures for handling and reporting crime on board such as unlawful interference, sabotage, hijacking and bomb threats. The 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 aircraft for concealed weapons, explosives or other dangerous devices when a well-founded suspicion exists that the aircraft may be the object of an act of unlawful interference. 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 aircraft, with respect to flight crew compartment access, so as to enable cabin crew to discreetly communicate to flight crew in the event of suspicious activity or security breaches in the passenger cabin.

32.2 Security Instructions and Guidance
Security instructions and guidance of a non-confidential nature which shall include the authority and responsibilities of operations personnel. Detailed guidance in the form of a checklist to assist operational personnel in any search for a bomb and/or for inspecting an aircraft for concealed weapons, explosives and other dangerous devices.

32.3 Preventative Security Measures and Training

A description of preventative security measures and training.

32.4 Security of the flight crew compartment —

(*a*) determination of the seriousness of any occurrence;
(*b*) crew communication and coordination;
(*c*) appropriate self-defence responses;
(*d*) use of non-lethal protective devices assigned to crew members whose use is authorised by the state of the operator;
(*e*) live situational training exercises regarding various threat conditions;
(*f*) cockpit procedures to protect the aircraft;
(*g*) aircraft search procedures and guidance on least-risk bomb locations; and
(*h*) post-flight concerns for the crew.

33. Handling of Accidents and Occurrences

33.1 Procedures for the handling, notifying and reporting of accidents and occurrences.

This section shall include —

(*a*) definitions of accidents and occurrences and the relevant responsibilities of all persons involved;
(*b*) the descriptions of which company departments, Authorities or other institutions have to be notified by which means and in which sequence in case of an accident;
(*c*) special notification requirements in the event of an accident or occurrence when dangerous goods are being carried;
(*d*) a description of the requirements to report specific occurrences and accidents;
(*e*) the forms used for reporting and the procedure for submitting them to the Authority shall also be included;
(*f*) if the AOC holder develops additional safety related reporting procedures for its own internal use, a description of the applicability and related forms to be used,
(*g*) the forms used for reporting and the procedure for submitting them to the Authority shall also be included;
(*h*) procedures as prescribed in civil aviation (rules of the air and air traffic services) regulations, for pilots-in-command observing an accident; and
(*i*) reporting procedures, these procedures must include internal safety related reporting procedures to be followed by crew members, designed to ensure that the Commander is informed immediately of any incident that has endangered, or may have endangered, safety during flight and that he is provided with all relevant information.

34. Rules of the Air

Rules of the air including —

(*a*) territorial application of the Rules of the Air;

(*b*) visual and instrument flight rules;
(*c*) communication procedures including COM-failure procedures;
(*d*) information and instructions relating to the interception of civil aircrafts;
(*e*) the circumstances during which a radio listening watch shall be maintained;
(*f*) ATC clearances, adherence to flight plan and position reports;
(*g*) signals;
(*h*) time system used in operation;
(*i*) visuals signals used to warn an unauthorised aircraft flying in or about to enter a restricted, prohibited or danger area;
(*j*) procedures for pilots observing an accident or receiving a distress transmission;
(*k*) the ground/air visual codes for use by survivors, description and use of signal aids; and
(*l*) distress and urgency signals.

35. Leasing

A description of the operational arrangements for leasing, associated procedures and management responsibilities.

SCHEDULE 12
(*Regulation 42 (5)*)

TRAINING PROGRAMME

The training segment of the operations manual (Part D: Training) may be based on the following outline —

1. Training Syllabi and Checking Programmes

1.1 General Requirements

Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight (which includes the initiation, continuation, deviation and termination of a flight) shall be developed to meet the respective requirements of the Authority. An AOC holder may not use, nor may any person serve in a required crew member capacity or operational capacity unless that person meets the training and currency requirements established by the Authority for that respective position.

2. Flight Crew

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

A written training programme acceptable to the Authority that provides for initial, transition (conversion), re-qualification, upgrade, recency of experience, familiarization, differences, recurrent training and other specialized training, as appropriate, for flight deck crew members for each type of aircraft flown by that crew member. This written training programme shall include both normal abnormal and emergency procedures training applicable for each type of aircraft flown by the crew member;

(*a*) adequate ground and flight training facilities and properly qualified instructors required to meet training objectives and needs as determined by the Authority;
(*b*) ground and flight training in the type(s) of aircraft on which the flight crew member serves;
(*c*) 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*) upset prevention and recovery training;
(*e*) 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;
(*g*) be given on a recurrent basis, as determined by the Authority and shall include an assessment of competence;

(*h*) the requirement for recurrent flight training in a particular type of aircraft shall be considered fulfilled by —

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

(ii) the completion within the appropriate period of the proficiency check required by the Civil Aviation (Operation of Aircraft) Regulations in that type of aircraft,

(*i*) a current list of approved training materials, equipment, training devices, simulators, and other required training items needed to meet the training needs for each type and variation of aircraft flown by the AOC holder;

(*j*) adequate number of ground check personnel and flight check pilots to ensure adequate training and checking of flight crew members; and

(*k*) a record system acceptable to the Authority to show compliance with appropriate training and currency requirements.

