(2) Take-off and climb procedures for noise abatement specified by the operator for any one helicopter type shall be the same for all heliports.

Carriage of infants and children

127.07.14 (1) The operator of a commercial air transport helicopter shall ensure that an infant is only carried when properly secured with a child restraint device or in the arms or on the lap of an adult passenger or in a skycot: Provided that, in the case of a skycot, the skycot 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 skycot under the maximum accelerations to be expected in flight.

(2) An 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 skycot will be secured by a restraining device so that it will not be thrown from such skycot under the maximum accelerations to be expected in flight.

(3) Infants shall not be seated in front of exits.

(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) Skycots shall not be used during critical phases of flight.

(6) Skycots 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 a helicopter, which is secured to the helicopter seat.

(10) A car-type infant seat referred to in sub-regulation (9) shall not be located in the same row or a row directly forward or aft of an emergency exit.

Carriage of passengers with disability

127.07.15 (1) The operator of a commercial air transport helicopter shall establish procedures for the carriage of passengers with disability, including identification, seating positions and handling of the passenger in the event of an emergency.

- (2) The operator shall ensure that -
 - (a) the PIC of the helicopter 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 or her 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 passenger with a disability so as to prevent pain or injury to such passenger.

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

- (a) the stretcher shall be secured in such helicopter so as to prevent it from moving under the maximum accelerations likely to be experienced in flight and in an emergency alighting such as ditching;
- (b) the patient shall be secured by an approved harness to the stretcher or helicopter structure; and
- (c) an able-bodied assistant shall accompany each stretcher patient.

(4) A mentally disturbed person shall not be carried in the helicopter unless –

- (a) accompanied by an able-bodied assistant; and
- (b) a medical certificate has been issued by a medical practitioner certifying such mentally disturbed person's suitability 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 mentally disturbed person who, according to his or her medical history, may become violent, only after special permission has been obtained from the Director.

(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, the passenger shall be accompanied by an able-bodied assistant.

Limitations on carriage of infants, children and passengers with disability

127.07.16 (1) The maximum number of passengers with a disability, unaccompanied minors, or a combination of such passengers and minors, which may be carried by the operator of a commercial air transport helicopter, is limited to one per unit of 20 passengers capacity or part thereof to a maximum of 10 such persons 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 of the safety of such passengers or minors: Provided that the persons 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, other than the procedures referred to in subregulations (1) and (2), for the carriage of infants, children and persons with a disability: Provided that such procedures –

- (a) do not jeopardise aviation safety; and
- (b) are approved by the Director.

Carriage of inadmissible passengers, deportees or persons in custody

127.07.17 (1) The operator of a commercial air transport helicopter shall establish procedures for the carriage of inadmissible passengers, deportees or persons in custody to ensure the safety of the helicopter and its occupants.

(2) The PIC of the helicopter 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).

(3) For the purposes of this regulation, "inadmissible passenger" means any person who is not entitled to board the helicopter and includes those persons who are not in the possession of a valid passenger ticket, passport or visa.

Carry-on baggage

127.07.18 (1) The operator of a commercial air transport helicopter shall establish adequate procedures to ensure that only such baggage is carried onto the helicopter 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 127.

Securing of passenger cabin and galley

127.07.19 (1) Before take-off and landing and whenever deemed necessary in the interests of aviation safety, the PIC of a commercial air transport helicopter shall ensure that –

- (a) all equipment, baggage and loose articles in the cabin of the helicopter, including passenger service items and flight 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 helicopter 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 helicopter, at all times whenever the seat belt lights are illuminated or when so directed by the PIC of such helicopter.

- (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, in accordance with the placarded mass limitation of the locker.

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

Passenger services

127.07.20 (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 helicopter.

(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 helicopter.

(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 helicopter.

(4) The cabin crew members shall complete the securing of the cabin before the approach for landing of the helicopter is commenced, if cabin crew members are carried.

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

Incidents and defects

127.07.21 (1) The operator of a commercial air transport helicopter shall establish adequate inspection and reporting procedures to ensure that defective equipment is reported to the PIC of the helicopter before take-off.

(2) The procedures referred to in sub-regulation (1) shall be extended to include the reporting to the operator of all incidents or the exceeding of limitations which may occur while the flight crew are embarked on the helicopter 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.

SUBPART 8: HELICOPTER PERFORMANCE OPERATING LIMITATIONS

Classification

127.08.1 (1) The classification of helicopters for performance limitations purposes is prescribed in regulation 91.09.3.

- (2) The operator of a commercial air transport helicopter shall ensure that ---
 - (a) a Class 1 helicopter is operated in accordance with the performance operating limitations prescribed in Division One;
 - (b) a Class 2 helicopter is operated in accordance with the performance operating limitations prescribed in Division Two; and
 - (c) a Class 3 helicopter is operated in accordance with the performance operating limitations prescribed in Division Three.

(3) Where specific design characteristics of a helicopter prevents compliance with the regulations in Division One, Two or Three of this subpart, the operator shall, notwithstanding the provisions of sub-regulation (2), ensure that the helicopter is operated in accordance with such standard that a level of safety equivalent to the level of safety prescribed in the appropriate Division in this subpart is maintained.

General provisions for all classes of helicopters

127.08.2 (1) The operator of a commercial air transport helicopter shall ensure that -

- (a) the mass of the helicopter, at the start of the take-off, is not greater than the mass at which the requirements prescribed in the appropriate Division can be complied with for the flight to be undertaken, allowing for expected reductions in mass as the flight proceeds; and
- (b) the approved performance data contained in this helicopter flight manual referred to in regulation 91.03.2, is used to determine compliance in the appropriate Division.

(2) When complying with the provisions of sub-regulation (1), the operator shall take account of airframe configuration, environmental conditions and the operation of systems which have an effect on performance, when appropriate.

Division One: Class 1 Helicopter

Take-off

127.08.3 (1) The operator of a Class 1 helicopter shall ensure that the take-off mass of the helicopter does not exceed the maximum permitted take-off mass for the pressure altitude and the ambient temperature at the place of departure.

(2) The take-off mass referred to in sub-regulation (1) shall be such that in the event of the critical power-unit failing -

- (a) at or before the take-off decision point, the helicopter can discontinue the take-off and stop within the rejected take-off area available; or
- (b) at or past the take-off decision point, the helicopter can continue the take-off and the climb, clearing all obstacles along the flight path by a vertical margin of at least 35 feet until such helicopter can comply with the provisions of regulation 127.08.6.

(3) For the purposes of sub-regulation (2)(a), "rejected take-off area" means an elevated heliport or helideck.

(4) When complying with the provisions of sub-regulation (2), account shall be taken of -

(a) the local pressure attitude;

- (b) the ambient temperature;
- (c) the take-off technique to be used; and
- (d) not more than 50 per cent of the reported head-wind component or, if such data is provided, not less than 150 per cent of the reported tail-wind component: Provided that if approved wind measuring equipment is used, the head-wind component may be factored by 80 per cent.

(5) The part of the take-off prior to the specified take-off decision point shall be so conducted in sight of the surface that a rejected take-off can be carried out.

Take-off flight path

127.08.4 (1) The operator of a Class 1 helicopter shall ensure that the take-off flight path clears all obstacles by a vertical margin of at least 35 feet in VFR and at least 35 feet plus 0.01 in IFR, where DR is the horizontal distance the helicopter has travelled from the end of the take-off distance available.

(2) An obstacle need not be considered if its lateral margin from the nearest point on the surface below the intended flight path exceeds 30m of 1.5 times the overall length of the helicopter, whichever is the greater, plus –

- (a) 0.15 DR for VFR operations; or
- (b) 0.30 DR for IFR operations.

(3) Obstacles may be disregarded if they are situated beyond -

- (a) 7R for day operations, if it is assured that navigation accuracy can be achieved by reference to suitable visual cues during the climb;
- (b) 10R for night operations, if it is assured that navigation accuracy can be achieved by reference to suitable visual cues during the climb;
- (c) 300 metres, if the pilot is able to maintain the required navigation accuracy through navigation aids; and
- (d) 900 metres in all other cases.

(4) For the purposes of sub-regulation (3), "R" means the rotor radius.

(5) Where a change of direction of more than 15° is made, vertical obstacle clearance requirements shall be increased by 15 feet from the point at which the turn is initiated: Provided that such turn shall not be initiated before reaching a height of 100 feet above the take-off surface.

(6) When complying with the provisions of this regulation, account shall be taken of --

- (a) the mass of the helicopter at the commencement of the take-off;
- (b) the local pressure altitude;
- (c) the ambient temperature; and
- (d) 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, unless otherwise approved.

En route with one or more engines inoperative

127.08.5 (1) The operator of a Class 1 helicopter shall ensure that, in the event of the critical power unit becoming inoperative at any point in the en route flight path, appropriate to the meteorological conditions expected for the flight, the helicopter can comply with the provisions of sub-regulation (2) or (3) at all points along the route.

(2) The operator shall ensure that, when it is intended that the flight will be conducted at any time out of sight of the surface, the mass of the helicopter permits a rate of climb of at least 50 feet per minute with one engine inoperative at an altitude of at least 1 000 feet or 2 000 feet in areas of mountainous terrain, above all obstacles along the route within 18.5 km on either side of the intended track: Provided that when it is intended that the flight will be conducted by day, VMC and in sight of the surface, only obstacles within 900 metres on either side of the route need to be considered.

