(c) persons employed, or otherwise engaged by the operator referred to in sub-regulation (1)(a) or (b), who perform functions essential to the operation of aeroplanes operated under this Part; and

(d) persons, mail or cargo on board an aeroplane operated under this Part.

(2) For the purposes of this Part, an aeroplane registered in another State and operated by the holder of an operating certificate issued in the Republic of South Africa, shall be deemed to be registered in the Republic.

**Admission to flight deck**

**121.01.2** (1) An air operator and the PIC of any aeroplane operated under this Part, shall ensure that no person, other than the flight crew members assigned to a flight, is admitted to, or carried on the flight deck of the aeroplane unless such person is –

(a) an authorised officer, inspector or authorised person; or

(b) permitted by, and carried in accordance with, the instructions contained in the operations manual referred to in regulation 121.04.2.

(2) Notwithstanding sub-regulation (1), the PIC may, in the interests of safety, deny a person admission to or remove such person from the flight deck. Any decision to deny admission to or remove a person from the flight deck shall be reported to the operator and shall include the reasons for the decision.

(3) The admission of any person to the flight deck shall not interfere with the operation of the aeroplane.

(4) The PIC shall ensure that any person carried on the flight deck is made familiar with the applicable safety equipment and pertinent operational procedures.

**Passenger intoxication and unruly behaviour**

**121.01.3**(1) An air operator shall not permit a person to enter or be in an aeroplane while under the influence of alcohol or a drug having a narcotic effect, to the extent where the safety of such aeroplane or its occupants is, or is likely to be, endangered.

(2) The operator shall establish procedures to ensure that any person referred to in sub-regulation (1) is –

(a) refused embarkation; or

(b) if such person is on board, restrained or disembarked.

(3) Each passenger on board an aeroplane shall obey any command issued by a crew member in the performance of his or her duties.

**Compliance with foreign and domestic regulations**

**121.01.4** (1) An air service operator shall ensure all crew members, while operating within foreign airspace, comply with all air traffic rules and regulations of the State concerned and the local airport rules, except where any regulation of this Part is more restrictive and may be followed without violating the rules or regulations of that State.

(2) The operator shall publish in the operations manual referred to in regulation 121.04.2, such information, procedures and instructions as is necessary to ensure its personnel are familiar with and in compliance with the laws, regulations and procedures pertinent to their duties with respect to –

(a) flight operations into or within domestic and foreign airspace;

(b) the area over which the operation will occur;

(c) the aerodromes to be used; and

(d) air navigation facilities to be used.

(3) Notwithstanding sub-regulation (2), each operator, including its employees or agents, shall comply with all applicable provisions of the Regulations.

**Regulatory infractions during emergency situations**

**121.01.5** (1) Where the PIC of an aeroplane takes action deemed necessary to ensure the safety of the aeroplane which results in a violation of any regulation of the State in, or over which the aeroplane is being operated, he or she shall comply with the requirements of regulation 91.02.6 and, where possible, cause the event to be marked on the CVR.

(2) Notwithstanding any requirement to file a report in terms of regulation 91.02.6, the PIC shall submit a full report of the event to the person responsible for operations within 48 hours after the conclusion of the flight in the manner specified in the operations manual referred to regulation 121.04.2.

**Language proficiency**

**121.01.6** (1) In addition to the language proficiency requirements specified in Part 61, an air service operator shall not assign a flight crew to duty unless at least one member of the flight crew has demonstrated to such operator, his or her ability to speak and understand the language used for radiotelephony communications over any route and airport named in the OFP for that flight.

(2) The level of language proficiency required to be demonstrated to the operator shall be as prescribed in Document SA-CATS 121.

## SUBPART 2: OPERATIONS PERSONNEL REQUIREMENTS

## DIVISION ONE: MINIMUM CREW REQUIREMENTS

### Composition of flight crew

**121.02.1** (1) The minimum number and composition of the flight crew shall not be less than the minimum number and composition specified in the aeroplane flight manual referred to in regulation 121.04.4.

(2) An air service operator shall allocate additional flight crew members when it is required by the type of operation, and the number of such additional flight crew members shall not be less than the number specified in the operations manual referred to in regulation 121.04.2.

(3) The operator shall not assign and no person shall act as a flight crew member on an aeroplane type or variant unless the flight crew member meets the qualification requirements specified in regulation 121.02.11.

(4) The flight crew shall include at least one member who holds a valid radiotelephony operator licence or an equivalent document issued by an appropriate authority, authorising such member to operate the type of radio transmitting equipment to be used.

(5) The flight crew shall include at least one member who is proficient in navigating over the route to be flown.

(6) Where the aeroplane flight manual specifies the requirement for the minimum flight crew to include a flight engineer, an operator shall ensure a flight engineer is assigned to each flight who meets the qualifications specified in regulation 121.02.12.

(7) The operator shall designate for each flight a PIC and a second-in-command.

### Crew pairing and in-flight relief of flight crew members

**121.02.2** (1) An air service operator shall publish procedures in its operations manual to ensure flight crew members who do not meet the crew pairing standards prescribed in Document SA-CATS-OPS-121 are not simultaneously assigned to flight duty.

(2) A flight deck crew member may be relieved in flight of his or her flight deck duties by another flight deck crew member qualified in accordance with regulation 121.02.11.

(3) A flight engineer may be relieved in flight by a flight crew member who is qualified in accordance with regulation 121.02.12 or by a suitably qualified flight crew member acceptable to the Director.

(4) No operator shall assign and no person shall accept an assignment to provide in-flight relief for the purpose of extending any flight duty period, unless such relief pilot holds the minimum qualifications specified in regulation 121.02.11(1)(f).

### Flight and cabin crew member emergency duties

**121.02.3** (1) An air operator and, where appropriate, the PIC shall assign to each flight and cabin crew member concerned the necessary functions to be performed in an emergency or a situation requiring emergency evacuation and the operator shall establish emergency evacuation procedures based on such assignment.

(2) The functions referred to in sub-regulation (1) shall be such as to ensure that any reasonably anticipated emergency can be adequately dealt with and shall take into consideration the possible incapacitation of individual flight and cabin crew members.

(3) With respect to the emergency evacuation procedures required by sub-regulation (1) –

(a) the operator shall prove to the satisfaction of the Director that the procedures to accomplish the evacuation have been adopted and are adequate; and

(b) the procedures shall be demonstrated by the operator's flight and cabin crew members and carried out in accordance with the requirements prescribed in Document SA-CATS 121.

(4) The operator shall carry out the emergency evacuation demonstration referred to in sub-regulation (3)(b) when a new type or variant of aeroplane or new configuration of an existing aeroplane is introduced for use and has not been certified under a certification process acceptable to the Director, as provided for in Document SA-CATS 121.

(5) No person may use an aircraft type and model in commercial air transport passenger-carrying operations unless the operator has first conducted, for the Authority, an actual full-capacity emergency evacuation demonstration for the configuration in 90 seconds or less.

(6) The Director may approve a partial-capacity demonstration in lieu of a full-capacity demonstration where the operator can produce 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 operator; or

(b) there is an engineering analysis, which shows that an evacuation is still possible within the 90 second standard, if the operator's aircraft configuration differs with regard to the number of exits or exit type or number of cabin crew members.

(7) Where the Director has approved the partial evacuation demonstration referred to in sub-regulation (6), such demonstration shall be performed in the manner prescribed in Document SA-CATS 121.

(8) The emergency evacuation procedures referred to in sub-regulation (1) shall be contained in the operator's operations manual referred to in regulation 121.04.2 and shall form part of the operator's emergency training programme.

(9) No operator shall assign and no flight or cabin crew member shall perform any emergency function unless such crew member has been trained to perform emergency functions in accordance with the operator's approved emergency training programme.

**Cabin crew member complement**

**121.02.4** (1) An air service operator may not operate an aeroplane with a certificated passenger seating capacity of more than 19 in a passenger-carrying service unless –

(a) one or more cabin crew members have been assigned to duty, if one or more passengers are carried; and

(b) the minimum number of cabin crew members assigned to a flight is not less than that prescribed in Document SA-CATS 121, notwithstanding the actual number of passengers on board the aeroplane.

(2) Where, in consideration of the size, complexity and physical layout of the aeroplane, the Director is of the opinion that it would be in the interest of safety, he or she may, notwithstanding the aeroplane's certificated seating capacity, –

(a) require one or more cabin crew members licensed in terms of Part 64 to be assigned to duty; or

(b) require the operator to demonstrate a capability to provide an equivalent level of safety as would be achieved by paragraph (a).

(3) A cabin crew member shall give priority to the performance of duties relating to the safety of passengers as may be assigned by the operator or the PIC.

(4) In unforeseen circumstances, the operator may reduce the required minimum number of cabin crew members: Provided that -

(a) the number of passengers has been reduced in accordance with the procedures specified in the operations manual referred to in regulation 121.04.2; and

(b) a report is submitted to the Director after completion of the flight.

**Operation on more than one type or variant by cabin crew member**

**121.02.5** (1) A cabin crew member shall not operate on more than three aeroplane types except where the Director approves the operation on a fourth aeroplane type; Provided the emergency and safety equipment and procedures for at least two of the aeroplane types are similar.

(2) The types of aeroplanes which are deemed to be similar in respect of emergency and safety equipment and procedures shall be based on the factors listed in Document SA-CATS 121.

**Senior cabin crew member**

**121.02.6** (1) An air service operator shall appoint a senior cabin crew member whenever more than one cabin crew member is carried on board an aeroplane operated under this Part.

(2) The senior cabin crew member shall be responsible to the PIC for the conduct of cabin operations and the coordination and performance of safety duties.

(3) The operator shall establish procedures to select the next most suitably qualified cabin crew member to operate as senior cabin crew member in the event of the nominated senior cabin crew member being unable to perform his or her duties.

**Cabin crew emergency evacuation stations**

**121.02.7** A cabin crew member assigned to perform evacuation duties shall occupy the seat provided for that purpose during take-off and landing or when so directed by the PIC for safety purposes.

**Seating of cabin crew members during flight**

**121.02.8** During take-off and landing, and whenever deemed necessary by the PIC in the interests of aviation safety, cabin crew members shall be seated at their assigned stations or seats, on all decks which are occupied by passengers.

## DIVISION TWO: FLIGHT CREWMEMBER, CABIN CREW MEMBER AND FLIGHT OPERATIONS OFFICER QUALIFICATIONS

**Flight crew member qualifications**

**121.02.9** (1) Subject to sub-regulation (6), an air service operator shall not permit a person to act and no person shall act as the flight crew member of an aeroplane unless, in addition to the recency requirements of regulation 91.02.4, the person –

(a) holds valid licences, certificates and ratings as required by Part 61 and Part 63 appropriate to the assignment;

(b) meets the type and variant training and checking requirements specified in Subpart 3 and has otherwise fulfilled all applicable training requirements set out in technical standard 121.03.4 of Document SA-CATS 121;

(c) in the case of the PIC assigned to duty on a passenger-carrying flight, meets the area, route and aerodrome familiarisation requirements specified in Document SA-CATS 121;

(d) in the case of a cruise relief pilot, within the previous 90 days, has –

(i) operated as a PIC, co-pilot or cruise relief pilot on the same type of aeroplane; or

(ii) completed flying skill refresher training including normal, abnormal and emergency procedures specific to cruise flight on the same type of aeroplane or in a FSTD approved for the purpose, and has practised approach and landing procedures, where the approach and landing procedure practise may be performed as the pilot who is not flying the aeroplane.

(2) A pilot who does not meet the recency requirements of regulation 91.02.4 or whose training and checking validity periods have lapsed shall regain competency as prescribed in the regaining competency requirements specified in Subpart 3.

(3) Unless otherwise approved by the Director, an operator shall not assign a person to act and no person shall act as the PIC or second-in-command on more than –

(a) two different types of aeroplanes, for which a separate licence endorsement is required, under this Part;

(b) one type of aeroplane under this Part and an additional two aircraft types of a maximum certificated take-off mass (MCM) in excess of 5 700 kg, for which a separate licence endorsement is required, if operating under Parts 93, 127 or 135; or

(c) two different types of aeroplanes for which a separate licence endorsement is required under this Part and an additional different aircraft type of an MCM in excess of 5 700 kg, for which a separate licence endorsement is required, if operating under Parts 93, 127 or 135.

(4) A pilot operating on more than one type of aeroplane under this Part shall meet the requirements specified in Document SA-CATS 121.

(5) The operator may permit a person to act and a person may act as the flight crew member of an aeroplane under this Part where the person does not meet the requirements of sub-regulation (1) if –

(a) the aeroplane is operated on a training, ferry or positioning flight; or

(b) the operator –

(i) is authorised to do so in its operations specifications, and

(ii) otherwise complies with the provisions of this Part.

**Flight engineer qualifications**

**121.02.10** An air service operator shall not assign and no person shall act as a flight engineer on board an aeroplane unless the person –

(a) holds a valid licence, certificates and appropriate ratings issued in terms of Part 63; and

(b) has fulfilled the requirements of the approved training and checking programme including line induction as specified in Subpart 3.

**Cabin crew member qualifications**

**121.02.11** An air service operator shall not assign a person to act and no person shall act as a cabin crew member on board an aeroplane unless the person –

(a) holds a valid licence and appropriate ratings issued in terms of Part 64;

(b) has successfully completed the operator's approved training programme outlined in Subpart 3, except that a person may act as a cabin crew member while undergoing familiarisation training if the person is carried in addition to the number of cabin crew members required by regulation 121.02.5(1) and is under the supervision of a cabin crew member; and

(c) has successfully completed familiarisation training within 180 days after completing the operator's training programme or has regained qualification in accordance with Subpart 3.

**Flight operations officer qualifications**

**121.02.12** An air service operator shall not permit a person to act and no person shall act as a flight operations officer unless he or she –

(a) meets the training and checking requirements specified in Subpart 3 and

(b) holds a flight operations officer certification specifying authorised duty assignments issued by the operator that is acceptable to the Director.

**DIVISION THREE: FLIGHT TIME AND DUTY LIMITATIONS**

**Flight time and duty period scheme**

**121.02.13** (1) An air service operator shall –

(a) establish a scheme for the regulation of flight time and duty periods, rest periods and days free of duty as applicable, for each flight crew member, cabin crew member and flight operations officer that –

(i) complies with the flight time and duty period limitations, rest periods and days free of duty, prescribed in Document SA-CATS 121; or

(ii) a system of flight time and duty period limitations, rest periods and days free of duty proposed by the operator where the Director is of the opinion that an equivalent level of safety may be achieved by the operator's proposed scheme; and

(b) publish the scheme referred to in sub-regulation (1)(a) in the operations manual referred to in regulation 121.04.2.

(2) The operator shall not assign and no crew member shall accept an assignment if such assignment is not in compliance with the provisions of the scheme referred to in sub-regulation (1)(a) or if -

(a) the operator or crew member knows or has been made aware that such flight assignment will cause the crew member to exceed the flight time and duty periods referred to in sub-regulation (1)(a) while on flight duty; or

(b) the crew member is suffering from or, having regard to the circumstances of the flight to be undertaken, is likely to suffer from fatigue which may endanger the safety of the aeroplane or its crew members and passengers.

(3) The operator shall not schedule a flight crew member for active flight duty for a period exceeding eight consecutive hours during any given flight time and duty period unless authorised in the scheme referred to in sub-regulation (1)(a).

(4) Where any flight crew member, cabin crew member or flight operations officer is aware of any reason they would be in violation of the scheme referred to in sub-regulation (1)(a), that person shall, without delay, inform the operator. For the purposes of this regulation, the operator shall be taken to mean –

(a) the appropriate management personnel if time permits;

(b) the duty crew scheduler of the operator; or

(c) the duty person responsible for operational control over the flight; and

(d) in the case of a cabin crew member, the PIC or such cabin crew member's immediate supervisor.

(5) The provisions to be included in a flight time and duty scheme referred to in sub-regulation (1) shall be as prescribed in Document SA-CATS 121.

## SUBPART 3: TRAINING AND CHECKING

### DIVISION ONE: GENERAL

#### Air service operator approved training programme

**121.03.1** (1) An air service operator shall establish and maintain a training and checking programme for all personnel referenced in Divisions One to Four of this Subpart that will ensure such personnel are adequately trained and qualified to perform their assigned duties and such personnel shall undergo the training from that operator.

(2) The training programme referred to in sub-regulation (1) shall be conducted by an ATO approved in accordance with Part 141 or by the operator, if approved by the Director as provided in regulation 121.03.3: Provided that, in the latter case, –

(a) such programme is conducted for the operator's employees only; and

(b) with respect to any licence, rating or validation under Part 61 or 64, the training is restricted to –

(i) training for an instrument rating revalidation;

(ii) initial type rating, familiarisation and differences training; and

(iii) training for licence renewals and proficiency checks; or

(c) the training is for any other qualification or certification required under this Part.

(3) The training programme referred to in sub-regulation (1) shall be approved by the Director as provided in regulation 121.03.3.

(4) The operator shall ensure that –

(a) prior to assignment to duty, each person required to receive training in accordance with this Subpart, shall, whether employed on a full or part time basis, receive such training as appropriate to his or her duties in accordance with the provisions in Document SA-CATS 121;

(b) each person required to receive training referred to in paragraph (a), shall pass a written examination or other comprehension assessment acceptable to the Director and where applicable, complete a skills test as specified in this Subpart; and

(c) the training facilities, equipment and personnel are acceptable to the Director and, in the case of training and checking personnel, shall meet the requirements prescribed in Document SA-CATS 121.

(5) The training and checking programme referred to in sub-regulation (1) shall meet the content prescribed in Document SA-CATS 121.

(6) The training programme referred to in sub-regulation (1) shall include a system of record keeping as prescribed in regulation 121.04.8.

(7) The training records referred to in sub-regulation (6) shall be retained as provided in regulation 121.04.8.

(8) An air operator shall publish the training programme referred to in regulation 121.03.1 in the operations manual referred to in regulation 121.04.2.

**Approval of training programme**

**121.03.2** (1) An air service operator shall submit its ground and flight training programme and any amendments thereto to the Director for approval.

(2) The interim and formal approval process shall be as prescribed in Document SA-CATS 121.

(3) The Director may approve an operator to have its training programme either whole or in part contracted to another organisation in accordance with the provisions specified in Document SA-CATS 121.

**DIVISION TWO: FLIGHT CREW MEMBER TRAINING**

**Flight crew member training**

**121.03.3** (1) Each air service operator shall provide ground and flight training to their flight crew personnel, as applicable, that includes at least the following training components –

(a) company induction training on an initial basis;

(b) crew resource management training including human factors, risk analysis and error management training;

(c) emergency procedures training including –

(i) the location, inspection schedules, testing as applicable and use of all emergency equipment required to be carried, or otherwise carried on board the aeroplane;

(ii) emergency evacuation, and where applicable ditching training; and

(iii) training in the functions for which each flight crew member is responsible and the relation of these functions to the functions of other crew members, particularly in regard to abnormal or emergency procedures.

(d) initial (aeroplane type training) including visual, instrument and special flight procedures as applicable, crew coordination in all types of emergency situations, normal, abnormal, emergency and supplementary procedures for the type of aeroplane assigned to;

(e) recurrent training;

(f) upgrade training;

(g) cruise relief pilot (CRP) training;

(h) line induction training on initial aeroplane assignment or upgrade;

(i) differences and familiarisation training where the operator intends to assign a flight crew member to variant types, in accordance with regulation 121.02.12(1)(c);

(j) pilot qualification to operate in either pilot seat;

(k) regaining recency/qualification training when required;

(l) area, route and airport familiarization training;

(m) ACAS or ACAS II training, as applicable, including ACAS II cyclic training, if applicable, to at least the PIC where the aeroplane is required to be operated with an approved, serviceable ACAS;

(n) RVSM training as applicable;

(o) line oriented flight training;

(p) dangerous goods (DG) training if DG are authorised to be carried or DG awareness training if they are not; and

(q) any other course of studies required by the Director as prescribed in Document SA-CATS 121 to ensure full competency of personnel on new or special equipment installed in the operator's aeroplane or other operations requiring specialised training.

(2) Except where noted in Document SA-CATS 121, all training components listed in sub-regulation (1) shall be provided on an initial and an annual recurrent basis and meet the requirements prescribed in Document SA-CATS 121.

**Advanced qualification programme**

**121.03.4** (1) The Director may, upon application by an air service operator, approve the incorporation of an advanced qualification programme (AQP) into the operator's approved training programme: Provided the AQP meets the conditions prescribed in Document SA-CATS 121.

(2) The AQP shall ensure a level of proficiency is maintained at least to the standards required by Division 5 of this Subpart.

## DIVISION THREE: TRAINING OF CABIN CREW MEMBERS

**Aeroplane type and differences training**

**121.03.5** (1) A cabin crew member shall complete a type training course when –

(a) employed by the operator as a cabin crew member; or

(b) assigned to act as a cabin crew member on another aeroplane type.

(2) The operator shall ensure that each cabin crew member successfully completes the initial aeroplane type training as prescribed in Document SA-CATS 121 before undertaking flight operations with the operator.

(3) A cabin crew member shall complete a differences training course when acting as a cabin crew member –

(a) in a variant of the current aeroplane type; or

(b) in an aeroplane type with equipment, equipment location or safety procedures which differ from the current aeroplane type or variant.

**Operator induction training**

**121.03.6** (1) An air operator shall ensure that each cabin crew member has completed the operator induction training, specified in the operations manual referred to in regulation 121.04.2, before undertaking duties assigned to them.

(2) A cabin crew member shall complete an operator induction training course upon initial hire by the operator.

(3) The operator induction training courses referred to in sub-regulation (1) shall consist of the subject matter as prescribed in Document SA-CATS 121.

**Familiarisation flights**

**121.03.7** An air operator shall ensure that upon completion of type training, differences training or requalification training, each cabin crew member undertakes familiarisation flights before acting as one of the minimum number of cabin crew prescribed in regulation 121.02.5.

**Recurrent training**

**121.03.8** (1) An air operator shall ensure that each cabin crew member undergoes recurrent training, covering the actions assigned to each cabin crew member in evacuation and other appropriate normal and emergency procedures and drills relevant to the aeroplane type or variant in accordance with the requirements as prescribed in Document SA-CATS 121.