3. Cabin Crew

A written training programme acceptable to the Authority that provides for initial, aircraft visit, aircraft type, familiarization flight, recurrent, conversion, re-qualification, upgrade, differences, and other specialized training for cabin crew members for each type of aircraft flown by that cabin crew member.

The operator shall establish and maintain a training programme, approved by the Authority, to be completed by all persons before being assigned as a cabin crew member.

Cabins crew members shall complete a recurrent training programme annually. These training programmes shall ensure that each person is —

(*a*) basic initial ground training covering duties, functions and responsibilities;

(*b*) introduction to aircraft systems and limitations;

(*c*) competency 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;

(*d*) 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, protective breathing equipment and automated external defibrillators;

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

(*f*) 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;

(*g*) aware of the types of dangerous goods which may, and may not, be carried in a passenger cabin;

(*h*) knowledgeable about human performance as related to passenger cabin safety duties including flight crew-cabin crew coordination;

(*i*) appropriate Authority rules and regulations;

(*j*) appropriate portions of the AOC holder's operating manual;

(*k*) appropriate emergency training as required by the Authority and the AOC holder's operating manual;

(*l*) appropriate flight training;
(*m*) security procedures;
(*n*) appropriate recurrent, upgrade, or difference training, as required, to maintain currency in any type and variance of aircraft the crew member may be required to work in; and
(*o*) maintain a training record system acceptable to the Authority to show compliance with all required training.

4. All Crew Members

A written training programme shall be developed for all crew members in the emergency procedures appropriate to each make and model of aircraft flown in by the crew member. Areas shall include —

(*a*) instruction in emergency procedures, assignments, and crew co-ordination;
(*b*) individual instruction in the use of on-board emergency equipment such as fire extinguishers, emergency breathing equipment, first aid equipment and its proper use, emergency exits and evacuation slides, and the aircraft's oxygen system including the use of portable emergency oxygen bottles. Flight crew members shall also practice using their emergency equipment designed to protect them in case of a cockpit fire or smoke;
(*c*) training shall also include instruction in potential emergencies such as rapid decompression, ditching, firefighting, aircraft evacuation, medical emergencies, the use ELT, hijacking, and disruptive passengers; and
(*d*) scheduled recurrent training to meet Authority requirements.

5. All Operations Personnel

The training syllabi and checking programmes for all operations personnel shall include —

(*a*) training in the safe transportation and recognition of all dangerous goods permitted by the Authority to be shipped by air. Training shall include the proper packaging, marking, labelling, and documentation of dangerous articles and magnetised materials;
(*b*) all appropriate security training required by the Authority; and
(*c*) a method of providing any required notification of an accident or incident involving dangerous good.

6. Operations Personnel Other Than Crew Members

For operations personnel other than crew members (e.g., flight operations officer, handling personnel etc.), a written training programme shall be developed that pertains to their respective duties. The training programme shall provide for initial, recurrent, and any required upgrade training.

6.1 Flight Operations Officer shall —

(*a*) satisfactorily completed the operator-specific training course that addresses all the specific components of its approved method of control and supervision of flight operations specified in these regulations;

(*b*) made, within the preceding 12 months, at least a one-way qualification flight in the flight crew compartment of an aircraft over any area for which that individual is authorized to exercise flight supervision. The flight should include landings at as many aerodromes as practicable;

(*c*) demonstrated to the operator a knowledge of —

(i) the contents and use of the operations manual described in Schedule 11 of these Regulations,
(ii) the radio equipment in the aircraft used,
(iii) the navigation equipment in the aircraft used,
(iv) mass and balance control,
(v) use of MEL/configuration deviation list (CDL),
(vi) transport of dangerous goods by air,
(vii) security procedures,
(viii) emergency response plan,
(ix) civil air law and regulations,
(x) aviation instruction,
(xi) aircraft performance,
(xii) flight planning and monitoring, and
(xiii) rules of the air, communication and air traffic management;

(*d*) demonstrate to the operator a knowledge of the following details concerning operations for which the officer is responsible and areas in which that individual is authorized to exercise flight supervision —
(i) seasonal meteorological conditions and the sources of meteorological information,
(ii) effects of meteorological conditions on radio reception in the aircraft used,
(iii) peculiarities and limitations of each navigation system which is used by the operation, and
(iv) aircraft loading instructions,

(*e*) demonstrate to the operator knowledge and skills related to human performance relevant to dispatch duties; and

(*f*) demonstrate to the operator the ability to perform the duties specified in Civil Aviation (Operations of Aircraft) Regulation.

7. Procedures for Training and Checking

7.2 Proficiency Checking Procedures

Procedures to be applied in the event that personnel do not achieve or maintain the required standards. Procedures for remedial training and subsequent examination of personnel unable to achieve or maintain required standards.