(3) The operator shall ensure that -

- (a) the flight path permits the helicopter to continue flight from the cruising altitude to a height of 1 000 feet above the heliport where a landing can be made in accordance with regulation 127.08.7;
- (b) the flight path clears vertically by at least 1 000 feet or 2 000 feet in areas of mountainous terrain, all obstacles along the route within 18.5 km on either side of the intended track;
- (c) the engine is assumed to fail at the most critical point along the route:

Provided that when it is intended that the flight will be conducted by day, VMC and in sight of the surface, only obstacles within 900 metres in either side of the route need to be considered.

(4) Account shall be taken of the effects of winds on the flight path.

(5) When complying with the provisions of this regulation, the width margins referred to in subregulations (2) and (3) may be reduced to 9.3 kilometres, if the required navigation accuracy can be achieved.

(6) In the event of any two power units becoming inoperative in the case of a helicopter having three or more power units, the helicopter shall be able to continue the flight to a suitable landing site and make a landing thereat.

Approach and landing

127.08.7 (1) The operator of a Class 1 helicopter shall ensure that the landing mass of the helicopter at the estimated time of landing does not exceed the maximum landing mass specified for the pressure altitude and the ambient temperature expected for the estimated time of landing at the heliport at which it is intended to land and, when required, at any alternate heliport.

(2) When determining the landing mass, in the event of the critical power-unit becoming inoperative at any point during the approach and landing phase –

(a) before the landing decision point, the helicopter shall, at the destination and at any alternate heliport, after clearing all obstacles in the approach path by a margin of 35 feet, be able to land and stop within the landing distance available, or perform a baulked landing and clear all obstacles in the flight path by a margin of 35 feet until the helicopter has reached safe take-off speed with a positive rate of climb; or

- (b) at or after the landing decision point, the helicopter shall, at the destination and at any alternate heliport, after clearing all obstacles in the approach path by a margin of 35 feet, be able to land and stop within the landing distance available;
- (c) For the purpose of paragraph (b), "landing distance available", if applicable, means an elevated heliport or helideck.

(3) When complying with the provisions of this regulation, account shall be taken of -

- (a) the pressure altitude at the destination;
- (b) the expected air temperature at the destination;
- (c) the landing technique to be used;
- (d) not more than 50 per cent of the forecast head-wing component unless otherwise approved; and
- (e) any expected variation in the mass of the helicopter during flight.

(4) The operator shall ensure that the part of the landing from the specified landing decision point to touchdown, is conducted in sight of the surface.

Division Two: Class 2 Helicopter

General

127.08.7 (1) The operator of a Class 2 helicopter shall ensure that the part of the take-off prior to the defined point after take-off and after the defined point before landing, is conducted only in conditions of weather and light and over such routes and diversions therefrom which permit a safe forced landing to be executed in the event of engine failure.

(2) A Class 2 helicopter shall not be permitted to operate from elevated structures in built-up areas.

Take-off

127.08.8 (1) The operator of a Class 2 helicopter shall ensure that the take-off mass of the helicopter does not exceed the maximum permitted take-off mass specified for a rate of climb for the pressure altitude and ambient temperature at the heliport of departure which allows the helicopter, in the event of the critical power unit becoming inoperative at any time after reaching the specified take-off decision point, to continue the take-off and initial climb and clear all obstacles along its flight path by a margin of 35 feet, until such helicopter can comply with the provisions of regulation 127.08.11.

(2) The operator shall ensure that for an elevated heliport, the take-off mass is such that the helicopter is capable of -

- (a) rejecting the take-off and landing on the elevated heliport; or
- (b) continuing the take-off and clearing the elevated heliport until such helicopter can comply with the provisions of regulation 127.08.11, or carry out a safe forced landing.

(3) In complying with the provisions of sub-regulation (2), account shall be taken of --

- (a) the pressure altitude at the elevated heliport;
- (b) the ambient temperature at the elevated heliport;

- (c) the take-off technique to be used; and
- (d) not more than 50 per cent of the reported head-wind component or, if such data is provided, not less than 150 per cent of the reported tail-wind component except that when approved wind measuring equipment is used, the headwind component may be factored by 80 per cent.

(4) The operator shall ensure that the part of the take-off up to the commencement of the takeoff flight path is conducted in sight of the surface.

Take-off flight path

127.08.9 (1) The operator of a Class 2 helicopter shall ensure that the take-off flight path clears all obstacles by a vertical margin of at least 35 feet in VFR and at least 35 feet plus 0.01 DR in IFR, where DR is the horizontal distance the helicopter has travelled from the end of the take-off distance available.

(2) An obstacle need not be considered if its lateral margin from the nearest point on the surface below the intended flight path exceeds 30m or 1.5 times the overall length of the helicopter, whichever is the greater, plus –

- (a) 0.15 DR for VFR operations; or
- (b) 0.30 DR for IFR operations.

(3) Obstacles may be disregarded if they are situated beyond -

- (a) 7R for day operations, if it is assured that navigation accuracy can be achieved by reference to suitable visual cues during the climb;
- (b) 10R for night operations, if it is assured that navigation accuracy can be achieved by reference to suitable visual cues during the climb;
- (c) 300 metres, if the pilot is able to maintain the navigation accuracy through navigation aids; and
- (d) 900 metres in all other cases.

(4) For the purposes of sub-regulation (3), "R" means the rotor radius.

(5) Where a change of direction of more than 15° is made, vertical obstacle clearance requirements shall be increased by 15 feet from the point at which the turn is initiated: Provided that such turn shall not be initiated before reaching a height of 100 feet above the take-off surface.

(6) When complying with the provisions of this regulation, account shall be taken of -

- (a) the mass of the helicopter at the commencement of the take-off;
- (b) the pressure altitude at the heliport;
- (c) the ambient temperature at the heliport; and
- (d) 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, unless otherwise approved.

En route with one or more engines inoperative

127.08.10 (1) The operator of a Class 2 helicopter shall ensure that, in the event of one engine becoming inoperative at any point in the en route flight path, appropriate to the meteorological conditions expected for the flight, the helicopter can comply with the provisions of this regulation at all points along the route.

(2) When it is intended that the flight shall be conducted -

- (a) at any time out of sight of the surface, the mass of the helicopter shall permit a rate of climb of at least 50 feet per minute with one engine inoperative at an altitude of at least 1 000 feet or 2 000 feet in areas of mountainous terrain, above all obstacles along the route within 18.5 km on either side of the intended track;
- (b) when it is intended that the flight will be conducted by day, VMC and in sight of the surface, only obstacles within 900 metres on either side of the route need to be considered.
- (3) The operator shall ensure that
 - (a) the flight path permits the helicopter to continue flight from the cruising altitude to a height of 1 000 feet above the heliport where a landing can be made in accordance with regulation 127.10.12;
 - (b) the flight path clears vertically by at least 1 000 feet or 2 000 feet in areas of mountainous terrain, all obstacles along the route within 18.5 kilometres on either side of the intended track; and
 - (c) the engine is assumed to fail at the most critical point along the route:

Provided that when it is intended that the flight will be conducted by day, VMC and in sight of the surface, only obstacles within 900 metres on either side of the route need to be considered.

(4) Account shall be taken of the effects of winds on the flight path.

(5) When complying with the provisions of this regulation, the width margins referred to in subregulations (2) and (3) may be reduced to 9.3 kilometres, if the required navigation accuracy can be achieved.

Landing

127.08.11 (1) The operator of a Class 2 helicopter shall ensure that the landing mass of the helicopter at the estimated time of landing does not exceed the maximum mass specified for the pressure altitude and ambient temperature expected for the estimated time of landing at the heliport at which it is intended to land, and at the alternate heliport, which shall allow the helicopter, in the event of the critical power unit becoming inoperative before the specified landing decision point after clearing all obstacles by a safe margin to either land and stop within the landing distance available or to perform a baulked landing and clear all obstacles in the flight path by a margin of 35 feet.

(2) If the becoming inoperative of the critical power unit after the specified landing decision point may cause the helicopter to force land, the helicopter shall only be operated in conditions of weather and light, and over such routes and diversions therefrom, which permit a safe forced landing to be executed in the event of an engine failure.

(3) When determining the landing mass for elevated heliports, the landing mass shall be such that the helicopter is capable of –

- (a) landing on the elevated heliport; or
- (b) rejected the landing and clearing the elevated heliport, thereafter continuing the; flight or carrying out a safe forced landing.

(4) In complying with the provisions of sub-regulation (3)(b), account shall be taken of --

- (a) the pressure altitude of the elevated heliport;
- (b) the expected air temperature at the elevated heliport;
- (c) the landing technique to be used;
- (d) not more than 50 per cent of the forecast headwind component unless otherwise approved; and
- (e) any expected variation in the mass of the helicopter expected during the flight.

Division Three: Class 3 Helicopter

General

127.08.12 (1) The operator of a Class 3 helicopter shall ensure that operations are only conducted in conditions of weather and light, and from those heliports and over such routes and diversions therefrom, which will permit a safe forced landing to be executed in the event of a power unit failure.

(2) A Class 3 helicopter shall not be permitted to operate from elevated heliports in built-up urban areas.

(3) The operator of a Class 3 helicopter, carrying passengers, shall not operate such helicopter under IMC or above more than three eighths of clouds within a radius of five nautical miles of the helicopter, unless the latest weather reports or forecasts, or any combination of them, indicate that the weather along the planned route (including take-off and landing), with due regard for the provision of regulation 127.08.15, allows flight under VFR under the ceiling (if a ceiling exists) at prescribed minimum heights established in terms of regulation 127.07.6, and that the weather is forecast to remain so until at least one hour after the estimated time of arrival at the destination.

