Statutory Instrument No. 19 of 2013

CIVIL AVIATION ACT (Act No. 11 of 2011)

CIVIL AVIATION (AIR OPERATOR CERTIFICATION AND ADMINISTRATION) REGULATIONS, 2013

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SCHEDULES

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

Citation

Interpretation

1. These Regulations may be cited as the Civil Aviation (Air Operator Certification and Administration) Regulations, 2013.

- 2. In these Regulations, unless the context otherwise directs –
- "act of unlawful interference" means an act or attempted act which is intended or likely to jeopardise the safety of civil aviation;
- "accountable manager" 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;
- "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;

- "Air Operator Certificate (AOC)" means a certificate issued under regulation 5 authorising an operator to carry out specified commercial air transport operations;
- "cabin crew member" means a crew member who performs, in the interest of safety of passengers, duties assigned by the operator or the pilot-incommand of the aircraft;
- "commercial air transport operation" means an aircraft operation involving the public 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 (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;
- "crew member" means a person assigned by an operator to duty on an aircraft during a flight duty period;
- "dangerous goods" means any article or substance which is identified as such in the Civil Aviation (Dangerous Goods) Regulations;
- "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 (IFR)" means rules that govern the procedures for conducting flight under instrument meteorological conditions;
- "Instrument Meteorological Conditions (IMC)" means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, less than the minima specified for visual meteorological conditions;
- "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) for aeroplanes, an aeroplane which has a maximum certified take-off mass of 5 700 kg or more, and
- (ii) for helicopters, a helicopter which has a maximum certified take-off mass of 3 175 kg or more;
- "Maintenance Control Manual (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 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 certificate" means a certificate issued under the Civil Aviation (Approved Maintenance Organisations) Regulations;
- "Minimum Equipment List (MEL)" means a list approved by the Authority 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 aircraft performance, other operating limitations and relevant expected conditions on the route to be followed and at the aerodromes or heliports 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;
- "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 (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 (SMS)" means a systematic approach to managing safety, including the necessary organisational structures, accountabilities, policies and procedures;
- "senior management position" means any of the positions under regulation 15;
- "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 (VFR)" means rules that govern the procedures for conducting flight under visual meteorological conditions; and
- "Visual Meteorological Conditions (VMC)" means meteorological conditions expressed in terms of visibility, distance from cloud, and ceiling, equal to or better than specified minima.

PART II — Air Operator Certificate

Air operator certificate

3. (1) An operator shall not operate an aircraft in commercial air transport unless he or she holds an Air Operator Certificate for the operation being conducted, issued under these Regulations.

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

(3) An Air Operator Certificate holder shall, at all times, operate in compliance with the terms, conditions of issuance and maintenance requirements of an Air Operator Certificate.

(4) Any person who operates an aircraft in commercial air transport without a valid Air Operator Certificate 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. (1) Any person who wishes to apply for an air operator certificate shall do so in the manner and form specified by the Authority under this regulation.

- (2) The certification process shall follow a five phase approach as follows -
- (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 by filling out Form A set out in the First Schedule.

(4) An application for an initial issue of an Air Operator Certificate shall be made to the Authority at least 90 days before the date of intended operation.

Application for an Air Operator Certificate (5) An application shall be accompanied by a fee set out in the Third Schedule.

5.(1) The Authority may, upon the payment of the fee specified in the Third Schedule, issue an Air Operator Certificate in Form B set out in the First Schedule if, after investigation, the Authority is satisfied that the applicant -

- (*a*) is a citizen of Botswana;
- (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 Air Operator Certificate; 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 air operator certificate obtains a substantial ownership or is employed in a senior management position.

(3) An Air Operator Certificate holder may apply in writing to the Authority for the issue of a duplicate certificate where the Air Operator Certificate is lost, destroyed or mutilated on payment of the fee set out in the Third Schedule.

- **6.** (1) The Air Operator Certificate shall consist of –
- (a) a one-page certificate for public display signed by the Authority; and
- (b) operations specifications containing the terms and conditions applicable to the Air Operator Certificate holder's certificate.
- (2) The Authority shall issue an Air Operator Certificate which contains -
- (a) the name and location, main place of business, of the Air Operator Certificate holder;
- (b) the date of issue and period of validity;
- (c) a description of the type of operations authorised;
- (d) the type of aircraft authorised for use;
- (e) the authorised areas of operations; and
- (f) other special authorisations, approvals and limitations issued by the Authority in accordance with the standards which are applicable to the operations and maintenance conducted by the air operator certificate holder.

7. An Air Operator Certificate, or any portion of the air operator certificate issued by the Authority shall be valid for 12 months unless where —

- (*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.

8.(1) The Authority may amend any Air Operator Certificate if –

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

Duration of an air operator certificate

Amendment of air operator certificate

Contents of air operator certificate

Issue of air operator certificate (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) If the Authority stipulates, by a notice in writing, that an emergency exists that requires immediate amendment of the Air Operator Certificate, 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 required under subregulation (2), but shall operate in accordance with it, unless the amendment is subsequently 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, unless 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 accompanied by the fees specified in the Third Schedule.

(6) A person shall not perform a commercial air transport operation for which an Air Operator Certificate 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 10 years, or to both.

9.(1) An Air Operator Certificate holder shall make an application for renewal of an Air Operator Certificate at least 30 days before the date of expiry of the certificate, in Form A set out in the First Schedule, accompanied by the renewal fees specified in the Third Schedule.

(2) Where an application for renewal is made after a period not exceeding 12 months after the expiry of the Air Operator Certificate, the Authority may renew the Air Operator Certificate subject to the payment of such penalty as may be prescribed.

(3) A penalty 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 Air Operator Certificate expired, calculated to the nearest pula.

(4) An application for the renewal of an Air Operator Certificate that expired 12 months or more prior to the application for renewal shall be treated as an application for a new Air Operator Certificate and the provisions of regulation 4 shall apply.

10. The Authority may suspend an Air Operator Certificate or a part of the Air Operator Certificate, where -

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

11. (1) The Authority may revoke an Air Operator Certificate air operator 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;

Renewal of air operator certificate

air operator certificate

Suspension of

Revocation of air operator certificate

(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.(2) Where an Air Operator Certificate is revoked in terms of subregulation (1), the

Air Operator Certificate holder shall surrender the certificate to the Authority.12. (1) The Air Operator Certificate holder shall, for purposes of

determining compliance with applicable 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.

(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.

13. (1) The Authority shall conduct on-going validation of the Air Operator Certificate holder's continued eligibility to hold its Air Operator Certificate and associated approvals.

(2) The 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 complying with the applicable laws and Air Operator Certificate terms and conditions.

(3) The Air Operator Certificate holder shall make available at its principal base of operations -

- (*a*) all portions of its current Air Operator Certificate;
- (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) Failure by any Air Operator Certificate holder to make available to the Authority upon request, all portions of the Air Operator Certificate, Operations and Maintenance Manuals and any required record, document or report shall form grounds for suspension of all or part of the Air Operator Certificate.

PART III — Air Operator Certification and Continued Validity

14. (1) An Air Operator Certificate holder that is not authorised to conduct maintenance under its Air Operator Certificate shall maintain a principal base of operations.

(2) An Air Operator Certificate holder that is authorised to conduct maintenance under its Air Operator Certificate shall maintain a principal base of operations and maintenance.

(3) An Air Operator Certificate holder may establish a main operations base

Access for inspection

Conducting tests and inspections

Base of operations

and a main maintenance base at the same location or at separate locations.

(4) An Air Operator Certificate holder shall provide written notification of intent to the Authority at least 30 days before it proposes to establish or change the location of its base.

15.(1) An Air Operator Certificate holder shall have an accountable manager, acceptable to the Authority, who has corporate authority for ensuring that all flight operations and maintenance activities can be financed and carried out to the highest degree of safety standards required by the Authority.

(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) Chief Inspector.

(3) The Authority may approve positions or numbers of positions, other than those listed, 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 specified in the Second Schedule.

(5) The individuals who serve in the positions required or approved under this regulation and anyone in a position to exercise control over operations conducted under the Air Operator Certificate 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) To the extent of their responsibilities, the individuals who serve in the positions required or approved 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).

Management personnel required for commercial air transport operations (8) An Air Operator Certificate holder shall not effect any changes without the prior written approval of the Authority with respect to -

(a) the accountable manager; 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.

16. (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 manager 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 quality system, and the quality manager, shall be acceptable to the Authority.

(5) An Air Operator Certificate holder shall describe the quality system in relevant documentation as specified in the Fourth Schedule.

(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 acceptance to the Authority, and State of Registry for aircraft not registered in Botswana.

17. (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 prior to co-ordination with the Authority.

(3) An Air Operator Certificate holder shall submit the proposed policy or procedure to the Authority at least 30 days prior to the date of intended implementation.

(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.

Submission and revision of policy and procedure manual

Quality System

C.494

Retention of records

18. (1) An Air Operator Certificate holder shall retain the following records for the period specified in the Fifth Schedule -

- (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 the following sections listed below -
 - (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*) other records as may be required by the Authority.

(3) For the records identified under subregulation (2), the 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) records for those employees performing crew member or flight operations officer duties in sufficient detail to determine whether the employee meets the experience and qualification for duties in commercial air transport operations.

(4) An Air Operator Certificate holder shall maintain records in a manner acceptable to 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.

- **19.** (1) An Air Operator Certificate holder shall retain —
- (*a*) the most recent flight data recorder calibration, including the recording medium from which this 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.

Cockpit voice and flight data recorder records (2) In the event of an accident or incident requiring immediate notification of the Authority, the Air Operator Certificate holder shall remove and keep recorded information from the cockpit voice recorder and flight data recorder 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) 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.

20. (1) An authorised person shall have power to inspect and copy any of the records referred to in regulation 18 and 19.

(2) Any person who refuses an authorised person access to any

of the records referred to under regulation 18 and 19 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.

21. (1) The Air Operator Certificate holder shall maintain in the operations specification, a current list of all aircraft it operates.

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

(3) An Air Operator Certificate holder shall apply to the Authority for an amendment to its operations specifications in advance of 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).

22. An Air Operator Certificate holder shall have an aircraft technical log that is carried on the aircraft that contains a journey records section and an aircraft maintenance record section.

23. (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, including co-ordination with other Air Operator Certificate personnel.

24. (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 the Sixth Schedule.