7.3 Procedures Involving the Simulation of Abnormal or Emergency Situations

Procedures to ensure that abnormal or emergency situations requiring the application of part or all of abnormal or emergency procedures, and simulation of IMC by artificial means, are not simulated during commercial air transportation flights. Procedures to require that flight crew members are properly trained and examined on abnormal and emergency conditions.

8. Document Retention

8.1 Documentation to be Stored and Storage Periods

An AOC holder shall retain all documentation required by the appropriate Authority, or the Authority of another State in which the AOC holder is operating for the time specified by the respective Authority, or for the time period needed to show compliance with appropriate regulations or this operations manual, whichever is longer.

SCHEDULE 13
(Regulation 43 (7))

AIRCRAFT OPERATING MANUAL

Each AOC applicant and AOC holder shall submit and maintain an aircraft operating manual. This segment of Part B (Aircraft Operating Information) of the operations manual may be based on the following outline.

1. General Information and Units of Measurement

General Information (e.g. aircraft dimensions), including a description of the units of measurement used for the operation of the aircraft type concerned and conversion tables.

2. Limitations

2.1 Certification and Operational Limitations

A description of the certified limitations and the applicable operational limitations including —

(*a*) certification status;
(*b*) passenger seating configuration for each aircraft type including a pictorial presentation;
(*c*) types of operation that are approved (e.g. IFR/VFR, CAT II/III, flights in known icing conditions etc.);
(*d*) crew composition;
(*e*) operating within mass and centre of gravity limitations;
(*f*) speed limitations;
(*g*) flight envelopes;
(*h*) wind limits including operations on contaminated runways;
(*i*) performance limitations for applicable configurations;
(*j*) runway slope;
(*k*) limitations on wet or contaminated runways;
(*l*) airframe contamination; and
(*m*) post landing.

3. Normal Procedures

The normal procedures and duties assigned to the crew, the appropriate checklists, system for use of the checklists and aircraft systems information as required including a statement covering the necessary co-ordination procedures between flight and cabin crew. The following normal procedures and duties shall be included —

(*a*) pre-flight;
(*b*) pre-departure and loading;
(*c*) altimeter setting and checking;
(*d*) taxi, take-off and climb;
(*e*) noise abatement;
(*f*) cruise and descent;

(*g*) approach, landing preparation and briefing;
(*h*) VFR approach;
(*i*) instrument approach;
(*j*) visual approach and circling;
(*k*) missed approach;
(*l*) normal landing;
(*m*) post landing; and
(*n*) operation on wet and contaminated runways.

3.1 Specific Flight Deck Procedures

(*a*) determining airworthiness of aircraft;
(*b*) obtaining flight release;
(*c*) initial cockpit preparation;
(*d*) standard operating procedures;
(*e*) cockpit discipline;
(*f*) standard call-outs;
(*g*) communications;
(*h*) flight safety;
(*i*) push-back and towing procedures;
(*j*) taxi guidelines and ramp signals;
(*k*) take-off and climb out procedures;
(*l*) choice of runway;
(*m*) take-off in limited visibility;
(*n*) take-off in adverse weather;
(*o*) use and limitations of weather radar;
(*p*) use of landing lights;
(*q*) monitoring of flight instruments;
(*r*) power settings for take-off;
(*s*) malfunctions during take-off;
(*t*) rejected take-off decision;
(*u*) climb, best angle, best rate;
(*v*) sterile cockpit procedures;
(*w*) en route and holding procedures;
(*x*) cruise control;
(*y*) navigation log book;
(*z*) descent, approach and landing procedures;
(*aa*) reporting maintenance problems; and
(*bb*) how to obtain maintenance and service en route

4. Abnormal and Emergency Procedures

4.1 Abnormal and Emergency Procedures and Duties

The manual shall contain a listing of abnormal and emergency procedures assigned to crew members with appropriate check-lists that include a system for use of the check-lists and aircraft system information as required including a statement covering the necessary co-ordination procedures between flight and cabin crew. The following abnormal and emergency procedures and duties shall be included —

(*a*) crew incapacitation;
(*b*) fire and smoke drills;
(*c*) unpressurised and partially pressurised flight; as applicable;
(*d*) exceeding structural limits such as overweight landing;
(*e*) exceeding cosmic radiation limits; as applicable;
(*f*) lightning strikes;
(*g*) distress communications and alerting ATC to emergencies;
(*h*) engine failure;
(*i*) system failures;
(*j*) guidance for diversion in case of serious technical failure;
(*k*) ground proximity warning;
(*l*) ACAS warning;
(*m*) windshear;
(*n*) emergency landing/ditching;
(*o*) aircraft evacuation;
(*p*) fuel jettisoning (as applicable) and overweight landing: general considerations and policy;
(*q*) fuel jettisoning procedures and precautions;
(*r*) emergency procedures: emergency descent low fuel;
(*s*) dangerous goods incident or accident;
(*t*) interception procedures;
(*u*) emergency signal for cabin crew members;
(*v*) communication procedures; and
(*w*) radio listening watch.