(2) The operator shall ensure that the recurrent training and checking programme syllabus includes theoretical and practical instruction, as well as individual practice. Such syllabus shall be based on those training items from the initial aeroplane type training programme the Director deems necessary.

(3) Upon successful completion of the recurrent training and checking, the operator shall issue a certificate of competency to the cabin crew member concerned, which certificate shall be valid for a period of 12 calendar months calculated from the last day of the calendar month in which such certificate is issued.

**Regaining qualification training**

**121.03.9** (1) An air operator shall ensure that a cabin crew member who has not been absent from all flying duties, but has not acted as a cabin crew member on a particular aeroplane type for a period of up to and including six months, completes –

(a) refresher training as prescribed in Document SA-CATS 121 in such aeroplane type; or

(b) two familiarisation sectors during commercial operations in such aeroplane type,

before undertaking duties on such aeroplane type.

(2) The operator shall ensure that each cabin crew member who has been absent from all flying duties for more than six months completes the requalification training as prescribed in Document SA-CATS 121.

## DIVISION FOUR: TRAINING OF PERSONS OTHER THAN FLIGHT AND CABIN CREW MEMBERS

**Employees and service agent training**

**121.03.10** An air service operator shall provide initial, recurrent and refresher training and checking as prescribed in Document SA-CATS 121 for any person whose function is essential to safe operations in terms of this Part. Such training will be given to at least –

(a) flight operations officers and flight followers;

(b) ground service personnel whose function involves working in, on or around the operator's aeroplanes; and

(c) any other person deemed necessary by the Director.

## DIVISION FIVE: TRAINING, CHECKING, CERTIFICATION AND VALIDITY

### Training, checking, certification and validity periods

**121.03.11** (1) The conduct of any check or demonstration of competency required in terms of this Subpart shall be as prescribed in Document SA-CATS 121.

(2) The issuance of any certificate or other means of certifying competency shall be as prescribed in Document SA-CATS 121.

(3) The following training, checking or demonstration of competency validity periods shall apply –

(a) flight crew members –

(i) training shall be valid to the first day of the thirteenth month following the month in which the training took place;

(ii) except as provided in subparagraph (iv) below, a pilot proficiency check (PPC) is valid to the first day of the seventh month following the month the PPC took place;

(iii) any two PPCs that are similar in nature and occur within four months of each other shall not alone satisfy the requirements of subparagraph (ii);

(iv) where an air service operator is approved to conduct an advanced qualification training programme on specific aeroplane types, such approvals allow for the PPC on those types to be valid to the first day of the thirteenth month following the month in which the PPC took place; and

(v) a line check is valid until the first day of the thirteenth month following the month the line check took place;

(b) cabin crew members –

(i) training shall be valid to the first day of the thirteenth month following the month in which the training took place;and

(ii) examinations and competency checks are valid to the first day of the thirteenth month following the month the examination or check took place;

(c) other than flight or cabin crew members –

(i) for flight operations officers, training and checks are valid to the first day of the thirteenth month following the month the training or demonstration of competency took place; and

(ii) for all others, training and checks are valid to the first day of the twenty-fifth month following the month the training, check or demonstration of competency took place.

(4) Where any required training, check or demonstration of competency is renewed within the last 60 days of its validity period, its validity period is extended by 6, 12 or 24 months, as appropriate.

(5) The Director may extend the validity period of any required training, check or demonstration of competency by up to 30 days where the Director is satisfied that the application is justified and that aviation safety is not likely to be compromised: Provided the request for extension is submitted prior to the expiration of the training, check or demonstration of competency.

(6) Completion of any required training, check or demonstration of competency at any time during the periods specified in paragraphs (3) or (4) above shall be considered as completed in the month due for calculation of the next due date.

## SUBPART 4: DOCUMENTATION AND RECORDS

### Documentary requirements

**121.04.1** (1) An air service operator shall ensure that, in addition to the requirements specified in regulation 91.03.1, the following documents or electronic equivalents are carried on board the aeroplane during flight –

(a) an OFP;

(b) the special loads notification (NOTOC), if applicable;

(c) the insurance certificate or proof of insurance;

(d) a certified copy of the AOC and operations specifications;

(e) the load and trim sheet specified in regulation 121.04.9;

(f) a copy of the aircraft operating manual or standard operating procedures, as applicable;

(g) a copy of the operations manual referred to in regulation 121.04.2 or the portions of it required to be carried; and

(h) a copy of the dangerous goods report as specified in regulation 92.00.15, if applicable.

(2) The operator shall ensure that –

(a) a copy of the OFP;

(b) copies of the relevant parts of the flight folio;

(c) the load and trim sheet specified in regulation 121.04.9;

(d) the passenger list or cargo manifest;

(e) the NOTOC, if applicable; and

(f) a general declaration in the case of an aeroplane engaged in international flights,

are retained in a safe place at the first point of departure in respect of each flight undertaken by the aeroplane.

(3) Except when otherwise instructed by the Director, the documents referred to in sub-regulation (2) shall be retained at the operator's main base of operations, or other location if approved by the Director, for a period of at least 90 days.

**Operations manual**

**121.04.2** (1) An air service operator shall draw up an operations manual containing all information required under this part and setting out the manner in which such operator will operate the air service for which such operator is licensed in terms of the International Air Services Act, 1993 (Act No. 60 of 1993), or the Air Services Licensing Act, 1990 (Act No. 115 of 1990), as the case may be.

(2) The operator shall ensure that –

(a) all parts of the manual are consistent and compatible in form and content and shall not contravene the conditions contained in the operating certificate or operations specifications issued to the operator in terms of regulation 121.06.3;

(b) the manual can be readily amended;

(c) the manual contains an amendment control page and a list of effective pages (LEP) showing the effective date for each page in the manual; and

(d) the manual has the date of the last amendment to each page specified on that page that agrees with the LEP.

(3) The operator shall submit the operations manual in the English language in duplicate to the Director for approval.

(4) If the Director is satisfied that the operator –

(a) will comply with the provisions of regulation 121.06.7; and

(b) will not operate the air service concerned contrary to any provision of the Act, the International Air Services Act, 1993 or the Air Services Licensing Act, 1990,

the Director shall certify in writing on both copies of the operations manual that such manual has been approved, and shall return one copy of the approved operations manual to the operator.

(5) The operator shall amend its operations manual –

(a) where there is a change in any aspect of an operator's operation;

(b) where the operations manual no longer meets the requirements of these regulations or associated technical standards; or

(c) when so required by the Director.

(6) The operator shall submit an amendment to its operations manual in duplicate to the Director for approval and if the Director is satisfied that the operator will comply with the provisions of sub-regulation (4)(a) and (b), the Director shall certify in writing on both copies of the amendment to the approved operations manual that such amendment has been approved and shall return one copy of the approved amendment to the operator.

(7) The operator shall at all times operate its aeroplanes in accordance with the approved operations manual or an approved amendment thereto.

(8) The operator shall –

(a) ensure that all operations personnel are able to understand the technical language used and that the information provided will ensure that such personnel are properly instructed in their particular duties and responsibilities and the relationship of such duties to the operation as a whole;

(b) ensure that every flight is conducted in accordance with the operations manual and that those parts of the operations manual which are required for the conduct of a flight, are easily accessible to the crew members on board during flight time;

(c) make the operations manual available for the use and guidance of operations personnel;

(d) provide the crew members with their own personal copy of the sections of the operations manual which are relevant to the duties assigned to them and designating such crew members as manual holders;

(e) provide each manual holder with copies of all amendments after approval by the Director and such manual holder shall insert amendments issued to them prior to their next flight assignment; and

(f) keep the operations manual in a safe place.

(9) The structure and contents of the operations manual referred to in sub-regulation (1) shall be as prescribed in Document SA-CATS 121.

**Aircraft operating manual**

**121.04.3** (1) An air service operator shall compile an aircraft operating manual (AOM) and make it available during flight time to all flight crew members assigned to the aeroplane and each flight crew member shall operate the aeroplane in accordance with such manual. The operator shall also provide such portions of the AOM to other operator employees or agents where their need to know can be established.

(2) The AOM shall contain the information specified in Document SA-CATS 121 and shall be submitted to the Director for approval.

(3) The operator shall provide each flight crew member with amendments to the AOM.

(4) The operator may provide the AOM in an electronic format provided a means of accessing the information during flight time has also been made available to any crew member who may have need to access the information therein.

(5) The aircraft operating manual may be included in the operations manual referred to in regulation 121.04.2 or be published as a stand alone document as part of the manual system.

**Aircraft flight manual**

**121.04.4** (1) An air service operator shall maintain and operate its aeroplanes in accordance with the approved AFM required by regulation 91.03.2.

(2) The operator shall maintain a system that ensures timely receipt and insertion of all AFM revisions as published by the aeroplane manufacturer or as required by the Director.

(3) Where the operator provides an AOM that meets the requirements of regulation 121.04.3(2) an AFM is not required to be carried on board the aeroplane.

**Operational flight plan**

**121.04.5** (1) An air service operator shall ensure that an OFP that meets the requirements specified in Document SA-CATS 121 is completed for each flight undertaken by its aeroplanes.

(2) The procedures for the use of the OFP and a copy of it shall be contained in the operations manual referred to in regulation 121.04.2.

(3) All entries in the OFP shall be current and permanent in nature.

(4) The OFP shall be retained by the operator for a period of at least 90 days.

**Flight time and duty period records**

**121.04.6** (1) An air service operator shall –

(a) maintain current flight time and duty period records of all crew members and flight operations officers in such operator's employ; and

(b) retain the flight time and duty period records for a period of 15 calendar months calculated from the date of the last flight of each crew member or, for flight operations officers, from their last date of employment.

(2) (a) A crew member who is employed by more than one operator or otherwise accumulates flight time outside of his or her employment, shall maintain an accurate record of flight time and duty periods and shall provide copies thereof to all operators by whom such crew member is employed.

(b) While the crew member is responsible to report all flight activity, each employer maintains responsibility to ensure the crew member concerned does not exceed the limits prescribed in the flight time and duty scheme of the operator referred to in regulation 121.02.13.

**Records of emergency and survival equipment**

**121.04.7** (1) An air service operator shall compile a list of all the survival and emergency equipment to be carried in the aeroplane and shall have such list available at all times for immediate communication to rescue coordination centres.

(2) The survival and emergency equipment list shall be included in the operations manual referred to in regulation 121.04.2.

(3) The format and minimum information to be included in the survival and emergency equipment list shall be as prescribed in Document SA-CATS 121.

**Training records**

**121.04.8** (1) An air service operator shall establish a training file for each person required to receive training and retain on such file a record of all training and checking required in terms of Subpart 3. The records of training and checking shall contain at least the information prescribed and be retained for the period of time specified in Document SA-CATS 121.

(2) The operator shall establish procedures to make an employee's training file available for supervised review by such employee, but all training files shall remain in the custody of the operator.

**Load and trim sheet**

**121.04.9** (1) An air service operator –

(a) registered in the Republic and operated into, within or from the Republic under –

(i) a Class I or Class II licence issued in terms of the Air Services Licensing Act, 1990; or

(ii) a Class I or Class II licence issued in terms of the International Air Services Act; or

(b) registered in a foreign State and operated into, within or from the Republic under –

a foreign operator's permit issued in terms of the International Air Services Act;

shall ensure that no flight is undertaken by the aeroplane unless the person superintending the loading of such aeroplane has completed and certified a load and trim sheet.

(2) A load and trim sheet shall be completed in duplicate and one copy shall be carried in the aeroplane and one copy shall be retained in accordance with the provisions of regulation 121.04.1.

(3) The load and trim sheet shall be retained by the operator for a period of at least 90 days calculated from the date on which the flight was completed.

(4) The minimum contents of a load and trim sheet shall be as prescribed in Document SA-CATS 121.

**Aeroplane search procedure checklist**

**121.04.10** An air service operator shall ensure that there is on board a checklist of the procedures to be followed in searching for a bomb in case of suspected sabotage and for

inspecting aeroplanes for concealed weapons, explosives or other dangerous devices when a well-founded suspicion exists that the aeroplane may be the object of an act of unlawful interference. The checklist shall be supported by guidance on the appropriate course of action to be taken should a bomb or suspicious object be found and information on the least-risk bomb location specific to the aeroplane.

**Preservation of documents**

**121.04.11** An air service operator shall retain any document required in terms of Subpart 4 for the period of time specified herein even where, prior to the expiry of such retention period, the operator ceases to maintain ownership or possession of the aeroplane concerned.

**Cosmic radiation records**

**121.04.12** An air service operator shall, for each flight of an aeroplane above 49 000 ft, maintain records so that the total cosmic radiation dose received by each crew member over a period of 12 consecutive months can be determined.

## SUBPART 5: AEROPLANE INSTRUMENTS AND EQUIPMENT

**Approval of instruments and equipment**

**121.05.1** (1) For the purposes of this Subpart, any reference to the initial date of a type certificate (TC) or certificate of airworthiness (C of A) means the first time that TC or C of A was issued for that aircraft type.

(2) An air service operator shall ensure that a flight does not commence unless the instruments and equipment required under this Subpart, or otherwise installed on the aeroplane are such that will enable the flight crew to control the flight path of the aeroplane, carry out any required procedural manoeuvres and observe the operating limitations of the aeroplane in the expected operating conditions and are –

(a) subject to the provisions of sub-regulation (2), approved and installed in accordance with the requirements, including operational and airworthiness requirements, applicable to such instruments and equipment; and

(b) in a condition for safe operation of the kind being conducted, except as provided for in the MEL.

(3) The operator shall not be required to obtain approval for the –

(a) fuses referred to in regulation 91.04.2;

(b) intrinsically safe electric torches referred to in regulation 91.04.3(1)(d);

(c) accurate time piece referred to in regulations 91.04.4 and 91.04.5;

(d) first aid equipment referred to in regulation 91.04.16;

(e) megaphones referred to in regulation 91.04.24;

(f) survival equipment referred to in regulation 91.04.29; and

(g) medical equipment referred to in regulation 121.05.13.

**Flight, navigation and associated equipment for aeroplanes operated under VFR**

**121.05.2** (1) An air service operator shall not operate an aeroplane in accordance with VFR, unless such aeroplane is equipped with –

(a) a magnetic compass;

(b) an accurate time-piece showing the time in hours, minutes and seconds;

(c) a sensitive pressure altimeter with a subscale setting, calibrated in hectopascals, adjustable for any barometric pressure setting likely to be encountered during flight;

(d) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing;

(e) a vertical-speed indicator;

(f) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;

(g) an attitude indicator;

(h) a stabilised direction indicator; and

(i) a means of indicating on the flight deck the outside air temperature in degrees Celsius.

(2) The second pilot's station shall be equipped with –

(a) a sensitive pressure altimeter with a subscale setting calibrated in hectopascals, adjustable for any barometric pressure setting likely to be encountered during flight;

(b) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing;

(c) a vertical-speed indicator;

(d) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;

(e) an attitude indicator; and

(f) a stabilised direction indicator.

(3) For flights, the duration of which does not exceed 60 minutes, which commence and end at the same aerodrome, and which remain within 25 nautical miles of such aerodrome, the instruments specified in sub-regulation (1)(f), (g) and (h), and sub-regulation (2)(d), (e) and (f), may be replaced by a turn-and-slip indicator, or a turn coordinator incorporating a slip indicator, or both an attitude indicator and a slip indicator.

(4) A large commercial air transport aeroplane being operated by night shall be equipped in accordance with the flight and navigation instruments referred to in regulation 121.05.3.

**Flight, navigation and associated equipment for aeroplanes operated under IFR**

**121.05.3** (1) An air service operator shall not operate an aeroplane in accordance with IFR, unless such aeroplane is equipped with –

(a) a magnetic compass;

(b) an accurate time-piece showing the time in hours, minutes and seconds;

(c) two sensitive pressure altimeters with subscale settings, calibrated in hectopascals, adjustable for any barometric pressure setting likely to be encountered during flight;

(d) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing, including a warning indicator of pitot heater failure;

(e) a vertical-speed indicator;

(f) a turn-and-slip indicator or a turn co-ordinator, incorporating a slip indicator;

(g) an attitude indicator;

(h) a stabilised direction indicator;

(i) a means of indicating on the flight deck the outside air temperature in degrees Celsius;

(j) an alternate source of static pressure for the altimeter and the airspeed and vertical-speed indicators;

(k) a chart holder in an easily readable position which can be illuminated, if to be operated at night;

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

(m) in the case of a multi-engine aeroplane, at least two independent electrical generating systems each operated by separate engines and individually capable of powering all required instruments and equipment necessary for safe emergency operation of the aeroplane; and

(n) in the case of the pressure altitude reporting transponder specified in regulation 91.04.5(1)(l), –

(i) all aeroplanes for which the individual certificate of airworthiness is first issued after 1 January 2009 shall be equipped with a data source that provides pressure-altitude information with a resolution of 25 ft or better; and

(ii) after 1 July 2012, all aeroplanes shall be equipped with a data source that provides pressure-altitude information with a resolution of 25 ft or better.

(2) The second-in-command's station shall be equipped with –

(a) a sensitive pressure altimeter with a subscale setting, calibrated in hectopascals, adjustable for any barometric pressure setting likely to be encountered during flight, which may be one of the two altimeters required under sub-regulation (1)(c);

(b) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunction due to either condensation or icing;

(c) a vertical-speed indicator;

(d) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;

(e) an altitude indicator; and

(f) a stabilised direction indicator.

(3) In addition to the flight and navigation equipment referred to in sub-regulations (1) and (2), an aeroplane shall be equipped with a single standby attitude indicator, capable of being used from either pilot's station which –

(a) is powered continuously during normal operation and, after a total failure of the normal electrical generating system is powered from a source independent of the normal electrical generating system;

(b) provides reliable operation for a minimum of 30 minutes after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;

(c) operates independently of any other attitude indicating system;

(d) is operative automatically after total failure of the normal electrical generating system and provides a clear indication on the instrument panel that the attitude indicator(s) is or are being operated by emergency power; and

(e) is appropriately illuminated during all phases of operation,

Provided that if the standby attitude instrument system is capable of being used through flight attitudes of 360° of pitch and roll, the turn-and-slip indicators may be replaced by slip indicators.

(4) Where the standby attitude indicator referred to in sub-regulation (3) has its own dedicated power supply, there shall be an associated indicator, either on the instrument or instrument panel, when such power supply is in use.

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

**Altitude alerting system**

**121.05.4** The operator of a large turbine-engine aeroplane shall not operate the aeroplane unless such aeroplane is equipped with an altitude alerting system capable of –

(a) alerting the flight deck crew members upon approaching preselected altitude in either ascent or descent in sufficient time to establish level flight at such preselected altitude; and

(b) alerting the flight deck crew members when deviating above or below a preselected altitude by at least an aural signal.

**Terrain awareness and warning system**

**121.05.5** (1) All turbine-engine aeroplanes of a maximum certificated take-off mass in excess of 15 000 kg or authorised to carry more than 30 passengers, for which the individual certificate of airworthiness is first issued on or after 1 July 1979, shall be equipped with a TAWS.

(2) All turbine-engine aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than nine passengers, for which the individual certificate of airworthiness is first issued on or after 1 January 2010, shall be equipped with a TAWS which has a predictive terrain avoidance function.

(3) All turbine-engine aeroplanes authorised under this Part to carry passengers shall be equipped with a TAWS which has a predictive terrain avoidance function.

(4) As from 1 January 2013 all piston-engine aeroplanes of a maximum certificated take-off mass in excess of 5 700 kg or authorised to carry more than nine passengers shall be equipped with a TAWS which provides the warnings contemplated in sub-regulations (6)(a) and (c), warning of unsafe terrain clearance and a predictive terrain avoidance function.

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

(6) A TAWS shall provide, unless otherwise specified herein, warnings of the following circumstances –

(a) excessive descent rate;

(b) excessive terrain closure rate;

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

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

(i) gear not locked down; or

(ii) flaps not in a landing position; and

(e) excessive descent below the instrument glide path.

(7) No person shall inhibit or otherwise render inoperative any required TAWS during flight time except in accordance with the approved aeroplane flight manual.

**Airborne weather radar equipment**

**121.05.6** (1) Subject to the provisions of sub-regulation (2), an air service operator shall not operate the aeroplane whenever such aeroplane is being operated by night or in IMC in area where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather radars, may be expected to exist along the route unless such aeroplane is equipped with airborne weather radar equipment.

(2) In the case of a non-pressurized aeroplane, the airborne weather radar equipment may however be substituted by other approved equipment, which is capable of detecting thunderstorms and other potentially hazardous weather conditions, and of providing the flight crew with bearing and distance of such detected conditions.

**Cosmic radiation detection equipment**

**121.05.7** An air service operator of an aeroplane which is intended to be operated above 49 000 feet, shall ensure that the aeroplane is equipped with an instrument to measure and indicate continuously the dose rate of total cosmic radiation being received and the cumulative dose on each flight.

**Flight deck crew interphone system**

**121.05.8** An air service operator shall not operate the aeroplane unless such aeroplane is equipped with a flight deck crew interphone system, including headsets and microphones, not of a hand-held type, for use by all flight deck crew members.

**Flight crew interphone system**

**121.05.9** (1) An air service operator shall not operate an aeroplane with a MCM exceeding 15 000 kilograms and a maximum approved passenger seating configuration of more than 19 seats, unless such aeroplane is equipped with a flight crew interphone system.

(2) The flight crew interphone system shall –

(a) operate independently of the public address system except for handsets, microphones, selector switches and signalling devices;

(b) provide a means of two-way communication between the flight deck crew compartment and –

(i) each passenger compartment;

(ii) each galley located on another level than on a passenger deck level; and

(iii) each isolated flight crew compartment;

(c) be readily accessible for use from each of the required flight deck crew stations on the flight deck;

(d) be readily accessible for use at the required cabin crew member stations close to each separate or pair of floor-level emergency exits;

(e) have an alerting system incorporating aural or visual signals for use by flight deck crew members to alert the cabin crew and for use by cabin crew members to alert the flight deck crew;

(f) have a means of the recipient of a call to determine whether it is a normal call or an emergency call; and

(g) provide on the ground a means of two-way communication between ground personnel and at least two flight deck crew members.