25.(1) An Air Operator Certificate holder shall establish and maintain a Safety Management System acceptable to 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;

Powers to inspect and copy records

Aircraft operated by Air Operator Certificate holder

Aircraft technical log

Company procedures indoctrination

Flight safety document system

Safety Management System

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

(2) An Air Operator Certificate holder that operates aircraft with a maximum certificated take-off mass of more than 27 000 kg shall include a flight data monitoring programme as part of its Safety Management System.

(3) The Air Operator Certificate holder's flight data analysis programme shall be non-punitive and contain adequate safeguards to protect the source of the data.

(4) The Air Operator Certificate holder's Safety Management System shall include a flight safety documents system for the use and guidance of its operational personnel.

(5) The Safety Management System shall be as specified under the Seventh Schedule.

26. An Air Operator Certificate holder who operates an aeroplane over 5 700 kg maximum certificated take-off mass shall obtain and assess continuing airworthiness information and recommendations available from the organisation responsible for the type design and shall implement resulting actions considered necessary in accordance with a procedure acceptable to the Authority.

27. (1) An Air Operator Certificate holder who operates an aeroplane over 5 700 kg maximum certificated take-off mass shall monitor and assess maintenance and operational experience with respect to continuing airworthiness and have a system whereby information on faults, malfunctions, defects and other occurrences that cause or might cause adverse effects on the continuing airworthiness of the aircraft is transmitted to the organisation responsible for the type design of the aircraft.

(2) The operators and maintenance organisations shall report to the Authority in respect of aeroplanes over 5 700 kg and helicopters over 3 175 kg maximum certificated take-off mass the service information required by the authority according to the procedure, established by the Authority.

(3) The operators and maintenance organisations shall transmit to the organisation responsible for the type design of aircraft in respect of aeroplanes over 5 700 kg and helicopters over 3 175 kg maximum certificated take-off mass 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

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

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

Continuing airworthiness information

Maintenance and operational experience

Authorised aircraft

(3) A person shall not operate additional or replacement aircraft of a type for which it is currently authorised unless it can show that each aircraft has completed an evaluation process for inclusion in the 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.

29. (1) An Air Operator Certificate holder may dry-lease a foreign registered aircraft for commercial air transport where authorised by the Authority.

(2) A person shall not operate a foreign registered aircraft unless -

- (*a*) there is in existence a current agreement between the Authority and the State of Registry that, while the aircraft is operated by a Botswana air operator certificate holder, these Regulations shall apply; and
- (b) there is in existence a current agreement between the Authority and the State of Registry that
 - (i) while the aircraft is operated by the air operator certificate holder, the airworthiness regulations of the State of Registry shall apply, or
 - (ii) if the State of Registry agrees to transfer some or all of the responsibility for airworthiness to the Authority under Article 83 bis of the Chicago Convention, the 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) Any 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.

30.(1) An Air Operator Certificate holder shall not interchange aircraft with another Air Operator Certificate holder without the approval of the Authority.

(2) The Air Operator Certificate holder shall comply with all the requirements for aircraft interchange specified in the Eighth Schedule.

31. (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 Air Operator Certificate 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 Air Operator Certificate under which the operation was conducted.

(3) The Air Operator Certificate holder shall comply with all the requirements for the wet-leasing of aircraft provided in the Ninth Schedule.

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

Dry leasing of foreign

registered

aircraft

Aircraft interchange

Wet leasing

Emergency evacuation demonstration (2) The full capacity actual 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; and
- (b) there is an engineering analysis which shows that an evacuation is still possible within the 90-second standard 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 it has first demonstrated to the Authority that it has the ability and equipment to efficiently carry out its ditching procedures.

(5) The Air Operator Certificate holder shall comply with all the requirements for the emergency evacuation demonstration provided in the Tenth Schedule.

33.(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) Demonstration flights required under subregulation (1) shall be conducted in accordance with the regulations applicable to the type of operation and aircraft type used.

(4) The Air Operator Certificate holder shall comply with all the requirements for demonstration flights provided in the Eleventh Schedule.

(5) The Authority may authorise deviations from this regulation where it finds that special circumstances exist which renders full compliance with this regulation unnecessary.

PART V — Facilities and Operations Schedules

34. (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.

35.(1) In establishing flight operations schedules, an Air Operator Certificate holder conducting scheduled operations shall allow enough time for the proper servicing of aircraft at intermediate stops, and shall consider the prevailing winds en route and cruising speed for the type of aircraft.

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

Demonstration flights

Operations schedules

Facilities

PART VI — Air Operator Certificate Flight Operations Management

36. (1) An Air Operator Certificate holder shall prepare and keep current an Operations Manual which contains the air operator certificate holder's procedures and policies for the use and guidance of its personnel.

(2) The Operations Manual shall contain the overall general company policies and procedures regarding the flight operations it conducts.

(3) An Air Operator Certificate holder shall issue to the crew members and persons assigned operational control functions, an Operations Manual approved by the Authority.

(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 of this manual 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) Unless otherwise acceptable to the Authority, an Air Operator Certificate holder shall provide an Operations Manual 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) The 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.

Operations

manual

(9) Specific subjects 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) The Operations Manual shall conform to the outline and structure provided in the Twelfth Schedule.

37. (1) An Air Operator Certificate holder shall ensure that all operations personnel are properly instructed in their duties and responsibilities and the relationship of such duties to the operation as a whole.

(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 have 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 the Thirteenth Schedule.

38.(1) 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.

(2) 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 check lists to be used applicable to the operations of the Air Operator Certificate holder that are approved by the Authority.

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

(4) 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.

(5) The Aircraft Operating Manual shall conform to the outline set out in the Fourteenth Schedule.

39. (1) An Air Operator Certificate holder shall use an aircraft technical log containing a journey records section which includes the following information for each flight -

- (a) Aircraft nationality and registration;
- (b) Date;
- (c) Names of crew members;

(d) Duty assignments of crew members;

Training programme

Aircraft Operating Manual

Aircraft Technical Log entries–journey records section (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) Entries in the journey logbook shall be made currently and in ink or indelible pencil.

(3) Completed journey log books shall be retained to provide a continuous record of the last two years operations.

40. The Air Operator Certificate holder shall, for each commercial air transport operation, designate in writing one pilot as the pilot-in-command.

41. (1) The Air Operator Certificate holder shall schedule, and the pilotin-command shall ensure that the minimum number of required cabin crew members are on board passenger-carrying flights.

(2) The number of cabin crew members may not be less than the minimum specified by the Authority in the air operator certificate holder's operations specifications or the following -

- (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.

(3) When passengers are on board a parked aircraft, the minimum number of flight attendants shall be one-half that is required for the flight operation, but never less than one cabin crew member or another person qualified in the emergency evacuation procedures for the aircraft.

(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.

42. (1) An Air Operator Certificate holder shall not allow the transportation of special situation passengers except -

- (*a*) where provided 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.

43. (1) An Air Operator Certificate holder shall have a programme approved by the Authority of checking and 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. of pilot-incommand Required cabin

crew members

Designation

Carriage of special situation passengers

Crew member checking and standardisation programme Cockpit check procedures

44. (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.

45. (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 Minimum Equipment List approved by the Authority.

(2) The Minimum Equipment List 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 Configuration Deviation List 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 acceptable to the Authority for operations in accordance with the Configuration Deviation List requirements.

(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.

46. (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 acceptable to 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.

47. (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.

48. (1) An Air Operator Certificate holder shall provide for the use of the flight crew members, ground handling personnel and persons assigned operational control functions during the performance of their duties, an aircraft handling and loading manual acceptable to the Authority.

(2) The manual referred to under subregulation (1) shall be specific to the aircraft type and variant and shall contain the procedures and limitations for servicing and loading of the aircraft.

Minimum Equipment List and Configuration Deviation List

Performance planning manual

Performance data control system

Aircraft loading and handling manual **49.** (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 the centre of gravity of any aeroplane by actual weighing 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 aeroplanes 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 actual weighing or determine the mass of the traffic load in accordance with standard passenger and baggage masses as specified in the Fifteenth Schedule.

(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.

50. (1) The 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) The cabin crew member manual shall contain those operational policies and procedures applicable to cabin crew members and the carriage of passengers.

(3) The Air Operator Certificate holder shall issue to the cabin crew members, a manual specific to the aircraft type and variant which contains the details of their normal, abnormal and emergency procedures and the location and operation of emergency equipment.

51. (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 the Sixteenth Schedule.

(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.

52. (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.

Cabin crew

member

manual

Passenger briefing cards

Mass and balance data control system

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

53. (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 -
 - (i) take-off runway length requirements for dry, wet and contaminated conditions, including those dictated by system failures which affect the take-off distance;
 - (ii) take-off climb limitations;
 - (iii) en-route climb limitations;
 - (iv) approach climb limitations and landing climb limitations;
 - (v) landing runway length requirements for dry, wet and contaminated conditions, including systems failures which affect the landing distance; and
 - (vi) supplementary information, such as tire speed limitations.

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

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

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

55. (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 specified under the Nineteenth Schedule.

Weather reporting sources

De-icing and anti-icing programme

Route guide

56. (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 specified under the Twentieth Schedule.

57. (1) An Air Operator Certificate holder's flights shall be able to have two-way radio communications with all air traffic control facilities along the routes and alternate routes to be used.

(2) An Air Operator Certificate holder shall be able to have rapid and reliable radio communications 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.

58. (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) if two-engine aircraft are used, adequate airports are available within the time or distance limitations; and
- (f) if single-engine aircraft are used, surfaces are available which permit a safe forced landing to be executed.

(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.

59. (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 -

Communications facilities

Routes and areas of operations

Navigational accuracy

C.505

Flight

system

supervision

and monitoring

(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 subregulation (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) Operations on route segments where the use of performance-based navigation, celestial navigation or other specialised means of navigation is required shall be approved by the Authority.

(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.

60. (1) An operator, pilot-in-command, a person carrying on the business of manufacturing, repairing, overhauling, modifying an aircraft, equipment or any part of the aircraft, 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, an air traffic controller, a flight information service officer, an aerodrome certificate holder, operator or manager, a person responsible for flight checking or inspection of air navigation facilities or any person who performs a function in respect of ground handling of an aircraft shall report to the Authority any event which constitutes a reportable occurrence in terms of subregulation (2).

- (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 (Investigation of Accidents) Regulations.

(5) Any person who contravenes this regulation commits an offence and is liable to a fine not exceeding P50 000, or to imprisonment for a term not exceeding 10 years, or to both.