Take-off

127.08.13 (1) The operator of a Class 3 helicopter shall ensure that the take-off mass of the helicopter does not exceed the maximum permitted take-off mass specified for a hover inside ground effect with all power units operating at take-off power at the pressure altitude and ambient temperature at the take-off site.

(2) For the purposes of this regulation, hover inside ground effect performance data shall include 17 knot wind accountability.

(3) The helicopter shall be able, with all engines operating, to clear all obstacles along its flight path by a margin of 35 feet until such helicopter can comply with the provisions of regulation 127.08.15.

En route

127.08.14 The operator of a Class 3 helicopter shall ensure that the helicopter is able, with all power-units operating, to continue along its intended route or to a planned diversion without flying at any point below the appropriate minimum flight altitude.

Landing

127.08.15 (1) The operator of a Class 3 helicopter shall ensure that the landing mass of the helicopter at the estimated time of landing does not exceed the maximum landing mass specified for a hover inside ground effect or hover outside ground effect, whichever is the greater, with all power units operating at take-off power at the pressure altitude and ambient temperature expected for the estimated time of landing at a destination heliport and at any alternate heliport, if required.

(2) For the purposes of this regulation, hover inside ground effect performance data shall include 17 knot wind accountability.

(3) With all engines operating, the helicopter shall, at the destination heliport and at any . attemate heliport, after clearing all obstacles in the approach path by a safe margin, be able to land and stop within the landing distance available, or to perform a bau/ked landing and clear all obstacles in the flight path by a margin of 35 feet.

SUBPART 9: MAINTENANCE

General

127.09.1 The operator of a commercial air transport helicopter shall not operate the helicopter unless such helicopter is maintained in accordance with the regulations in Part 43.

Helicopter maintenance schedule

127.09.2 (1) The operator of a commercial air transport helicopter shall ensure that the helicopter is maintained in accordance with a helicopter maintenance schedule established by the operator.

(2) The schedule shall contain details, including frequency, of all maintenance required to be carried out on the helicopter.

(3) The schedule shall include a reliability programme if the Director determines that such a reliability programme is necessary.

(4) The helicopter maintenance schedule referred to in sub-regulation (1) and any subsequent amendment thereof shall be approved by the Director.

(5) The operator of a commercial air transport Class C helicopter, to be operated at night or in IMC while carrying passengers, shall include in the schedule, referred to in sub-regulation (1) -

- (a) either the manufacturer's recommended engine trend monitoring programme, which includes an oil analysis, if appropriate; or
- (b) an engine trend monitoring programme, approved by the Director, that includes an oil analysis at each 100 hours interval or at the manufacturer's suggested interval, whichever is more frequent.

(6) The results of each test, observation, and inspection, required by the applicable engine trend monitoring programme prescribed by sub-regulation (5) shall be recorded and maintained in the engine maintenance records.

(7) The schedule shall contain, in respect of any helicopter referred to in sub-regulation (5), written maintenance instructions containing the methods, techniques, and practices necessary to maintain the equipment specified in regulation 127.05.3.

Maintenance contracted to AMO

127.09.3 If maintenance on a commercial air transport helicopter is carried out by the holder of an AMO approval with the appropriate rating issued in terms of Part 145, the operator of the helicopter shall ensure that all contracted maintenance is carried out in accordance with the regulations in Part 43.

PART 133: HELICOPTER EXTERNAL-LOAD OPERATIONS

List of regulations

SUBPART 1: GENERAL

- 133.01.1 Applicability
- 133.01.2 Requirements for commercial external-load operations

SUBPART 2: OPERATING RULES AND RELATED REQUIREMENTS

- 133.02.1 Operating rules
- 133.02.2 Carriage of persons
- 133.02.3 Flight crew member training, currency and testing requirements

SUBPART 3: AIRWORTHINESS REQUIREMENTS

- 133.03.1 Flight characteristics requirements
- 133.03.2 Structures and design
- 133.03.3 Operating limitations
- 133.03.4 Helicopter-load combination flight manual
- 133.03.5 Markings and placards
- 133.03.6 Equipment

SUBPART 1: GENERAL

Applicability

133.01.1 (1) This Part applies to -

- helicopters engaged in commercial and non-commercial external-load operations within the Republic;
- (b) helicopters registered in the Republic and engaged in commercial and noncommercial international external-load operations; and
- (c) persons acting as flight crew members of the helicopters operated in terms of this part.
- (2) The certification rules of this Part shall not apply to
 - (a) helicopter manufacturers when developing external-load attaching means;
 - (b) helicopter manufacturers demonstrating compliance of equipment utilised under this Part or Part 21;
 - (c) operations conducted by a person demonstrating compliance for the issuing of any certificate or authorisation under this Part; or
 - (d) training flights conducted in preparation for the demonstration of compliance with this Part.

(3) For the purposes of this Part, any person, other than a flight crew member or a person who is charged with duties essential to the helicopter external-load operation, may only be carried in a Class D helicopter-load combination.

(4) For the purposes of this Part, external-load operations include underslung load operations, winching operations and any operation in which the helicopter is connected by means of a cable to another object, including towing.

(5) Unless the context otherwise indicates, external-load operations shall be conducted in accordance with the provisions of this Part and in addition, the applicable provisions of Part 91 and Part 127.

Requirements for commercial external-load operations

133.01.2 The operator of a helicopter engaged in a commercial external-load operation shall not operate the helicopter unless such operator is the holder of 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 Part 127.

SUBPART 2: OPERATING RULES AND RELATED REQUIREMENTS

Operating rules

133.02.1 (1) No owner, operator or PIC of a helicopter engaged in an external-load operation shall operate the helicopter without, or contrary to, the helicopter-load combination flight manual referred to in regulation 133.03.4.

(2) The owner, operator or PiC shall not operate the helicopter unless -

- (a) a standard category type certificate or a restricted category type certificate has been issued in respect of such helicopter in terms of Part 21;
- (b) a valid certificate of airworthiness has been issued in respect of such helicopter in terms of Part 21; and
- (c) such helicopter complies with the certification provisions of Subpart 3 that apply to the applicable class of helicopter-load combination.

(3) The PIC of the helicopter shall, before such PIC operates such helicopter with an externalload configuration which differs substantially from any external load configuration previously carried with such type of helicopter, irrespective of whether the helicopter-load combination is of the same class, conduct, in a manner that will not endanger persons or property on the surface, the following applicable flight-operational checks:

- (a) A determination that -
 - the mass of the helicopter-load combination and the location of its centre of gravity are within approved limits;
 - (ii) the external load is securely fastened; and
 - (iii) the external load does not interfere with devices provided for its emergency release;
- (b) make an initial lift-off and verify that controllability is satisfactory;
- (c) while hovering, verify that directional control is adequate;
- (d) accelerate into forward flight to verify that no attitude of the helicopter or of the external load is encountered, in which the helicopter is uncontrollable or which is otherwise hazardous;
- (e) in forward flight, check for hazardous oscillations of the external load: Provided that if the external load is not visible to such PIC, other flight crew members or ground personnel may make this check and signal the PIC; and
- (f) increase the forward airspeed and determine an operational airspeed at which no hazardous oscillation or hazardous aerodynamic turbulence is encountered.

(4) Notwithstanding the provisions of Part 91, the owner or operator of a helicopter in respect of which a restricted category type certificate has been issued in terms of Part 21, may conduct an external-load operation over densely inhabited areas, if the operation is conducted without hazard to persons or property on the surface and complies with the following:

- (a) The operator shall compile an approved plan for each complete operation, which shall include --
 - an agreement with the appropriate local government that local officials will exclude unauthorised persons from the area in which the operation will be conducted;
 - (ii) coordination with the appropriate ATSU, if necessary; and
 - (iii) a detailed chart depicting the flight routes and altitudes; and
- (b) each flight shall be conducted at an altitude, and on a route, which will allow -
 - (i) an external load for purposes of release, to be jettisoned; and
 - (ii) the helicopter to land in an emergency without hazard to persons or property on the surface.

(5) Notwithstanding the provisions of Part 91 and except as prescribed in regulation 133.03.3 the owner or operator of a helicopter engaged in an external-load operation may conduct the operation, including an approach, departure, and load positioning manoeuvre necessary for the operation, below 500 feet above the surface and closer than 500 feet to persons, vessels, vehicles, and structures, if such operation is conducted without creating a hazard to persons or property on the surface.

(6) No owner, operator or PIC of a helicopter engaged in an external-load operation shall --

- (a) conduct the operation under IMC, or
- (b) carry passengers during the external-load operation,

unless flight under IMC, or external-load/passenger combination flights, or both, have been approved by the Director on the conditions contained in the operations manual referred to in regulation 127.04.2; or unless prior written permission has been granted by the Director for a specific flight or series of flights on conditions prescribed by him or her: Provided that passengers shall never be carried outside the helicopter in an undersling operation under IMC.

Carriage of persons

133.02.2 (1) The owner or operator of a helicopter engaged in an external-load operation shall ensure that no person is carried during the operation unless such person –

- (a) is a flight crew member;
- (b) is a flight crew member trainee;
- (c) is charged with duties essential to the helicopter external-load operation; or
- (d) is necessary to accomplish the work activity directly associated with that operation.