**Public address system**

**121.05.10** (1) The operator of aeroplane with a maximum approved passenger seating configuration of more than 19 seats, shall not operate the aeroplane unless such aeroplane is equipped with a public address system.

(2) The public address system shall –

(a) operate independently of the interphone systems referred to in regulations 121.05.8 and 121.05.9, except for handsets, microphones, selector switches and signalling devices;

(b) be readily accessible for immediate use from each required flight deck crew member station;

(c) be readily accessible for use from at least one cabin crew member station in the cabin;

(d) in the case of a public address system microphone intended for cabin crew member use, be positioned adjacent to a cabin crew member seat located near each required floor-level emergency exit in the passenger compartment;

(e) be capable of operation within 10 seconds by a cabin crew member at each of those stations in the compartment from which the use of such public address system is accessible;

(f) be audible and intelligible in all phases of flight at all passenger seats, toilets and cabin crew member seats and stations; and

(g) be powered continuously during normal operation.

**Windshield wipers**

**121.05.11** An air service operator shall not operate an aeroplane unless such aeroplane is equipped with a windshield wiper or equivalent system for each required pilot station.

**Internal doors and curtains**

**121.05.12** An air service operator shall not operate an aeroplane unless such aeroplane is equipped with –

(a) in the case of an aeroplane with a maximum certified passenger seating configuration of more than 19 seats, a door between the passenger compartments and the flight deck compartment with a locking device to prevent passengers from opening it without the permission of a flight deck crew member;

(b) a device for opening each door which separates a passenger compartment from another compartment that has emergency exit provisions and such device for opening shall be readily accessible;

(c) if it is necessary to pass through a doorway or curtain separating the passenger cabin from other areas to reach any required emergency exit from each passenger seat, a device to secure such door or curtain in the open position;

(d) a placard on each internal door or adjacent to a curtain which provides access to an emergency exit, to indicate that the door or curtain shall be secured open during take-off and landing; and

(e) a device for any flight crew member to unlock any door which is normally accessible to passengers and which can be locked by passengers.

**First aid, emergency medical and universal precaution kits**

**121.05.13** (1) No air service operator shall operate an aircraft unless such aircraft is equipped with an appropriate first aid kit as prescribed in Document SA-CATS 121 that is accessible to the crew or passengers.

(2) The operator of an aeroplane with a maximum approved passenger seating configuration of more than 10 seats, shall not operate the aeroplane unless such aeroplane is equipped with the appropriate emergency medical kit as prescribed in Document SA-CATS 121, if any point on the planned route is more than 120 minutes flying time, at normal cruising speed, from an aerodrome at which qualified medical assistance is available.

(3) The medication contained in the emergency medical kit shall only be dispensed by a qualified doctor, nurse or similarly qualified personnel acting under the authority of the PIC of the aeroplane.

(4) The emergency medical kit shall be dust and moisture proof and shall be carried in an appropriate secured location.

(5) Personnel authorised by the operator shall carry out periodical inspections of all emergency medical kits to ensure that, as far as is practicable, the contents thereof are in a condition necessary for their intended use.

(6) The supplies in the emergency medical kit shall be replenished at regular intervals in accordance with instructions contained on their labels or as circumstances require.

(7) The operator of an aircraft shall ensure the universal precaution kits prescribed in Document SA-CATS 121 are carried.

**Means for emergency evacuation**

**121.05.14** (1) An air operator shall not operate any aeroplane with passenger emergency exit sill heights –

(a) which are more than 1,83 metres above the ground with the aeroplane on the ground and the landing gear extended; or

(b) which will be more than 1,83 metres above the ground after the collapse of, or failure to extend one or more legs of the landing gear and for which a type certificate was first applied for on or after 1 March 1998,

unless such aeroplane has equipment or devices available at each exit to enable passengers and flight crew members to reach the ground safely in an emergency.

(2) The equipment or devices referred to in sub-regulation (1) need not be provided at overwing exits if the designated place on the aeroplane structure at which the escape route

terminates, is less than 1,83 metres from the ground with the aeroplane on the ground, the landing gear extended and the flaps in the take-off or landing position, whichever flap position is higher from the ground.

(3) In an aeroplane required to have a separate emergency exit for the flight deck crew and –

(a) for which the lowest point of the emergency exit is more than 1,83 metres above the ground with the landing gear extended; or

(b) for which a type certificate was first applied for on or after 1 March 1998 and for which the lowest point of the emergency exit will be more than 1,83 metres above the ground after the collapse of, or failure to extend one or more legs of the landing gear;

there shall be a device to assist the flight deck crew members in reaching the ground safely in an emergency.

**Airborne Collision Avoidance System**

**121.05.15** (1) No air service operator or PIC of a turbine-engine aeroplane shall operate an aeroplane unless –

(a) such aeroplane is equipped with a serviceable ACAS meeting ACAS II specifications, as prescribed in technical standard 91.04.31 of Document SA-CATS 91; and

(b) the flight crew members have been trained and checked as prescribed in technical standard 121.03.4 of Document SA-CATS 121.

(2) Notwithstanding the provisions of sub-regulation (1), an aeroplane may be flown –

(a) for the purpose of moving the aeroplane to a place to have an approved but unserviceable ACAS that is fitted to the aeroplane repaired, removed, substituted or overhauled; or

(b) if the aeroplane is fitted with an approved ACAS that is unserviceable at the beginning of the flight –

(i) for aeroplanes with an approved MEL, such aeroplane is operated in accordance with that MEL; or

(ii) for aeroplanes without an approved MEL –

(aa) if not more than 10 days have passed since the ACAS became unserviceable, excluding the day of discovery, or for such shorter duration as prescribed by the authority responsible for a particular airspace; or

(bb) if the TA and RA are inoperative on the non-flying pilot side, the TA and RA elements and audio functions are operative on the flying pilot side, and on intercontinental flights the TA and RA functions are visible to the non-flying pilot.

(3) The PIC of an aeroplane that is fitted with a serviceable ACAS system shall take all reasonable steps to ensure that the system is activated at all times during flight, and that its use is consistent with the conditions prescribed for the area of operation.

**Passenger cabin signs and placards**

**121.05.16** An air service operator shall ensure the following information is conveyed to the passengers by means of signs or placards suitably conspicuous that will ensure each passenger on board the aeroplane is aware –

(a) of when and how seat belts must be fastened;

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

(c) that smoking is not permitted;

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

(e) of the location and method of opening emergency exits.

**Flight recorders**

**121.05.17** (1) An air service operator shall equip the aeroplanes specified in Document SA-CATS 121 with the flight recorders as provided therein.

(2) Each flight recorder installed in an aeroplane shall be located and installed in such a manner that maximum practicable protection is provided, in order that, in the event of an accident or incident, the recorded data may be recovered in a preserved and intelligible state. Flight recorders shall meet the crashworthiness and fire protection specifications prescribed in Document SA-CATS 121.

(3) Flight recorders shall be deactivated upon completion of flight time following an accident or incident. The flight recorders shall not be reactivated before their disposition to the accident or incident investigation team.

(4) An operator shall ensure, to the extent possible, in the event the aeroplane becomes involved in an accident or incident, the preservation of all related flight recorder records and, if necessary, the associated flight recorders and their retention in safe custody pending their disposition as determined in accordance with Part 12.

(5) The flight recorder shall not be switched off during flight time.

(6) Flight recorders shall be checked daily and on an annual basis as specified in Document SA-CATS 121.

**Flight data recorders**

**121.05.18** (1) An air service operator shall ensure any aeroplane operated is equipped with the FDR specified in technical standard 121.05.17 of Document SA-CATS 121.

(2) The operator shall ensure that the FDR required by this Subpart complies with the specifications as prescribed in technical standard 121.05.17 of Document SA-CATS 121.

(3) Each FDR installed in an aeroplane shall be located in such a manner that ensures maximum practicable protection is provided, in order that, in the event of an accident or incident, the recorded data may be recovered in a preserved and intelligible state.

(4) The parameters of the FDR shall be determined to be within the ranges, accuracies and recording intervals as prescribed in technical standard 121.05.17 of Document SA-CATS 121 and, where required by sub-regulation (1), shall comply with the requirements of –

(a) a Type I/IA FDR capable of recording the parameters that accurately determine the aeroplane flight path, speed, attitude, engine power, configuration and operation; or

(b) a Type II/IIA FDR capable of recording the parameters that accurately determine the aeroplane flight path, speed, attitude, engine power and configuration of lift and drag devices.

(5) No operator may operate an aeroplane equipped with a FDR using –

(a) metal foil;

(b) photographic film technology; or

(c) from 1 January 2016, magnetic tape.

(6) The FDR required by sub-regulation (1) shall be capable of retaining the data recorded during at least the last 25 hours of its operation except for the Type IIA FDR, which shall be capable of retaining the information recorded during at least the last 30 minutes of its operation.

(7) The data obtained from a FDR shall be obtained from aeroplane sources which enable accurate correlation with information displayed to the flight crew.

(8) The FDR shall start automatically to record the data prior to the aeroplane being capable of moving under its own power and shall stop automatically after the aeroplane is incapable of moving under its own power.

(9) An aeroplane may commence a flight with the FDR inoperative: Provided that –

(a) for aeroplanes with an approved MEL, the aeroplane is operated in accordance with that MEL and such MEL incorporates the provisions of paragraph (b) below; or

(b) for aeroplanes without an approved MEL –

(i) the aeroplane shall not depart from an aerodrome where repairs or replacements to such FDR can be made;

(ii) the aeroplane does not exceed six further consecutive flights with the FDR unserviceable;

(iii) not more than 48 hours have elapsed since the FDR became unserviceable; and

(iv) such FDR is not a CVR combined with the FDR and the CVR is serviceable and functioning in accordance with the requirements of regulation 121.05.18.

**Cockpit voice recorders**

**121.05.19** (1) An air service operator shall ensure each aeroplane operated under this Part is equipped with a CVR as specified in technical standard 121.05.17 of Document SA-CATS 121.

(2) The operator shall ensure that the CVR required by this Subpart complies with the specifications as prescribed in technical standard 121.05.17 of Document SA-CATS 121.

(3) The CVR shall record, with reference to a time scale –

(a) voice communications transmitted from or received on the flight deck or in the cockpit by radio;

(b) the aural environment of the flight deck or cockpit, including without interruption, the audio signals received from each microphone in use;

(c) voice communications of flight crew members on the flight deck or in the cockpit using the interphone system of the aeroplane, if installed;

(d) voice or audio signals identifying navigation or approach aids introduced into a headset or speaker; and

(e) voice communications of flight crew members on the flight deck or crew members in the cockpit using the public address system of the aeroplane, if installed.

(4) The CVR shall –

(a) be capable of retaining information recorded during at least the period of time as prescribed in technical standard 121.05.17 of Document SA-CATS 121;

(b) start automatically to record the aeroplane moving under its own power and continue to record, until the termination of the flight when the aeroplane is no longer capable of moving under its own power; and

(c) if possible, start to record the cockpit checks prior to engine start at the beginning of the flight, until the cockpit checks immediately following engine shutdown at the end of the flight.

(5) The CVR may be combined with a FDR referred to in regulation 121.05.18.

(6) From 1 January 2016, no operator may operate an aeroplane equipped with a CVR using magnetic tape or wire.

(7) An aeroplane may commence a flight with the CVR inoperative: Provided that –

(a) for aeroplanes with an approved MEL, such aeroplane is operated in accordance with that MEL and such MEL incorporates the provisions of paragraph (b) below; or

(b) for aeroplanes without an approved MEL –

(i) the aeroplane shall not take-off from an aerodrome where repairs or replacements to such CVR can be made;

(ii) the aeroplane does not exceed six further consecutive flights with the CVR unserviceable;

(iii) not more than 48 hours have elapsed since the CVR became unserviceable; and

(iv) any FDR required to be carried is operative, unless the FDR is combined with a CVR.

**Data link recorders**

**121.05.20** (1) All aeroplanes for which the individual certificate of airworthiness was first issued after 1 January 2016, which utilise any of the data link communications applications listed in Document SA-CATS 121 and are required to carry a CVR shall record on a flight recorder, all data link communications messages.

(2) All aeroplanes which are modified on or after 1 January 2016 to install and utilise any of the data link communications applications listed in Document SA-CATS 121 and are required to carry a CVR shall record on a flight recorder the data link communications messages.

(3) Sufficient information to derive the content of the data link communications message and, whenever practical, the time the message was displayed to or generated by the crew, shall be recorded.

**Lifesaving equipment during flight over open water**

**121.05.21** (1) No air service operator shall operate an aeroplane over water at a distance of more than 50 nm from shore, in any operation described in sub-regulation (2) unless there is carried on board one life jacket or equivalent individual flotation device for each person on board, stowed in a position easily accessible from each seat or berth occupied by such person.

(2) The equipment prescribed in sub-regulation (1) applies to –

(a) aeroplanes having two power-units, where in the event of the critical power-unit becoming inoperative at the most critical point along the route, the aeroplane is not capable of maintaining the minimum safe flight altitude to the planned destination or a suitable alternate aerodrome where a safe landing can be made;

(b) aeroplanes having three or more power-units, where in the event of two power-units becoming inoperative at the most critical point along the route, the aeroplane is not capable of maintaining the minimum safe flight altitude to the planned destination or a suitable alternate aerodrome where a safe landing can be made;

(c) when taking off or landing at an aerodrome where the aeroplane flight path is over water and in the opinion of the Director, should any mishap occur, there would be a likelihood of the aeroplane ditching into the water.

**Equipment requirements for aeroplanes on long range over-water flights**

**121.05.22** (1) In addition to the equipment prescribed in regulation 121.05.21(1), the following equipment shall be installed in all aeroplanes when used over routes on which the aeroplane may be over water and at more than a distance corresponding to 120 minutes at cruising speed or 400 nm, whichever is the lesser, away from land suitable for making an emergency landing:

(a) Life-saving rafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in an emergency, provided with such life-saving equipment,

including means of sustaining life as is appropriate to the flight to be undertaken; and

(b) Equipment for making distress signals.

(2) Each life jacket and equivalent individual flotation device, except that provided for an aeroplane specified in regulation 121.05.21(2)(d), shall be equipped with a means of electric illumination for the purpose of facilitating the location of persons.

(3) The life raft, survival radio equipment and information requirements for such extended over-water flights shall be as prescribed in technical standard 91.04.28 of Document SA-CATS 91.

**Cabin attendant seats**

**121.05.23** Aeroplanes shall be equipped with seats for cabin crew members which shall be forward or rearward facing, within 15° of the longitudinal axis of the aeroplane and located near floor-level emergency exits, where possible. Each cabin crew member required to satisfy the emergency evacuation criteria shall have a seat equipped with a safety harness: Provided that a safety belt with one diagonal shoulder strap is permitted if the fitting of a safety harness is not reasonably practical.

**Emergency locator transmitters**

**121.05.24** (1) No air service operator shall operate an aeroplane under this Part unless such aeroplane is equipped with –

(a) at least one automatic ELT or two ELTs of any type; and

(b) where the aeroplane is of a type for which the individual certificate of airworthiness was first issued after 1 July 2008, it shall be equipped with at least two ELTs, one of which shall be automatic.

(2) ELT equipment carried in terms of sub-regulation (1) shall operate and be installed as prescribed in technical standard 91.04.26 of SA-CATS 91.

(3) ELTs required to be fitted in terms of this regulation, shall be capable of transmitting on the frequencies 121,5 MHz and 406 MHz simultaneously.

(4) Notwithstanding sub-regulations (1) and (2), an aeroplane may be operated without a serviceable ELT where –

(a) it is operated in accordance with a MEL approved by the Director; or

(b) where a MEL has not been approved by the Director in respect of the aeroplane, the operator –

(i) repairs or removes the ELT at the first aerodrome at which repairs or removal can be accomplished;

(ii) on removal of the ELT from the aeroplane, sends the ELT to a maintenance facility;

(iii) displays on a readily visible placard within the aeroplane cockpit, for the period of removal of the ELT from the aeroplane, a notice stating that the ELT has been removed and setting out the date of removal; and

(iv) installs a serviceable ELT within 5 days after the date of removal.

**Microphones**

**121.05.25** All flight crew members required to be on flight deck duty shall communicate through boom or throat microphones below the transition level/altitude.

## SUBPART 6: AIR OPERATOR CERTIFICATE

**Requirement to hold AOC**

**121.06.1** No air service operator shall operate an aeroplane in terms of this Part unless the operator is the holder of and complies with the conditions of a valid AOC including the operations specifications attached thereto and an air services licence issued in terms of the Air Services Licensing Act, No. 115 of 1990, or the International Air Services Act, No. 60 of 1993.

(2) The holder of an AOC shall not wet lease in more than fifty percent of its entire fleet nor more than fifty percent of the aeroplane type in the fleet having the greatest MCM.

(3) The operations specifications of an AOC shall contain a record of at least the type, model or series, and registration of each aeroplane approved for use by an operator.

**Application for the issuance or amendment of AOC and operations specifications**

**121.06.2** (1) An application for the issuance or amendment of an AOC or operations specifications shall be made to the Director in the form and manner prescribed in Document SA-CATS 121 and shall be accompanied by the appropriate fee prescribed in Part 187.

(2) The applicant shall demonstrate in the application that the applicant –

(a) has adequate equipment, facilities and personnel to operate the proposed commercial air transport operation; and

(b) is able to conduct the commercial air transport service in a safe and proper manner and in full compliance with all applicable rules and regulations.

(3) The holder of an AOC may add to its AOC an aeroplane registered on another AOC: Provided –

(a) the aeroplane is not registered on more than three AOCs;

(b) the aeroplane is maintained by only one AMO;

(c) the manual of procedures or maintenance control manual, as applicable, for all operators and the Operations Specifications for each operator, specify the AMO responsible for the maintenance of each shared aeroplane, by aeroplane registration number;

(d) the aeroplane flight folio used is the same for all operators, such that there is but one continuous record of the aeroplane's activities, and the flight crew members are trained in the procedures for completion of the flight folio;

(e) there is one method with respect to the entry, reporting and rectification of defect procedures and the flight crew members are trained in those procedures;

(f) the flight crew members use the MEL approved for the aeroplane and are trained in the MEL procedures for that particular aeroplane, if applicable, and the operations manual specifies the procedures the flight crew are to follow in the event contact with maintenance personnel is needed; and

(g) the flight crew members receive ground and flight training covering any differences between the model(s) operated by the operator and that being added to the AOC, including at least –

(i) safety equipment contained on board;

(ii) ancillary equipment such as navigational aids, auto flight system, flight director or FMS, ACAS, TAWS, weather radar, etc; and

(iii) systems differences, engine/airframe limitations, performance considerations and operating characteristics,

and the results of such training are recorded on the flight crew member's training file.

(4) The submission of an application under this Subpart does not place any obligation upon the Director to issue an AOC or operations specifications until he/she has been given reasonable time to review the application and the application has been adjudicated in terms of these Regulations.

(5) The personnel referred to in sub-regulation (2)(a) shall be comprised of the following positions, as applicable to the type of operation proposed, the incumbents of which shall be approved by the Director –

(a) chief executive officer;

(b) person responsible for flight operations;

(c) person responsible for aircraft;

(d) chief pilot;

(e) cabin crew manager;

(f) air safety officer;

(g) quality manager; and

(h) security manager.

(6) The nominated post-holders required by sub-regulation (5) shall meet the qualifications and be responsible for the functions specified in Document SA-CATS 121 and shall be employed on a full time basis. For the purposes of this sub-regulation "full time employment" shall mean having spent sufficient time in the workplace to accomplish all duties within his or her area of responsibility.

(7) Any person who held any of the positions listed in sub-regulation (5) prior to the commencement of these Regulations shall be deemed to meet the qualifications required by Document SA-CATS 121: Provided that –

(a) for a nominated post-holder, such person is satisfactory to the Director;

(b) for an incumbent, that incumbent has discharged his or her responsibilities to the satisfaction of the Director; and

(c) for a nominated or incumbent post-holder, such person meets the qualifications specified in Document SA-CATS 121 within six months from the commencement of these Regulations.

(8) When, after consideration of the scope and size of an operator, the Director is of the opinion that it would be appropriate, he or she may approve the assignment of more than one position to one person or approve different positions.

(9) No person who has been approved for one or more management positions in terms of sub-regulations (5)(a) to (d) shall hold for a management position at another operator.

(10) Notwithstanding any provision to the contrary in these Regulations, the Director may withdraw any approval where any manager no longer meets the qualifications required for that position or fails to discharge the responsibilities of that position.

(11) The Director may amend an AOC if –

(a) he or she determines that safety in commercial air transport and the public interest requires the amendment; or

(b) the holder of the AOC applies for an amendment, and the Director determines that safety in commercial air transport and the public interest requires such amendment.

(12) If the Director stipulates in writing that an emergency exists requiring immediate amendment in the public interest with respect to safety in commercial air transportation, such an amendment becomes effective on the date the holder of an AOC receives such notice.

(13) A holder of an AOC may make representations to the Director against the amendment contemplated in regulation (11)(a) or (12), but shall continue to operate in accordance with such amendment, unless it is subsequently varied or withdrawn.

(14) Amendments approved by the Director, other than emergency amendments referred to in sub-regulation (12), become effective 30 days after notice to the holder of an AOC, unless the holder of the AOC makes representations against such proposal as contemplated in sub-regulation (13) prior to the effective date.

(15) Amendments proposed by the holder of an AOC shall be made at least 30 days prior to the intended date of any operation under the proposed amendment.

(16) No person may perform a commercial air transport operation for which an AOC amendment is required, unless that person has received notice of the approval from the Director.

**Application, adjudication of and issuance of AOC or operations specifications**

**121.06.3** (1) In considering an application referred to in regulation 121.06.2 the Director may conduct any investigation he or she deems necessary to determine the applicant's ability to meet the requirements specified in this Part.