5. Performance Data

Performance data shall be provided in a form in which it can be used without difficulty. Performance material which provides the necessary data to allow the flight crew to comply with the approved aircraft flight manual performance requirements shall be included to allow the determination of —

(*a*) take-off climb limits - mass, altitude, temperature;
(*b*) take-off field length limits (dry, wet, contaminated);
(*c*) net flight path data for obstacle clearance calculation or, where applicable, take-off flight path;
(*d*) the gradient losses for banked climb outs;
(*e*) en route climb limits;
(*f*) approach climb limits;
(*g*) landing climb limits;
(*h*) landing field length limits (dry, wet, contaminated) including the effects of an in-flight failure of a system or device, if it affects the landing distance;
(*i*) brake energy limits; and
(*j*) speeds applicable for the various flight stages (also considering wet or contaminated runways).

5.1 Supplementary Performance Data

Supplementary data covering —

(*a*) flights in icing conditions;

(*b*) the maximum crosswind and tailwind components for each aeroplane type operated and the reductions to be applied to these values having regard to gusts, low visibility, runway surface conditions, crew experience, use of autopilot, abnormal or emergency circumstances, or any other relevant operational factors;

(*c*) any certified performance related to an allowable configuration, or configuration deviation, such as anti-skid inoperative, shall be included.

5.2 Other Acceptable Performance Data

If performance data, as required for the appropriate performance class, is not available in the approved AFM, then other data acceptable to the Authority shall be included. Alternatively, the operations manual may contain cross-reference to the approved data contained in the AFM where such data is not likely to be used often or in an emergency.

5.3 Additional Performance Data

Additional performance data where applicable including —

(*a*) all engine climb gradients;

(*b*) drift-down data;

(*c*) effect of de-icing/anti-icing fluids;

(*d*) flight with landing gear down;

(*e*) for aircraft with 3 or more engines, one engine inoperative ferry flights; and

(*f*) flights conducted under the provisions of a configuration deviation list (CDL).

6. Flight Planning

6.1 Flight Planning Data

Specific data and instructions necessary for pre-flight and in-flight planning including factors such as speed schedules and power settings. Where applicable, procedures for engine(s) out operations, EDTO and flights to isolated airports shall be included for the flight plan and the operational flight plan.

7. Fuel Calculations

The method for calculating fuel needed for the various stages of flight.

8. Mass and Balance

8.1 Calculating Mass and Balance

Instructions and data for the calculation of mass and balance including —

(*a*) calculation system (e.g. Index system);

(*b*) information and instructions for completion of mass and balance documentation, including manual and computer-generated types;

(*c*) limiting mass and centre of gravity of the various versions;
(*d*) dry operating mass and corresponding centre of gravity or index.

9. Loading

9.1 Loading Procedures

Procedures and provisions for loading and securing the load in the aircraft.

9.2 Loading Dangerous Goods

The operations manual shall contain a method to notify the PIC when dangerous goods is loaded in the aircraft.

10. Survival and Emergency Equipment Including Oxygen

10.1 List of Survival Equipment to be Carried

A list of the survival and emergency equipment to be carried for the routes to be flown and the procedures for checking the serviceability and for some equipment verify its normal functioning before take-off. Instructions regarding the location, accessibility and use of survival and emergency equipment and its associated check list(s) shall also be included.

10.2 Ground-Air Visual Signal

Instructions illustrating the ground-air visual signal code for use by survivors shall also be included, as contained in Civil Aviation (Rules of the Air and Air Traffic services) Regulations.

10.3 Oxygen Usage

The procedure for determining the amount of oxygen required and the quantity that it available. The flight profile, number of occupants and possible cabin decompression shall be considered. The information provided shall be in a form in which it can be used without difficulty.

10.4 Emergency Equipment Usage

A description of the proper use of the following emergency equipment, if applicable —

(*a*) life jackets;
(*b*) life rafts;
(*c*) medical kits/first aid kits;
(*d*) survival kits;
(*e*) emergency locator transmitter (ELT);
(*f*) visual signalling devices;
(*g*) evacuation slides; or
(*h*) emergency lighting.

11. Emergency Evacuation Procedures

11.1 Instructions for Emergency Evacuation

Instruction for emergency evacuation procedures, including type-specific procedures, crew coordination, assignment of crew's emergency positions and the emergency duties assigned to each crew member.

11.2 Emergency Evacuation Procedures

A description of the duties of all members of the crew for the rapid evacuation of an aircraft and the handling of the passengers in the event of a forced landing, ditching or other emergency.

12. Aircraft Systems

A description of the aircraft systems, related controls and indications and operating instructions.

13. Minimum Equipment List and Configuration Deviation List

The minimum equipment list and configuration deviation list for the aeroplane types operated and specific operations authorised, including any requirements relating to operations where performance-based navigation is prescribed.