(2) The PIC shall ensure that all persons are briefed before take-off on all pertinent procedures to be followed, including normal, abnormal and emergency procedures, and equipment to be used during the external-load operation.

Flight crew member training, currency and testing requirements

133.02.3 (1) The owner or operator of a helicopter engaged in an external-load operation shall ensure that the PIC –

- (a) is the holder of a valid underslung load rating (helicopter) or winching rating (helicopter), as the case may be, issued in terms of Part 61; and
- (b) has the knowledge with respect to the helicopter-load combination including the --
 - (i) steps to be taken before starting operations, including a survey of the flight area;
 - (ii) proper method of loading, rigging or attaching the external load;
 - (iii) performance capabilities, under approved operating procedures and limitations, of the helicopter to be used;
 - (iv) proper instructions of flight crew and ground personnel; and
 - (v) the applicable helicopter-load combination flight manual;
- (c) has the skill in respect of the helicopter-load combination including --
 - (i) take-off and landing;
 - (ii) directional control while hovering;
 - (iii) acceleration from a hover;
 - (iv) flight at operational airspeeds;
 - (v) approaches to landing or working area;
 - (vi) manoeuvring the external load into the release position; and
 - (vii) winch operation, if a winch is installed to hoist the external load.

(2) The owner or operator of a helicopter engaged in an external-load operation, shall ensure that each flight crew member or other operations personnel member successfully completes the appropriate training, as prescribed in SA-CATS 133.

(3) Training shall be given by the holder of the appropriate ATO approval issued in terms of Part 141 of these Regulations.

(4) Upon successful completion of the training, the approved ATOs, referred to in subregulation (3), shall issue a certificate of competency to the flight crew member or other operations personnel member concerned.

SUBPART 3: AIRWORTHINESS REQUIREMENTS

Flight characteristic requirements

133.03.1 (1) The owner or operator of a helicopter engaged in an external-load operation shall demonstrate to the Director, by performing the operational flight checks prescribed in sub-regulation (3), (4) or (5), as the case may be, that the helicopter-load combination to be used in the operations has satisfactory flight characteristics.

(2) For the purposes of the demonstration, the external-load mass, including the external-load attaching means, is the maximum mass for which authorisation is requested.

(3) In the case of a Class A helicopter-load combination the operational flight check shall consist of at least the following manoeuvres:

- (a) Take-off and landing;
- (b) demonstration of adequate directional control while hovering;
- (c) acceleration from a hover; and
- (d) horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested.

(4) In the case of a Class B and a Class D helicopter-load combination the operational flight check shall consist of at least the following manoeuvres:

- (a) Pick up of the external load;
- (b) demonstration of adequate directional control while hovering;
- (c) acceleration from a hover;
- (d) horizontal flight at airspeeds up to the maximum airspeed for which authorisation is requested;
- demonstrating appropriate lifting device operation; and
- (f) manoeuvring of the external load into release position and its release, under probable flight operation conditions, by means of each of the quick-release controls installed on the helicopter.

(5) In the case of a Class C helicopter-load combination used in wire-stringing, cable-laying, or similar operations, the operational flight check shall consist of the appropriate manoeuvres prescribed in sub-regulation (4).

Structures and design

133.03.2 (1) Each external-load attaching means and each quick-release device shall have been approved under Part 21.

(2) The total mass of the helicopter-load combination shall not exceed the total mass approved for the helicopter during its type certification.

(3) The location of the centre of gravity shall, for all loading conditions, be within the range established for the helicopter during its type certification.

(4) For a Class C helicopter-load combination, the magnitude and direction of the loading force shall be established at those values for which the effective location of the centre of gravity remains within its established range.

Operating limitations

133.03.3 (1) In addition to the operating limitations contained in the AFM referred to in Regulation 91.03.2, and any other limitations which the Director may determine, the owner or operator of a helicopter engaged in an external-load operation shall establish operating limitations and publish the operating limitations in the helicopter-load combination flight manual referred to in Regulation 133.03.4, for helicopter-load combination operations.

- (2) The operating limitations established by the owner or operator shall include -
 - the mass and centre of gravity limitations established in accordance with Regulation 133.03.2(2), (3) or (4) within which the helicopter-load combination may be operated;
 - (b) the external load mass of the helicopter-foad combination which shall not exceed the external load mass referred to in Regulation 133.03.1(2) and 133.03.2(2) respectively;
 - (c) the airspeeds at which the helicopter-load combination may be operated, which airspeeds shall not be greater than the airspeeds established in accordance with Regulation 133.03.1(3), (4) or (5);
 - (d) a prohibition on the conducting of an external-load operation in terms of this Part, with a helicopter, type certificated in the restricted category in terms of Part 21, over a densely inhabited area, in a congested airway, or near an aerodrome licensed in terms of Part 139; and
 - (e) in the case of a Class D helicopter-load combination such combination may only be conducted in accordance with the following:
 - The helicopter to be used shall be of a multi-engine type and shall provide hover capability with one engine inoperative at that operating mass and altitude;
 - the helicopter shall be equipped to allow direct radio inter-communication among required flight crew members;
 - (iii) the personnel lifting device shall be of an approved type; and
 - (iv) the lifting device shall have an emergency release requiring two distinct actions.

Helicopter-load combination flight manual

133.03.4 (1) The owner or operator of a helicopter to be used in an external-load operation shall compile a helicopter-load combination flight manual and submit the helicopter-load combination flight manual for approval to the Director.

(2) The helicopter-load combination flight manual shall be prepared in accordance with the AFM referred to in Regulation 91.03.2.

(3) The helicopter-load combination flight manual shall include --

- (a) the operating limitations, other than the limiting height-speed envelope data, normal, abnormal and emergency procedures, performance and any other information required in terms of this Subpart;
- (b) the class of helicopter-load combinations for which the airworthiness of the helicopter has been demonstrated in accordance with Regulation 133.03.1 and 133.03.2; and
- (c) in the information section of the helicopter-load combination flight manual -
 - (i) information on any peculiarities discovered when operating particular helicopter-load combinations;
 - (ii) precautionary advice regarding static electricity discharges for Class B, Class C and Class D belicopter-load combinations; and
 - (iii) any other information essential for safe operation with external loads.

(4) The operator of a helicopter engaged in commercial external-load operations shall include the helicopter-load combination flight manual in the operations manual referred to in regulation 127.04.2.

Markings and placards

133.03.5 The owner or operator of a helicopter engaged in an external-load operation shall ensure that the following markings and placards are displayed in a conspicuous place and cannot be easily erased, disfigured, or obscured:

- (a) A placard displayed in the cockpit or cabin, stating the class of helicopter-load combination for which the helicopter has been approved and the occupancy limitation prescribed in regulation 133.03.3(2)(a); and
- (b) a placard, marking, or instruction, displayed next to the external-load attaching means, stating the maximum external load prescribed as an operating limitation in regulation 133.03.3(2)(b).

Equipment

133.03.6 When the pilot at the flight controls of a helicopter engaged in an external-load operation is not verbally guided by a flight crew member on board the helicopter, or by a person the ground using two-way radio communication or the appropriate hand signals, and such pilot is not able to monitor the external load from his or her station, such helicopter shall be fitted with a mirror in such manner that such pilot is able to monitor the external-load from his or her station and conduct the operation without such guidance.

PART 135: AIR TRANSPORT OPERATIONS - CARRIAGE OF LESS THAN 20 PASSENGERS OR CARGO

List of regulations

SUBPART 1: GENERAL

- 135.01.1 Applicability
- 135.01.2 Admission to flight deck
- 135.01.3 Passenger intoxication and unruly behaviour
- 135.01.4 Compliance with foreign and domestic regulations
- 135.01.5 Language proficiency other languages

SUBPART 2: OPERATIONS PERSONNEL REQUIREMENTS

Division One: Flight crew requirements

- 135.02.1 Composition of flight crew
- 135.02.2 Minimum requirements for assignment as PIC
- 135.02.3 Flight crew member emergency duties
- 135.02.4 Area, route and aerodrome qualifications
- 135.02.5 Flight crew member qualifications
- 135.02.6 Requirement for flight followers
- 135.02.7 Flight follower qualifications
- 135.02.8 Ground personnel qualifications
- 135.02.9 Flight time and duty period scheme

SUBPART 3: TRAINING AND CHECKING

- 135.03.1 Air service operator approved training programme
- 135.03.2 Approval of training programme
- 135.03.3 Flight crew member training
- 135.03.4 Employee and service agent training
- 135.03.5 Checking of flight crew members
- 135.03.6 Training and pilot proficiency or competency check validity periods

SUBPART 4: DOCUMENTATION AND RECORDS

- 135.05.1 Documentary requirements
- 135.05.2 Operations manual
- 135.05.3 Standard operating procedures
- 135.05.4 Aeroplane flight manual
- 135.05.5 Operational flight plan

SUBPART 5: AEROPLANE INSTRUMENTS AND EQUIPMENT

- 135.05.1 General
- 135.05.2 Flight, navigation and associated equipment for aeroplanes operated under VFR
- 135.05.3 Flight, navigation and associated equipment for aeroplanes operated under IFR or at night
- 135.05.4 Altitude alerting system
- 135.05.5 Terrain awareness and warning system
- 135.05.6 Airborne weather radar equipment
- 135.05.7 Windshield wipers
- 135.05.8 Airborne collision avoidance system
- 135.05.9 Flight recorders
- 135.05.10 Flight data recorders
- 135.05.11 Cockpit voice recorders
- 135.05.12 Flight recorders utilising data link technology
- 135.05.13 Lifesaving equipment during flight over open water
- 135.05.14 Equipment requirements for aeroplanes on long range over-water flights
- 135.05.15 Equipment requirements for seaplanes
- 135.05.16 Emergency locator transmitter
- 135.05.17 Microphones
- 135.05.18 First aid kit