Mandatory occurence reporting

PART VII — Air Operator Certificate Maintenance Requirements

61. (1) An Air Operator Certificate holder shall ensure the airworthiness of the aircraft and the serviceability of both operational and emergency equipment by -

- (a) assuring the accomplishment of pre-flight inspections;
- (b) assuring the correction of any defect or damage affecting safe operation of an aircraft to an approved standard, taking into account the Minimum Equipment List or Configuration Deviation List, if available, for the aircraft type;
- (c) assuring the accomplishment of all maintenance in accordance with the approved operator's aircraft maintenance programme;
- (*d*) the analysis of the effectiveness of the Air Operator Certificate holder's approved aircraft maintenance programme;
- (e) assuring the accomplishment of any operational directive, airworthiness directive and any other continued airworthiness requirement made mandatory by the Authority; and
- (f) assuring the accomplishment of modifications in accordance with an approved standard and, for non-mandatory modifications, the establishment of an embodiment policy.

(2) An Air Operator Certificate holder shall ensure that the certificate of airworthiness for each aircraft operated remains valid in respect to -

- (a) the requirements under subregulation (1);
- (b) the expiration date of the certificate; and
- (c) any other maintenance condition specified in the certificate of airworthiness.

(3) An Air Operator Certificate holder shall ensure that the requirements specified in subregulation (1) are performed in accordance with procedures approved by or acceptable to the Authority.

(4) An Air Operator Certificate holder shall ensure that the maintenance, preventive maintenance, and modification of its aircraft or aeronautical products are performed in accordance with its maintenance control manual or current instructions for continued airworthiness and the Civil Aviation (Airworthiness) Regulations.

(5) An Air Operator Certificate holder may make an arrangement with another person or entity for the performance of any maintenance, preventive maintenance, or modifications; but shall remain responsible of all work performed under such arrangement.

(6) An Air Operator Certificate holder shall have its aircraft maintained and released to service by an approved maintenance organisation.

(7) 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.

62. (1) An Air Operator Certificate holder shall not operate an aircraft, except for pre-flight inspections, unless it is maintained and released to service by an approved maintenance organisation that is approved by the State of Registry and is acceptable to the Authority.

(2) For aircraft registered in Botswana, an approved maintenance organisation shall be approved by the Authority.

Approval and acceptance of Air Operator Certificate maintenance systems and programmes

Maintenance

responsibility

C.507

(3) For aircraft not registered in Botswana, an approved maintenance organisation shall be approved by the State of Registry of the aircraft, and such approval shall be accepted by the Authority.

(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.

63. (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 manager 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 16; 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) The 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 administrative agreements between the Air Operator Certificate holder and the approved maintenance organisation, or a description of the maintenance procedures and the procedures for completing and signing a maintenance release when maintenance is based on a system other than that of an approved maintenance organisation;
- (b) a description of the procedures to ensure each aircraft they operate is in an airworthy condition;
- (c) a description of the procedures to ensure the emergency equipment for each flight is serviceable;
- (d) the names and duties of the person or persons required to ensure that all maintenance is carried out in accordance with the maintenance control manual;
- (e) a reference to the maintenance programme required by the Authority;
- (f) a description of the methods for completion and retention of the operator's maintenance records required by the Authority;
- (g) a description of the procedures for monitoring, assessing and reporting maintenance and operational experience for all aircraft over 5 700 kg maximum certificated take-off mass;

Maintenance control manual

- (h) a description of the procedures for obtaining and assessing continued airworthiness information and implementing any resulting actions considered necessary by the State of Registry for all aircraft over 5 700 kg maximum certificated take-off mass, from the organisation responsible for the type design;
- (*i*) a description of the procedures for implementing mandatory continuing airworthiness as required by the Authority;
- (*j*) a description of the procedures establishing and maintaining a system of analysis and continued monitoring of the performance and efficiency of the maintenance programme in order to correct any deficiency in that programme;
- (k) a description of aircraft types and models to which the manual applies;
- (*l*) a description of the procedures for ensuring that unserviceabilities affecting airworthiness are recorded and rectified; and
- (*m*) a description of the procedures for advising the State of Registry of significant in-service occurrences.

(3) A person shall not provide for use of its personnel in commercial air transport any Maintenance Control Manual or portion of this manual which has not been reviewed and approved for the Air Operator Certificate holder by the Authority.

(4) 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.

64. (1) The Air Operator Certificate holder, approved as an approved maintenance organisation, shall carry out the requirements of regulation 69.

Maintenance management

(2) If the 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 61 by using –

- (a) an equivalent system of maintenance approved or accepted 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 or accepted by the Authority.

(3) An Air Operator Certificate holder shall employ a person or group of persons, acceptable to the Authority, to ensure that all maintenance is carried out to an approved standard such that the maintenance requirements of regulation 69 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 16.

(4) An Air Operator Certificate holder shall provide suitable office accommodation at appropriate locations for the personnel specified in subregulation (2).

(5) An Air Operator Certificate holder shall establish a safety program for the maintenance of aircraft that is in accordance with regulation 25 that is acceptable to the Authority. Maintenance records **65.** (1) An Air Operator Certificate holder shall ensure that a system has been established to keep, in a form acceptable to the Authority, the following records -

- (*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 ensure that items under subregulation (1) shall be kept for a minimum of 90 days after the unit to which they refer has been permanently withdrawn from service, and the records shall be kept for the periods specified in the Fifth Schedule after the signing of the maintenance release.

(3) An Air Operator Certificate holder shall ensure that in the event of temporary change of operator, the records specified in subregulation (1) shall be made available 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.

66. (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.

Aircraft technical log entries – maintenance record section (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, or have made, 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 specified in the Fifth Schedule 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.

67. (1) An Air Operator Certificate holder shall not operate an aircraft unless it has a maintenance release, as follows -

- (a) an Air Operator Certificate holder shall not operate an aircraft unless it is maintained and released to service by an organisation approved in accordance with the Civil Aviation (Approved Maintenance Organisation) Regulations which shall be acceptable to the State of Registry;
- (b) an Air Operator Certificate holder using an approved maintenance organisation shall not operate an aircraft after release under paragraph
 (a) unless a maintenance release has been prepared in accordance with the Air Operator Certificate holder's maintenance control manual procedures and a logbook entry in the maintenance records section of the aircraft technical log has been made;
- (c) an Air Operator Certificate holder not using an approved maintenance organisation shall not operate an aircraft after release under paragraph (a) unless a logbook entry in the maintenance records section of the aircraft technical log is prepared or caused to be prepared by an individual appropriately licensed and rated by the Authority and the maintenance release certificate is made in accordance with the Air Operator Certificate holder's maintenance control manual procedures; and
- (*d*) the Air Operator Certificate holder shall ensure that the pilot-incommand of the aircraft has reviewed the maintenance section of the aircraft technical log and determined that any maintenance performed has been appropriately documented.

(2) An Air Operator Certificate holder shall not operate an aircraft unless the pilot-in-command is in possession of a valid maintenance release to indicate that any maintenance, preventative maintenance or inspections performed on the aircraft have been satisfactorily performed and appropriately documented.

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

(2) Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained, and in the case of a major repair or major modification, the work shall be done in accordance with the technical data approved by the Authority.

(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 Air Operator Certificate, provided —

Release to service – maintenance

Modifications and repairs

- (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 operator certificate holder's operations specifications.

(4) An Air Operator Certificate holder using a maintenance system acceptable to the State of Registry 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) The 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 issuing 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 accepted by the Authority of the State of registry, 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.

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(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 repair or modification design conforms to applicable standards of airworthiness.

(11) A person or organisation repairing 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 supplemental 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.

69. (1) An Air Operator Certificate holder's aircraft maintenance programme and any subsequent amendment shall be submitted to the State of Registry for approval, and acceptance by the Authority shall be conditioned upon prior approval by the State of Registry, or where appropriate, upon the Air Operator Certificate holder complying with recommendations provided by the State of Registry.

(2) The Authority shall require an operator to include a reliability programme when the Authority determines that such a reliability programme is necessary.

(3) Where the Authority determines that a reliability programme is necessary the Air Operator Certificate holder shall provide such procedures and information in its maintenance control manual.

(4) 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.

(5) Repetitive maintenance tasks that are specified in mandatory intervals as a condition of approval of the type design shall be identified as such.

(6) A person shall not provide for use of its personnel in commercial air transport a Maintenance Programme or a portion of it which has not been reviewed and approved for the air operator certificate holder by the Authority.

(7) Approval by the Authority of an Air Operator Certificate holder's maintenance programme and any subsequent amendments shall be noted in the Air Operator Certificate.

Aircraft maintenance programme (8) An Air Operator Certificate holder shall have an inspection programme and a programme covering other maintenance, preventive maintenance, and modifications to ensure that -

- (*a*) maintenance, preventive maintenance, and modifications performed by it, or by other persons, are performed in accordance with the air operator certificate holder's maintenance control manual; and
- (b) each aircraft released to service is airworthy and has been properly maintained for operation.

(9) The Authority may amend any specifications issued to an Air Operator Certificate holder to permit deviation from those provisions of this regulation that would prevent the return to service and use of airframe components, power plants, appliances, and spare parts because those items have been maintained, altered, or inspected by persons employed outside Botswana who do not hold a Botswana technician's licence.

(10) An Air Operator Certificate holder who is granted authority under this deviation shall provide for surveillance of facilities and practices to assure that all work performed on these parts is accomplished in accordance with the Air Operator Certificate holder's maintenance control manual.

(11) 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.

70. (1) A maintenance programme for each aircraft shall contain when 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) The 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 -

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

(b) in 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.

Reliability programme

71. (1) An Air Operator Certificate holder which 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 that 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.

72. (1) Any 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 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 a 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.

73. (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 schedule a person performing maintenance functions for aircraft certified for commercial air transport for more than 12 consecutive hours of duty.

(3) In situations involving unscheduled aircraft unserviceability, persons 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.

(4) Following unscheduled duty periods, the person performing maintenance functions for aircraft shall have a mandatory rest period of 10 hours.

(5) The Air Operator Certificate holder shall relieve the person performing maintenance functions from all duties for 24 consecutive hours during any seven consecutive day period.

Authority to perform and approve maintenance, preventive maintenance and modifications

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

Rest and duty limitations for persons performing maintenance functions

PART VIII — Air Operator Certificate Holder's Security Management

Security requirements

Security training programmes **74.** An Air Operator Certificate holder shall ensure that all appropriate personnel are familiar, and comply with, the relevant requirements of the national aviation security programmes of the State of the operator.