SCHEDULE 14
(Regulation 54 (5))

MASS AND BALANCE DATA CONTROL SYSTEM

1. An air operator certificate holder may determine the mass of the traffic load in accordance with the following mass values and tables for passengers and baggage as applicable to the passenger seating configuration of the airplane.

2. Each air operator certificate holder shall compute the mass of passengers and checked baggage using either the actual weighed mass of each person or the actual weighed mass of baggage or the standard mass values specified in Tables 1 to 3 below except where the number of passenger seats available is less than 10. In such cases 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.

3. 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.

4. If determining the actual mass by weighing, an air operator certificate holder must ensure that passengers' personal belongings and hand baggage are included. Such weighing must be conducted immediately prior to boarding and at an adjacent location.

5. If determining the mass of passengers using standard mass values, the standard mass values in Tables 1 and 2 below must be used. The standard masses include hand baggage and the mass of any infant below 2 years of age carried by an adult on one passenger seat. Infants occupying separate passenger seats must be considered as children for the purpose of this paragraph.

Mass values for passengers – 20 passenger seats or more

(1) Where the total number of passenger seats available on an aeroplane is 20 or more, the standard masses of male and female in Table 1 are applicable. As an alternative, in cases where the total number of passenger seats available is 30 or more, the 'All Adult' mass values in Table 1 are applicable.

(2) For the purpose of Table 1, "holiday charter" means a charter flight solely intended as an element of a holiday travel package. The holiday charter mass values apply provided that not more than 5% of passenger seats installed in the aeroplane are used for the non-revenue carriage of certain categories of passengers.

Table 1

Passenger seats	20 and more	30 and more	
	Male	female	All adult
All flights except holiday charters	88kg	70kg	84kg
Holiday charters	83kg	69kg	76kg
children	35kg	35kg	35kg

Mass values for passengers – 19 passenger seats or less.

(1) Where the total number of passenger seats available on an aeroplane is 19 or less, the standard masses in Table 2 are applicable.

(2) 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 above male and female masses. Articles such as 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 sub-paragraph.

Table 2

Passenger seats	1-5	6-9	10-19
Male	104kg	96kg	92kg
Female	86kg	78kg	74kg
Children	35kg	35kg	35kg

Mass values for baggage

(1) Where the total number of passenger seats available on the aeroplane is 20 or more the standard mass values given in Table 3 are applicable for each piece of checked baggage.

For aeroplanes with 19 passenger seats or less, the actual mass of checked baggage, determined by weighing, must be used.

(2) For the purpose of Table 3:
- (i) domestic flight means a flight with origin and destination within the borders of one State,
- (ii) flights within the European region means flights, other than Domestic flights, whose origin and destination are within the area of Europe, and
- (iii) intercontinental flight, other than flights within the European region, means a flight with origin and destination in different continents.

Table 3
20 or more passenger seats

Type of flight	Baggage standard mass
Domestic	11kg
Within the European region	13kg
Intercontinental	15kg
All other	13kg

6. If an air operator certificate holder wishes to use standard mass values other than those contained in Tables 1 to 3 above, the operator must advise the Authority of the reasons and gain its approval in advance. The certificate holder must also submit to the Authority for approval a detailed weighing survey plan and apply the statistical analysis method.

7. After verification and approval by the Authority of the results of the weighing survey, the revised standard mass values are only applicable to that air operator certificate holder. The revised standard mass values can only be used in circumstances consistent with those under which the survey was conducted. Where revised standard masses exceed those in Tables 1 – 3, then such higher values must be used.

8. On any flight identified as carrying a significant number of passengers whose masses, including hand baggage, are expected to exceed the standard passenger mass, an air operator certificate holder must determine the actual mass of such passengers by weighing or by adding an adequate mass increment.

10. If standard mass values for checked baggage are used and a significant number of passengers check in baggage that is expected to exceed the standard baggage mass, an air operator certificate holder must determine the actual mass of such baggage by weighing or by adding an adequate mass increment.

11. An air operator certificate holder shall ensure that a pilot-in-command is advised when a non-standard method has been used for determining the mass of the load and that this method is stated in the mass and balance documentation.

SCHEDULE 15
(Regulation 56 (1))

PASSENGER BRIEFING CARDS

1. Each air operator certificate holder shall, at each exit seat, provide passenger information cards in the primary language in which emergency commands are given by the crew.

2. Functions required of a passenger in the event of an emergency in which a crew member is not available to assist, including how to —

   (*a*) locate the emergency exit;
   (*b*) recognise the emergency exit opening mechanism;
   (*c*) comprehend the instructions for operating the emergency exit;
   (*d*) operate the emergency exit;
   (*e*) assess whether opening the emergency exit will increase the hazards to which passengers may be exposed;
   (*f*) follow oral directions and hand signals given by a crew member;
   (*g*) stow or secure the emergency exit door so that it will not impede use of the exit;
   (*h*) assess the condition of an escape slide, activate the slide, and stabilise the slide after deployment to assist others in getting off the slide;
   (*i*) pass expeditiously through the emergency exit; and
   (*j*) assess, select, and follow a safe path away from the emergency exit.