SUBPART 6: AIR OPERATOR CERTIFICATE

- 135,06.1 Requirements to hold AOC
- 135.06.2 Application for issuance or amendment of AOC and operations specifications
- 135.06.3 Application, adjudication of and issuance of AOC or operations specifications
- 135.06.4 Validity and status of AOC
- 135.06.5 Safety and security inspections and audits
- 135.06.6 Administrative duties of an AOC holder
- 135.06.7 Register of AOCs
- 135.06.8 Demonstration flights

SUBPART 7: FLIGHT OPERATIONS

Division One: General

- 135.07.1 Routes and areas of operation and aerodrome facilities
- 135.07.2 Establishment of procedures
- 135.07.3 Competence of operations personnel
- 135.07.4 Use of air traffic services
- 135.07.5 Single-engine aeroplane IMC and night operations
- 135.07.6 Defect reporting
- 135.07.7 Instrument approach and departure procedures
- 135.07.8 IFR or night flight without second-in-command
- 135.07.9 Reporting of hazardous flight conditions
- 135.07.10 Refuelling and defuelling with passengers on board
- 135.07.11 Reporting acts of unlawful interference
- 135.07.12 In-flight simulation of emergencies
- 135.07.13 Operational control and supervision of flight operations
- 135.07.14 Services for operational control system
- 135.07.15 Familiarity with technical information
- 135.07.16 Retention of flight operations documents and reports
- 135.07.17 Maintenance status
- 135.07.18 Minimum equipment list
- 135.07.19 Aerodrome operating minima
- 135.07.20 Minimum flight altitudes
- 135.07.21 In-flight operational changes to a flight plan
- 135.07.22 Fuel policy
- 135.07.23 Fuel and oil supply and record keeping
- 135.07.24 Operation of aircraft in icing conditions
- 135.07.25 Surface contamination programme
- 135.07.26 Mass and balance control
- 135.07.27 Inertial navigation and inertial reference systems
- 135.07.28 Low visibility operations
- 135.07.29 Operations with head-up displays or enhanced vision systems
- 135.07.30 Operations with electronic flight bags
- 135.07.31 Reduced vertical separation minima aeroplane monitoring
- 135.07.32 Carry-on baggage
- 135.07.33 Hold baggage screening
- 135.07.34 Securing of passenger cabin and galley
- 135.07.35 Passenger services
- 135.07.36 Briefing of passengers
- 135.07.37 Safety features card

SUBPART 8: AEROPLANE PERFORMANCE OPERATING LIMITATIONS

- 135.08.1 General requirements
- 135.08.2 Take-off mass limitations
- 135.08.3 Net take-off flight path
- 135.08.4 En route limitations with single-engine aeroplanes
- 135.08.5 En route limitations with one engine inoperative
- 135.08.6 En route limitations with more than one engine inoperative
- 135.08.7 Dispatch limitations: landing at destination and alternate aerodromes
- 135.08.8 Dispatch limitations: wet runway turbojet- or turbofan-powered aeroplanes

SUBPART 9: MAINTENANCE CONTROL

135.09.1 General

826

- 135.09.2 Aeroplane maintenance programme
- 135.09.3 Maintenance contracted to approved AMO
- 135.09.4 Operator's maintenance responsibilities
- 135.09.5 Operator's maintenance control manual
- 135.09.6 Meintenance records
- 135.09.7 Continuing airworthiness information
- 135.09.8 Modifications and repairs

SUBPART 10: SAFETY MANAGEMENT AND QUALITY SYSTEMS

Division One: Safety management system

- 135.10.1 Requirement for safety management system
- 135.10.2 Components of safety management system
- 135.10.3 Development and approval of safety management manual
- 135.10.4 Establishment and structure of safety management system
- 135.10.5 Holder of more than one certificate
- 135.10.6 Size and complexity

Division One: Quality management system

135.10.7 Requirement for quality management system

SUBPART 1: GENERAL

Applicability

135.01.1 (1) This Part applies to any South African operator engaged in a commercial air transport operation using –

(a) aeropianes registered in the Republic of South Africa -

- (i) having a maximum certificated passenger seating capacity of 19 or less as authorized In the initial type certificate issued to such aeroplane; or
- (ii) operating in an all-cargo configuration having a maximum certificated take-off mass of 8 618 kg or less;
- (b) any aircraft that is authorised by the Director to be operated under this Part;
- (c) persons employed, or otherwise engaged by the operator referred to in sub-regulation (1)(a), 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

135.01.2 (1) An air service operator and the PIC of any aeroplane with a flight deck door operated under this Part, shall ensure that no person, other than the flight crew members assigned to the 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 135.04.2.

(2) Notwithstanding sub-regulation (1), an operator of aeroplanes certificated or authorised for flight with one pilot may use the second seat on the flight deck as a passenger seat.

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

(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

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

(2) An operator shall establish procedures to ensure that any person referred to in subregulation (1) or one whose behaviour otherwise represents a threat to the safety of the aeroplane or its occupants or to the maintenance of good order and discipline on board the aeroplane is –

- (a) refused embarkation; or
- (b) if such person is on board, restrained or disembarked, if possible.

Compliance with foreign and domestic regulations

135.01.4 (1) An operator shall ensure that all pilots are familiar with the taws, regulations and procedures, pertinent to the performance of their duties, prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto. The operator shall ensure that other members of the flight crew are familiar with such of these laws, regulations and procedures as are pertinent to the performance of their respective duties in the operation of the aeroplane.

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

Language proficiency - other languages

135.01.5 In addition to the English 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 the ability to speak and understand the language used for radiotelephony communications over any route and at any aerodrome named in the OFP for that flight.

SUBPART 2: OPERATIONS PERSONNEL REQUIREMENTS

Division One: Flight crew requirements

Composition of flight crew

135.02.1 (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.

(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.

(3) The flight crew shall include at least one member who is proficient in navigating over the route to be flown using the equipment required for such navigation.

(4) An operator shall designate for each flight a PIC and, where the aeroplane is required by this Part to be operated by two pilots, a second-in-command.

(5) A flight crew member may be relieved in flight of his or her flight deck duties by another flight crew member qualified in accordance with regulations 135.02.4 and 135.02.5.

Minimum requirements for assignment as PIC

135.02.2 (1) The operator shall not assign a PiC, and no flight crew member may accept any assignment to act as a PIC of any aeroplane unless such person meets the minimum flight time requirements for command and the operating experience requirements prescribed in Document SA-CATS 135.

(2) The Director may, in the interests of safety, require a PIC to have additional flight time experience prior to operating in that position.

(3) The operator shall publish the minimum flight time for assignment and operating experience requirements for a PIC in its operations manual.

Flight crew member emergency duties

135.02.3 (1) An operator and, where appropriate, the PIC of any aeroplane operated in terms of this Part, 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) A flight crew member shall not accept an assignment of emergency functions unless such flight crew member has been instructed in the performance of such emergency functions in accordance with the requirements prescribed in Subpart 3 and shall include instruction in the use of all emergency and lifesaving equipment required to be carried.

Area, route and aerodrome qualifications

135.02.4 (1) An air service operator shall not assign, and a pilot shall not act as PiC of an aeroplane engaged in passenger-carrying operations, unless the PIC has familiarised him or herself with the area, route and aerodromes to be operated over or into prior to operating there, including consideration of –

- (a) the aerodrome operating minima, terrain and minimum safe altitudes;
- (b) the *en* route and aerodrome meteorological conditions, in particular any localized adverse weather patterns;
- (c) the meteorological, communication and air traffic and search and rescue facilities, services and procedures, as appropriate;
- (d) the aerodrome obstructions, physical layout, approach aids and arrival, departure, holding and instrument approach procedures and weather minima;

- the procedures applicable to flight paths over densely inhabited areas and areas of higher traffic density; and
- (f) with respect to the navigational capability associated with the route along which the flight is to take place, -
 - (i) the use of the equipment needed to navigate the route; and
 - (ii) the navigational facilities and procedures, including any long-range or specialised navigation procedures or equipment, to be used.

(2) The operator shall establish in its operations manual the means by which the PIC is to become familiar with the area, route and aerodromes over or into which he or she is to operate.

Flight crew member qualifications

135.02.5 (1) Subject to sub-regulation (6), an air service operator shall not assign a person to act and no person shall act as the PIC or second-in-command of an aeroplane in a commercial air transport operation unless the person –

- (a) is the holder of valid licences, ratings and certificates appropriate to his or her assignment; and
- (b) has completed the training and checking requirements specified in Subpart 3 as appropriate to the intended flight.

(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) Except as provided in sub-regulation (4), an operator shall not assign a person to act and no person shall act as the PIC or second-in-command on more than three aeroplane types for which a separate licence endorsement is required, having a maximum certificated take-off mass (MCM) greater than 5 700 kg and operated in terms of this Part.

(4) If a person acts as the PIC or second-in-command on one or more aircraft types with an MCM greater than 5 700 kg in terms of Part 93, 96, 121 or 127, the number of aeropiane types operated in terms of this Part shall be reduced by an equal number.