75. (1) Each Air Operator Certificate holder shall establish, maintain and conduct approved training programmes which enable the operator's personnel to take appropriate action to prevent acts of unlawful interference such as sabotage or unlawful seizure of aircraft and to minimise the consequences of such events should they occur.

(2) As a minimum, the security training programme shall include —

- (a) determination of the seriousness of any occurrence;
- (b) crew communication and coordination;
- (c) appropriate self-defense responses;
- (d) use of non-lethal protective devices assigned to crew members;
- (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; and
- (h) crew preventative measures and techniques in relation to passengers, baggage, cargo, mail, equipment, stores and supplies intended for carriage on an aircraft.

76. Following an act of unlawful interference on board an aircraft the pilotin-command or, in his or her absence, the air operator certificate holder shall submit, without delay, a report of such an act to the designated local authority and the Authority in the State of the operator.

77. An Air Operator Certificate holder shall ensure that all aircraft carry a checklist of the procedures to be followed for that type aircraft in searching for concealed weapons, explosives, or other dangerous devices.

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

(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 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.

79. (1) An aeroplane certificated with a maximum certificated take-off mass in excess of 45 500 kg or with a passenger seating-security procedures capacity greater than 60 shall be equipped with an approved flight crew compartment door that is designed to resist penetration by small arms fire and grenade shrapnel, and to resist forcible intrusions by unauthorised persons and the door shall be capable of being locked and unlocked from either pilot's station.

Reporting acts of unlawful interference

Aircraft search procedure checklist

Flight crew compartment doors-security procedures

Flight crew compartment doors, large aeroplanessecurity procedures (2) The door shall be closed and locked from the time all external doors are closed following embarkation until any such door is opened for disembarkation, except when necessary to permit access and egress by authorised persons.

(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

80. (1) A foreign air operator shall not perform any operations in Botswana except in accordance with an Air Operator Certificate that has been issued by the State of the Operator and validated in accordance with this Part.

(2) Any person who operates an aircraft in commercial air transport without a validation certificate issued by the Authority under regulation 82 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.

81. (1) An application by a foreign air operator for approval to operate in Botswana shall be made in Form A set out in the Twenty-first Schedule and shall be accompanied by the following -

- (*a*) the Air Operator Certificate 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.

82. (1) The Authority may issue a validation certificate to a foreign air operator in Form B set out in the Twenty-first Schedule to operate within Botswana upon the payment of the fees specified in the Third Schedule where it is satisfied -

- (*a*) that the holder of the validation certificate shall conduct operations into, within or from Botswana;
- (b) that the foreign Air Operator Certificate 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 the holder of an Air Operator Certificate that is engaged in operations under a validation certificate issued by the Authority have its Air Operator Certificate 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.

Issue of validation certificate

Authorisation for foreign air operator to operate in Botswana

otswana

Application for authority

to operate in

Botswana

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- (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.

83. 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 Air Operator Certificate that is in effect and that notification of any changes to the original Air Operator Certificate 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.
- (c) a statement that the foreign air operator shall comply with the authorisations, conditions and limitations of its Air Operator Certificate operations specifications while operating in Botswana.
- **84.** (1) Subject to regulations 86 and 87, a validation certificate shall remain in force as long as the foreign Air Operator Certificate 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 twelfth month following the last commercial air transport operation in Botswana to which the validation applies.

85. 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 the Third Schedule, obtain a duplicate validation certificate.

86. The Authority may suspend a validation certificate where —

- (a) there exists any condition or information which is subject to verification;
- (b) the foreign Air Operator Certificate is suspended by the authority in the State of issue; or
- (c) the Authority establishes that the certificate holder has not met, or no longer meets the requirements of these Regulations.

Duration of validation certificate

Issue of duplicate validation certificate

Suspension of validation certificate

Conditions of validation

certificate
- 87. A validation certificate shall be revoked by the Authority where -
- (*a*) the foreign Air Operator Certificate is revoked by the authority in the State of issue;
- (b) the aircraft is destroyed or it is permanently withdrawn from use;
- (c) there is termination of a charter, lease or hire purchase agreement resulting in the change of ownership of the air operator;
- (d) the holder of the validation certificate has been convicted of an offence under the Act;
- (e) 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
- (f) the Authority establishes that the certificate holder has not met, or no longer meets the requirements of these Regulations.

88. 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.

89. (1) The Authority may exempt a foreign air operator engaged in commercial air transport operations under an air operator certificate issued by the State of the Operator from compliance with a provision of this Part in respect of the aircraft where -

- (*a*) the Authority is satisfied that under the foreign air operator's Air Operator Certificate 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.

90. The 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.

91. (1) 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 -

- (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.
- **92.** (1) A foreign air operator shall -
- (*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) The 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.

Surrender of validation certificate

Exemptions

Preservation, production and use of flight recorder recordings

Authority to inspect

Documents, manuals and records

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Revocation

of validation

certificate

PART X – General

Dangerous goods carriage

copy of

documents

Penalties

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

Search and

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

95. 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

96. (1) Any certificate or approval issued prior to the commencement of these Regulations shall, unless otherwise rendered invalid, remain valid until expiry or for a period of 6 months from the date of commencement of these Regulations, whichever comes first.

(2) Notwithstanding any other provision of these Regulations, a person who at the commencement of these Regulations, is carrying out any acts, duties or operations affected by these Regulations shall, within 6 months from the date of commencement, or within such longer time that the Minister may, by notice in the Gazette prescribe, comply with the requirements of these Regulations or cease to carry out such acts, duties or operations.

Transitional

FIRST SCHEDULE

FORM A

APPLICATION/RENEWAL FOR AN AIR OPERATOR CERTIFICATE (*Regulation 4 (3) and 9 (1)*)

- 1. Name, address, and telephone number of applicant.
- 2. Names(s) if different from 1 above in which Air Transport Operations will be conducted.
- 3. Types and numbers of Aircraft for which the certificate is required. Please state registration marks.
- 4. Purpose for which Aircraft are to be operated.
- 5. Aerodromes at which each type of Aircraft will be based
- 6. Details of office accommodation available for use by operating staff
- 7. Geographical regions in which it is proposed to operate each type of aircraft
- 8. State whether operations and training manuals are available for submission to the Civil Aviation Authority of Botswana
- 9. Name and address of organization responsible for all maintenance of each type of aircraft.
- 10. Names, qualifications and experience of persons responsible for conducting on behalf of the operator the periodical tests required by the Air Navigation Regulations.
- 11. Names, qualifications and experience of managerial and senior executive staff and details of the duties for which each individual is responsible.
- 12. Proposed date commencement of operations.

I apply for the grant of an Air Operator's Certificate based on the information provided in this form.

Signature

Name: (BLOCK LETTERS)_____

Status:

Date: _____

FORM B AIR OPERATOR CERTIFICATE (*Regulation 5 (1), 21 (2)*)

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

Notes.-

- 1. For use of the State of the Operator.
- 2. Replace by the name of the State of the Operator.
- 3. Replace by the identification of the issuing authority of the State of the Operator.
- 4. Unique AOC number, as issued by the State of the Operator.
- 5. Date after which the AOC ceases to be valid (dd-mm-yyyy).
- 6. Replace by the operator's registered name.
- 7. Operator's trading name, if different. Insert "dba" before the trading name (for "doing business as").
- 8. Operator's principal place of business address.
- 9. Operator's principal place of business telephone and fax details, including the country code. 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 — <i>Operations Specifications</i> (subject to the approved conditions in the Operations Manual)				
ISSUING AUTHORITY C	CONTACT D	ETAIL	S	
Telephone:	; Fax:		; E-mail:	
2AOC No.: 3Oj	perator's Nar	ne:	4Date: Sigr	nature:
Dba Trading Name:				
5Aircraft Model:				
6Type of Operation:				
7Area(s) of Operation:				
8Special Limitations:				
Special Authorizations	Yes	No	9Specific Approvals	Remarks
Dangerous Goods				
Low visibility Operations				
Approach and Landing			10CAT:RVR:mDH: ft	
Take-off			11RVR:m	
12RVSM				

¹³ ETOPS		¹⁴ Maximum Diversion Time: minutes	
15Navigation Specifications for PBN Operations			16
Continuing Airworthiness		17	
18Other			

Notes.-

- 1. Telephone and fax contact details of the authority, including the country code. E-mail to be provided if available.
- 2. Insert the associated AOC number.
- 3. Insert the operator's registered name and the operator's trading name, if different. Insert "dba" before the trading name (for "doing business as").
- 4. Issuance date of the operations specifications (dd-mm-yyyy) and signature of the authority representative.
- 5. Insert the Commercial Aviation Safety Team (CAST)/ICAO designation of the aircraft make, model and series, or master series, if a series has been designated (e.g. Boeing-737-3K2 or Boeing-777-232). The CAST/ICAO taxonomy is available at: http://www. intlaviationstandards.org/.
- 6. Other type of transportation to be specified (e.g. emergency medical service).
- 7. List the geographical area(s) of authorized operation (by geographical coordinates or specific routes, flight information region or national or regional boundaries).
- 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 I, II, IIIA, IIIB or IIIC). Insert the minimum RVR in meters and decision height in feet. One line is used per listed approach category.
- 11. Insert the approved minimum take-off RVR in meters. One line per approval may be used if different approvals are granted.
- 12. "Not applicable (N/A)" box may be checked only if the aircraft maximum ceiling is below FL 290.
- 13. Extended range operations (ETOPS) currently applies only to twin-engined aircraft. Therefore the "Not applicable (N/A)" box may be checked if the aircraft model has more than 2 engines. Should the concept be extended to 3 or 4-engined aircraft in the future, the "Yes" or "No" checkbox will be required to be checked.
- 14. The threshold distance may also be listed (in NM), as well as the engine type.
- 15. Performance-based navigation (PBN): one line is used for each PBN specification authorization (e.g. RNAV 10, RNAV 1, RNP 4), with appropriate limitations or conditions listed in the "Specific Approvals" and/or "Remarks" columns.