3. A request that a passenger identify himself or herself to allow reseating if he or she —

   (*a*) cannot perform the emergency functions stated in the information card;
   (*b*) has a non-discernible condition that will prevent him or her from performing the functions;
   (*c*) may suffer bodily harm as the result of performing one or more of those functions;
   (*d*) does not wish to perform those functions; or
   (*e*) lacks the ability to read, speak, or understand the language or the graphic form in which instructions are provided by the air operator certificate holder.

SCHEDULE 16
(Regulation 57 (2))

AERONAUTICAL DATA CONTROL SYSTEM

1. Each air operator certificate holder shall provide aeronautical data for each airport used by the air operator certificate holder which includes —

(*a*) aerodromes or heliports;
(*b*) facilities;
(*c*) public protection;
(*d*) navigational and communications aids;
(*e*) construction affecting take-off, landing, or ground operations;
(*f*) air traffic facilities;
(*g*) runways, clearways, and stop-ways;
(*h*) dimensions;
(*i*) surface;
(*j*) marking and lighting systems;
(*k*) elevation and gradient;
(*l*) displaced thresholds;
(*m*) location;
(*n*) dimensions;
(*o*) take-off or landing or both;
(*p*) obstacles —
  (i) those affecting take-off and landing performance computations,
  (ii) controlling obstacles,
(*q*) instrument flight procedures;
(*r*) departure procedure;
(*s*) approach procedure;
(*t*) missed approach procedure;
(*u*) special information relating to —
  (i) runway visual range measurement equipment,
  (ii) prevailing winds under low visibility conditions.

SCHEDULE 17
(Regulation 60 (3))

WEATHER REPORTING SOURCES

1. The Authority approves and considers the following sources of weather reports satisfactory for flight planning or controlling flight movement —

(*a*) Department of Meteorological Services; and
(*b*) Botswana government-operated automated surface observation stations;
(*c*) Botswana government-operated supplemental aviation weather reporting stations;
(*d*) observations taken by airport traffic control towers;
(*e*) Botswana government-contracted weather observatories;
(*f*) any active meteorological office listed in the MET tables located in ICAO Regional Air Navigation Plans operated by a foreign state which subscribes to the standards and practices of ICAO conventions;
(*g*) any military weather reporting sources approved by the Authority, provided the use of military sources is limited to control of those flight operations which use military airports as departure, destination, alternate, or diversionary airports;
(*h*) near real time reports such as pilot reports, radar reports, radar summary charts, and satellite imagery reports made by commercial weather sources or other sources specifically approved by the Authority; and
(*i*) an air operator certificate holder operated and maintained weather reporting system approved by the Authority.

Note: Some automated systems cannot report all required items for a complete surface aviation weather report.

SCHEDULE 18
(Regulation 61 (2))

DE-ICING AND ANTI-ICING PROGRAMME

1. The air operator certificate holder's ground de-icing and anti-icing programme shall include a detailed description of —

   (*a*) how the air operator certificate holder determines how conditions such as frost, ice, or snow may reasonably be expected to adhere to the aircraft and that ground de-icing and anti-icing operational procedures shall be in effect;
   (*b*) who is responsible for deciding that ground de-icing and anti-icing operational procedures shall be in effect;
   (*c*) the procedures for implementing ground de-icing and anti-icing operational procedures; and
   (*d*) the specific duties and responsibilities of each operational position or group responsible or getting the aircraft safely airborne while ground de-icing and anti-icing operational procedures are in effect.

2. Initial and annual recurrent ground training for flight crew and all other affected personnel e.g. dispatchers/flight operations officers, ground crews, contract personnel concerning the specific requirements of the approved programme and each person's responsibilities and duties under the approved programme specifically covering the following areas —

   (*a*) the use of holdover times;
   (*b*) aircraft de-icing/anti-icing procedures including inspection and check procedures and responsibilities;
   (*c*) communication procedures;
   (*d*) aircraft surface contamination i.e., adherence of frost, ice or snow and critical area identification, and how contamination adversely affects aircraft performance and flight characteristics;
   (*e*) types and characteristics of de-icing/anti-icing fluids;
   (*f*) cold weather pre-flight inspection procedures; and
   (*g*) techniques for recognising contamination on the aircraft.

3. The air operator certificate holder's anti-icing programme shall include procedures for flight crew members to increase or decrease the determined holdover time in changing conditions. The holdover time shall be supported by data approved by the Authority. If the maximum holdover time is exceeded, take-off is prohibited unless at least one of the following conditions exists —

   (*a*) a pre-take-off contamination check is conducted outside the aircraft within five minutes prior to beginning take-off to determine that the wings, control surfaces, and other critical surfaces, as defined in the air operator certificate holder's anti-icing programme, are free of frost, ice, or snow;
   (*b*) it is otherwise determined by an alternate procedure, approved by the Authority and in accordance with the air operator certificate holder's approved anti-icing programme, that the wings, control surfaces, and other critical surfaces are free of frost, ice, or snow; or
   (*c*) the wings, control surfaces, and other critical surfaces are de-iced again and a new holdover time is determined.