(2) An application shall be granted and the appropriate aviation document issued, containing such conditions as the Director determines, if the Director is satisfied that –

(a) the applicant will comply with the provisions of its air service operator certificate and operations specifications; and

(b) the applicant will not operate the air service concerned contrary to any provision of the Act, the International Air Services Act, No. 60 of 1993, or the Air Service Licensing Act, No. 115 of 1990.

(3) Where in the opinion of the Director an applicant has failed to provide satisfactory evidence of qualification for the document being sought, the applicant will be informed by the Director as to the deficiencies and will be given a reasonable opportunity to rectify such deficiencies after which time the Director shall grant or refuse the application concerned.

(4) An AOC and associated operations specifications shall be issued in a prescribed form and contain at least the information prescribed in Document SA-CATS-OPS-121.

**Validity and status of an AOC**

**121.06.4** (1) Unless otherwise specified by the Director, an AOC shall remain valid and in force for an indefinite period: Provided that –

(a) the operator submits on or before the anniversary date of initial issue, the appropriate annual fee as prescribed in Part 187;

(b) the operator successfully completes such audits and inspections as were carried out by the Director, including the satisfactory resolution of any findings reported to the operator by the Director;

(c) the AOC is not otherwise suspended, cancelled or voluntarily surrendered to the Director; and

(d) the operator continues to meet the requirements for issue of an AOC.

(2) An AOC is not transferable to any other entity.

(3) Where an operator is notified by the Director that its AOC has been suspended or cancelled, the operator shall return the AOC to the Director within seven days of such notification.

**Safety and security inspections and audits**

**121.06.5** (1) An applicant for the issuance of an AOC shall permit an authorised officer, inspector or authorised person to carry out such safety and/or security inspections and audits which may be necessary to verify the validity of an application made in terms of regulation 121.06.2.

(2) The holder of an AOC shall permit an authorised officer, inspector or authorised person to carry out such safety and security inspections and audits as may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

**Administrative duties of an AOC holder**

**121.06.6** (1) The holder of an AOC shall keep the AOC in a safe place and produce such AOC to an authorised officer or inspector for inspection if so requested by such officer or inspector.

(2) An operator shall advise the Director of any changes in the personnel occupying the management positions specified in regulation 135.06.2(5) and shall submit the names and qualifications of the replacement person(s) for the Director's approval before effecting such changes: Provided that, in the case of the sudden departure of an incumbent, the operator shall notify the Director of the event and his or her intentions to ensure safety of operations while replacing such person.

(3) An operator shall notify the Director in the event of any change in the ownership of the operator, including the names and contact details of the new owners.

**Register of AOCs**

**121.06.7** (1) The Director shall maintain a register of all AOCs issued in terms of these regulations.

(2) The register shall contain the following particulars –

(a) the full name and, if any, the business name of the holder of the AOC;

(b) the postal address of the holder of the AOC;

(c) the number of the AOC issued to the holder;

(d) particulars of the type of air service for which the AOC was issued, including a list of operations specification issued;

(e) particulars of the category of aeroplane for which the AOC was issued; and

(f) the date on which the AOC was issued.

(3) The particulars referred to in sub-regulation (2) shall be recorded in the register within 30 days from the date on which the AOC is issued.

(4) The register shall be kept in a safe place at the office of the Director.

(5) A copy of the register shall be furnished, on payment of the appropriate fee as prescribed in Part 187, to any person who requests the copy.

**Demonstration flights**

**121.06.8** (1) No person may operate an aircraft type in commercial air transport unless he or she first conducts satisfactory demonstration flights as required by the Director in that aircraft type.

(2) No person may operate an aircraft in a designated special area, or use a specialised navigation system, unless he or she conducts a satisfactory demonstration flight as required by the Director.

(3) The demonstration flights required by sub-regulations (1) and (2) shall be conducted in accordance with the regulations applicable to the type of operation and aircraft type used.

(4) The Director may authorise deviations from this regulation if he or she finds that special circumstances make full compliance with the provisions of this regulation unnecessary.

## SUBPART 7: FLIGHT OPERATIONS

### Division One: General

**Routes and areas of operation and aerodrome facilities**

**121.07.1** (1) Aeroplane dispatched over any route or airway in IMC shall be capable of –

(a) in the case of a twin engine aeroplane in the event of the failure of the critical engine, maintaining the minimum *en route* altitude published or established by the operator for such route or airway;

(b) in the case of an aeroplane having three or more engines in the event of the failure of any two engines, maintaining the minimum *en route* altitude published or established by the operator for such route or airway; and

(c) in addition to subparagraphs (a) and (b) and for flight in VMC, the aeroplane shall be capable of landing at the intended destination or alternate aerodrome in accordance with the provisions of regulations 121.08.8, 121.08.9 and 121.08.10.

(2) The operator shall specify in its operations manual the procedures used to determine the minimum altitudes to be flown in order to meet the obstacle clearance requirements specified in regulation 121.07.27 and, for operations in uncontrolled airspace, the means for ensuring a navigational capability is maintained while operating on any route used therein.

(3) The operator of an aeroplane shall select at least one destination alternate aerodrome for each IFR flight unless –

(a) two separate runways, arranged such that the closure of one cannot affect the operations of the other and each with an operational straight-in instrument approach procedure, are available and usable by the flight crew at the destination aerodrome; and

(b) the duration of the flight from the departure aerodrome, or from the point of in-flight re-planning, to the destination aerodrome is such that, taking into account all operational information relevant to the flight, for a period of at least one hour before and one hour after the estimated time of arrival, a reasonable certainty exists that the approach and landing may be made under VMC; or

(c) the destination aerodrome is isolated and no suitable alternate aerodrome is available, in which case the provisions of regulation 91.07.7(6)(b) shall apply.

(4) The operator of an aeroplane shall select at least two destination alternate aerodromes for IFR flights when the appropriate weather reports or forecasts for the destination aerodrome, or any combination thereof, indicate that during a period commencing one hour before and ending one hour after the estimated time of arrival, the weather conditions will be below the applicable planning minima or no weather information is available at the destination aerodrome.

(5) An air service operator shall not permit, nor may a PIC operate, a flight that is to be conducted in accordance with IFR, for which one or more destination alternate aerodromes are required, to be commenced unless the aerodrome meteorological forecast indicates that conditions for a period of at least one hour before until one hour after the estimated time of arrival at the destination alternate aerodrome(s) will meet or exceed those specified in Document SA-CATS 121.

(6) The operator shall operate all flights in accordance with such route, aerodrome or other approvals and conditions pertaining to flight operations as are contained in the AOC.

(7) The operator shall ensure that –

(a) the equipment of the aeroplane intended to be used, complies with the minimum requirements for the planned operation; and

(b) except as approved by the Director in accordance with Document SA-CATS 121, no twin-engine aeroplane is operated under this Part over a route which contains a point further from an adequate and suitable aerodrome than the distance that can be flown, under standard conditions in still air, in 60 minutes at the one-engine inoperative cruise speed.

(8) No operator shall commence a flight unless it has been ascertained by every reasonable means available that the ground facilities and services, including meteorological services, are available as required for the safe operation of the aeroplane and the protection of the passengers, are adequate for the type of operation being conducted and are functioning normally for their intended purpose.

(9) The operator shall report without delay to the responsible authority any observed operational inadequacy of facilities referred to in sub-regulation (8).

**Establishment of procedures**

**121.07.2** (1) An air operator shall –

(a) establish for each aeroplane type, procedures and instructions for ground personnel and crew members pertaining to the duties for all types of operations on the ground and in flight;

(b) establish a checklist system to be used by flight crew members for all phases of operation under normal, abnormal and emergency conditions, to ensure that the operating procedures in the operations manual referred to in regulation 121.04.2 are followed;

(c) ensure that flight crew members do not perform any activities during critical phases of the flight other than those required for the safe operation of the aeroplane; and

(d) ensure specific procedures are developed to instruct pilots with respect to rates of climb and descent in the various stages of flight.

(2) The approved checklist system referred to in sub-regulation (1)(b) shall include –

(a) an easy-to-use checklist for normal phases of flight operations;

(b) a quick reference-type checklist dealing with all malfunctions requiring the use of abnormal or emergency procedures;

(c) an amplified checklist that ensures all referenced check items are dealt with in accordance with the aeroplane manufacturer's recommended procedures;

(d) an easy to locate and employ system of supplementary checks and/or procedures, if applicable; and

(e) any other check items relating to the use of equipment not installed at the time of aeroplane manufacture or not included in the check system provided for in the approved aeroplane flight manual.

(3) The PIC shall be responsible for ensuring all check procedures, including checklists, are managed in accordance with the procedures specified in the operator's operations manuals.

**Competence of operations personnel**

**121.07.3** An air operator shall ensure that all personnel assigned to, or directly involved in ground and flight operations, are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole.

**Use of air traffic services**

**121.07.4** An air operator shall ensure that air traffic services are used for all flights whenever available.

**Single-engine aeroplane operations**

**121.07.5** No air service operator may operate a single-engine aeroplane under this Part.

**Defect reporting**

**121.07.6** (1) An air operator shall establish adequate inspection and reporting procedures to ensure that defective equipment is reported to the PIC of the aeroplane before take-off and where a defect is observed during flight, the PIC shall be responsible to ensure such defect is recorded and reported in the manner established in the operator's operations manual.

(2) The procedures referred to in sub-regulation (1) shall be extended to include the reporting to the operator of all incidents of exceeding engine or airframe limitations that may occur while the flight crew are embarked on the aeroplane and of defective equipment found on board.

(3) Upon receipt of the reports referred to in sub-regulation (2), the operator shall compile a report and submit such report on a monthly basis to the Director.

**Instrument approach and departure procedures**

**121.07.7** An air service operator may implement instrument approach and departure procedures, other than instrument approach and departure procedures referred to in regulation 91.07.15: Provided that –

(a) such instrument approach and departure procedures have been approved by the Director or the appropriate authority of the State in which such aerodrome is located; or

(b) the appropriate air traffic control clearance has been received from the ATSU.

**Noise abatement procedures**

**121.07.8** (1) An air service operator shall establish operating procedures for noise abatement.

(2) Take-off and climb procedures for noise abatement specified by the operator for any one aeroplane type may vary for different aerodromes.

**Reporting of hazardous flight conditions**

**121.07.9** The PIC of any aeroplane that encounters flight conditions considered to be hazardous to his or her, or another aeroplane, shall report such conditions to any appropriate aeronautical station as soon as possible, giving such details as may be pertinent to the safety of other aeroplanes.

**Refuelling and defuelling with passengers on board**

**121.07.10** No person shall refuel or defuel any aeroplane when passengers are embarking, disembarking or on board unless the fuelling is carried out in accordance with the procedures specified in Document SA-CATS 121 and such procedures are included in the operator's operations manual.

**Reporting acts of unlawful interference**

**121.07.11** Following an act of unlawful interference, the pilot-in command shall –

(a) where in his opinion the safety of persons on board the aeroplane would not be jeopardized, report the events to the nearest air traffic services authority by the most discrete method possible, by the means devised for such communications; and

(b) submit, without delay, a report of such act to the Director in a form acceptable to the Director.

**Cabin and flight deck signals**

**121.07.12** (1) An air service operator shall publish in a manner acceptable to the Director a system of signals to be used between the cabin and the flight deck during normal, abnormal, emergency and security operations.

(2) The signals may be issued in an overt or covert manner.

## DIVISION TWO: DISPATCH AND FLIGHT RELEASE RULES

### Operational control and supervision of flight operations

**121.07.13** (1) An air service operator shall establish and maintain an OCS that –

(a) meets the requirements prescribed in Document SA-CATS 121; and
(b) is approved by the Director.

(2) The Director may approve the use of a variation of the operational control systems described in Document SA-CATS 121 provided an equivalent level of operational control and supervision is demonstrated.

(3) No operator shall dispatch a flight unless a flight release has been issued for the flight. The flight release procedures shall meet the requirements specified in Document SA-CATS 121 and be acceptable to the Director as appropriate to the type of operation.

(4) Where a flight release has been issued with respect to a flight and not withdrawn prior to the take-off, the PIC has the final authority as to the commencement, continuation, diversion or termination of that flight.

(5) Where a flight release has been issued with respect to a flight, it shall remain in force for the duration of the flight, from the originating point to the final destination, including en route stops, except where –

(a) the aeroplane has been delayed or otherwise detained at the originating point or any *en route* station stop for a period of more than 4 hours;

(b) any flight crew member has been changed from the original crew;

(c) any crew member has exceeded his or her maximum flight duty time, necessitating an extension to such duty period;

(d) the aeroplane has been involved in an incident or occurrence or has otherwise encountered a malfunction which may have altered the status of the maintenance release;

(e) due to operational requirements, the aeroplane was forced to divert to an alternate or other airport, not included in the planned itinerary; or

(f) in the opinion of the PIC or flight operations officer (FOO), if applicable, there has been significant change in the operational weather or other conditions upon which the flight release was issued, thereby rendering it invalid. In such situations the flight release may be withdrawn by either the PIC or the FOO.

(6) The operator shall ensure that the OCS includes a means of following the progress of each flight as specified in Document SA-CATS 121 and that the communication equipment and

facilities required for the flight watch or flight following system used are in place and serviceable during the period of time any of its flights is in progress.

(7) For operations involving co-authority dispatch, the operator shall develop a conflict resolution policy that ensures that any disagreement that occurs between the PIC and a FOO with respect to the conduct of a proposed flight is resolved prior to flight.

(8) The conflict resolution policy specified in sub-regulation (7) shall require a course of action that would provide the greatest margin of safety.

(9) The operator shall publish in the operations manual referred to regulation 121.04.2 –

(a) the details of its OCS, including the titles and functions of those persons authorized to exercise operational control over a flight;

(b) the policies and procedures associated with the type or types of OCS it intends to use in preparing for, releasing and monitoring its flights as well as the emergency procedures to be followed; and

(c) the conflict resolution policy in full detail.

**Contracted services for an operational control system**

**121.07.14** (1) An air service operator may use the operational control system of an agent whether domestic or foreign: Provided –

(a) for the implementation of a co-authority dispatch system, the agency and operator establish an equivalent system to that specified in technical standard 121.07.13 of Document SA-CATS 121; or

(b) for the implementation of a pilot self-dispatch system, as specified in technical standard 121.07.13 of Document SA-CATS 121, the operator establishes a means to effectively interface with the contracted services; and

(c) the service agreement is approved by the Director.

(2) The methods, procedures and policies for effecting operational control using the agency shall be described in the operations manual referred to in regulation 121.04.2.

**Operational flight plan and flight release**

**121.07.15** (1) An air service operator shall prepare an OFP for its flights as provided in technical standard 121.04.5 of Document SA-CATS 121.

(2) The signatures or alternative means of signifying acceptance of the OFP by the PIC and flight operations officer, if applicable, as required by technical standard 121.04.5 of Document SA-CATS 121, shall constitute a flight release and certifies that –

(a) the OFP has been prepared and accepted in accordance with the procedures specified in the operations manual; and

(b) the fight is safe to proceed.

**Familiarity with weather conditions and technical data**

**121.07.16** No flight operations officer may release a flight unless he or she is thoroughly familiar with –

(a) reported and forecast weather conditions on the route to be flown and at all planned destination and alternate aerodromes;

(b) the navigational requirements for the planned routes and aerodromes; and

(c) any other technical data relevant to the proposed flight including aerodrome operating minima, aeroplane performance, maintenance status, NOTAMs, bulletins or operational directives issued by the operations manager,

and that nothing in such information indicates there is a threat to the safety of the flight.

**Retention of flight operations documents and reports**

**121.07.17** (1) Unless otherwise specified by the Director, every air service operator shall retain all flight documents made in terms of this Subpart, for a period of not less than 90 days.

(2) All flight documentation required by this Subpart to be prepared with respect to a flight and which was carried onboard that flight shall be returned to the company's main base specified in the AOC. Such documentation shall include weather maps and printed information, NOTAMs, cargo and fuel loading sheets and manifests and all paperwork used to record the flight's progress or diversion and irregular or emergency situations.

**Maintenance status**

**121.07.18** (1) No person may dispatch or release an aeroplane unless it is airworthy and all known defects have been rectified and appropriately certified by an aeroplane maintenance engineer except where the dispatch of the aeroplane is in accordance with an approved MEL issued in terms of regulation 121.07.19, a CDL approved by the State of Manufacture or as otherwise permitted in the aeroplane flight manual.

(2) Under a co-authority dispatch system the pre-flight briefing issued by the flight operations officer shall include a full review of the aeroplane maintenance status.

**Requirements for Minimum Equipment Lists**

**121.07.19** (1) Except as provided in sub-regulations (2) and (5), no person shall conduct a take-off in an aeroplane with instruments or equipment that are not serviceable or that have been removed, where such instruments or equipment are required by –

(a) the standards of airworthiness that apply to day or night VFR or IFR flight, as applicable;

(b) any equipment list published by the aeroplane manufacturer respecting aeroplane equipment that is required for the intended flight;

(c) an AOC;

(d) an airworthiness directive; or

(e) these Regulations.

(2) A person may conduct a take-off in an aeroplane with instruments or equipment that are not serviceable or that have been removed: Provided the aeroplane is operated in accordance with any conditions or limitations specified in a MEL, which has been approved by the Director as prescribed in Document SA-CATS 121 and, in the opinion of the PIC, aviation safety will not be affected.

(3) An operator shall establish a MEL for each type of aeroplane for which a MMEL has been approved by the State of Manufacture of such aeroplane: Provided the State of Manufacture is a Contracting State and the manufacturing standards used by such State are at least equal to the ICAO standards for manufacturing.

(4) No person may operate an aeroplane in accordance with a MEL unless such MEL is carried on board the aeroplane.

(5) A person may conduct a take-off in an aeroplane that has instruments or equipment that are not serviceable or that have been removed where the aeroplane is operated in accordance with the conditions of a flight permit that has been issued by the Director or his delegate specifically for that purpose.

(6) No person shall conduct a take-off in an aeroplane for which a MEL has not been approved and the aeroplane has instruments and equipment, other than the instruments and equipment specified in sub-regulation (1), that are not serviceable or that have been removed unless –

(a) where the unserviceable instrument or equipment is not removed from the aeroplane, it is isolated or secured so as not to constitute a hazard to any other aeroplane system or to any person on board the aeroplane;

(b) the appropriate placards are installed as required by the maintenance control manual; and

(c) an entry recording the actions referred to in paragraphs (a) and (b) is made in the flight folio, as applicable.

**Aerodrome operating minima**

**121.07.20** (1) An air service operator shall establish aerodrome operating minima in accordance with the provisions of sub-regulations (2), (3) and (4) in a manner approved by the Director.

(2) The operator shall establish aerodrome operating minima for each aerodrome planned to be used, which shall not be lower than the values prescribed in technical standard 91.07.5 of Document SA-CATS 91, except as provided in regulation 121.07.36.

(3) The operator shall conduct all instrument approaches and departures in accordance with the procedures approved for such operator in its operations specifications.

(4) Where an operator is operating at an aerodrome other than a South African aerodrome, the aerodrome operating minima established by the operator may be lower than the minima established by the appropriate authority of the State in which such aerodrome is located: Provided that –

(a) the State in which such aerodrome is located approves the lower operating minima; and

(b) the operator has been authorised in its operations specifications to operate to such lower minima.

**Minimum flight altitudes**

**121.07.21** (1) An air service operator shall establish minimum flight altitudes and the methods to determine such minimum flight altitudes for all route segments to be flown which provide the required terrain clearance, taking into account the operating limitations referred to in Subpart 8 of this Part and the minimum altitudes prescribed in regulation 91.06.32.

(2) The operator shall take into account the following factors when establishing minimum flight altitudes –

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

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

(c) the characteristics of the terrain along the routes or in the areas where operations are to be conducted;

(d) the probability of encountering unfavourable meteorological conditions; and

(e) possible inaccuracies in aeronautical charts.

(3) In complying with the provisions of sub-regulation (2), the operator shall give due consideration to –

(a) corrections for temperature and pressure variations from standard values;

(b) the air traffic control requirements; and

(c) any contingencies which may occur along the planned route.

**Ditching**

**121.07.22** An air service operator shall not operate an aeroplane with an approved passenger seating configuration of more than 30 seats over routes on which the aeroplane may be over

water and at more than a distance corresponding to 120 minutes at cruising speed or 400 nm, whichever is the lesser, away from land suitable for making an emergency landing, unless such aeroplane has been certified as having adequate characteristics for ditching or has been approved as adequate for ditching.

**Fuel policy**

**121.07.23** (1) An air service operator shall establish a fuel policy that meets the requirements prescribed in Document SA-CATS 121 for the purpose of flight planning and in-flight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserve fuel to cover deviations from the planned operation.

(2) The operator shall ensure that the planning of a flight is based upon –

(a) procedures, tables or graphs which are contained in or derived from current aeroplane-specific data or the operations manual referred to in regulation 121.04.2;

(b) the operating conditions under which the flight is to be conducted, including –

(i) realistic aeroplane fuel consumption data;

(ii) anticipated masses;

(iii) expected meteorological conditions;

(iv) the effects of loss of facilities or services as identified in NOTAMs; and

(v) ATS procedures, restrictions and anticipated delays.

(3) The operator shall establish policies and procedures with respect to fuel management and publish such policies and procedures in the operations manual referred to in regulation 121.04.2.

(4) The policies and procedures required by sub-regulation (3) shall, as a minimum, include the requirement that –

(a) in-flight fuel checks are to be performed at least hourly by or on behalf of the PIC to ensure that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to a suitable aerodrome where a safe landing can be made with the planned final reserve fuel remaining; and

(b) the PIC shall declare a situation of urgency when the calculated usable fuel predicted to be available upon landing at the nearest suitable aerodrome where a safe landing can be made is less than the planned final reserve fuel.

**Fuel supply and record keeping**

**121.07.24** (1) An air service operator shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out.

(2) The operator shall keep a record of all fuel uplifts, including quantities and types. Record-keeping procedures shall be published in the operator's approved documents and shall be considered flight documents for record retention as prescribed in regulation 121.07.23.