- 16. Limitations, conditions and regulatory basis for operational approval associated with the performance-based navigation specifications (e.g. GNSS, DME/DME/IRU). Information on performance-based navigation, and guidance concerning the implementation and operational approval process, are contained in the Performance-based Navigation Manual (Doc 9613).
- 17. Insert the name of the person/organization responsible for ensuring that the continuing airworthiness of the aircraft is maintained and the regulation that requires the work, i.e. within the AOC regulation or a specific approval (e.g. EC2042/2003, Part M, Subpart G).
- 18. 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).

SECOND SCHEDULE

MANAGEMENT PERSONNEL REQUIRED FOR COMMERCIAL AIR TRANSPORT OPERATIONS (Regulation 15(4))

- (a) Each AOC holder shall make arrangements to ensure continuity of supervision if operations are conducted in the absence of any required management personnel.
- (b) Required management personnel shall be contracted to work sufficient hours such that the management functions are fulfilled.
- (c) A person serving in a required management position for an AOC holder may not serve in a similar position for any other AOC holder, unless an exemption is issued by the Authority.
- (d) The minimum initial qualifications for an Operations Manager are -
 - (1) An Airline Transport Pilot License (ATPL); and
 - (2) 3 years experience as Pilot In Command (PIC) in commercial air transport operations of -
 - (i) large aircraft if the AOC holder operates large aircraft, or
 - (ii) either large or small aircraft if the AOC holder operates only small aircraft.

Notwithstanding (d) above the Authority may accept a commercial pilot license 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
 - (1) An ATPL with the appropriate ratings for at least one of the aircraft used in the AOC holder's operations; and
 - (2) 3 years experience as PIC in commercial air transport operations -
 - (i) in large aircraft if the AOC holder operates large aircraft, or
 - (ii) in either large or small aircraft if the AOC holder operates only small aircraft.

Notwithstanding (e) above the Authority may accept a commercial pilot license 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
 - (1) broad operational knowledge and experience in the function of the organization including training management, aircraft operations, air traffic management, aerodrome operations and maintenance organization management;

- (2) sound knowledge of safety management principles and practices;
- (3) good written and verbal communication skills;
- (4) well-developed interpersonal skills;
- (5) computer literacy;
- (6) ability to relate to all levels, both inside and outside the organization;
- (7) organizational ability;
- (8) ability to work unsupervised;
- (9) good analytical skills;
- (10) leadership skills and an authoritative approach; and
- (11) worthy of respect from peers and management.
- (g) The minimum entry qualifications for a Maintenance Manager are -
 - (1) An Aviation Maintenance Technician (AMT) license with airframe and powerplant ratings;
 - (2) 3 years experience in maintaining the same category and class of aircraft used by the AOC holder including 1 year in the capacity of returning aircraft to service; and
 - (3) 1 year supervisory experience maintaining the same category and class of aircraft used by the AOC holder.
- (*h*) An AOC 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.

THIRD SCHEDULE

FEES

		Р			
Regulation 4 (5), 9 (1)	Application for certificate, renewal	500			
Regulation 5 (1)and (3)	Issue or duplicate certificate	30 for every 100kg or part thereof of the aggregate weight of all aircraft to be operated under the certificate			
Regulation 8 (5)	Amendment of certificate	10 for every 100kg or part thereof			
Regulation 82 (1), 85	Issue or renewal of validation for use of foreign registered aircraft for commercial air transport operations.				
	aircraft not exceeding 5700 kg (weight)	500.00 per month, or part thereof			
	aircraft exceeding 5700 kg (weight)	800.00 per month, or part thereof			
Regulation 94 documents	Searches and copies of documents/c	ertificates or excerpts of 100			

FOURTH SCHEDULE

QUALITY SYSTEM (*Regulation 16 (5)*)

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

1.0. General.

1.1 Terminology.

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

"accountable manager" means the person acceptable to 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 manager 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 manager is an essential part of the operators management organisation. With regard to the text in regulation 16(2) the term "accountable manager" 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 manager will have overall responsibility for the operators 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 manager;
 - (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.
- 2.0 Quality System.
- 2.1 Introduction.
- 2.1.2 The operator's quality system should ensure compliance with and adequacy of operational and maintenance activities requirements, standards, and operational procedures.
- 2.1.3 The operator should specify the basic structure of the quality system applicable to the operation.
- 2.1.4 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
- 3.0 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 should 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:
 - (a) Actual flight operations;
 - (b) Ground deicing/anti-icing;
 - (c) Flight support services;
 - (d) Load control;
 - (e) Maintenance;
 - (f) Technical standards; and
 - (g) 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;
 - (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 which an 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;
 - (*a*) A statement explaining the scope (*b*) Planning and preparation:
 - (b) Planning and preparation;

- (c) Gathering and recording evidence; and
- (d) Analysis of the evidence.
- 3.3.3 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.
- 3.4.1 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.
- 3.4.2 The responsibilities of the auditors should be clearly defined in the relevant documentation.
- 3.5 Auditor's Independence.
- 3.5.1 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 acceptable to 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.
- 3.5.2 The operator's quality assurance programme should identify the persons within the company who have the experience, responsibility and authority to
 - (a) perform quality inspections and audits as part of ongoing quality assurance;
 - (b) identify and record any concerns or findings, and the evidence necessary to substantiate such concerns or findings;
 - (c) initiate or recommend solutions to concerns or findings through designated reporting channels;
 - (d) verify the implementation of solutions within specific time scales; and
 - (e) report directly to the quality manager.
- 3.6 audit scope.
- 3.6.1 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:
 - (*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
- (y) Training.
- 3.7 Audit Scheduling.
- 3.7.1 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.
- 3.7.2 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.
- 3.7.3 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 should 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 manager. Such non-compliance should be recorded, for the purpose of further investigation, in order to determine the cause and to enable the recommendation of appropriate corrective action.
- 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 manager will have the ultimate responsibility for resourcing the corrective 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 should establish
 - (a) the seriousness of any findings and any need for immediate corrective action;
 - (b) the origin of the finding;
 - (c) what corrective actions are required to ensure that the non-compliance does not recur;
 - (d) a schedule for corrective action;
 - (e) the identification of individuals or departments responsible for implementing corrective action; and
 - (f) allocation of resources by the accountable manager, 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 manager 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 5 years -
 - (a) audit schedules;
 - (b) quality inspection and audit reports;
 - (c) responses to findings;
 - (d) corrective action reports;
 - (e) follow-up and closure reports; and
 - (f) management evaluation reports.
- 4.0 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 deicing/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.
- 5.0. 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.
- 6.0 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.

Quality System — Organisation Examples

The following diagrams illustrate two typical examples of Quality organizations.

Quality System within the AOC holder's organization when the AOC holder also holds an approval for maintenance.



Quality Systems related to an AOC holder's organization where aircraft maintenance is contracted out to an approved organization which is not integrated with the AOC holder.



Note: Quality System and Quality Audit Programme of the AOC holder should assure that the maintenance carried out by the approved organisation is in accordance with requirements specified by the AOC holder.

FIFTH SCHEDULE

VALIDITY PERIODS FOR RETENTION OF RECORDS (Regulation 18 (1) 39, 65 and 66)

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 personnal	Until 12 months after the ampleuse has left		
for whom an approved training program is required in these regulations	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 AOC 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 AOC holder

SIXTH SCHEDULE

FLIGHT SAFETY DOCUMENTS SYSTEM (Regulation 24)

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.

- 1.0 Organization
- 1.1 A flight safety documents system shall be organized 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 follows -
 - (a) Time critical information, e.g., information that can jeopardize 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.
- 2.0 Validation. 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.
- 3.0 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.

- 4.0 Deployment. 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.
- 5.0 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 emphasizes 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 standardization.

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 minimize 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.

SEVENTH SCHEDULE

FRAMEWORK FOR SAFETY MANAGEMENT SYSTEMS (SMS) (Regulation 25 (5))

This Schedule specifies the framework for the implementation and maintenance of a safety management system (SMS) by an operator or an approved maintenance organization. An SMS is a management system for the management of safety by an organization. The framework includes four components and twelve elements representing the minimum requirements for SMS implementation. The implementation of the framework shall be commensurate with the size of the organization and the complexity of the services provided. This Schedule also includes a brief description of each element of the framework.

- 1. Safety policy and objectives
- 1.1 Management commitment and responsibility
- 1.2 Safety accountabilities
- 1.3 Appointment of key safety personnel
- 1.4 Coordination of emergency response planning
- 1.5 SMS documentation
- 2. Safety risk management
- 2.1 Hazard identification
- 2.2 Safety risk assessment and mitigation
- 3. Safety assurance
- 3.1 Safety performance monitoring and measurement
- 3.2 The management of change
- 3.3 Continuous improvement of the SMS
- 4. Safety promotion
- 4.1 Training and education
- 4.2 Safety communication

1. Safety policy and objectives

1.1 Management commitment and responsibility

The operator/approved maintenance organization shall define the organization's safety policy which shall be in accordance with international and national requirements, and which shall be signed by the accountable executive of the organization. The safety policy shall reflect organizational commitments regarding safety; shall include a clear statement about the provision of the necessary resources for the implementation of the safety policy; and shall be communicated, with visible endorsement, throughout the organization. The safety policy shall include the safety reporting procedures; shall clearly indicate which types of operational behaviours are unacceptable; and shall include the conditions under which disciplinary action would not apply. The safety policy shall be periodically reviewed to ensure it remains relevant and appropriate to the organization.

1.2 Safety accountabilities

The operator/approved maintenance organization shall identify the accountable executive who, irrespective of other functions, shall have ultimate responsibility and accountability, on behalf of the operator/approved maintenance organization, for the implementation and maintenance of the SMS. The operator/approved maintenance organization shall also identify the accountabilities of all members of management, irrespective of other functions, as well as of employees, with respect to the safety performance of the SMS. Safety responsibilities, accountabilities and authorities shall be documented and communicated throughout the organization, and shall include a definition of the levels of management with authority to make decisions regarding safety risk tolerability.

1.3 Appointment of key safety personnel

The operator/approved maintenance organization shall identify a safety manager to be the responsible individual and focal point for the implementation and maintenance of an effective SMS.

1.4 Coordination of emergency response planning

The operator/approved maintenance organization shall ensure that an emergency response plan that provides for the orderly and efficient transition from normal to emergency operations and the return to normal operations is properly coordinated with the emergency response plans of those organizations it must interface with during the provision of its services.