SCHEDULE 19
(*Regulation 62 (4)*)

FLIGHT MONITORING SYSTEM

1. An air operator certificate holder shall have an approved flight following system established and adequate for the proper monitoring of each flight, considering the operations to be conducted.

2. An air operator certificate holder`s dispatch shall be located at those points necessary to ensure —

   (*a*) the proper monitoring of the progress of each flight with respect to its departure at the point of origin and arrival at its destination, including intermediate stops and diversions; and
   (*b*) that the PIC is provided with all information necessary for the safety of the flight.

3. An air operator certificate holder conducting charter operations may arrange to have flight following facilities provided by persons other than its employees, but in such a case the air operator certificate holder continues to be primarily responsible for operational control of each flight.

4. Each air operator certificate holder conducting charter operations using a flight following system shall show that the system has adequate facilities and personnel to provide the information necessary for the initiation and safe conduct of each flight to —

   (*a*) the flight crew of each aircraft; and
   (*b*) the persons designated by the certificate holder to perform the function of operational control of the aircraft.

5. Each air operator certificate holder conducting charter operations shall show that the personnel required to perform the function of operational control are able to perform their duties.

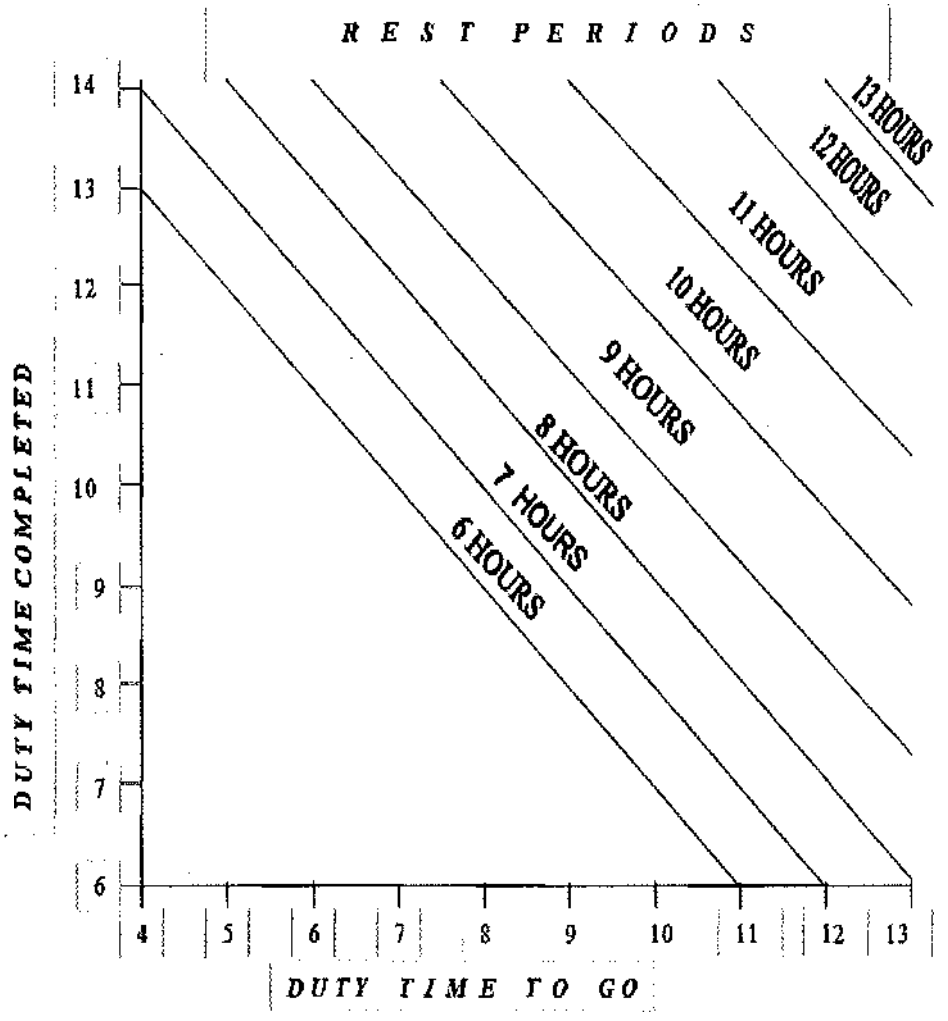
SCHEDULE 20
(Regulation 69 (1))