**Operation of aircraft in icing conditions**

**121.07.25** (1) No person shall conduct a take-off or continue a flight in an aeroplane when icing conditions are reported to exist or are forecast to be encountered along the route to be flown unless the aeroplane is equipped to be operated in such conditions and the aircraft type certificate authorises flight in such conditions.

(2) In no case shall a flight be initiated or continued in icing conditions where in the opinion of the PIC, the conditions experienced may adversely affect the safety of the flight.

(3) No person shall operate an aeroplane in icing conditions at night unless the aeroplane is equipped with a means to illuminate a representative surface or otherwise detect the formation of ice.

**Surface contamination programme**

**121.07.26** (1) No person shall conduct or attempt to conduct a take-off in an aeroplane that has frost, ice or snow adhering to any of its critical surfaces.

(2) Notwithstanding sub-regulation (1), a person may conduct a take-off in an aeroplane that has frost adhering to the underside of its wings that is caused by cold-soaked fuel, if the take-off is conducted in accordance with the aeroplane manufacturer's instructions for take-off under such conditions.

(3) Where conditions are such that frost, ice or snow may reasonably be expected to adhere to the aircraft, no person shall conduct or attempt to conduct a take-off in an aeroplane unless the operator has established an aeroplane inspection programme in accordance with a surface contamination programme approved by the Director and the dispatch and take-off of the aircraft are in accordance with that programme.

(4) The inspection referred to in sub-regulation (3) shall be performed by –

(a) the PIC;

(b) a flight crew member of the aircraft who is designated by the PIC; or

(c) a person, other than a person referred to in paragraph (a) or (b), who –

(i) is designated by the operator of the aeroplane; and

(ii) has successfully completed an aeroplane surface contamination training programme approved for such operator.

(5) Where, before commencing take-off, a crew member of an aeroplane observes that there is frost, ice or snow adhering to the wings of the aeroplane, the crew member shall immediately report that observation to the PIC and the PIC, or a flight crew member designated by the PIC, shall inspect the wings of the aeroplane before take-off.

(6) Before an aeroplane is de-iced or anti-iced, the PIC of the aeroplane shall ensure that the crew members and passengers are informed of the decision to do so.

(7) An air service operator is not required to have a programme as required by sub-regulation (3) if it includes a statement in its operations manual that the operator will not dispatch its aeroplane into any region or country where it could be reasonably expected that surface contamination could at anytime form on the aeroplane, while parked or operating on the ground.

**Reduced vertical separation minima – aeroplane monitoring**

**121.07.27** (1) An air operator authorised to operate in reduced vertical separation minima airspace shall ensure that a minimum of two aeroplanes of each aeroplane type grouping of its fleet have their height-keeping performance monitored at least once every two years or within intervals of 1 000 flight hours per aeroplane, whichever period is longer: Provided that, if an operator's aeroplane type grouping consists of a single aeroplane, monitoring of that aeroplane shall be accomplished within the specified period.

(2) The monitoring requirements specified in sub-regulation (1) may be met through the use of data obtained from any air traffic services regional monitoring programme.

**Inertial navigation systems and inertial reference systems**

**121.07.28** No air service operator shall use inertial navigation or reference systems (INS/IRS) unless the operator –

(a) is authorised to do so in its operations specifications; and
(b) complies with the INS/IRS requirements prescribed in Document SA-CAT 121.

**Mass and balance control**

**121.07.29** (1) No person shall operate an aeroplane unless, during every phase of the flight, the load restrictions, mass and centre of gravity of the aeroplane conform to the limitations specified in the aeroplane flight manual.

(2) An air service operator shall have a mass and balance programme that complies with regulation 91.07.11.

(3) The operator shall specify in its operations manual its mass and balance programme and instructions to employees regarding the preparation and accuracy of mass and balance forms and the load and trim sheet in accordance with regulation 121.04.9.

**Low visibility operations**

**121.07.30** No air service operator shall assign and no person shall conduct a low visibility take-off or Category II or III approach unless –

(a) the operator meets the conditions prescribed in Document SA-CAT 121;

(b) the operator is authorised to do so in its operations specifications; and

(c) the LVO are conducted in accordance with the procedures approved for the operator in the operations manual referred to in regulation 121.04.2.

**Operations with head-up displays or enhanced vision systems**

**121.07.31** (1) No air service operator shall use a head-up display (HUD) or enhanced vision system (EVS) unless the operator –

(a) is authorised to do so in its operations specifications; and

(b) complies with the HUD or EVS, as applicable, requirements prescribed in Document SA-CATS 121.

(2) The operator shall include the procedures for use of such equipment in the operations manual referred to in regulation 121.04.2.

**Operations with electronic flight bags**

**121.07.32** (1) No air service operator shall use an electronic flight bag (EFB) unless the operator –

(a) is authorised to do so in its operations specifications; and

(b) complies with the EFB requirements prescribed in Document SA-CAT 121.

(2) The operator shall include the procedures for use of such equipment in the operations manual referred to in regulation 121.04.2.

**Division Three: Cabin safety**

**Carriage of infants**

**121.07.33** (1) An air service operator shall ensure that an infant is only carried when properly secured in the arms or on the lap of an adult passenger, or with a child restraint device or in a sky cot provided the sky cot is –

(a) restrained so as to prevent it from moving under the maximum accelerations to be expected in flight; and

(b) fitted with a restraining device so as to ensure that the infant will not be thrown from such sky cot under the maximum accelerations to be expected in flight.

(2) The operator shall ensure that precautions are taken to ensure that, at the times seat belts are required to be worn in flight, the infant carried in the sky cot will not be thrown from such sky cot under the maximum accelerations to be expected in flight.

(3) No passenger may be responsible for the safety of more than one infant on board an aeroplane.

(4) Infants shall not be carried behind a bulkhead unless a child restraint device is used during critical phases of flight and during turbulence.

(5) Sky cots may not be used during critical phases of flight.

(6) Sky cots shall be positioned in such a way that they do not prevent or hinder the movement of adjacent passengers or block exits.

(7) When an infant is carried in the arms or on the lap of a passenger, the seat belt, when required to be worn, shall be fastened around the passenger carrying or nursing the infant, but not around the infant.

(8) When an infant is carried in the arms or on the lap of a passenger, the name of the infant shall be bracketed on the passenger list with the name of the person carrying or nursing the infant.

(9) An infant may be seated in a car-type infant seat, approved for use in an aeroplane, provided –

(a) the infant's seat is secured to the aeroplane seat in accordance with the instructions provided with the child seat;

(b) the infant's seat is designed to be secured to a passenger seat by means of a single lap strap and face the same direction as the passenger seat;

(c) the lower part of the shell does not unreasonably extend beyond the forward position of the passenger seat cushion on which it rests;

(d) the infant's seat is secured to the passenger seat at all times during flight, even when it is unoccupied by the child;

(e) only the infant shall be removed from the aircraft in an emergency evacuation, not the infant's seat;

(f) the infant's seat is positioned in such a way that it does not prevent or hinder the movement of adjacent passengers or block exits;

(g) the infant's seat is not placed in an aisle seat, depending on cabin configuration;

(h) the infant's seat is used in accordance with infant weight limitations specified for such device; and

(i) the infant's seat is fitted with a single release harness, which secures the infant's lap, torso and shoulders, but designed that the child can easily be secured in or removed from it.

(10) An infant or a car-type infant seat referred to in sub-regulation (9) shall not be located in –

(a) the same row or row directly forward or aft of an overwing emergency exit; or

(b) in the same row as any other exit unless such exit and row are separated by a bulkhead.

**Carriage of persons with a disability**

**121.07.34** (1) An air service operator shall establish procedures, including identification, seating positions and handling in the event of an emergency, for the carriage of passengers with a disability.

(2) The operator shall ensure that -

(a) the PIC of the aeroplane is notified when a passenger with a disability is to be carried on board;

(b) a passenger with a disability is not seated in the same row or a row directly forward or aft of an emergency exit;

(c) individual briefings on emergency procedures are given to a passenger with a disability and his able-bodied assistant, appropriate to the needs of such passenger; and

(d) the person giving the briefing shall enquire as to the most appropriate manner of assisting the person with a disability so as to prevent pain or injury to that person.

(3) In the case of the carriage of a stretcher patient in the aeroplane -

(a) the stretcher shall be secured in such aeroplane so as to prevent it from moving under the maximum accelerations likely to be experienced in flight and in an emergency alighting such as a ditching;

(b) the patient shall be secured by an approved harness to the stretcher or aeroplane structure; and

(c) an able-bodied assistant shall accompany each stretcher patient.

(4) A person with a mental disability shall not be carried in the aeroplane unless -

(a) he or she is accompanied by an able-bodied assistant; and

(b) a medical certificate has been issued by a medical practitioner certifying that the person with the mental disability is suitable for carriage by air and confirming that there is no risk of violence from such person.

(5) The operator shall undertake the carriage of a person with a mental disability who, according to his medical history, may become violent, only after special permission has been obtained from the Director by such operator.

(6) A passenger with a splinted or artificial limb may travel unaccompanied provided he or she is able to assist himself or herself.

(7) The affected limb or supporting aids of a passenger referred to in sub-regulation (6) shall not obstruct an aisle or any emergency exit or equipment.

(8) If a passenger with a splinted or artificial limb cannot assist himself or herself then he or she shall be accompanied by an able-bodied assistant.

**Limitations on carriage of children and passengers with disability**

**121.07.35** (1) Unless otherwise authorised by the Director, the maximum number of passengers with a disability, unaccompanied minors, or a combination of such passengers and minors, which may be carried by an air operator, is limited to one per unit of 20 passenger capacity or part thereof to a maximum of 10 such passengers or minors.

(2) At least one able-bodied assistant shall be carried for every group of five passengers with a disability or unaccompanied minors, or a part or combination thereof, and such assistant shall be assigned with the responsibility for the safety of such passengers or minors: Provided that the passengers with a disability can assist themselves.

(3) In addition to the provisions of sub-regulation (2), for each one passenger with a disability who cannot assist himself or herself, an able-bodied assistant shall be assigned to solely assist such passenger.

(4) The operator may establish procedures in lieu of the provisions of sub-regulations (2) and (3) for the carriage of children and passengers with a disability: Provided that such procedures –

(a) do not jeopardise aviation safety; and

(b) prior written approval is obtained from the Director.

**Carriage of persons without documentation, deportees or persons in custody**

**121.07.36** (1) An air operator shall establish procedures for the carriage of persons without documentation, deportees or persons in custody to ensure the safety of the aeroplane and its occupants.

(2) The PIC of the aeroplane shall be notified by the operator prior to departure, of the intended carriage and the reason for carriage, of any of the persons referred to in sub-regulation (1).

**Carry-on baggage**

**121.07.37** (1) An air operator shall establish adequate procedures to ensure that only such baggage is carried onto the aeroplane and taken into the passenger cabin as can be adequately and securely stowed.

(2) The minimum requirements for the procedures referred to in sub-regulation (1) shall be as prescribed in Document SA-CATS 121.

**Hold baggage screening**

**121.07.38** (1) An air operator engaged in international civil aviation operations, shall not carry any originating hold baggage unless such baggage has been screened prior to being loaded into the aircraft.

(2) The minimum requirements for the procedures referred to in sub-regulation (1) shall be as prescribed in Document SA-CATS 121.

(3) An operator engaged in a scheduled commercial air service shall not carry any originating hold baggage unless such baggage has been screened prior to being loaded into the aircraft.

(4) The minimum requirements for the procedures referred to in sub-regulation (3) shall be as prescribed in Document SA-CATS 121.

**Securing of passenger cabin and galley**

**121.07.39** (1) Before take-off and landing and whenever deemed necessary in the interests of aviation safety, the PIC shall ensure that –

(a) all equipment, baggage and loose articles in the cabin of the aeroplane, including passenger service items and crew members' and passengers' personal effects, are properly secured and stowed so as to avoid the possibility of injury to persons or damage to such aeroplane through the movement of such articles caused by in-flight turbulence or by unusual accelerations or manoeuvres; and

(b) all aisles, passage ways, exits and escape paths are kept clear of obstructions.

(2) All solid articles shall be placed in approved stowage areas in the aeroplane at all times whenever the seat belt lights are illuminated or when so directed by the PIC of such aeroplane.

(3) For the purposes of sub-regulation (2), "approved stowage area" means –

(a) the area under a passenger seat; or

(b) a locker, overhead or other, utilised in accordance with the placarded mass limitation of the locker.

(4) No take-off or landing shall be commenced by the PIC of the aeroplane unless he or she has been informed of the safe condition of the cabin.

**Passenger services**

**121.07.40** (1) Except when in use, all items provided for passenger services, including food containers, thermos flasks and servicing trays, shall be carried in their respective stowages and secured against movement likely to cause injury to persons or damage to the aeroplane.

(2) All items referred to in sub-regulation (1) shall be stowed during take-off and landing or during emergency situations, as directed by the PIC of the aeroplane.

(3) Any item which cannot be accommodated in the stowage, referred to in sub-regulation (1), shall not be permitted in the cabin of the aeroplane.

(4) Securing of the cabin shall be completed by the cabin crew members before the approach for landing of the aeroplane is commenced.

(5) If passenger services are provided while the aeroplane is on the ground, no passenger service equipment shall obstruct the aisles or exits of the aeroplane.

**Seats for cabin safety inspectors**

**121.07.41** An air service operator shall provide a cabin safety inspector who is performing an in-flight cabin inspection with a confirmed passenger seat in the passenger compartment.

**Briefing of passengers**

**121.07.42** (1) The PIC shall ensure that passengers are given a safety briefing in accordance with Document SA-CATS 121.

(2) Where the safety briefing referred to in sub-regulation (1) is insufficient for a passenger because of that passenger's physical, sensory or comprehension limitations or because that passenger is responsible for another person on board the aeroplane, the PIC shall ensure that the passenger is given an individual safety briefing that is appropriate to the passenger's needs.

(3) The PIC shall ensure that, in the event of an emergency and where time and circumstances permit, all passengers are given an emergency briefing in accordance with the Document SA-CATS 121.

(4) The PIC shall ensure that each passenger who is seated next to an emergency exit is made aware of how to operate that exit.

**Safety features card**

**121.07.43** An air service operator shall provide each passenger, at the passenger's seat, with a safety features card containing, in pictographic form, and any wording shall be in English or as required by the Director and shall contain such information as prescribed by Document SA-CATS 121.

## SUBPART 8: AEROPLANE PERFORMANCE OPERATING LIMITATIONS

**General requirements**

**121.08.1** (1) An air service operator shall not operate a large aeroplane unless such aeroplane meets the requirements specified in this Subpart.

(2) Any determination made for the purposes of this Subpart shall be based on approved performance data set out in the aeroplane flight manual for the aeroplane concerned supplemented as necessary with other data acceptable to the Director.

(3) A person may operate an aeroplane without complying with the requirements of this Subpart if the person –

(a) is authorized to do so in the operator's operations specifications; and

(b) complies with the requirements as prescribed in SA-CATS 121.

(4) Where an operator uses charts or graphs published in the approved aeroplane flight manual, allowance should be made to ensure any extract errors will be on the side of safety.

(5) An operator shall adopt obstacle data sufficient to make accurate and safe performance calculations.

(6) In complying with any of the provisions in this Subpart, all factors that significantly affect the performance of the aeroplane, as applicable to the phase of flight, shall be taken into account and which shall include as a minimum –

(a) the mass of the aeroplane;

(b) the operating procedures employed by the operator;

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

(d) the ambient temperature;

(e) the wind;

(f) the runway slope; and

(g) the surface conditions of the runway.

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

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

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

**Take-off mass limitations**

**121.08.2** (1) No person shall conduct a take-off in an aeroplane if the mass of the aeroplane –

(a) exceeds the maximum take-off mass specified in the aeroplane flight manual for the pressure altitude and the ambient temperature at the aerodrome where the take-off is to be made; or

(b) after allowing for planned fuel consumption during the flight to the destination aerodrome or alternate aerodrome, exceeds the landing mass specified in the aeroplane flight manual for the pressure altitude and the ambient temperature at the destination aerodrome or alternate aerodrome.

(2) No person shall conduct a take-off in an aeroplane unless the aeroplane is able, in the event of a critical engine failing or for other reasons, at any point in the take-off, either to discontinue the take-off and stop within the accelerate-stop distance available or to continue the take-off and clear all obstacles along the flight path by an adequate vertical or horizontal distance.

(3) In the determination of the maximum take-off mass referred to in sub-regulation (1) –

(a) the required accelerate-stop distance shall not exceed the accelerate-stop distance available (ASDA);

(b) the required take-off run shall not exceed the take-off run available (TORA); and

(c) the required take-off distance shall not exceed the take-off distance available (TODA).

(4) For the purposes of sub-regulation (2), the following factors shall be applied –

(a) the pressure altitude at the aerodrome;

(b) the ambient temperature;

(c) the runway slope in the direction of take-off;

(d) not more than 50 per cent of the reported headwind component or not less than 150 per cent of the reported tailwind component;

(e) loss of effective TORA during runway alignment except where rolling take offs are approved; and

(f) where the runway condition is other than dry the appropriate penalty based upon the runway condition or contaminates shall be factored into the performance calculation.

**Net take-off flight path**

**121.08.3** (1) No person shall conduct a take-off in an aeroplane if the mass of the aeroplane is greater than the mass specified in the aeroplane flight manual as allowing a net take-off flight path that clears all obstacles by at least 35 feet vertically or at least 62 meters horizontally within the aerodrome boundaries and by at least 95 meters horizontally outside those boundaries.

(2) In the determination of the maximum mass, minimum distances and flight path referred to in sub-regulation (1) –

(a) corrections shall be made for –

(i) the runway to be used;

(ii) the runway slope in the direction of take-off;

(iii) the pressure-altitude at the aerodrome;

(iv) the ambient temperature; and

(v) the wind component at the time of take-off, where not more than 50 per cent of the reported headwind component or not less than 150 per cent of the reported tailwind component may be considered; and

(b) calculations shall be based on the pilot –

(i) not banking the aeroplane before reaching an altitude of 50 feet;

(ii) subject to sub-regulation (3), using 15 degrees or less of bank at or below 400 feet;

(iii) using no more than 25 degrees of bank thereafter, aeroplane speed and configuration permitting; and

(c) consideration of the effects of any crosswind and navigation accuracy shall be taken into account.

(3) A bank angle greater than the 15 degrees referred to in sub-regulation (2)(b)(ii) may be used if it is authorized by the Director.

***En route* limitations with one engine inoperative**

**121.08.4** (1) No person shall conduct a take-off in an aeroplane if the mass of the aeroplane is greater than the mass that will allow the aeroplane to attain, with any engine inoperative, a net flight path that –

(a) has a positive slope at 1 000 feet above all terrain and obstructions within five nautical miles on either side of the intended track, at all points along the route or planned diversion therefrom; or

(b) will permit flight from the cruising altitude to an aerodrome where the requirements of regulation 121.08.6 can be complied with and clears vertically, by at least 2 000 feet, all terrain and obstructions within five nautical miles on either side of the intended track.

(2) For the purposes of sub-regulation (1), the following factors shall be taken into account after an engine failure –

(a) the effects of wind and temperature on the net flight path; and

(b) the effects of fuel jettisoning, where the jettisoning is conducted in accordance with procedures set out in the operator's operations manual and sufficient fuel remains to complete a landing with the required fuel reserves.

***En route* limitations with two engines inoperative**

**121.08.5** (1) No person shall operate an aeroplane having three or more engines unless the mass of the aeroplane is not greater than the mass that, according to the two-engines-inoperative *en route* net flight path data shown in the aeroplane flight manual, will allow the aeroplane to clear vertically, by at least 2,000 feet, all terrain and obstructions within five nautical miles on either side of the intended track and thereafter to continue flight to an aerodrome where the requirements of regulation 121.08.6 can be complied with.

(2) For the purposes of sub-regulation (1)(b), the following factors shall be taken into account after the failure of two engines –

(a) the effects of wind and temperature on the net flight path; and

(b) the effects of fuel jettisoning, where the jettisoning is conducted in accordance with procedures set out in the operator's operations manual and sufficient fuel remains to arrive at the destination aerodrome at 1 500 feet AGL with a fuel reserve sufficient to fly for 15 minutes thereafter at cruise power.

**Dispatch limitations: landing at destination and alternate aerodromes**

**121.08.6** (1) Subject to sub-regulation (3), no person shall dispatch or conduct a take-off in an aeroplane unless –

(a) the mass of the aeroplane on landing at the destination aerodrome will allow a full-stop landing –

(i) in the case of a turbojet- or turbofan-powered aeroplane, within 60 per cent of the landing distance available (LDA), or

(ii) in the case of a propeller-driven aeroplane, within 70 per cent of the landing distance available (LDA); and

(b) the mass of the aeroplane on landing at the alternate aerodrome will allow a full-stop landing –

(i) in the case of a turbojet- or turbofan-powered aeroplane, within 60 per cent of the landing distance available (LDA), and

(ii) in the case of a propeller-driven aeroplane, within 70 per cent of the landing distance available (LDA).

(2) In determining whether an aeroplane can be dispatched or a take-off can be conducted in accordance with sub-regulation (1), the following shall be taken into account –

(a) the pressure altitude at the destination aerodrome and at the alternate aerodrome;

(b) not more than 50 per cent of the reported headwind component or not less than 150 per cent of the reported tailwind component may be used in computing distances for take-off or landing; and

(c) that the aeroplane must be landed on a suitable runway, considering the wind speed and direction, the ground handling characteristics of the aeroplane and other conditions such as landing aids and terrain.

(3) Where conditions at the destination aerodrome at the time of take-off do not permit compliance with sub-regulation (2)(c), an aeroplane may be dispatched and a take-off conducted if the alternate aerodrome designated in the OFP permits, at the time of take-off, compliance with sub-regulations (1)(b) and (2).

(4) Where the aerodrome of intended landing has in place noise criteria that may require a landing mass reduction, the take off mass shall be adjusted to comply with such limitations.

**Dispatch limitations: wet runway – turbojet- or turbofan-powered aeroplanes**

**121.08.7** (1) Subject to sub-regulation (2), when weather reports or forecasts indicate that the runway may be wet at the estimated time of arrival, no air service operator shall dispatch or conduct a take-off in a turbojet- or turbofan-powered aeroplane unless the landing distance available (LDA) at the destination aerodrome is at least 115 per cent of the landing distance required in terms of regulation 121.08.6(1)(a).