(5) The operator may permit a person to act and a person may act as the PIC or second-incommand of an aeroplane 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; and
- (b) the operator -
 - (i) is authorised to do so in its operations manual; and

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

Division Two: Other than flight crew requirements

Requirement for flight followers

135.02.6 An air service operator shall employ sufficient flight followers to ensure adequate operational control is exercised over its flights.

Flight follower qualifications

135.02.7 An air service operator shall not permit a person to act and no person shall act as a flight follower unless such person meets the training and checking requirements specified in Subpart 3.

Ground personnel qualifications

135.02.8 Where an air service operator employs ground personnel to provide essential ground support services appropriate to the aeroplanes and type of service being operated, the operator shall ensure –

- (a) persons assigned to the handling of dangerous goods are qualified to do so in accordance with Subpart 3; and
- (b) persons assigned to provide direct service to an operator's aeroplanes or any passenger, cargo or mail intended to be carried aboard such aeroplanes, are trained and qualified as appropriate to their assignments.

Division Three: Flight time and duty limitations

Flight time and duty period scheme

135.02.9 (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 that -
 - complies with the flight time and duty period limitations, rest periods and days free of duty, prescribed in Document SA-CATS 135; or
 - (ii) is 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 135.04.2.

(2) The operator shall not assign and no flight 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 flight crew member knows or has been made aware that such flight assignment will cause the flight crew member to exceed the flight time and/or duty periods referred to in sub-regulation (1)(a) while on duty; or
- (b) the flight 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 flight crew members and passengers.

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

(4) Where any flight crew member 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.

SUBPART 3: TRAINING AND CHECKING

Air service operator approved training programme

135.03.1 (1) An air service operator shall implement and maintain a training and checking programme for all personnel referenced in 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, except as provided in Document SA-CATS 135.

(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 135.03.2: 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) An operator who has been approved to conduct its own training programme as provided for in sub-regulation (2), may contract such training either in whole or in part to another organisation in accordance with the provisions specified in Document SA-CATS 135.

- (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 training as appropriate to his or her duties in accordance with the provisions in Document SA-CATS 135;
- (b) each person required to receive the 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 shall meet the requirements prescribed in Document SA-CATS 135.

(5) The training and checking programme referred to in sub-regulation (1) shall meet the content prescribed in Document SA-CATS 135.

(6) The training programme referred to in sub-regulation (1) shall include a system of record keeping as prescribed in regulation 135.04.8.

(7) The training records referred to in sub-regulation (6) shall be retained as provided in regulation 135.04.8.

(8) An operator shall publish the training programme referred to in regulation 135.03.1(1) in the operations manual referred to in regulation 135.04.2.

Approval of training programme

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

(2) The initial and final approval process shall be as prescribed in Document SA-CATS 135.

Flight crew member training

135.03.3 (1) An air service operator shall provide ground and flight training to its flight crew members that includes at least the following training components –

- (a) company induction training;
- (b) crew resource management training;
- (c) cabin safety procedures, emergency equipment procedures and security training;

- (d) initial and recurrent aeroplane type ground and flight training; and
- (e) regaining recency; and
- (f) regaining qualification training.

(2) An operator shall provide ground and flight training to its flight crew members that includes at least the following training components as appropriate to its operation and the type of aeroplane operated –

- (a) line induction training on aeroplanes with a maximum take off mass of greater than 5 700 kg following initial training or upgrade training;
- (b) differences and familiarisation training where the operator intends to assign a flight crew member to variant types, in accordance with regulation 135.02.5(1)(b);
- initial upgrade training for aeroplanes required to be crewed by two pilots;
- (d) for aeroplanes with dual controls, pilot training to operate in either pilot seat for pilots required to operate in either seat;
- (e) area, route and airport familiarization training on initial conversion or upgrade training, as applicable;
- (f) ACAS training;
- (g) RVSM training;
- (h) training for LVO;
- (i) single-engine IFR and night VFR training;
- (j) single pilot IFR and night VFR training;
- (k) dangerous goods training if the operator is authorised to carry dangerous goods or, if not so authorised, dangerous goods awareness training; and
- any other course of studies required by the Director to ensure full competency of personnel on new or special equipment installed in the operator's aeropiane or other operations requiring specialised training.

(3) The training required by sub-regulation (1) and (2) shall be as prescribed in Document SA-CATS 135.

(4) The validity period for any training required under this Subpart shall be as prescribed in regulation 135.03.7.

Employee and service agent training

135.03.4 An air service operator shall provide initial, recurrent and refresher training and checking as prescribed in Document SA-CATS 135 for any person whose function is essential to safe operations in terms of this Part. Such training shall be given to at least –

- (a) flight followers;
- (b) ground service personnel as identified in regulation 135.02.8, as applicable; and
- (c) any other person the Director determines is required to receive training.

Checking of flight crew members

135.03.5 (1) No air service operator may assign nor may a PIC or second-in-command, if applicable, accept an assignment to operate an aeroplane under this Part unless he or she has completed the check requirements specified in Document SA-CATS 135.

(2) The conduct of the checks required in terms of this Subpart shall be as prescribed in Document SA-CATS 135.

Training and pilot proficiency or competency check validity periods

135.03.6 (1) The validity periods of the training required by this Subpart for flight crew members are as follows:

- (a) Company induction training shall be indefinite while employed with that operator except that significant changes in policies or procedures are required to be conveyed to the employee as required.
- (b) Crew resource management training is valid to the first day of the thirteenth month following the fast training.
- (c) Cabin safety, emergency equipment and security training -
 - cabin safety, emergency equipment and security theoretical training is valid indefinitely provided new equipment or procedures are not introduced, whereupon employees shall receive training in such equipment or procedures; and
 - (ii) practical training in the use of emergency equipment is valid until the first day of the thirty-seventh month following the last training.
- (d) Aeroplane ground and flight training is valid to the first day of the thirteenth month following the fast training.
- (e) Regaining competency training is valid indefinitely unless a provision of the regulation is not met.
- (f) Line induction training is valid indefinitely unless the pilot is required to undergo initial or upgrade training.

- (g) Differences and familiarisation training is valid indefinitely provided recurrent ground and flight training is completed as provided in the approved training programme.
- (h) Upgrade training is valid indefinitely on that aeroplane type.
- (i) Pilot qualification to operate in either pilot seat is valid to the first day of the thirteenth month following the last training.
- (j) ACAS training is valid to the first day of the thirteenth month following the last training.
- (k) RVSM training is valid indefinitely provided the pilot has operated in RVSM airspace in the preceding 12 months.
- (I) LVO training is valid to the first day of the thirteenth month following the last training.
- (m) Single-engine IFR or night training is valid to the first day of the thirteenth month following the last training.
- (n) Single-pilot IFR or night operations training is valid to the first day of the thirteenth month following the last training.
- (o) Dangerous goods training and dangerous goods awareness training are valid to the first day of the twenty-fifth month following the last training.
- (p) The validity periods of training in other areas shall be as determined by the Director. Training with respect to flight operations involving the use of specialised equipment or procedures shall be accomplished as part of the annual recurrent training programme.

(2) The validity period of the training required by this Subpart for employees and agents shall be as specified in the approved training programme.

(3) Except as provided in technical standard 135.03.6 of Document SA-CATS 135, the following checking validity periods shall apply –

- (a) for flight crew members
 - except as provided in subparagraph (ii), a PPC or competency check is valid to the first day of the seventh month following the month the PPC or competency check took place;
 - (ii) where an operator is approved for aeroplane grouping on specific aeroplane types, as provided in technical standard 135.03.6(5) of Document SA-CATS 135, such approval allows for the PPC completed on one aeroplane of the grouped types to be valid to the first day of the seventh month following the month in which the PPC took place for all the aeroplanes in that grouping; and
 - (iii) a line check is valid until the first day of the thirteenth month following the month the line check took place; and
- (b) for other than flight crew members, checks are valid until the first day of the twenty-fifth month following the month the check took place.

(4) Where any required training or check is renewed within the last 60 days of its validity period, its validity period is extended by 12, 24 or 36 months, as appropriate.

(5) The Director may extend the validity period of any training or check 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 check or training.

(6) Completion of a training or check requirement at any time during the periods specified in paragraphs (4) or (5) above shall be considered as completed in the month due for calculation of the next due date.

SUBPART 4: DOCUMENTATION AND RECORDS

Documentary requirements

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

- (a) a copy of the OFP;
- (b) the special loads notification (NOTOC), if applicable;
- (c) the insurance certificate or proof of insurance;
- (d) a copy of the AOC and operations specifications;
- (e) the load and trim sheet specified in regulation 135.04.9;
- (f) a copy of the standard operating procedures or aircraft operating manual, as applicable;
- (g) a copy of the operations manual referred to in regulation 135.04.2 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;
- (d) the crew and passenger list and cargo manifest, if applicable; and
- (e) the NOTOC, if applicable;

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 subregulation (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

135.04.2 (1) An air service operator shall prepare an operations manual containing all the 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 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 135.06.3;
- (b) the manual can be readily amended;
- (c) the manual contains an amendment control page and a list of effective pages (LEP) that are in effect 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 duplicate to the Director for approval.
- (4) If the Director is satisfied that the operator –
- (a) will comply with the provisions of regulation 135.06.7; 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 the 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), 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.