MINIMUM REST PERIODS FOR FLIGHT CREW

Length of immediately preceding duty period	Minimum length of sufficient rest period
Not exceeding 10 hours	11 hours
Exceeding 10 but not exceeding 11 hours	12 hours
Exceeding 11 but not exceeding 12 hours	13 hours
Exceeding 12 but not exceeding 13 hours	14 hours
Exceeding 13 but not exceeding 14 hours	15 hours
Exceeding 14 but not exceeding 15 hours	16 hours
Exceeding 15 but not exceeding 16 hours	17 hours
Exceeding 16 but not exceeding 17 hours	19 hours
Exceeding 17 but not exceeding 18 hours	21 hours
Exceeding 18 but not exceeding 19 hours	23 hours
Exceeding 19 but not exceeding 20 hours	25 hours
Exceeding 20 but not exceeding 21 hours	27 hours
Exceeding 21 but not exceeding 22 hours	29 hours
Exceeding 22 but not exceeding 23 hours	31 hours
Exceeding 23 hours	33 hours
Minimum rest period – distance not within fifty miles of place of residence	
Length of immediately preceding duty period	Minimum length of sufficient rest period
Exceeding 10 but not exceeding 11 hours	10 hours
Exceeding 11 but not exceeding 12 hours	12 hours
Exceeding 12 but not exceeding 14 hours	13 hours
Exceeding 14 but not exceeding 17 hours	15 hours
Exceeding 17 but not exceeding 20 hours	16 hours
Exceeding 20 but not exceeding 23 hours	17 hours
Exceeding 23 hours	18 hours

SCHEDULE 21
(Regulation 73 (5))

REDUCED REST PERIODS FOR FLIGHT CREW



SCHEDULE 22
(Regulation 97 (1))

FORM A – VALIDATION CERTIFICATE FOR FOREIGN AIR OPERATORS

<table>
<tr><td colspan="3">FORM A – VALIDATION CERTIFICATE FOR FOREIGN AIR OPERATORS</td></tr>
<tr><td rowspan="2">  </td><td>REPUBLIC OF BOTSWANA [2]
CIVIL AVIATION AUTHORITY OF BOTSWANA[3]</td><td rowspan="2">[1]Plot No. 61920, Letsema Office Park
P.O. Box 250, Gaborone, Botswana
Fax: +267 3913121,
Tel: +267 3688200
Email: caab@caab.co.bw</td></tr>
<tr><td>AOC VALIDATION #[4] :

Expiry Date[5]:</td><td>OPERATOR'S NAME[6]

Dba trading name[7]:

Operator Address[8]:

Telephone[9]:

Fax:

E-mail:</td><td>OPERATIONAL POINTS OF CONTACT[10]
Contact details, at which operational management can be contacted without undue delay,
are listed in
……[11]</td></tr>
<tr><td colspan="3">This certificate certifies that_____ [12] is authorised to perform commercial air operations, as defined in the operations specifications issued by the Foreign Authority [that issued and oversees the AOC], in accordance with the operations manual and the applicable state of operator Regulations[13].

Statements of Compliance[14]

This certificate is issued to___[12] on the basis of it holding a valid AOC. Any changes to the AOC made by the Foreign Authority that issued and oversees the AOC of__[12] shall be submitted by___[12] in writing to CAAB within thirty (30) days of such change;
This certificate ceases to have effect upon expiry, suspension, revocation, cancellation or equivalent action in respect of the foreign Air Operator's AOC and …

The Foreign Air Operator shall comply with the authorizations, conditions and limitations of its AOC operations specifications while operating in the territory of Botswana.</td></tr>
<tr><td>Date of issue [15]:</td><td colspan="2">Name and Signature [16]:

Title:</td></tr>
</table>

Notes.—

1. For use of the validating State.
2. Replace by the name of the validating State.
3. Replace by the identification of the validating Authority.
4. Unique AOC number, as issued by the validating State.
5. Date after which the AOC validation certificate ceases to be valid (dd-mm-yyyy).
6. Replace by the operator's registered name.
7. Operator's trading name, if different. Insert "dba" before the trading name (for "doing business as").
8. Operator's principal place of business address.
9. Operator's principal place of business telephone and fax details, including the country code. E-mail to be provided if available.
10. The contact details include the telephone and fax numbers, including the country code, and the e-mail address (if available) at which operational management can be contacted without undue delay for issues related to flight operations, airworthiness, flight and cabin crew competency, dangerous goods and other matters as appropriate.
11. Insert the controlled document, carried on board, in which the contact details are listed, with the appropriate paragraph or page reference, e.g.: "Contact details are listed in the operations manual, Gen/Basic, Chapter 1, 1.1" or "... are listed in the operations specifications, page 1" or "... are listed in an attachment to this document".
12. Operator's registered name.
13. Insertion of reference to the applicable state of operator regulations.
14. Statements of Compliance.
15. Issuance date of the AOC (dd-mm-yyyy).
16. Title, name and signature of the authority representative. In addition, an official stamp may be applied on the AOC.

MADE this 8th day of June, 2022.

ERIC MOTHIBI MOLALE,
Minister of Transport and Public Works.