(2) The landing distance available on a wet runway may be shorter than that required by sub-regulation (1) but not shorter than that required by regulation 121.08.6, if the aeroplane flight manual includes specific information about landing distances on wet runways.

**Landing at destination and alternate aerodromes**

**121.08.8** (1) An air operator shall ensure that the landing mass of the aeroplane, determined in accordance with the provisions of regulation 121.08.1(9), does not exceed the

maximum landing mass specified for the altitude and the ambient temperature expected for the estimated time of landing at the destination and alternate aerodrome.

(2) For instrument approaches with decision heights below 200 feet, the operator shall verify that the approach mass of the aeroplane, taking into account the take-off mass and the fuel expected to be consumed in flight, allows a missed approach gradient of climb of at least 2,5 per cent in the approach configuration with one engine inoperative, or an approved alternative procedure.

**Landing on dry runways**

**121.08.9** (1) An air operator shall ensure that the landing mass of the aeroplane for the estimated time of landing, allows a full stop landing from 50 feet above the threshold within 70 per cent of the landing distance available at the destination aerodrome and at any alternate aerodrome: Provided that the Director may permit the use of a screen height of less than 50 feet, but not less than 35 feet, for steep-approach and short-landing procedures.

(2) When complying with the provisions of sub-regulation (1), the operator shall take account of –

(a) the pressure altitude at the aerodrome; and

(b) not more than 50 per cent of the reported head-wind component or not less than 150 per cent of the reported tail-wind component.

**Landing on wet and contaminated runways**

**121.08.10** (1) An air operator shall ensure that, when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be wet, the landing distance available is at least 115 per cent of the required landing distance determined in accordance with the provisions of regulation 121.08.9.

(2) The operator shall ensure that, when the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be contaminated, the landing distance available must be at least the landing distance determined in accordance with the provisions of sub-regulation (1) or at least 115 per cent of the landing distance determined in accordance with approved contaminated landing distance data or an equivalent thereof, whichever is the greater.

(3) A landing distance on a wet runway shorter than the landing distance required by the provisions of sub-regulation (1), but not less than the landing distance required by the provisions of regulation 121.08.9(1), may be used if the aeroplane flight manual referred to in regulation 121.04.4 includes specific additional information on landing distances on wet runways.

**SUBPART 9: MAINTENANCE**

**General**

**121.09.1** An air service operator shall not operate any aeroplane under this Part unless such aeroplane is maintained in accordance with the regulations in Part 43.

**Aeroplane maintenance programme**

**121.09.2** (1) Each air service operator shall ensure that the aeroplane is maintained in accordance with an aeroplane maintenance programme established by the operator.

(2)(a) The operator shall provide a maintenance programme, approved by the Director, containing the information required by sub-regulation (3) for the use and guidance of the maintenance and operational personnel concerned.

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

(3) The maintenance programme referred to in sub-regulation (1) shall be developed for each aeroplane type and shall contain the following information –

(a) maintenance tasks and the intervals at which these are to be performed, taking into account the anticipated utilization of the aeroplane;

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

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

(d) when applicable, condition monitoring and reliability programme descriptions for aircraft systems, components and powerplants.

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

(5) The aeroplane maintenance programme referred to in sub-regulation (1) and any subsequent amendment thereof shall be approved by the Director.

(6) Upon approval of the Director, copies of all amendments to the maintenance programme shall be furnished promptly to all organizations or persons to whom the maintenance programme has been issued.

**Maintenance contracted to approved AMO**

**121.09.3** If maintenance on a large commercial air transport aeroplane is carried out by the holder of an AMO approval with the appropriate rating issued in terms of Part 145, the operator of the aeroplane shall ensure that all contracted maintenance is carried out in accordance with the regulations in Part 43.

**Operator's maintenance responsibilities**

**121.09.4** (1) An air service operator shall establish procedures acceptable to the Director that ensure -

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

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

(c) the Certificate of Airworthiness of each aeroplane they operate, and any appropriate special conditions, remains valid.

(2) The operator shall not operate an aeroplane unless it is maintained and released to service by an organization approved in accordance with Part 145 in the manner referred to in regulation 121.09.3.

(4) The operator shall employ sufficient personnel to ensure that all maintenance is carried out in accordance with the maintenance control manual referred to in regulation 121.09 5.

(5) The operator shall ensure that the maintenance of its aeroplanes is performed in accordance with the maintenance programme referred to in regulation 121.09.2.

**Operator's maintenance control manual**

**121.09.5** (1) An air service operator shall provide a maintenance control manual (MCM) that meets the requirements prescribed in technical standard 43.02.3 of Document SA-CATS 43 for the use and guidance of maintenance and operational personnel concerned.

(2) The MCM referred to in sub-regulation (1) shall incorporate relevant principles of human factors.

(3) The operator shall provide two copies of its proposed MCM to the Director and one copy of the approved MCM shall remain in the custody of the Director.

(4)(a) The operator shall amend its MCM as necessary in accordance with the amendment procedures contained in the MCM, in order to keep the information contained therein up-to-date and accurately reflect company policy with respect to the maintenance of its aeroplanes.
(b) The operator shall forward two copies of all amendments to the MCM to the Director for approval.

(5) Upon receipt of any approved amendments, each holder of an MCM shall be furnished a copy of such amendment with clear instructions to insert the amended pages in a timely manner into the MCM.

(6) The Director may require an operator to produce an amendment where he or she is of the opinion that the MCM requires updating.

**Maintenance records**

**121.09.6** (1) An air service operator shall ensure that the following records are kept for the periods prescribed in sub-regulation (2) –

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

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

(c) appropriate details of modifications and repairs;

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

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

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

(2) The records in sub-regulation (1)(a) to (e) shall be kept for a minimum period of 6 months after the unit to which they refer has been permanently withdrawn from service and the records in sub-regulation (1)(f) for a minimum period of 5 years after the signing of the maintenance release.

(3) In the event an aeroplane is leased or otherwise transferred temporarily to another operator, the records shall be made available to the new operator.

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

**Continuing airworthiness information**

**121.09.7** An air service operator shall monitor and assess maintenance and operational experience with respect to continuing airworthiness and provide such information as required by the Director and shall report said information to him or her using a reporting system developed for that purpose.

(2) The Director shall transmit all mandatory continuing airworthiness information reported to him or her in accordance with sub-regulation (1) to the State of Design of any aeroplane that has been issued a South African Certificate of Airworthiness and operated in terms of this Part.

(3) The operator shall obtain and assess continuing airworthiness information and recommendations issued by an aeroplane manufacturer, the organization responsible for the aeroplane type design or by the State of Design, or any additional requirements issued by the Director for each type of aeroplane operated under this Part and shall implement resulting actions considered necessary in accordance with a procedure acceptable to the Director.

**Modifications and repairs**

**121.09.8** (1) All modifications and repairs shall comply with airworthiness requirements acceptable to the Director.

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

## SUBPART 10: SAFETY AND QUALITY MANAGEMENT SYSTEMS

### Division One: Safety management system

**Requirement for safety management system**

**121.10.1** (1) An air service operator shall ensure that it maintains an acceptable level of safety by establishing and maintaining a SMS that meets the requirements of this Subpart and is approved by the Director.

(2) The operator shall adhere to its approved SMS.

**Components of safety management system**

**121.10.2** A SMS shall include –

(a) a safety policy on which the system is based expressing a firm commitment to all elements of the programme, including financial and human resources, that the accountable executive has approved and communicated to all employees;

(b) a process for defining expected levels of safety performance and setting safety targets for the improvement of aviation safety and for measuring the attainment of those targets;

(c) a process for identifying hazards to aviation safety and for evaluating and managing the associated risks;

(d) a process for the internal reporting and analyzing of hazards and for developing remedial action plans for the timely resolution of all identified safety hazards;

(e) a process for the early alerting of the persons responsible for operations or maintenance about known or suspected hazards that would require immediate safety resolution action to be taken through the operational or maintenance control systems;

(f) a process for the internal reporting of suspected safety concerns or occurrences of a sensitive nature providing the assurance of anonymity to the person reporting and where possible, immunity from disciplinary action against any person involved in such occurrence.

(g) a quality assurance programme, except where an operator develops a quality management system in terms of Division two of this Subpart;

(h) a process for conducting periodic scheduled reviews or audits of the SMS as well as reviews or audits of the SMS occasioned by any event affecting or, if left unattended, could affect safety;

(i) a process for the investigation of accidents and incidents for the purposes of

implementing reactive safety measures;

(j) a process of enhancing safety awareness through communication and a system for safety promotion;

(k) an advertised schedule of safety meetings and a means of informing company personnel of the minutes and actions arising out of such meetings;

(l) a process for the continuous improvement of the SMS that is capable of monitoring and measuring improvement to the overall level of safety performance;

(m) in the case of aeroplanes of a maximum certificated take-off mass in excess of 27 000 kg, a flight data analysis programme shall form part of its SMS. Such program shall incorporate safeguards when requested, for the anonymity of the data source and the nature of the programme shall in any case be non-punitive;

(n) procedures for analysing data obtained under paragraph (m) above and during an audit conducted under sub-regulation (1)(i) and for taking corrective actions;

(o) training requirements for the persons responsible for operations and maintenance and other personnel assigned duties under the SMS; and

(p) procedures for making progress reports to the accountable executive at intervals determined by the accountable manager and other reports as needed in urgent cases.

**Development and approval of safety management manual**

**121.10.3** (1) Except as provided in sub-regulation (2), an air service operator shall establish a safety management manual (SMM) that is as prescribed in Document SA-CATS 121.

(2) The operator's SMM shall be submitted to the Director for approval who may in view of the operator's size and complexity, determine that the information required by sub-regulation (2) need not be contained in a separate manual. In such case the information shall be included in the operator's approved operations and maintenance control manuals, as applicable.

**Establishment and structure of safety management system**

**121.10.4** (1) The establishment of a SMS shall be as prescribed in Document SA-CATS 121 and be the responsibility of the accountable executive specified in regulation 121.06.2(5)

(2) The accountable executive shall nominate an air safety officer (ASO), as specified in regulation 121.06.2(5)(f), who meets the qualifications and performs the functions specified in technical standard 121.06.2 of Document SA-CATS 121.

(3) The ASO shall nominate sufficient personnel to fill the key positions identified by the programme in consideration of the scope, size and complexity of the operator and develop the programme to include clear lines of reporting.

(4) The ASO shall be responsible for the review of safety data and assessment of all analytical information, the development of corrective recommendations arising from such reviews and the presentation of corrective recommendations to the accountable executive and

the person responsible for operations or maintenance, as applicable. The person responsible for operations or maintenance shall be responsible for the final development and implementation of all corrective action plans in a manner that will ensure the timely resolution of safety issues.

(5) Where the persons responsible for operations or maintenance have delegated any responsibility held under these regulations to another person, such person shall keep the respective manager currently informed. The respective manager shall maintain responsibility for the corrective action plans arising out of the SMS.

**Holder of more than one certificate**

**121.10.5** The holder of an AOC issued in terms of this Part who is also the holder of an approved maintenance organization certificate issued under Part 145, shall adhere to the requirements referred to in Part 145 with regard to a SMS when undertaking maintenance control activities.

**Size and complexity**

**121.10.6** The size and complexity of an approved SMS shall be determined by the Director and measured in terms of scope and size as well as the hazards and risks associated with the activities being carried out by the certificate holder.

**Division Two: Quality management system**

**Requirement for quality management system**

**121.10.7** (1) An air service operator shall establish a quality management system (QMS) that meets the requirements prescribed in Document SA-CATS 121.

(2) The quality management system shall –

(a) include 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; and

(b) be described in relevant documentation as prescribed in Document SA-CATS 121.

(3) The operator shall designate a person responsible for the QMS who meets the qualifications and experience requirements and who will be responsible for the functions as prescribed in technical standard 121.06.2 of Document SA-CATS 121.

(4) The operator shall prepare a quality management manual that meets the requirements prescribed in Document SA-CATS 121.

(5) Notwithstanding sub-regulation (3) above, the operator may appoint two quality managers, one for flight operations and one for maintenance: Provided the operator has designated one single quality management unit to ensure that the quality system is applied uniformly throughout the entire operation.

## PART 127: COMMERCIAL AIR TRANSPORT AND GENERAL AVIATION OPERATIONS: HELICOPTERS

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**SUBPART 1: GENERAL**

**Applicability**

**127.01.1** (1) This Part applies to –
(a) helicopters engaged in commercial air transport operations within the Republic;
(b) helicopters registered in the Republic and engaged in commercial international air transport operations;
(c) persons acting as flight crew members of helicopters referred to in these Regulations; and
(d) persons who are on board a helicopter operated under this Part.

(2) For the purposes of this Part, a helicopter registered in another State and operated by the holder of an operating certificate issued in the Republic, shall be deemed to be registered in the Republic.

(3) The provisions of Part 91 apply with the necessary changes to any helicopter operated in terms of this Part.

**Exemptions**

**127.01.2** (1) The Director may exempt any helicopter or person involved in emergency operations from the provisions of this part, on the conditions as prescribed in Document SA-CATS 127.

(2) An application for an exemption shall be made in accordance with the provisions of Part 11.

**Admission to cockpit**

**127.01.3** (1) The operator of a commercial air transport helicopter shall ensure that no person is admitted to, or carried in the cockpit of the helicopter unless such person is –

(a) a flight crew member assigned to the flight;
(b) an authorised officer, inspector or authorised person; or
(c) permitted by, and carried in accordance with, the instructions contained in the operations manual referred to in regulation 127.04.2.

(2) The final decision regarding the admission of any person to the cockpit shall be the responsibility of the PIC.

(3) The admission of any person to the cockpit shall not interfere with the operation of the helicopter.

(4) Any person carried in the cockpit shall be made familiar with the applicable procedures.

(5) For purposes of this Part, the expression 'cockpit' shall have the same meaning as the expression 'flight deck'.

**Drunkenness**

**127.01.4** (1) The operator of a commercial air transport helicopter shall not permit, and no person shall enter or be in the helicopter while under the influence of alcohol or a drug having a narcotic effect, to the extent where the safety of such helicopter or its occupants is, or is likely to be, endangered.

(2) The operator shall establish procedures to ensure that any person referred to in sub-regulation (1) is –
(a) refused embarkation; or
(b) if such person is on board, restrained or disembarked.

**Preservation of documents**

**127.01.5** The operator of a commercial air transport helicopter who is required to retain any of the documents for a specified period referred to in subpart 4, shall retain such documents for such specified period irrespective of the fact that such operator, before the expiry of such specified period, ceases to be the owner or possessor of the helicopter concerned.

## SUBPART 2: FLIGHT CREW

**Composition of flight crew**

**127.02.1** (1) The minimum number and composition of the flight crew shall not be less than the minimum number and composition specified in the helicopter flight manual referred to in regulation 91.03.2.

(2) The operator of a commercial air transport helicopter shall allocate additional flight crew members when it is required by the type of operation, and the number of such additional flight crew members shall not be less than the number specified in the operations manual referred to in regulation 127.04.2.

(3) The operator shall ensure that the flight crew members –

(a) are competent to perform the duties assigned to them; and
(b) hold the appropriate valid licences and ratings.

(4) The flight crew shall include at least one member who holds a valid radiotelephony operator licence or equivalent document issued by an appropriate authority, authorising such member to operate the type of radio transmitting equipment to be used.

(5) When deemed necessary for the safe conduct of a flight, the flight crew shall include at least one member who is proficient in navigating over the route to be flown.

(6) The operator shall ensure that the flight crew of a commercial air transport helicopter consists of two pilots –

(a) in the case of operations under IFR or by night when more than nine passengers are carried; or
(b) in the case of any operation when more than 19 passengers are carried.

(7) A helicopter, other than a helicopter referred to in sub-regulation (6), may be operated by a single pilot: Provided that the requirements referred to in sub-regulation (8) are complied with: Provided further that if the requirements referred to in sub-regulation (8) are not complied with, the minimum flight crew shall be two pilots.

(8) A helicopter referred to in sub-regulation (7) may be operated by a single pilot in VMC by night if the following requirements are complied with:

(a) The helicopter shall be certificated and equipped for single-pilot night operations;
(b) The operator shall include, in the operations manual, referred to in regulation 127.04.2, a recurrent training programme for pilots which includes the additional requirements for a single-pilot night VFR operation;
(c) the cockpit procedures shall include–
    (i) use of night flying equipment, including lights and lighting;
    (ii) use of normal, abnormal and emergency checklist;
    (iii) departure and approach procedures;
    (iv) simplified in-flight documentation; and
    (v) if applicable: stability augmentation or automatic flight control system management.
(d) The recurrent checks prescribed in subpart 3 shall be performed at night in the single-pilot role in an environment suitable for the type of operation involved ;
(e) The pilot concerned shall have a minimum of 50 hours of flight time on the specific type of helicopter, of which 10 hours shall be as PIC;
(f) The pilot concerned shall during the ninety days immediately preceding the intended flight have–
    (i) executed, by night, not less than three circuits (including take-off and landing); or
    (ii) passed the appropriate skill test or proficiency check prescribed in Part 61 for the helicopter night rating in the type of helicopter in which the intended flight is to be undertaken.

(g) if the helicopter has not been fitted with a stability augmentation system or automatic flight control system, night flight time shall be limited to two periods of maximum two continuous hours, with a rest period of at least half an hour in between.

(9) A helicopter, referred to in sub-regulation (7), may be operated by a single pilot in IMC if the following requirements are complied with:

(a) the helicopter shall be certificated and equipped for single-pilot IFR operations, as prescribed by regulation 127.05.3;

(b) the operator has included in the operations manual, referred to in regulation 127.04.2, an approved conversion and recurrent training programme for pilots, which includes the additional requirements for a single-pilot IMC operation, as prescribed by regulation 127.03.3;

(c) the cockpit procedures shall include–

(i) use of normal, abnormal and emergency checklist;

(ii) operation with partial instrument panel;

(iii) departure and approach procedures;

(iv) stability augmentation or automatic flight control system management; and

(v) simplified in-flight documentation.

(d) the recurrent checks prescribed in Subpart 3 shall be performed in the single-pilot role in an environment representative of the operation;

(e) the pilot concerned shall be the holder of a valid instrument rating for helicopters and have completed, in helicopters, not less than 1 000 hours of flight time, of which -

(i) 250 hours shall be as PIC, or not less than 100 hours as PIC and the necessary additional flight time as co-pilot performing, under the supervision of the PIC, the duties and functions of a PIC;

(ii) 200 hours shall be cross-country flight time, of which not less than 100 hours shall be as PIC or as co-pilot performing, under the supervision of the PIC, the duties and functions of a PIC;

(iii) 30 hours shall be simulated or actual instrument time, of which not more than 10 hours may have been acquired in a simulator approved for the purpose;

(f) the pilot concerned shall during the ninety days immediately preceding the intended flight have–

(i) executed at least three approaches, either under actual or simulated conditions with reference to flight instruments only; or

(ii) passed the appropriate skill test or proficiency check for the helicopter instrument rating as prescribed in Part 61, in the type of helicopter in which the intended flights to be undertaken;

(g) if the helicopter has been equipped with a stability augmentation system only rather than with an automatic flight control system, instrument flight time shall be limited to periods of maximum two continuous hours with either a rest period or flight in VMC by day of at least half an hour between such periods.

(10) Notwithstanding the provisions of sub-regulation (9), no person may operate a helicopter in a Category II or Category III approach and landing operation unless the flight crew includes a properly rated second pilot.

(11) Nothing is this regulation shall be construed as meaning that a flight under IFR or at night for the purpose of flight instruction conducted by an appropriately rated flight instructor would be

a single-pilot operation, or that such a training flight, if conducted in terms of Part 127 would require to be operated by two qualified pilots.

(12) The operator shall designate one pilot among the flight crew as PIC of a commercial air transport helicopter and the PIC may delegate the conduct of the flight to another suitably qualified pilot.

**Flight crew member emergency duties**

**127.02.2** (1) The operator and, where appropriate, the PIC of a commercial air transport helicopter, operated by a multi-crew, shall assign to each flight crew member concerned, the necessary functions to be performed in an emergency or a situation requiring emergency evacuation.

(2) The functions referred to in sub-regulation (1) shall be such as to ensure that any reasonably anticipated emergency can be adequately dealt with and shall take into consideration the possible incapacitation of individual flight crew members.

(3) The operator shall prove to the satisfaction of the Director that the flight crew members are competent to perform such functions, by means of an emergency evacuation demonstration carried out in accordance with the requirements prescribed in Document SA-CATS 127.

(4) The operator shall carry out an emergency evacuation demonstration referred to in sub-regulation (3) when a new type or variant of helicopter or new configuration of an existing helicopter is introduced for use.

(5) A flight crew member shall not accept an assignment of emergency functions unless such flight crew member has been trained to perform emergency functions in accordance with the requirements prescribed in Subpart 3.

**Recency, route and heliport qualifications**

**127.02.3** (1) A pilot shall not act as PIC of a commercial air transport helicopter used in a scheduled public air transport service operation, unless the pilot has within the preceding 12 months demonstrated to the operator of such helicopter an adequate knowledge of –

(a) the route to be flown;
(b) the helicopters to be used;
(c) the procedures applicable to flight paths over densely inhabited areas and areas of higher traffic density; and
(d) obstructions, physical layout, lighting, approach aids and arrival, departure, holding and instrument approach procedures including operating minima.

(2) If a route requires a specific type of navigation qualification, the PIC shall within the 12 months immediate preceding a flight on such route, demonstrate his or her ability to the operator of the commercial air transport helicopter by –

(a) flying over a route as PIC using the applicable special type of navigation system; or

(b) flying over a route under the supervision of a suitably qualified pilot using the applicable special type of navigation system.

**Cabin crew member complement**

**127.02.4** (1) If the certificate of airworthiness of a commercial air transport helicopter requires the carrying of one or more cabin crew members, the operator of the helicopter shall not, when carrying one or more passengers, operate such helicopter without carrying the minimum number of cabin crew as prescribed in Document SA-CATS 127.