(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) make available on board the aeroplane for the use of crew members, controlled copies of the sections of the operations manual which are relevant to the duties assigned to them;
- (e) provide each manual holder with copies of all amendments after approval by the Director and such manual holder shall insert amendments issued to him or her 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 135.

Standard operating procedures

135.04.3 (1) An air service operator shall compile standard operating procedures (SOPs) for each aeroplane type being operated and make them 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 procedures.

(2) The operator shall provide such portions of the SOPs to the operator's employees or agents if required in the performance of their duties.

(3) The SOPs shall meet the requirements of, and contain the information specified in Document SA-CATS 135.

(4) The operator shall ensure each flight crew member has access to the SOPs during flight time and that such SOPs are current.

(5) The operator shall publish the SOPs as a stand-alone document as part of the manual system or include them in an aircraft operating manual (AOM) that meets the requirements of Document SA-CATS 135.

(6) The operator may provide the SOPs or 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.

Aeroplane flight manual

135.04.4 (1) An air service operator shall operate its aeroplanes in accordance with the approved aeroplane flight manual (AFM) required by regulation 91,03.2.

(2) An 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.

Operational flight plan

135.04.5 (1) An air service operator shall ensure that an OFP is completed for each flight undertaken by the aeroplane in terms of this Part.

(2) The OFP and its use shall be contained in the operations manual referred to in regulation 135.04.2.

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

(4) The items to be contained in the OFP shall be as prescribed in Document SA-CATS 135.

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

Flight time and duty period records

135.04.6 (1) An air service operator 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 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 flight crew member is employed. While the flight crew member is responsible to report all flight activity, each employer maintains responsibility to ensure the flight crew member concerned does not exceed the limits prescribed in the flight time and duty scheme of the operator referred to in regulation 135.02.9.

Records of emergency and survival equipment

135.04.7 (1) An air service operator shall have on board the aeroplane a list of all the survival and emergency equipment to be carried in the aeroplane and shall have such a list available at the operator's facility at all times for immediate communication to rescue coordination centres.

(2) The format and minimum information to be included in the survival and emergency equipment list shall be as prescribed in technical standard 91.01.5 of Document SA-CATS 91.

Training records

135.04.8 (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 135.

(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

135.04.9 (1) An air service operator 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) No PIC may conduct a take-off unless he or she has accepted the load and trim sheet as provided in Document SA-CATS 135.

(3) 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 135.04.1.

(4) The minimum contents of a load and trim sheet shall be as prescribed in Document SA-CATS 135.

Aeroplane search procedure checklist

135.04.10 (1) 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.

(2) The checklist referred to in sub-regulation (1) shall be supported by guidance on the appropriate course of action to be taken should a bomb or suspicious object be found and information on the least-risk bomb location specific to the aeroplane where such information is available from the manufacturer.

Preservation of documents

135.04.11 An air service operator shall retain any document required in terms of Subpart 4, for the period of time specified therein even where, prior to the expiry of such retention period, the operator ceases to maintain ownership or possession of the aeroplane or no longer employs the person concerned.

ATS flight planning for a series of flights

135.04.12 (1) An air service operator shall ensure that an ATS flight plan is completed for each flight operated under this Part unless the flight is operated on a series of flights as provided in sub-regulation (2) and for each sector, alerting service has not been requested and the aeroplane does not –

- (a) depart or arrive at a controlled aerodrome;
- (b) operate within or transit through any controlled or advisory airspace; or
- (c) operate within an airway or advisory route unless crossing such at right angles.

(2) For the purposes of sub-regulation (1), a series of flights is deemed to occur as long as the following criteria are met -

- (a) the series of flights shall not result in flight time longer than 90 minutes in total;
- (b) no individual sector shall be longer than 30 minutes; and
- (c) the time spent on the ground at each en route stop shall not exceed 30 minutes.

SUBPART 5: AEROPLANE INSTRUMENTS AND EQUIPMENT

General

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

(2) An air service operator shall ensure that a flight does not commence unless the instruments and equipment referred to in sub-regulation (2) 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 (3), 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 referred to in regulation 135.07.22.

(3) Except as provided in sub-regulations (1)(b) and (4), 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 the type of flight being operated;
- (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.

(4) 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 specifically for that purpose.

(5) 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 (2), that are not serviceable or that have been removed unless approved in the aeroplane flight manual or –

- (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 or other document approved for the operator, as applicable.

Flight, navigation and associated equipment for aeroplanes operated under VFR

135.05.2 (1) An air service operator shall not operate the 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 pilot 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 altitude indicator;
- (h) a stabilised direction indicator; and
- (i) a means of indicating on the flight deck the outside air temperature in degrees Celsius.

(2) For aeroplanes required by these Regulations or the type certificate of the aeroplane to be operated by two pilots, 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 altitude 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 altitude indicator and a slip indicator.

Flight, navigation and associated equipment for aeroplanes operated under IFR or at night

135.05.3 (1) An air service operator shall not operate the aeroplane in accordance with IFR or at night, 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 altitude 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 verticalspeed indicators;
- (k) a chart holder in an easily readable position which can be illuminated, if to be operated at night;
- (I) a power-failure warning device or vacuum indicator to show the power available for gyroscopic instruments from each power source; and
- (m) a pressure altitude reporting transponder with a capability of providing pressurealtitude information with a resolution of 25 ft or better -
 - (i) for all aeroplanes for which the individual certificate of airworthiness is first issued after 1 January 2009; and
 - (ii) for all large turbine-engine aeroplanes after 1 January 2014.

(2) The operator shall not operate an aeroplane in IMC, unless such aeroplane is equipped with --

- (a) in the case of a single-engine aeroplane, as provided in regulation 135.07.5;
- (b) 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
- (c) for all aeroplanes, at least 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 aeroplane 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 aeroplane must be on a different engine;

(3) The operator shall not operate aeroplanes required by these Regulations or the type certificate of the aeroplane to be operated by two pilots unless such aeroplanes are equipped as provided in regulation 135.05.2(2).

(4) In addition to the flight and navigation equipment referred to in sub-regulations (1), (2) and (3), a large aeroplane shall be equipped with a single standby altitude 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 altitude 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 altitude 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 altitude instrument system is capable of being used through flight altitudes of 360° of pitch and roll, the turn-and-slip indicators may be replaced by slip indicators.

(5) Where the standby altitude indicator referred to in sub-regulation (4) 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) 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

135.05.4 The operator of a large turbine engine aeroplane shall not operate the aeroplane unless such aeroplane is equipped with an attitude 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

135.05.5 (1) All turbine-engine aeroplanes of a maximum certificated take-off mass in excess of 15 000 kg, 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 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 has a predictive terrain avoidance function.

(4) As from 1 January 2013 all piston-engine aeropianes 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 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 the landing configuration as follows -
 - (i) gear not locked down; or
 - (ii) flaps not in a landing position; and
- (e) excessive descent below the instrument glide path.

(7) The TAWS equipment required by this regulation shall meet the requirements specified in technical standard 91.04.33 of Document SA-CATS 91.

(8 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

135.05.6 (1) Subject to the provisions of sub-regulation (2), an air service operator shall not operate an aeroplane at night or in #MC in an 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.

Windshield wipers

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

Airborne collision avoidance system

135.05.8 (1) The operator of a large turbine-engine aeroplane shall not operate the 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 in the use of ACAS as prescribed in technical standard 135.03.3 of Document SA-CATS 135.
- (2) Notwithstanding the provisions of sub-regulation (1), such 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.

Flight recorders

135.05.9 (1) An air service operator shall ensure that the aeroplanes required to be equipped with the flight recorders as provided in this Subpart are installed as specified in Document SA-CATS 135 and meet the crashworthiness and fire protection specifications as provided therein.

(2) Flight recorders shall be checked and inspected daily and on an annual basis as specified in Document SA-CATS 135.

(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 a serious incident in which the aeroplane is not able to continue on its intended itinerary, 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.

Flight data recorders

135.05.10 (1) An air service operator shall ensure that the aeroplane specified in Document SA-CATS 135 is equipped and operated with the FDR specified therein.

(2) An operator shall ensure that the FDR required by sub-regulation (1) complies with the specifications prescribed in Document SA-CATS 135.

(3) The parameters of the FDR shall be determined to be within the ranges, accuracies and recording intervals as prescribed in Document SA-CATS 135 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, altitude, 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, altitude, engine power and configuration of lift and drag devices.
- (4) 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.

(5) 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.

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

(7) 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.

- (8) 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
 - the aeroplane shall not depart from an aerodrome where repairs or replacements to such FDR can be made;
 - the aeroptane 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 135.05.12.

Cockpit voice recorders

135.05.11 (1) An air service operator shall ensure the aeroplanes specified in Document SA-CATS 135, when operated in terms of this Part, are equipped with the CVR specified in Document SA-CATS 135 and that such CVR complies with the specifications prescribed therein.

- (2) The CVR shall record, with reference to a time scale -
- 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;
- 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.
- (3) The CVR shall –

- (a) be capable of retaining information recorded during at least the period of time as prescribed in Document SA-CATS 135;
- (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.
- (4) The CVR may be combined with a FDR referred to in regulation 135.05.11.

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

- (6) 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 -
 - 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.