1.5 SMS documentation

The operator/approved maintenance organization shall develop an SMS implementation plan, endorsed by senior management of the organization that defines the organization's approach to the management of safety in a manner that meets the organization's safety objectives. The organization shall develop and maintain SMS documentation describing the safety policy and objectives, the SMS requirements, the SMS processes and procedures, the accountabilities, responsibilities and authorities for processes and procedures, and the SMS outputs. Also as part of the SMS documentation, the operator/approved maintenance organization shall develop and maintain safety management systems manual (SMSM), to communicate its approach to the management of safety throughout the organization.

2. Safety risk management

2.1 Hazard identification

The operator/approved maintenance organization shall develop and maintain a formal process that ensures that hazards in operations are identified. Hazard identification shall be based on a combination of reactive, proactive and predictive methods of safety data collection.

2.2 Safety risk assessment and mitigation

The operator/approved maintenance organization shall develop and maintain a formal process that ensures analysis, assessment and control of the safety risks in flight/maintenance operations.

3. Safety assurance

3.1 Safety performance monitoring and measurement

The operator/approved maintenance organization shall develop and maintain the means to verify the safety performance of the organization and to validate the effectiveness of safety risk controls. The safety performance of the organization shall be verified in reference to the safety performance indicators and safety performance targets of the SMS.

3.2 The management of change

The operator/approved maintenance organization shall develop and maintain a formal process to identify changes within the organization which may affect established processes and services; to describe the arrangements to ensure safety performance before implementing changes; and to eliminate or modify safety risk controls that are no longer needed or effective due to changes in the operational environment.

3.3 Continuous improvement of the SMS

The operator/approved maintenance organization shall develop and maintain a formal process to identify the causes of Sub-standard performances of the SMS, determine the implications of substandard performance of the SMS in operations, and eliminate or mitigate such causes.

4. Safety promotion

4.1 Training and education

The operator/approved maintenance organization shall develop and maintain a safety training programme that ensures that personnel are trained and competent to perform the SMS duties. The scope of the safety training shall be appropriate to each individual's involvement in the SMS.

4.2 Safety communication

The operator/approved maintenance organization shall develop and maintain formal means for safety communication that ensures that all personnel are fully aware of the SMS, conveys safety-critical information, and explains why particular safety actions are taken and why safety procedures are introduced or changed.

EIGHTH SCHEDULE

AIRCRAFT INTERCHANGE (Regulation 30 (2))

- 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 AOC 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 AOC holder has adequate training programs to ensure that any potentially hazardous dissimilarities are safely overcome by flight crew familiarization.
- 2. Each AOC holder conducting an interchange agreement shall include the pertinent provisions and procedures of the agreement in its manuals.
- 3. The AOC holders shall amend their operations specifications to reflect the interchange agreement.
- 4. The AOC holder shall comply with the applicable regulations of the State of Registry of an aircraft involved in an interchange agreement while it has operational control of that aircraft.

NINTH SCHEDULE

WET LEASING

(Regulation 31 (3))

- 1. Each AOC 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 crewmembers;
 - (d) Paying crewmembers; and
 - (e) Training crewmembers.
- 3. Each AOC holder engaged in a wet leasing arrangement shall amend its operations specifications to contain the following information -
 - (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.

TENTH SCHEDULE

EMERGENCY EVACUATION DEMONSTRATION (Regulation 32 (5))

- 1. Each AOC 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 AOC 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 AOC 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 AOC holder's assigned cabin crew members shall, using the AOC 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 AOC 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.

ELEVENTH SCHEDULE

DEMONSTRATION FLIGHTS (Regulation 33 (4))

- 1. Each AOC holder shall conduct demonstration flights for each type of aircraft, including those aircraft materially altered in design, and for each kind of operation the AOC holder intends to conduct.
- 2. Each AOC holder shall conduct demonstration flights which contain at least -
 - (a) one hundred total hours of flight time, unless the Authority determines that a satisfactory level of proficiency has been demonstrated in fewer hours;
 - (b) five hours of night time, if night flights are to be authorised;
 - (c) five instrument approach procedures under simulated or actual instrument weather conditions, if IFR flights are to be authorised; and
 - (d) entry into a representative number of en route airports, as determined by the Authority
- 3. No person may carry passengers in an aircraft during demonstration flights, except for those needed to make the demonstration flight and those designated by the Authority.
- 4. For those AOC holders of aircraft of less than 5700 kg, the necessity and extent of demonstration shall be at the option of the Authority.

TWELFTH SCHEDULE

OPERATIONS MANUAL (Regulation 36 (10))

- 1. Each AOC holder shall ensure that the contents and structure of the operations manual are in accordance with rules and regulations of the Authority, and are relevant to the area(s) and type(s) of operation.
- 2. An operations manual, which may be issued in separate user manuals corresponding to specific aspects of operations shall be organized and developed in four parts in accordance with the requirements in regulation 36
- 3. An AOC holder may design a manual to be more restrictive than the Authority's requirements.
- Each AOC holder shall ensure that the manual, in all of its parts together, shall contain all information required by each group of personnel addressed in that part, including –

 (a) general policies;
 - (b) duties and responsibilities of each crew member, appropriate members of the ground organisation, and management personnel; and
 - (c) reference to the appropriate Civil Aviation Regulations.
- 5. Flight dispatching and operational control, including procedures for co-coordinated dispatch or flight control or flight following procedures and maintenance control procedures, as applicable.
- 6. En route flight, navigation, and communication procedures, including procedures for the dispatch or release or continuance of flight if any item of equipment required for the particular type of operation becomes inoperative or unserviceable en route.
- 7. Appropriate information extracted from the operations specifications, such as areas of operation, each approved route, the aircraft model authorised, the type of operation such as VFR, IFR, day, night, etc., authorised aerodromes, instrument approach procedures authorised and any other pertinent information.
- 8. Procedures for familiarising passengers with the use of emergency equipment, during flight.
- 9. Emergency equipment and procedures.
- 10. The method of designating succession of command of flight crew members.
- 11. Procedures for determining the usability of landing and take-off areas, and for disseminating pertinent information thereon to operations personnel.
- 12. Procedures for operating in periods of ice, hail, thunderstorms, turbulence, or any potentially hazardous meteorological condition.
- 13. Airman training programs, including appropriate ground, flight, and emergency phases.
- 14. Procedures for refueling aircraft, eliminating fuel contamination, protection from fire (including electrostatic protection), and supervising and protecting passengers during refueling.
- 15. Methods and procedures for maintaining the aircraft mass and centre of gravity within approved limits.
- 16. Where applicable, pilot and dispatcher route and aerodrome qualification procedures.
- 17. Accident notification procedures.
- 18. Procedures and information to assist personnel to identify packages marked or labelled as containing hazardous materials and, if these materials are to be carried, stored, or handled, procedures and instructions relating to the carriage, storage, or handling of hazardous materials, including the following:

- 19. Procedures for determining the proper shipper certification and proper packaging, marking, labeling, shipping documents, compatibility of materials, and instructions on the loading, storage, and handling.
- 20. Notification procedures for reporting hazardous material incidents.
- 21. Instructions and procedures for the notification of the pilot in command when there are hazardous materials aboard.
- 22. Other information or instructions relating to safety.

The general section (Part A: General) of the operations manual may be based upon the following outline -

1.0 Administration and Control of Operations Manual

- 1.1 Introduction
 - (a) A statement that the manual complies with all applicable Authority regulations and requirements and with the terms and conditions of the applicable Air Operator Certificate.
 - (b) A statement that the manual contains operational instructions that are to be complied with by the relevant personnel in the performance of their duties.
 - (c) A list and brief description of the various operations manual parts, their contents, applicability and use.
 - (d) Explanations and definitions of terms and words used in the manual.
- 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) Annotation of changes (on text pages and as practicable, on charts and diagrams).
 - (g) A system for recording temporary revisions.
 - (h) A description of the distribution system for the manuals, amendments and revisions. (*i*) A statement of who is responsible for notifying the Authority of proposed changes and
 - working with the Authority on changes requiring Authority approval.

2.0 Organisation and Responsibilities

2.1 Organisational Structure

A description of the organisational structure including the general company organisation and operations department organisation. The relationship between the operations department and the other departments of the company. In particular, the subordination and reporting lines of all divisions, departments etc., which pertain to the safety of flight operations, shall be shown.

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.
- 3.0 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) Specifications for the operational flight plan
- (b) Competence of operations personnel; and
- (c) 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 Accident Prevention and Flight Safety Programme
 - A description of the main aspects of the flight safety programme including -
 - (a) Programmes to achieve and maintain risk awareness by all persons involved in flight operations; and
 - (b) Evaluation of accidents and incidents and the promulgation of related information.
- 3.4. Operational Control

A description of the objectives, procedures and responsibilities necessary to exercise operational control with respect to flight safety.

4.0 Quality System

A description of the quality system adopted.

5.0 Crew Composition

An explanation of the method for determining crew compositions taking into account of the following —

- (a) Experience (total and on type), recency and qualification of the crew members; and
- (b) The designation of the PIC and, if required by the duration of the flight, the procedures for the relief of the PIC or other members of the flight crew.
- 5.1 Designation of the PIC
- The rules applicable to the designation of a PIC.
- 5.2 Flight Crew Incapacitation
 - Instructions on the succession of command in the event of flight crew incapacitation.

6.0 Qualification Requirements

6.1 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.

- 6.2 Flight Crew
 - (a) Operation on more than one type or variant.
- 6.3 Cabin Crew
 - (a) Senior cabin crew member.
 - (b) Cabin crew member.

- i. Required cabin crew member.
- ii. Additional cabin crew member, and
- iii. Cabin crew member during familiarisation flights.
 - (c) Operation on more than one type or variant.
- 6.4 Other Operations Personnel

7.0 Crew Health

- 7.1 Crew Health Precautions
 - The relevant regulations and guidance for crew members concerning health including -
 - (a) Alcohol and other intoxicating liquor;
 - (b) Narcotics;
 - (c) Drugs;
 - (d) Sleeping tablets;
 - (e) Pharmaceutical preparations;
 - (f) Immunisation;
 - (g) SCUBA diving;
 - (h) Blood donation;
 - (i) Meal precautions prior to and during flight;
 - (j) Sleep and rest; and
 - (k) Surgical operations.