(2) Cabin crew members are carried for the purpose of performing duties relating to the safety of passengers and other duties assigned by the operator or the PIC.

(3) In unforeseen circumstances, the operator may reduce the required minimum number of cabin crew members: Provided that –

(a) the number of passengers are reduced in accordance with the procedures specified in the operations manual referred to in regulation 127.04.2; and
(b) a report is submitted to the Director after completion of the flight.

**Operation on more than one type or variant by cabin crew member**

**127.02.5** (1) A cabin crew member shall not operate on more than three helicopter types: Provided that the Director may approve the operation on four helicopter types if the emergency and safety equipment and procedures for at least two of the helicopter types are similar.

(2) The types of helicopter which are similar in respect of emergency and safety equipment and procedures, shall be listed in Document SA-CATS 127.

**Senior cabin crew member**

**127.02.6** (1) The operator of a commercial air transport helicopter shall appoint a senior cabin crew member whenever more than one cabin crew member is carried on board the helicopter.

(2) The senior cabin crew member shall be responsible to the PIC for the conduct of cabin operations and the coordination and performance of cabin crew duties.

(3) The operator shall establish procedures to select the next most suitably qualified cabin crew member to operate as senior cabin crew member in the event of the nominated senior cabin crew member being unable to operate.

**Cabin crew emergency evacuation stations**

**127.02.7** A cabin crew member assigned to perform evacuation duties in a commercial air transport helicopter shall occupy the seat provided therefor during take-off and landing or when so directed by the PIC in the interests of aviation safety.

**Seating of cabin crew members during flight**

**127.02.8** During take-off and landing, and whenever deemed necessary by the PIC in the interest of aviation safety, cabin crew members shall be seated at their assigned stations or seats.

**Flight time and duty periods**

**127.02.9** (1) The operator of a commercial air transport helicopter shall –

(a) establish a scheme for the regulation of flight time and duty periods for each flight crew member;
(b) include the scheme referred to in paragraph (a) in the operations manual referred to in regulation 127.04.2;
(c) ensure that each flight crew member complies with the provisions of the scheme referred to in paragraph (a);
(d) not cause or permit any flight crew member to fly in the helicopter if such operator knows or has been made aware that such flight crew member –
    (i) will exceed the flight time and duty periods referred to in sub- regulation (1)(a) while on flight duty; or
    (ii) is suffering from or, having regard to the circumstances of the flight to be undertaken, is likely to suffer from fatigue which may endanger the safety of the helicopter or its flight crew members and passengers; and
(e) not schedule a flight crew member for active flight duty for a period exceeding eight consecutive hours during any given flight time and duty period unless authorised in the scheme referred to in paragraph (a).

(2) Except with the approval of the Director, the flight time and duty scheme of the operator shall not be in conflict with the provisions of regulation 91.02.3(1)(f).

(3) The provisions to be included in a flight time and duty scheme referred to in sub-regulation (1) shall be as prescribed in Document SA-CATS 127.

**SUBPART 3: TRAINING AND CHECKING**

**Division One: General Provisions**

**Training of flight crew members**

**127.03.1** (1) The operator of a commercial air transport helicopter shall establish and maintain a ground and flight training programme for flight crew members in his or her employ.

(2) The operator shall ensure that –

(a) each flight crew member receives training in accordance with this subpart and the appropriate syllabus as prescribed in Document SA-CATS 127;
(b) the training shall only be provided by the holder of an ATO approval issued in terms of Part 141; and

(c) each flight crew member passes a written examination with regard to all the subjects of the training syllabus referred to in paragraph (a).

(3) The provisions of this subpart shall apply in respect of full-time as well as part-time employed flight crew members.

**Initial training of flight crew members**

**127.03.2** A flight crew member employed by the operator of a commercial air transport helicopter shall have successfully completed the initial training and skill tests as prescribed in Part 61 or 64, as the case may be.

**Division Two: Pilot Training**

**Conversion training**

**127.03.3** (1) The operator of a commercial air transport helicopter shall ensure that –

(a) a cockpit crew member completes a type conversion course in accordance with the applicable requirements prescribed in Part 61 when changing from one type of helicopter to another type or class for which a new type or class rating is required;

(b) a cockpit crew member completes an operator's type conversion course before commencing unsupervised operational flying –

(i) when changing to a helicopter for which a new type or class rating is required; or

(ii) when employed by such operator;

(c) type conversion training is conducted by a competent person in accordance with the detailed course syllabus included in the operations manual referred to in regulation 127.04.2, and as prescribed in Document SA-CATS 127;

(d) the amount of training required by the operator's type conversion course is determined after due note has been taken of the cockpit crew member's previous training as recorded in the training records referred to in regulation 127.04.5;

(e) the minimum standards of qualification and experience required of cockpit crew members before undertaking type conversion training are specified in the operations manual referred to in regulation 127.04.2;

(f) each cockpit crew member undergoes the checks prescribed in regulation 127.03.7(2) and the training and checks prescribed in regulation 127.03.7(6) before commencing operational flying under supervision;

(g) upon completion of operational flying under supervision, the check prescribed in regulation 127.03.7(4) is undertaken; and

(h) in the case of multi-crew operations, cockpit crew resource management training as prescribed in Document SA-CATS 127 is incorporated in the conversion course.

(2) In the case of changing helicopter type or class, the check prescribed in regulation 127.03.7(2) may be combined with the type or class rating skill test prescribed in Part 61.

(3) The operator's type conversion course and the type or class rating course prescribed in Part 61, may be combined.

(4) The operator's type conversion course shall include the items, and shall be conducted in the order as prescribed in Document SA-CATS 127.

(5) When a cockpit crew member has not previously completed an operator's type conversion course, the operator shall ensure that, in addition to sub-regulation (4), the cockpit crew member undergoes general first aid training and, if applicable, ditching procedures training using the appropriate equipment in water.

(6) The operator of a commercial air transport helicopter to be operated by a single pilot in terms of regulation 127.02.1(8) or 127.02.1(8A), shall ensure that additional crew training is provided as prescribed in Document SA-CATS 127.

**Differences training and familiarisation training**

**127.03.4** (1) The operator of a commercial air transport helicopter shall ensure that a cockpit crew member completes differences training when –

(a) operating another variant of a helicopter of the same type or another type of the same class currently operated; or
(b) a change of equipment or procedures on types or variants currently operated, requires the acquisition of additional knowledge.

(2) The operator shall ensure that a cockpit crew member completes familiarisation training when –

(a) operating another helicopter of the same type or variant; or
(b) a change of equipment or procedures on types or variants currently operated, requires the acquisition of additional knowledge.

(3) The operator shall specify in the operations manual referred to in regulation 127.04.2 when differences training or familiarisation training is required.

**Upgrading to PIC**

**127.03.5** (1) The operator of a commercial air transport helicopter shall ensure that, for an upgrade to PIC from co-pilot, and for a pilot joining as PIC –

(a) a minimum level of experience is specified in the operations manual referred to in regulation 127.04.2; and
(b) if multi-crew operations are contemplated, the co-pilot or pilot, as the case may be, completes an appropriate command course.

(2) The command course referred to in sub-regulation (1)(b) shall be specified in the operations manual referred to in regulation 127.04.2, and shall include –

(a) if an approved flight simulator is available, training in such simulator, including operational flying training, or flying training in the helicopter;
(b) an operator proficiency check operating as PIC;
(c) PIC responsibilities;
(d) operational in-command training under supervision: Provided that a minimum of 10 sectors is required for pilots already qualified on the helicopter type;
(e) completion of a PIC operational check prescribed in regulation 127.03.7(4);

(f) in the case of scheduled public air transport service operations, the recency, route and heliport qualifications prescribed in regulation 127.02.3; and
(g) if multi-crew operations are contemplated, cockpit crew resource management training as prescribed in Document SA-CATS 127.

**Pilot-in-command holding commercial pilot licence**

**127.03.6** The operator of a commercial air transport helicopter shall ensure that –
(a) a holder of a CPL (helicopter) does not operate as a PIC of a helicopter certificated in the flight manual referred to in regulation 91.03.2 for single-pilot operations unless –
  (i) when conducting passenger carrying operations under VFR outside a radius of 50 nautical miles from a heliport of departure, the pilot has a minimum of 300 hours total flight time on helicopter or holds a valid instrument rating; or
  (ii) when operating under IFR, the pilot has a minimum of 400 hours total flight time on helicopters which includes 200 hours as PIC of which 100 hours have been under IFR: Provided that the 200 hours as PIC may be substituted by hours operating as co-pilot on the basis of two hours as co-pilot is equivalent to one hour as PIC: Provided further that these hours are gained within an established multi-pilot flight crew system prescribed in the operations manual referred to in regulation 127.04.2;
(b) in addition to paragraph (a)(ii), when operating under IFR as a single pilot, the requirements prescribed in regulation 127.02.1(8) are complied with;
(c) in multi-pilot flight crew operations, and prior to operating as PIC the command course prescribed in regulation 127.03.5(1)(b) is completed.

**Recurrent training and checking**

**127.03.7** (1) The operator of a commercial air transport helicopter shall ensure that –
(a) each cockpit crew member undergoes recurrent training and checking and that all such training and checking is relevant to the type or variant of helicopter on which the cockpit crew member is licensed to operate;
(b) a recurrent training and checking programme is included in the operations manual referred to in regulation 127.04.2;
(c) recurrent training is conducted by –
  (i) a competent person, in the case of ground and refresher training;
  (ii) a type rated instructed, in the case of helicopter or flight simulator training;
  (iii) competent personnel in the case of emergency and safety equipment training and checking; or
  (iv) competent personnel, in the case of cockpit crew resource management training;
(d) recurrent checking is conducted by –
  (i) an examiner in the case of operator proficiency checks; and
  (ii) a PIC designated by the operator in the case of operational checks; and
(e) each cockpit crew member undergoes operator proficiency checks every six calendar months as part of a normal cockpit crew complement.

(2) The operator shall ensure that, in the case of an operator proficiency check referred to in sub-regulation (1)(e) –

(a) each cockpit crew member undergoes such checks to demonstrate his or her competence in carrying out normal, abnormal and emergency procedures; and
(b) such check is conducted without external visual references when the cockpit crew member will be required to operate under IFR.

(3) Upon successful completion of the operator proficiency check referred to in sub-regulation (1)(e), the operator shall issue a certificate of competency to the cockpit crew member concerned, which certificate shall be valid for a period of six calendar months calculated from the last day of the calendar month in which such certificate is issued.

(4) The operator shall ensure that, in the case of an operational check, each cockpit crew member undergoes the operational check on the helicopter to demonstrate his or her competence in carrying out normal operations specified in the operations manual referred to in regulation 127.04.2.

(5) Upon successful completion of the operational check referred to in sub-regulation (4), the operator shall issue a certificate of competency to the cockpit crew member concerned, which certificate shall be valid for a period of 12 calendar months calculated from the last day of the calendar month in which such certificate is issued.

(6) The operator shall ensure that, in the case of emergency and safety equipment training and checking, each cockpit crew member undergoes training and checking on the location and use of all emergency and safety equipment carried.

(7) Upon successful completion of the emergency and safety equipment check referred to in sub-regulation (6), the operator shall issue a certificate of competency to the cockpit crew member concerned, which certificate shall be valid for a period of 12 calendar months calculated from the last day of the calendar month in which such certificate is issued.

(8) The operator shall ensure that, in the case of cockpit crew resource management training, each cockpit crew member undergoes such training as part of the recurrent training as prescribed in Document SA-CATS 127.

(9) The operator shall ensure that, in the case of ground and refresher training, each cockpit crew member undergoes such training every 12 calendar months.

**Pilot qualification to operate in either pilot's seat**

**127.03.8** The operator of a commercial air transport helicopter shall ensure that –
(a) a pilot to be assigned to operate in either pilot's seat, completes the appropriate training and checking; and
(b) the training and checking programme is –
    (i) specified in the operations manual referred to in regulation 127.04.2; and
    (ii) is undertaken in accordance with the appropriate syllabus as prescribed in Document SA-CATS 127.

**Advanced qualification programme**

**127.03.9** (1) The period of validity for the training referred to in regulation 127.03.7 may be extended if the Director has approved an advanced qualification programme established by the operator.

(2) The advanced qualification programme shall contain training and checking which establishes and maintains a proficiency that is not less than the proficiency referred to in regulations 127.03.3(4), 127.03.4, 127.03.5, 127.03.6 and 127.03.7.

**Division Three: Training of Cabin Crew Members**

**Initial training**

**127.03.10** The operator of a commercial air transport helicopter shall ensure that each cabin crew member successfully completed the initial training as prescribed in Part 64, before undertaking helicopter type and differences training.

**Type and differences training**

**127.03.11** (1) The operator of a commercial air transport helicopter shall ensure that each cabin crew member has completed the type training or differences training, specified in the operations manual referred to in regulation 127.04.2 before undertaking duties assigned to them.

(2) A cabin crew member shall complete a type training course when –
(a) employed by the operator as a cabin crew member; or
(b) assigned to act as a cabin crew member on another helicopter type.

(3) A cabin crew member shall complete a differences training course when acting as a cabin crew member –
(a) in a variant of the current helicopter type; or
(b) in a helicopter type with equipment, equipment location, or safety procedures which differ from the current helicopter type or variant.

(4) The operator shall determine the content of the type or differences training course taking account of the cabin crew member's previous training as recorded in the cabin crew member's training records prescribed in regulation 127.04.5.

(5) The operator shall ensure that –
(a) type training is conducted in a structured manner, in accordance with the requirements as prescribed in Document SA-CATS 127;
(b) differences training is conducted in a structured manner; and
(c) type training and differences training includes the use of all emergency and survival equipment and all emergency procedures applicable to the helicopter type or variant and involves training and practice on either a representative training device or on the actual helicopter.

**Familiarisation flights**

**127.03.12** The operator of a commercial air transport helicopter shall ensure that upon completion of type training or differences training, each cabin crew member undertakes familiarisation flights before acting as one of the minimum number of cabin crew prescribed in regulation 127.02.4.

**Recurrent training**

**127.03.13** (1) The operator of a commercial air transport helicopter shall ensure that each cabin crew member undergoes recurrent training, covering the actions assigned to each cabin crew member in evacuation and other appropriate normal and emergency procedures and drills relevant to the helicopter type or variant, in accordance with the requirements as prescribed in Document SA-CATS 127.

(2) The operator shall ensure that the recurrent training and checking programme includes the theoretical and practical instruction, as well as individual practice, as prescribed in Document SA-CATS 127.

(3) Upon successful completion of the recurrent training and checking, the operator shall issue a certificate of competency to the cabin crew member concerned, which certificate shall be valid for a period of 12 calendar months calculated from the last day of the calendar month in which such certificate is issued.

**Refresher training**

**127.03.14** (1) The operator of a commercial air transport helicopter shall ensure that each cabin crew member who has been absent from all flying duties for more than six months completes the refresher training specified in the operations manual referred to in regulation 127.04.2, as prescribed in Document SA-CATS 127.

(2) The operator shall ensure that a cabin crew member who has not been absent from all flying duties, but has not acted as a cabin crew member on a particular helicopter type for a period of six months, completes –

(a) refresher training in such helicopter type; or
(b) two familiarisation sectors during commercial operations in such helicopter type, before undertaking duties on such helicopter type.

**Checking**

**127.03.15** (1) The operator of a commercial air transport helicopter shall ensure that during or following completion of the training prescribed in regulations 127.03.10, 127.03.11 and 127.03.13, each cabin crew member undergoes a check covering the training received in order to verify his or her proficiency in carrying out safety and emergency duties.

(2) The checks referred to in sub-regulation (1) shall be performed by competent personnel.

(3) The operator shall ensure that each cabin crew member undergoes checks of the items for initial, helicopter type, differences and recurrent training, as prescribed in Document SA-CATS 127.

**Division Four: Training of Other Crew Members**

**Training**

**127.03.16** The operator of a commercial air transport helicopter shall provide an initial, recurrent and refresher training course for any –

(a) load master;
(b) winch operator; and
(c) any other crew member essential to safe operations,

if the operator has such operations personnel in his or her employ.

**SUBPART 4: DOCUMENTATION AND RECORDS**

**Documents to be retained on ground**

**127.04.1** (1) The operator of a commercial air transport helicopter engaged in a scheduled public air transport service operation, shall ensure that –

(a) copies of the relevant parts of the flight folio;
(b) the load and trim sheet;
(c) the passenger list or cargo manifest;
(d) the special loads notification, if applicable; and
(e) a general declaration in the case of a helicopter engaged in international flights.

are retained in a safe place at the first point of departure in respect of each flight undertaken by the helicopter.

(2) The documents referred to in sub-regulation (1) shall be retained for a period of at least 90 days.

**Operations manual**

**127.04.2** (1) The operator of a commercial air transport helicopter shall draw up an operations manual containing all information required under this Part and setting out the manner in which such operator will operate the air service for which such operator is licensed in terms of the International Air Services Act, 1993, or the Air Services Licensing Act, 1990, as the case may be.

(2) The operator shall submit the operations manual in duplicate to the Director for approval.

(3) If the Director is satisfied that the operator –

(a) will comply with the provisions of regulation 127.06.7; and
(b) will not operate the air service concerned contrary to any provision of the Act, the International Air Services Act, or the Air Services Licensing Act, 1990, ,

the Director shall certify in writing on both copies of the operations manual that such manual has been approved, and shall return one copy of the approved manual to the operator.

(4) The operator shall submit an amendment to an approved operations manual in duplicate to the Director for approval.

(5) If the Director is satisfied that the operator will comply with the provisions of sub-regulation (3)(a) and (b), the Director shall certify in writing on both copies of the amendment to the operations manual that such amendment has been approved, and shall return one copy of the approved amendment to the operator.

(6) The operator shall at all times operate the commercial air transport helicopter in accordance with the approved operations manual or an approved amendment thereto.

(7) The operator shall –
(a) ensure that all operations personnel are able to understand the technical language used in those sections of the operations manual which pertain to their duties;
(b) ensure that every flight is conducted in accordance with the operations manual and that those parts of the operations manual which are required for the conduct of a flight, are easily accessible to the flight crew members on board;
(c) make the operations manual available for the use and guidance of operations personnel;
(d) provide the flight crew members with their own personal copy of the sections of the operations manual which are relevant to the duties assigned to them;
(e) keep the operations manual up to date; and
(f) keep the operations manual in a safe place.

(8) The contents of the operations manual shall not contravene the conditions contained in the operating certificate issued to the operator in terms of regulation 127.06.3.

(9) The structure and contents of the operations manual referred to in sub-regulation (1) shall be as prescribed in Document SA-CATS 127.

**Flight time and duty period records**

**127.04.3** (1) The operator of a commercial air transport helicopter shall –
(a) maintain current flight time and duty period records of all flight crew members in such operator's employ; and
(b) retain the flight time and duty period records for a period of 15 calendar months calculated from the date of the last flight of each flight crew member.

(2) A flight crew member in the part-time employ of an operator shall maintain his or her own flight time and duty period records and shall provide copies thereof to the operator to enable such operator to ensure that such flight crew member does not exceed the limits prescribed in the flight time and duty scheme of the operator referred to in regulation 127.02.9.

**Records of emergency and survival equipment**

**127.04.4** (1) The operator of a commercial air transport helicopter shall compile a list of all the survival and emergency equipment to be carried in a commercial air transport helicopter and shall have such list available at all times for immediate communication to rescue coordination centres.

(2) The survival and emergency equipment list shall be included in the operations manual referred to in regulation 127.04.2.

(3) The format and minimum information to be included in the survival and emergency equipment list shall be as prescribed in Document SA-CATS 127.

**Flight crew member training records**

**127.04.5** (1) The operator of a commercial air transport helicopter shall maintain the records of all training and proficiency checks undertaken by the flight crew members in such operator's employ, and such records shall incorporate certificates indicating the successful completion of such training and proficiency checks.

(2) The operator shall retain the record of each cockpit crew member for a period of at least three years and the record of each cabin crew member for a period of at least 12 months from the date on which the flight crew member concerned has left the employ of such operator.

(3) The certificates referred to in sub-regulation (1) shall be made available by the operator to the flight crew member concerned on request.

**Load and trim sheet**

**127.04.6** (1) The operator of a commercial air transport helicopter with a maximum approved passenger seating configuration of more than nine seats
shall ensure that no flight is undertaken by the helicopter unless the person superintending the loading of such helicopter has completed and certified a load and trim sheet.

(2) A load and trim sheet shall be completed in duplicate and one copy shall be carried in the helicopter and, one copy shall be retained in accordance with the provisions of regulation 127.04.1.

(3) The load and trim sheet shall be retained by the operator for a period of at least 90 days calculated from the date on which the flight was undertaken.

(4) The minimum contents of a load and trim sheet shall be as prescribed in Document SA-CATS 127.

**Hellcopter checklist**

**127.04.7** The operator of a commercial air transport helicopter, shall, in addition to the aircraft checklist referred to in regulation 91.03.3, compile and make available to the flight crew and other personnel members in such operator's employ, a checklist of the procedures to be followed by such flight crew and personnel members when searching for concealed weapons, explosives or other dangerous devices.

## SUBPART 5: HELICOPTER INSTRUMENTS AND EQUIPMENT

**Approval of instruments and equipment**

**127.05.1** (1) The operator of a commercial air transport helicopter shall ensure that a flight does not commence unless the instruments and equipment required under this Subpart, or otherwise installed on the helicopter, are –

(a) subject to the provisions of sub-regulation (2), approved and installed in accordance with the requirements, including operational and airworthiness requirements, applicable to such instruments and equipment; and
(b) in a condition for safe operation of the kind being conducted, except as provided for in the MEL.

(2) The operator shall not be required to obtain approval for the –

(a) fused referred to in regulation 91.04.2;
(b) intrinsically safe electric torches referred to in regulation 91.04.3(1)(d);
(c) accurate time piece referred to in regulations 91.04.4 and 91.04.5;
(d) first aid equipment referred to in regulation 91.04.16;
(e) megaphones referred to in regulation 91.04.24;
(f) survival equipment referred to in regulation 91.04.29; and
(g) sea anchors and equipment for the mooring, anchoring or manoeuvring of amphibious helicopters on water, referred to regulation 91.04.30.