8.0 Operating Procedures

- 8.1 Flight Preparation Instructions As applicable to the operation:
- 8.1.1 Criteria for Determining the Usability of Aerodromes
- 8.1.2 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.
- 8.1.3 Presentation and Application of Aerodrome and En-route Operating Minima
- 8.1.4 Interpretation of Meteorological Information. Explanatory material on the decoding of MET forecasts and MET reports relevant to the area of operations, including the interpretation of conditional expressions.
- 8.1.5 Determination of the Quantities of Fuel, Oil and Water Methanol Carried. The methods by which the quantities of fuel, oil and water methanol to be carried are determined and monitored in flight. This section 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. The system for maintaining fuel and oil records shall also be described.
- 8.1.6 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;
 - (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 and balance documentation in use;
 - (e) Last minute changes procedures; and
 - (f) Seating policy/procedures.
- 8.1.7 List Of Documents, Forms And Additional Information To Be Carried During A Flight.

8.2 Ground Handling Instructions

- 8.2.1 Fuelling Procedures.
 - A description of fuelling 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.
 - (d) Method to ensure the required amount of fuel is loaded.
- 8.2.2 Aircraft, Passengers And Cargo Handling Procedures Related To Safety. A description of the handling procedures to be used when allocating seats and embarking and disembarking passengers and when loading and unloading the aircraft. Further procedures, aimed at achieving safety whilst the aircraft is on the ramp, shall also be given. Handling procedures shall include -
 - (a) Sick passengers and persons with reduced mobility;
 - (b) Permissible size and weight of hand baggage;
 - (c) Loading and securing of items in the aircraft;
 - (d) Special loads and classification of load compartments (i.e., dangerous goods, live animals, etc.);
 - (e) Positioning of ground equipment;
 - (f) Operation of aircraft doors;
 - (g) Safety on the ramp, including fire prevention, blast and suction areas;
 - (*h*) Start-up, ramp departure and arrival procedures;
 - (*i*) Servicing of aircraft;
 - (j) Documents and forms;
 - (k) Multiple occupancy of aircraft seats.
- 8.2.3 Procedures for the Refusal of Embarkation.

Procedures to ensure that persons who appear to be intoxicated or who demonstrate by manner or physical indications that they are under the influence of alcohol or drugs, except medical patients under proper care, are refused embarkation.

8.2.4 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-.
- (d) Precautions during usage.
- 8.3 Flight Procedures
 - 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
- (*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.
- 8.3.1 Navigation Procedures
 - A description of all navigation procedures relevant to the type(s) and area(s) 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) In-flight re-planning; and
 - (c) Procedures in the event of system degradation.
 - (d) Where relevant to the operations, the long range navigation procedures, engine failure procedure for ETOPS and the nomination and utilisation of diversion aerodromes.
 - (e) Instructions and training requirements for the avoidance of controlled flight into terrain and policy for the use of the ground proximity warning system (GPWS).
 - (f) Policy, instructions, procedures and training requirements for the avoidance of collisions and the use of the airborne collision avoidance system (ACAS).
 - (g) 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.
- 8.3.2 Policy and Procedures for In-flight Fuel Management
- 8.3.3 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.
- 8.3.4 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
- (f) High altitude operations
- 8.3.5 Incapacitation of Crew Members. Procedures to be followed in the event of incapacitation of crew members in flight. Examples of the types of incapacitation and the means for recognising them shall be included.
- 8.3.6 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; and
 - (d) Procedures for fuelling with passengers on board, embarking, or disembarking.
 - (e) Smoking on board.
 - (f) Use of portable electronic equipment and cellular telephones
- 8.3.7 Passenger Briefing Procedures.
 - The contents, means and timing of passenger briefing.
- 8.3.8 Procedures for Use of Cosmic or Solar Radiation Detection Equipment Aeroplanes intended to be operated above 15,000m (49,000 feet).
 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.

- 8.4 All Weather Operations
- 8.5 Use of the Minimum Equipment and Configuration Deviation List(s)
- 8.6 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.
- 8.7 Oxygen Requirements
 - An explanation of the conditions under which oxygen shall be provided and used.

9.0 Dangerous Goods And Weapons

- 9.1 Transport of Dangerous Goods
 - Information, instructions and general guidance on the transport of dangerous goods including -
 - (a) AOC holder's policy on the transport of dangerous goods;
 - (b) Guidance on the requirements for acceptance, labelling, handling, stowage and segregation of dangerous goods;
 - (c) Procedures for responding to emergency situations involving dangerous goods;
 - (d) Duties of all personnel involved; and
 - (e) Instructions on the carriage of the AOC holder's employees

9.2 Transport of Weapons

The conditions under which weapons, munitions of war and sporting weapons may be carried.

- 10.0 Security
- 10.1 Security Policies and Procedures A description of security policies and procedures for handling and reporting crime on board such as unlawful interference, sabotage, hijacking and bomb threats, including the search procedure checklist to be carried on board the aircraft.
- 10.2 Security Instructions and Guidance Security instructions and guidance of a non-confidential nature which shall include the authority and responsibilities of operations personnel
- 10.3 Preventative Security Measures and Training A description of preventative security measures and training. (Note: Parts of the security instructions and guidance may be kept confidential.)

11.0 Handling Of Accidents And Occurrences

Procedures for the handling, notifying and reporting of accidents and occurrences. This section shall include -

- (a) Definitions of accidents and occurrences and the relevant responsibilities of all persons involved;
- (b) The descriptions of which company departments, Authorities or other institutions have to be notified by which means and in which sequence in case of an accident;
- (c) Special notification requirements in the event of an accident or occurrence when dangerous goods are being carried;
- (d) A description of the requirements to report specific occurrences and accidents;
- (e) The forms used for reporting and the procedure for submitting them to the Authority shall also be included; and
- (f) If the AOC holder develops additional safety related reporting procedures for its own internal use, a description of the applicability and related forms to be used.

12.0 Rules of the Air

Rules of the Air including:

- (a) Territorial application of the Rules of the Air;
- (b) The circumstances during which a radio listening watch shall be maintained;
- (c) ATC clearances, adherence to flight plan and position reports;
- (d) The ground/air visual codes for use by survivors, description and use of signal aids; and
- (e) Distress and urgency signals.

THIRTEENTH SCHEDULE

TRAINING PROGRAMME (Regulation 37 (5))

The training segment of the operations manual (Part D: Training) may be based on the following outline -

1.0 Training Syllabi And Checking Programmes

1.1 General Requirements.

Training syllabi and checking programmes for all operations personnel assigned to operational duties in connection with the preparation and/or conduct of a flight (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.

1.2 Flight Crew.

The training syllabi and checking programmes for flight crew members shall include -

- (a) A written training programme acceptable to the Authority that provides for initial, transition, difference, and recurrent training, as appropriate, for flight deck crew members for each type of aircraft flown by that crew member. This written training programme shall include both normal and emergency procedures training applicable for each type of aircraft flown by the crew member.
- (b) Adequate ground and flight training facilities and properly qualified instructors required to meet training objectives and needs.
- (c) 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.
- (d) Adequate number of ground check personnel and flight check pilots to ensure adequate training and checking of flight crew members.
- (e) A record system acceptable to the Authority to show compliance with appropriate training and currency requirements.
- 1.3 Cabin Crew.

The training syllabi and checking programmes for cabin crew members shall include -

- (a) Basic initial ground training covering duties and responsibilities.
- (b) Appropriate Authority rules and regulations.
- (c) Appropriate portions of the AOC holder's operating manual.
- (d) Appropriate emergency training as required by the Authority and the AOC holder's operating manual.
- (e) Appropriate flight training.
- (f) Appropriate recurrent, upgrade, or difference training, as required, to maintain currency in any type and variance of aircraft the crew member may be required to work in.
- (g) Maintain a training record system acceptable to the Authority to show compliance with all required training.
- 1.4 All 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, fire fighting, aircraft evacuation, medical emergencies, hijacking, and disruptive passengers.
- (d) Scheduled recurrent training to meet Authority requirements.
- 1.5 All Operations Personnel.
 - The training syllabi and checking programmes for all operations personnel shall include -
 - (a) Training in the safe transportation and recognition of all dangerous goods permitted by the Authority to be shipped by air. Training shall include the proper packaging, marking, labelling, and documentation of dangerous articles and magnetised materials.
 - (b) All appropriate security training required by the Authority.
 - (c) A method of providing any required notification of an accident or incident involving dangerous good.
- 1.6 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.

2.0 Procedures for Training and Checking

2.1 Proficiency Checking Procedures

Procedures to be applied in the event that personnel do not achieve or maintain the required standards.

2.2 Procedures Involving the Simulation of Abnormal or Emergency Situations.

Procedures to ensure that abnormal or emergency situations requiring the application of part or all of abnormal or emergency procedures, and simulation of IMC by artificial means, are not simulated during commercial air transportation flights.

3.0 Document Retention

3.1 Documentation To Be Stored And Storage Periods

An AOC holder shall retain all documentation required by 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.

FOURTEENTH SCHEDULE

AIRCRAFT OPERATING MANUAL (Regulation 38 (5))

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 -

1.0 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.

2.0 Limitations

2.1 Certification and Operational Limitations

A description of the certified limitations and the applicable operational limitations including—(a) Certification status;

- (b) Passenger seating configuration for each aircraft type including a pictorial presentation;
- (c) Types of operation that are approved (e.g. IFR/VFR, CAT II/III, flights in known icing conditions etc.);
- (*d*) Crew composition;
- (e) Operating within mass and centre of gravity limitations;
- (f) Speed limitations;
- (g) Flight envelopes;
- (h) Wind limits including operations on contaminated runways;
- (*i*) Performance limitations for applicable configurations;
- (j) Runway slope;
- (k) Limitations on wet or contaminated runways;
- (*l*) Airframe contamination; and
- (m) Post landing

3.0 Normal Procedures

The normal procedures and duties assigned to the crew, the appropriate checklists, the system for use of the checklists and a statement covering the necessary co-ordination procedures between flight and cabin crew. The following normal procedures and duties shall be included -

- (a) Pre-flight;
- (b) Pre-departure and loading;
- (c) Altimeter setting and checking;
- (d) Taxi, Take-off and Climb;
- (e) Noise abatement;
- (f) Cruise and descent;
- (g) Approach, landing preparation and briefing;
- (h) VFR approach;
- (*i*) Instrument approach;
- (*j*) Visual approach and circling:
- (k) Missed approach;
- (*l*) Normal landing;
- (*m*) Post landing; and
- (n) Operation on wet and contaminated runways.