**Flight, navigation and associated equipment for helicopters operated under VFR**

**127.05.2** (1) The operator of a commercial air transport helicopter shall not operate the helicopter in accordance with VFR, unless such helicopter is equipped with –

(a) a magnetic compass;
(b) an accurate time-piece indicating the time in hours, minutes and seconds;
(c) a sensitive pressure altimeter with a subscale setting, calibrated in hectopascals, adjustable for any barometric pressure setting likely to be encountered during flight;
(d) an airspeed indicator;
(e) a vertical speed indicator;
(f) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;
(g) an attitude indicator;
(h) a stabilised direction indicator; and
(i) a means of indicating in the cockpit the outside air temperature in degrees Celsius; and
(j) a chart holder in an easily readable position which can be illuminated. if to be operated by night.

Provided that a helicopter with a MCM of 2 730 kilograms or less, does not have to comply with the provisions of paragraph (g) and (h).

(2) If two pilots are required to operate a commercial air transport helicopter, the second pilot's station shall be equipped with –

(a) a sensitive pressure altimeter with a subscale setting calibrated in hectopascals, adjustable for any barometric pressure setting likely to be encountered during flight;
(b) an airspeed indicator;

(c) a vertical speed indicator;
(d) a turn-and-slip indicator or a turn coordinator, incorporating a slip indicator;
(e) an attitude indicator; and
(f) a stabilised director indicator.

Provided that a helicopter with a MCM of 2 730 kilograms or less, does not have to comply with the provisions of paragraph (e) and (f).

(3) A commercial air transport helicopter being operated by night in accordance with VFR –
(a) outside a radius of 15 nautical miles from its point of departure; or
(b) if on a cross-country flight, for longer than 20 minutes; or
(c) over water at a distance from land corresponding to more than 10 minutes at normal cruise speed;

shall be equipped with a radio altimeter with an audio warning operating below a preset height and a visual warning capable of operating at a height selectable by the pilot.

**Flight, navigation and associated equipment for helicopters operated under IFR**

**127.05.3** (1) The operator of a commercial air transport helicopter shall not operate the helicopter in accordance with IFR, unless such helicopter is equipped with –
(a) a magnetic compass;
(b) an accurate time-piece indicating the time in hours, minutes and seconds;
(c) two sensitive pressure altimeters with subscale settings, calibrated in hectopascals, adjustable for any barometric pressure setting likely to be encountered during flight;
(d) in the case of a helicopter used in a scheduled or non-scheduled public air transport service operation and having a MCM exceeding 5 700 kilograms, a radio altimeter with an audio warning operating below a preset height and a visual warning capable of operating at a height selectable by the pilot;
(e) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunctioning due to either condensation or icing, including a warning indicator of pitot heater failure;
(f) a vertical-speed indicator;
(g) a turn-and-slip indicator or in lieu thereof, an additional attitude indicator powered by a power source separate from that of the main attitude indicator;
(h) an attitude indicator;
(i) a single standby attitude indicator, capable of being used from either pilot's station, which –
    (i) is powered continuously during normal operation and, after a total failure of the normal electrical generating system is powered from a source independent of the normal electrical generating system;
    (ii) provides reliable operation for a minimum of 30 minutes after total failure of the normal electrical generating system, taking into account other loads on the emergency power supply and operational procedures;
    (iii) operates independently of any other attitude indicating system;
    (iv) is operative automatically after total failure of the normal electrical generating system; and
    (v) is appropriately illuminated during all phases of operation:

Provided that if the standby attitude instrument system is capable of being used through flight attitudes of 360° of pitch and roll, the turn-and-slip indicators may be replaced by slip indicators;

(j) a stabilised direction indicator;

(k) a means of indicating in the cockpit the outside air temperature in degrees Celsius;

(l) an alternate source of static pressure for the altimeter and the airspeed and vertical speed indicators; and

(m) a chart holder in an easily readable position which can be illuminated, if to be operated by night.

(2) The operator of a commercial air transport helicopter shall not operate the helicopter in IMC while carrying passengers, unless such helicopter is equipped with -

(a) a power-failure warning device or vacuum indicator to show the power available for gyroscopic instruments from each power source;

(b) two independent sources of energy (with means of selecting either), of which at least one is an engine-driven pump or generator, which are both able to drive all required gyroscopic instruments powered by, or to be powered by, that particular source, and installed in such a manner that failure of one instrument or source does not interfere with the energy supply, to the remaining instruments or the other energy source except where the rate-of-turn indicator of a single-engine helicopter involved in all-cargo operations only, has a source of energy separate from the bank and pitch and direction indicators. For the purpose of this sub-regulation, each engine-driven source of energy of a multi-engine helicopter must be on a different engine;

(c) if a multi-engine helicopter, at least two generators or alternators of which any combination of one-half of the total number are rated sufficiently to supply the electrical loads of all required instruments and equipment necessary for safe emergency operation of the helicopter (both units may be mounted on the main rotor drive train); or

(d) if a single-engine helicopter:

(i) two independent electrical power-generating sources, each of which is able to supply all probable combinations of continuous in-flight electrical loads for required instruments or equipment; or

(ii) in addition to the primary electrical power-generating source, a stand-by battery or an alternate source of electrical power that is capable of supplying 150% of the electrical loads of all required instruments and equipment necessary for safe emergency operation of the helicopter for at least 30 minutes;

***Note:*** *For the purpose of subparagraph (d)(i), a continuous in-flight electrical load includes one that draws current continuously during flight, such as radio equipment, electrically driven instruments, and lights, but does not include occasional intermittent loads.*

(e) either airborne weather radar equipment or other equipment, approved by the Director, capable of detecting thunderstorms and other potentially hazardous weather conditions.

(3) If two pilots are required to operate a commercial air transport helicopter the second pilot's station shall be equipped with –

(a) a sensitive pressure altimeter with a subscale setting, calibrated in hectopascals, adjustable for any barometric pressure setting likely to be encountered during flight, which may be one of the two altimeters required under sub-regulation (1)(c);

(b) an airspeed indicator system with heated pitot tube or equivalent means for preventing malfunction due to either condensation or icing including a warning indicator of pitot heater failure;

(c) a vertical-speed indicator;

(d) a turn-and-slip indicator, or in lieu thereof, an additional altitude indicator powered by a power source separate from that of the main altitude indicator;
(e) an altitude indicator; and
(f) a stabilised direction indicator.

(4) In complying with the provisions of sub-regulation (1)(i) it shall be clearly evident to the cockpit crew members when such standby altitude indicator is being operated by emergency power.

(5) Where the standby altitude indicator referred to in sub-regulation (1)(i) has its own dedicated power supply, there shall be an associated indicator, either on the instrument or instrument panel, when such power supply is in use.

(6) When a commercial air transport helicopter is operated with a single pilot in terms of sub-regulation 127.02.1(8) while carrying passengers at night or in IMC, the helicopter shall furthermore be equipped with –

(a) IFR-approved RNAV equipment that provides immediate identification and heading to the nearest suitable diversion;
(b) an approved stability augmentation or automatic flight control management system; and
(c) if the helicopter is fitted with a turbo engine –
    (i) an auto-ignition system or use of continuous ignition during take-off, landing and flight during heavy precipitation; and
    (ii) a manual throttle that bypasses the governing section of the fuel control unit, and permits continued unrestricted operation of the engine in the event of a fuel control unit failure.

**Airborne weather radar equipment**

**127.05.4** The operator of a commercial air transport helicopter with a maximum approved passenger seating configuration of more than nine seats on a scheduled or non-scheduled public air transport service operation, shall not operate the helicopter unless such helicopter is equipped with airborne weather radar equipment whenever such helicopter is being operated by night or in IMC in areas where thunderstorms or other potentially hazardous weather conditions, regarded as detectable with airborne weather radars, may be expected to exist along the route.

**Cockpit crew interphone system**

**127.05.5** The operator of a commercial air transport helicopter on which more than one cockpit crew member is required, shall not operate the helicopter unless such helicopter is equipped with a cockpit crew interphone system, including headsets and microphones, not of a hand-held type, for use by all cockpit crew members.

**Flight crew interphone system**

**127.05.6** (1) The operator of a commercial air transport helicopter with a maximum approved passenger seating configuration of more than 19 seats, shall not operate the helicopter unless such helicopter is equipped with a flight crew interphone system.

(2) The flight crew interphone system shall –

(a) operate independently of the public address system referred to in regulation 127.05.7 except for handsets, microphones, selector switches and signalling devices;

(b) provide a means of two-way communication between the cockpit and each passenger compartment;
(c) be readily accessible for use from each of the required cockpit crew stations in the cockpit;
(d) be readily accessible for use at the required cabin crew stations close to each separate or pair of floor level emergency exits;
(e) have an alerting system incorporating aural or visual signals for use by cockpit crew members to alert the cabin crew and for use by cabin crew to alert the cockpit crew;
(f) have a means of the recipient of a call to determine whether it is a normal call or an emergency call; and
(g) provide on the ground a means of two-way communication between ground personnel and at least two cockpit crew members, if the design of the helicopter requires such interphone system.

**Public address system**

**127.05.7** (1) The operator of a commercial air transport helicopter with a maximum approved passenger seating configuration of more than nine seats, shall not operate the helicopter unless such helicopter is equipped with a public address system.

(2) The public address system shall –
(a) operate independently of the interphone systems referred to in regulations 127.05.5 and 127.05.6, except for handsets, microphones, selector switches and signalling devices;
(b) be readily accessible for immediate use from each required cockpit crew member station;
(c) be readily accessible for use from at least one cabin crew station in the cabin;
(d) in the case of a public address system microphone intended for cabin crew use, be positioned adjacent to a cabin crew seat located near each required floor level emergency exit in the passenger compartment;
(e) be capable of operation within 10 seconds by a cabin crew member at each of those stations in the compartment from which the use of such public address system is accessible;
(f) be audible and intelligible in all phases of flight at all passenger seats, toilets and cabin crew seats and stations;
(g) be powered continuously during normal operation; and
(h) provide reliable operation for at least 10 minutes, following a total failure of the normal electrical generating system.

**Survival suits**

**127.05.8** The operator of a commercial air transport helicopter shall not operate the helicopter beyond 10 minutes flying time at normal cruising speed from land when the weather report or forecasts available to the PIC indicate that –
(a) the water temperature will be less than 10°C during the flight; or
(b) the estimated rescue time exceeds the calculated survival time;
unless each person on board is wearing a survival suit: Provided that this provision shall not apply where an operator received the prior written approval of the Director to operate without such survival suits.

## SUBPART 6: OPERATING CERTIFICATE

### Operating certificate

**127.06.1** The operator of a commercial air transport helicopter shall not operate the helicopter unless such operator is the holder of, and in compliance with, a valid –

(a) licence issued in terms of the Air Services Licensing Act, 1990, or the International Air Services Act, 1993; and
(b) operating certificate issued in terms of regulation 127.06.3.
(c) operations specification as an attachment to the operating certificate which addresses at least the following operational and maintenance areas:
  (i) Part A General provisions
  (ii) Part B En-route authorisations and limitations
  (iii) Part C Aerodrome authorisations and limitations
  (iv) Part D Maintenance
  (v) Part E Mass and balance
  (vi) Part F Interchange of equipment operations
  (vii) Part G Aircraft leasing operations.

### Application for operating certificate and operations specifications

**127.06.2** An application for an operating certificate and operations specification shall be made to the Director in a form and manner as prescribed in Document SA-CATS 127 and shall be accompanied by the appropriate fee as prescribed in Part 187.

### Adjudication of application for operating certificate

**127.06.3** (1) In considering an application referred to in regulation 127.06.2 the Director may conduct the investigation he or she deems necessary.

(2) An application shall be granted and the operating certificate issued if the Director is satisfied that –

(a) the applicant will comply with the provisions of regulation 127.06.7; and
(b) the applicant will not operate the air service concerned contrary to any provision of the Act, the International Air Services Act, 1993, or the Air Service Licensing Act, 1990.

(3) If the Director is not so satisfied, he or she shall notify the operator thereof, stating the reasons in the notification, and grant the operator the opportunity to rectify or supplement any defect within the period determined by the Director, after which period the Director shall grant or refuse the application concerned.

(4) An operating certificate shall be issued on the appropriate form as prescribed in Document SA-CATS 127, under such conditions which the Director may determine.

### Period of validity of operating certificate

**127.06.4** (1) An operating certificate shall be valid for such period as may be determined by the Director: Provided that such period shall not exceed a period of 12 months from the date of issuing thereof.

(2) If the holder of an operating certificate applies, at least 30 (thirty) days prior to the expiry thereof for a renewal of the operating certificate, the operating certificate shall, notwithstanding the provisions of sub-regulation (1), remain in force until such holder is notified by the Director of the result of the application for its renewal.

**Safety inspections and audits**

**127.06.5** (1) An applicant for the issuing of an operating certificate shall permit an authorised officer, inspector or authorised person to carry out such safety inspections and audits which may be necessary to verify the validity of an application made in terms of regulation 127.06.2.

(2) The holder of an operating certificate shall permit an authorised officer, inspector or authorised person to carry out such safety inspections and audits which may be necessary to determine compliance with the appropriate requirements prescribed in this Part.

**Duties of holder of operating certificate**

**127.06.6** The holder of an operating certificate shall –

(a) notify the Director in the manner as prescribed in Document SA-CATS 127, before any change is effected to the particulars on the operating certificate;
(b) keep the operating certificate in a safe place and produce such operating certificate to an authorised officer, inspector or authorised person for inspection if so requested by such officer, inspector or person; and
(c) not commence or continue with the air service concerned unless such holder is the holder of a valid operating certificate.

**Register of operating certificates**

**127.06.7** (1) The Director shall maintain a register of all operating certificates issued in terms of these regulations.

(2) The register shall contain the following particulars:

(a) the full name and, if any, the trade name of the holder of the operating certificate;
(b) the postal address of the holder of the operating certificate;
(c) the number of the operating certificate issued to the holder;
(d) particulars of the type of air service for which the operating certificate was issued;
(e) particulars of the category of helicopter for which the operating certificate was issued; and
(f) the date on which the operating certificate was issued.

(3) The particulars referred to in sub-regulation (2) shall be recorded in the register within 30 days from the date on which the operating certificate is issued.

(4) The register shall be kept in a safe place at the office of the Director.

(5) A copy of the register shall be furnished by the Director, on payment of the appropriate fee as prescribed in Part 187, to any person who requests the copy.

## SUBPART 7: FLIGHT OPERATIONS

### Routes and areas of operation

**127.07.1** (1) The operator of a commercial air transport helicopter shall ensure that scheduled public air transport service operations are only conducted along such routes for which –

(a) ground facilities and services, including meteorological services, are provided which are adequate for the planned operation;
(b) appropriate maps and charts are available; and
(c) where a single-engine helicopter is used, surfaces are available which permit a safe forced landing to be executed.

(2) The operator shall ensure that operations are only conducted within such areas and along such routes for which approval or authorisation has been obtained, where required, from the appropriate authority concerned.

(3) The operator shall ensure that –

(a) the performance of the helicopter intended to be used, is adequate to comply with minimum flight altitude requirements; and
(b) the equipment of the helicopter intended to be used, complies with the minimum requirements for the planned operation.

### Establishment of procedures

**127.07.2** The operator of a commercial air transport helicopter shall –

(a) establish procedures and instructions, for each helicopter type, containing ground personnel and flight crew members' duties for all types of operations on the ground and in flight;
(b) establish a checklist system to be used by cockpit crew members for all phases of operation under normal, abnormal and emergency conditions, to ensure that the operating procedures in the operations manual referred to in regulation 127.04.2, are followed; and
(c) ensure that flight crew members do not perform any activities during critical phases of the flight other than those required for the safe operation of the helicopter.

### Operations control and supervision

**127.07.3** The operator of a commercial air transport helicopter shall exercise operational control and establish and maintain an approved method of supervision of flight operations.

### Competence of operations personnel

**127.07.4** The operator of a commercial air transport helicopter shall ensure that all personnel assigned to, or directly involved in, ground and flight operations, are properly instructed, have demonstrated their abilities in their particular duties and are aware of their responsibilities and the relationship of such duties to the operation as a whole.

**Use of air traffic services**

**127.07.5** The operator of a commercial air transport helicopter shall ensure that air traffic services are used for all flights whenever available.

**Minimum flight altitudes**

**127.07.6** (1) The operator of a commercial air transport helicopter shall establish minimum flight altitudes for all operations carried out in accordance with IFR and all scheduled public air transport service operations, as well as the methods to determine such minimum flight altitudes for all route segments to be flown which provide the required terrain clearance, taking into account the performance operating limitations referred to in subpart 8.

(2) The operator shall take into account, when establishing minimum flight altitudes –
(a) the accuracy with which the position of the helicopter can be determined;
(b) the possible inaccuracies in the indications of the altimeters used;
(c) the characteristics of the terrain along the routes or in the areas where operations are to be conducted;
(d) the probability of encountering unfavourable meteorological conditions; and
(e) possible inaccuracies in aeronautical charts.

(3) In complying with the provisions of sub-regulation (2) the operator shall consider –
(a) corrections for temperature and pressure variations from standard values;
(b) the air traffic control requirements; and
(c) any contingencies which may occur along the planned route.

**Heliport operating minima**

**127.07.7** (1) The operator of a commercial air transport helicopter to be used under IMC shall establish heliport operating minima in accordance with the provisions of sub-regulations (2), (3) and (4) and in conjunction with the instrument approach and landing charts for each heliport and aerodrome intended to be used either as destination or alternate heliport.

(2) The operator shall establish heliport operating minima for each heliport planned to be used, which shall not be lower than the values as prescribed in Document SA-CATS 91.

(3) The method of determining heliport operating minima shall be approved by the Director.

(4) The heliport operating minima established by the operator shall not be lower than any heliport operating minima established by the appropriate authority of the State in which the heliport is located: Provided that if such appropriate authority approves such lower heliport operating minima established by the operator, the lower heliport operating minima shall apply.

**Offshore operations**

**127.07.8** (1) The operator of a commercial air transport helicopter shall ensure that, in the case of flights over water –

(a) radio contact is maintained with his or her shore base or other flight-monitoring station;
(b) a full complement of flight crew to operate the helicopter and its safety equipment under normal emergency conditions; and
(c) the helicopter is equipped for flights over water in terms of these Regulations.

(2) In the case of a single-reciprocating-engine helicopter –
(a) flights shall be limited to five nautical miles seaward from shore base;
(b) no flights shall be undertaken except by day and under VMC, and no flight shall be commenced which cannot be completed at least one hour before last light;
(c) a back-up helicopter or rescue craft, which is suitably manned and equipped for air and sea rescue operations and which is fully operational, shall be on stand-by at the shore base with survival and rescue equipment on board, adequate for the rescue of the passengers and flight crew of the helicopter for which it is on stand-by.

(3) In the case of a single-turbine-engine helicopter –
(a) flights shall be limited to 50 nautical miles seaward from shore base;
(b) no flights shall be undertaken except by day and under VMC;
(c) for flights over water from five up to 15 nautical miles sufficient survival dinghies are carried in such a manner that they will be instantly accessible at the time of ditching; and
(d) for flights over water of more than 15 nautical miles, a back-up helicopter or rescue craft referred to in sub-regulation (2)(c), shall be available for search and rescue purposes.

(4) In the case of multi-engine helicopters the operator shall comply with the provisions of sub-regulation (1) and, in addition, if a flight is to be undertaken by night or under IMC, shall ensure that –
(a) the helicopter is equipped for IFR operations; and
(b) functioning area or on-board navigation aids are available.

(5) For the purposes of this regulation "shore base" means the site from which the flight over water is commenced or supported.

**Smoking in helicopter**

**127.07.9** No person shall smoke in a South African registered helicopter or any helicopter when such helicopter is used in a scheduled public air transport service operation and has departed from and will be landing within the Republic.

**Fuel policy**

**127.07.10** (1) The operator of a commercial air transport helicopter shall establish a fuel policy for the purpose of flight planning and in-flight replanning to ensure that every flight carries sufficient fuel for the planned operation and reserve fuel to cover deviations from the planned operation.

(2) The operator shall ensure that the planning of a flight is only based upon –

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(a) procedures, tables or graphs which are contained in or derived from the operations manual referred to in regulation 127.04.2, or current helicopter-specific data;
(b) the operating conditions under which the flight is to be conducted including –
    (i) realistic helicopter fuel consumption data;
    (ii) anticipated masses;
    (iii) expected meteorological conditions; and
    (iv) ATS procedures and restrictions.

(3) The operator shall ensure that the calculation of usable fuel required by such helicopter for a flight includes –
(a) taxi fuel;
(b) trip fuel;
(c) reserve fuel consisting of –
    (i) contingency fuel as prescribed in Document SA-CATS 127;
    (ii) alternate fuel, if a destination alternate heliport is required;
    (iii) final reserve fuel;
    (iv) additional fuel, if required by the type of operation; and
(d) extra fuel, if required by the PIC.

(4) The operator shall ensure that in-flight replanning procedures for calculating usable fuel required when a flight has to proceed along a route or to a destination heliport other than originally planned includes –
(a) trip fuel for the remainder of the flight;
(b) reserve fuel consisting of –
    (i) contingency fuel;
    (ii) alternate fuel, if a destination alternate heliport is required, including selection of the departure heliport as the destination alternate heliport;
    (iii) final reserve fuel; and
    (iv) additional fuel, if required by the type of operation; and
(c) extra fuel, if required by the PIC.

**Fuel and oil supply**

**127.07.11** The operator of a commercial air transport helicopter shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out.

**Instrument approach and departure procedures**

**127.07.12** The operator of a commercial air transport helicopter may implement instrument approach and departure procedures other than instrument approach and departure procedures referred to in regulation 91.07.12, if required: Provided that such instrument approach and departure procedures have been approved by the Director or the appropriate authority of the State in which the heliport to be used, is located.

**Noise abatement procedures**

**127.07.13** (1) The operator of a commercial air transport helicopter shall establish operating procedures for noise abatement.