- 3.1 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
 - (bb) How to obtain maintenance and service en route

4.0 Abnormal And Emergency Procedures

4.1 Abnormal and Emergency Procedures and Duties

The manual shall contain a listing of abnormal and emergency procedures assigned to crew members with appropriate check-lists that include a system for use of the check-lists and a statement covering the necessary co-ordination procedures between flight and cabin crew. The following abnormal and emergency procedures and duties shall be included —

- (*a*) Crew incapacitation;
- (b) Fire and smoke drills;
- (c) Unpressurised and partially pressurised flight; 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; and
- (n) Emergency landing/ditching.
- (o) Aircraft evacuation

- (*p*) Fuel Jettisoning (as applicable) and Overweight Landing: General considerations and policy
 - Fuel jettisoning procedures and precautions
- (q) Emergency Procedures: Emergency descent Low fuel

Dangerous goods incident or accident

- (r) Interception procedures
- (s) Emergency signal for cabin crew members
- (t) Communication Procedures
- (*u*) Radio listening watch

5.0 Performance Data

Performance data shall be provided in a form in which it can be used without difficulty. 5.1 Performance Data.

Performance material which provides the necessary data to allow the flight crew to comply with the approved aircraft flight manual performance requirements shall be included to allow the determination of -

- (a) Take-off climb limits Mass, Altitude, Temperature;
- (b) Take-off field length 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 inflight failure of a system or device, if it affects the landing distance;
- (*i*) Brake energy limits; and
- (*j*) Speeds applicable for the various flight stages (also considering wet or contaminated runways).
- 5.1.1. Supplementary Performance Data

Supplementary data covering

Flights in icing conditions.

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.

Any certified performance related to an allowable configuration, or configuration deviation, such as anti-skid inoperative, shall be included.

5.1.2. Other Acceptable Performance Data

If performance data, as required for the appropriate performance class, is not available in the approved AFM, then other data acceptable to the Authority shall be included. Alternatively, the operations manual may contain cross-reference to the approved data contained in the AFM where such data is not likely to be used often or in an emergency.

- 5.2 Additional Performance Data.
 - Additional performance data where applicable including -
 - (a) All engine climb gradients;
 - (b) Drift-down data;
 - (c) Effect of de-icing/anti-icing fluids;
 - (d) Flight with landing gear down; .

(e) For aircraft with 3 or more engines, one engine inoperative ferry flights; and

(f) Flights conducted under the provisions of a configuration deviation list (CDL).

6.0 Flight Planning

6.1 Flight Planning Data

Data and instructions necessary for pre-flight and in-flight planning including factors such as speed schedules and power settings. Where applicable, procedures for engine(s) out operations, ETOPS and flights to isolated airports shall be included.

6.2 Fuel Calculations

The method for calculating fuel needed for the various stages of flight.

7.0 Mass And Balance.

- 7.1 Calculating Mass and Balance Instructions and data for the calculation of mass and balance including —
 - (a) Calculation system (e.g. Index system);
 - (b) Information and instructions for completion of mass and balance documentation, including manual and computer generated types;
 - (c) Limiting mass and centre of gravity of the various versions;
 - (d) Dry operating mass and corresponding centre of gravity or index.
- 8.0 Loading
- 8.1 Loading Procedures

Procedures and provisions for loading and securing the load in the aircraft.

8.1 Loading Dangerous Goods The operations manual shall contain a method to notify the PIC when dangerous goods is loaded in the aircraft.

9.0 Survival And Emergency Equipment Including Oxygen

9.1 List of Survival Equipment to be Carried

A checklist of the survival equipment to be carried for the routes to be flown and the procedures for checking the serviceability of this equipment prior to take-off. Instructions regarding the location, accessibility and use of survival and emergency equipment and its associated check list(s) shall be included. In addition, Instructions illustrating the ground-air visual signal code for use by survivors shall also be included.

9.2 Oxygen Usage

The procedure for determining the amount of oxygen required and the quantity that it available. The flight profile, number of occupants and possible cabin decompression shall be considered. The information provided shall be in a form in which it can be used without difficulty.

9.3 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
- (h) Emergency lighting

10.0 Emergency Evacuation Procedures

10.1 Instructions for Emergency Evacuation Instructions for preparation for emergency evacuation including crew co-ordination and emergency station assignment.

10.2 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.

- 11.0 Aircraft Systems
- 11.1 Aircraft Systems

A description of the aircraft systems, related controls and indications and operating instructions.

FIFTEENTH SCHEDULE

MASS AND BALANCE DATA CONTROL SYSTEM (Regulation 49 (5))

- 1. An AOC 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 AOC holder shall compute the mass of passengers and checked baggage using either the actual weighed mass of each person and 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 AOC 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 sub-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.

Passenger seats	20 and more		30 and more
	Male	Female	All Adult
All flights except Holiday charts	88kg	70kg	84kg
Holiday charters	83kg	69kg	76kg
Children	35kg	35kg	35kg

Table 1

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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	104 kg	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:
 - 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	13kg region
Intercontinental	15kg
All other	13kg

- 6. If an AOC 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 AOC 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 AOC 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 AOC holder must determine the actual mass of such baggage by weighing or by adding an adequate mass increment.
- 11. An AOC 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.

SIXTEENTH SCHEDULE

PASSENGER BRIEFING CARDS (Regulation 51 (1))

- 1. Each AOC holder shall, at each exit seat, provide passenger information cards that include the following information in the primary language in which emergency commands are given by the crew -
- 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 AOC holder.

SEVENTEENTH SCHEDULE

AERONAUTICAL DATA CONTROL SYSTEM (Regulation 52 (2))

- 1. Each AOC holder shall provide aeronautical data for each airport used by the AOC 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;
 - (1) 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.

EIGHTEENTH SCHEDULE

WEATHER REPORTING SOURCES (*Regulation 54 (3)*)

- 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.
 - (b) Botswana government-operated automated surface observation stations.

Note: Some automated systems cannot report all required items for a complete surface aviation weather report.

- (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 operated by a foreign state which subscribes to the standards and practices of ICAO conventions.

Note: These meteorological offices are normally listed in the MET tables located in ICAO Regional Air Navigation Plans.

(g) Any military weather reporting sources approved by the Authority.

Note: Use of military sources is limited to control of those flight operations which use military airports as departure, destination, alternate, or diversionary airports.

- (*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.
- (*i*) An AOC holder operated and maintained weather reporting system approved by the Authority.

NINETEENTH SCHEDULE

DE-ICING AND ANTI-ICING PROGRAMME (Regulation 55 (2))

- 1. Contents of the AOC holder's ground de-icing and anti-icing programme shall include a detailed description of -
 - (*a*) how the AOC holder determines that conditions are such that frost, ice, or snow may reasonably be expected to adhere to the aircraft and that ground de-icing and anti-icing operational procedures shall be in effect;
 - (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 for 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 AOC holder's programme shall include procedures for flight crew members to increase or decrease the determined holdover time in changing conditions. The holdover time shall be supported by data acceptable to the Authority. If the maximum holdover time is exceeded, 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 AOC holder's 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 AOC holder's approved 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.

TWENTIETH SCHEDULE

FLIGHT MONITORING SYSTEM (Regulation 56)

- 1. Each AOC holder shall have an approved flight following system established and adequate for the proper monitoring of each flight, considering the operations to be conducted.
- 2. For AOC holders having flight following centres, these centres 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 AOC holder conducting charter operations may arrange to have flight following facilities provided by persons other than its employees, but in such a case the AOC holder continues to be primarily responsible for operational control of each flight.
- 4. Each AOC holder conducting charter operations using a flight following system shall show that the system has adequate facilities and personnel to provide the information necessary for the initiation and safe conduct of each flight to
 - (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 AOC holder conducting charter operations shall show that the personnel required to perform the function of operational control are able to perform their duties.

TWENTY-FIRST SCHEDULE

FORM A –APPLICATION FOR VALIDATION CERTIFICATE (Regulation 81 (1))

Application Form for Commercial Air Transport Operations by a Foreign Operator				
(To be completed by a foreign air operator for an approval to conduct operations in Botswana)				
Section 1A. To be completed	Section 1A. To be completed by all applicants			
1. Company registered name and trading name if different. Address of company: mailing address; telephone; fax; and e-mail.		2. Address of the principal place of business including: telephone; fax; and e-mail.		
3. Proposed start date of operations: (dd/mm/yy):		4. ICAO 3-letter designator for aircraft operating agency:		
5. Operational management personnel				
Name	Title	Telephone, fax and e-mail		
Section 1B. Type of approval requested - To be completed by all applicants, checking applicable boxes				
6. 1. Air operator intends to conduct commercial flights to and from aerodromes in [State]2. Air operator intends to only conduct overflights and technical stops in [State]				
7. Air operator proposed types of operation:		8. Geographic areas of intended operations and proposed route structure:		
Passengers and cargo				
Cargo only				
Scheduled operations				
Charter flight operations				
Dangerous goods				
Section 1C on Page 2 to be completed by the air operator				
Signature:	Date (dd/mm/yy):	Name and title:		

Section 2. To be completed by the CAA			
Evaluated by (name and office):	CAAB decision:	Approval granted Not approved	
Remarks:			
Signature of CAAB representative:	Date (dd/mm/yy):		

FORM B – VALIDATION CERTIFICATE FOR FOREIGN AIR OPERATORS (*Regulation 82 (1)*)

FORM B – VALIDATION CERTIFICATE FOR FOREIGN AIR OPERATORS			
CAA	REPUBLIC OF BOTSWANA ²	¹ Plot 61920, Letsema Office Park	
BOVTREAL	CIVIL AVIATION AUTHOR- ITY OF BOTSWANA ³	Gaborone, Botswana Fax: +267 391 3121, Tel: +267 3688200 Email: caab@caab.co.bw	
AOC VALIDATION # 4.	OPERATOR'S NAME ⁶		
AOC VALIDATION # :	Dba trading name ⁷ :	CONTACT ¹⁰	
Г : D / ⁵	Operator Address ⁸ :	Contact details, at which	
Expiry Date .	Telephone ⁹ :	contacted without undue delay,	
	Fax:		
	E-mail:		
This certificate certifies that ¹² is authorized to perform commercial air opera- tions, 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			
Date of issue ¹⁵ :	Name and Signature ¹⁶ :		
	Title:		

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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.
- Unique AOC number, as issued by the validating State.
 Date after which the AOC validation certificate ceases to be valid (dd-mm-yyyy).
 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 13th day of March, 2012.

HON. NONOFO E. MOLEFHI. Minister of Transport and Communications.