Flight recorders utilising data link technology

135.05.12 (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 135 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 135 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

135.05.13 (1) No air service operator shall operate a 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) landplanes having two or more power-units, where in the event of the failure of one power-unit for aeroplanes having two power-units or two power-units for aeroplanes having three or more power-units, a ditching would be required;
- (b) for single-engine landplanes, when operating over water beyond gliding distance from the shore; or
- (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

135.05.14 (1) In addition to the equipment prescribed in regulation 135.05.13 (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 in the case of aeroplanes operated in accordance with 135.05.13 (2)(a), and 30 minutes or 100 nm, whichever is the lesser, for all single-engine landplanes –

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

Equipment requirements for seaplanes

135.05.15 All seaplanes, including amphibian aeroplanes operated as seaplanes, for all flights shall be equipped with –

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

- (b) equipment for making the sound signals prescribed in the International Regulations for Preventing Collisions at Sea, where applicable; and
- (c) one sea anchor (drogue).

Emergency locator transmitter

135.05.16 (1) No air service operator shall operate an aeroplane certificated for 19 passengers or less unless such aeroplane is equipped with ~

- (a) at least one ELT 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, at least one automatic ELT.

(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

135.05.17 All flight crew members when operating, who are required to be on flight deck duty, shall communicate through boom or throat microphones below the transition level/altitude.

First aid kit

135.05.18 (1) No air operator shall operate an aircraft unless such aircraft is equipped with a first aid kit consisting of the medical supplies as prescribed in Document SA-CATS 135.

(2) The owner or operator shall carry out periodical inspections of the first aid kit specified in sub-regulation (1) to ensure that, as far as practicable, the contents thereof are in a condition necessary for their intended use.

(3) The contents of the first aid kit specified in sub-regulation (1) shall be replenished at regular intervals, in accordance with instructions contained on their labels, or as circumstances require.

(4) The first aid kit specified in sub-regulation (1) shall be readily accessible to the crew or passengers.

SUBPART 6: AIR OPERATOR CERTIFICATE

Requirements to hold AOC

135.06.1 (1) No air service operator shall operate an aeroplane unless the operator is the holder of and complies with the conditions of a valid AOC including the operations specifications attached thereto, issued in terms of this Part and an air services licence issued in terms of the Air Services Licensing Act, 1990, or the international Air Services Act, 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 issuance or amendment of AOC and operations specifications

135.06.2 (1) An application for the issuance or amendment of an AOC or associated operations specifications (OpSpecs) shall be made to the Director in the form and manner prescribed in Document SA-CATS 135 and shall be accompanied by the appropriate fee prescribed in Part 187.

(2) Each application made in terms of sub-regulation (1), subject to the approval of the Director, shall demonstrate 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 submission of an application under this Subpart does not place any obligation upon the Director to issue an AOC or OpSpecs until he or she has been given reasonable time, as agreed in the schedule of events, to review the application and the application has been adjudicated in terms of regulation 135.06.3. (4) 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 –
 - safety equipment contained on board;
 - ancillary equipment such as navigational aids, auto flight system, flight director or FMS, ACAS, TAWS, weather radar, etc; and
 - 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.

(5) The personnel referred to in sub-regulation (2)(a) shall be comprised of the following positions, 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) air safety officer;
- (e) quality manager; and

(f) security manager.

(6) When, after consideration of the scope and size of an operator applicant, 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.

(7) The nominated post-holders required by sub-regulation (6) shall meet the qualifications and be responsible for the functions specified in Document SA-CATS 135.

(8) Any post-holder of the positions listed in sub-regulation (6), who held such position on the commencement of these Regulations, shall be deemed to meet the qualifications required by Document SA-CATS 135: 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 135 within six months from the commencement of these Regulations.

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

- (10) The Director may amend any 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.

(11) 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.

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

(13) 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.

(14) 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.

(15) 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

135.06.3 (1) In considering an application referred to in regulation 135.06.2, 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 AOC 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, 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 shall contain at least the information prescribed in Document SA-CATS 135.

Validity and status of AOC

135.06.4 (1) Unless otherwise specified by the Director, an AOC shall remain valid and in force until suspended or cancelled: 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 operator continues to meet the requirements for issue of an AOC; and
- (d) the AOC is not voluntarily returned to the Director.
- (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

35.06.5 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 135.06.2.

Administrative duties of an AOC holder

135.06.6 (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 air service 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) to the Director for approval before effecting such changes: Provided that, in the case of the sudden departure of an incumbent, the operator shall immediately notify the Director of the event and the means by which safety of operations will be ensured 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

135.06.7 (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 by the Director.

(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.

Demonstration flights

135.06.8 (1) No person may operate a large aeroplane in commercial air transport unless he or she first conducts satisfactory demonstration flights as specified in Document SA-CATS 135.

(2) No person may operate an aeroplane 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 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

135.07.1 (1) An aeroplane shall not be operated over any route or airway in IMC unless --

- (a) in the case of a single-engine aeroplane, the cloud base at any point along the route of flight is not lower than that which would permit descent in VMC below the minimum *en route* altitude published or established by the operator for such route or airway;
- (b) in the case of a twin-engine aeroplane in the event of the failure of the critical engine, -
 - the aeroplane is capable of maintaining the minimum *en route* altitude published or established by the operator for such route or ainway; or
 - (ii) the aeroplane is not capable of maintaining the minimum *en route* aftitude published or established by the operator for such route or airway and
 - (aa) the aeroplane is able to maintain flight to a suitable fanding area, the cloud base at any point along the route of flight is not lower than that which would permit descent in VMC below the minimum *en route* altitude published or established by the operator for such route or airway and flight in VMC to a suitable landing area; or
 - (bb) the aeroplane is unable to maintain flight to a suitable landing area, the cloud base at any point along the route of flight is not lower than that which would permit descent in VMC below the minimum *en route* altitude published or established by the operator for such route or airway;
- (c) 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
- (d) in addition to paragraphs (b)(i), (b)(ii)(aa) and (c), the aeroplane shall be capable of (anding at the intended destination or alternate aerodrome in accordance with the related landing performance criteria for such aeroplane.

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

- (a) for other than an isolated aerodrome -
 - (i) two separate runways, arranged such that the closure of one cannot affect the operations of the other and each with an operational straight-in approach procedure, are available and usable by the flight crew at the destination aerodrome; and
 - (ii) 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
- (b) for a destination aerodrome that is isolated and for which no adequate destination alternate aerodrome exists, -
 - a standard instrument approach procedure is prescribed for the aerodrome of intended landing and the associated navigation aids will be functional from two hours before time of arrival; and
 - (ii) available current meteorological information indicates that the following meteorological conditions will exist from two hours before time of arrival -
 - (aa) a cloud base of at least 1 000 ft above the minimum associated with the instrument approach procedure; and
 - (bb) visibility of at teast 5.5 km or of 4 km more than the minimum associated with the procedure, whichever is greater.

(3) The operator of an aeroplane shall select at least two destination alternate aerodromes for each IFR flight when –

- (a) 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
- (b) meteorological information is not available at the destination aerodrome.

(4) 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 135.

(5) 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.

(6) 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 135.07.24 and, for operations in uncontrolled airspace, the means for ensuring a navigational capability is maintained while operating on any route used therein.

- (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 135, no operator shall operate a twin-engine aeroplane 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 120 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 and rescue fire fighting services –

- (a) are available as required for the safe operation of the aeroplane and the protection of the passengers;
- (b) are adequate for the type of operation being conducted; and
- (c) are functioning normally for their intended purpose.

(9) An operator shall establish procedures in its operations manual that will ensure an operation can be safely conducted in the event that the rescue fire fighting services at an aerodrome that may be used are or may be below that for which the aerodrome is certified, and such procedures shall include a risk assessment.

(10) 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

135.07.2 (1) An air operator shall -

- (a) establish for each aeroplane type, procedures and instructions for ground personnel and crew members pertaining to their duties for all types of operations on the ground and in flight;
- (b) provide 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 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, if any;
- (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 aeroptane manufacture or not included in the check system provided for in the approved aeroptane flight manual.

(3) The PIC shall ensure all check procedures, including checklists, are complied with in detail.

Competence of operations personnel

135.07.3 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

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

Single-engine aeroplane IMC and night operations

135.07.5 (1) Except as provided in sub-regulations (2) and (3), no air service operator shall operate a single-engine aeroplane with passengers or cargo on board in IMC or night flight.

(2) An operator may operate a single turbine engine aeroplane with passengers on board in IMC or night flight: Provided such operator –

- (a) is authorized to do so in its operations specifications; and
- (b) complies with the provisions prescribed in Document SA-CATS 135.

(3) An operator may operate a single-engine aeroplane with cargo only on board in IMC or night flight: Provided such operator –

- (a) meets the requirements of sub-regulation (2); or
- (b) is authorized to do so in its operations specifications; and
- (c) complies with the provisions prescribed in Document SA-CATS 135.

Defect reporting

135.07.6 (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.

(3) If any report of an incident, as specified in sub-regulation (2), has been received, the operator shall compile and submit a report to the Director within a month of having received such report.

Instrument approach and departure procedures

135.07.7 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 such instrument approach and departure procedures have been approved by –

- (a) the appropriate authority of the State in which such aerodrome is located; or
- (b) the Director.

IFR or night flight without second-in-command

135.07.8 No air service operator may operate an aeroplane without a second-in-command during IFR or night VFR flight unless –

- (a) the aeroplane is -
 - (i) of a certificated maximum mass of less than or equal to 5 700 kg;
 - (ii) is not certificated to carry more than nine passengers; and
 - (iii) not certificated or otherwise required by these Regulations to be flown by two pilots;
- (b) the operator is authorized to do so in his or her operations specifications; and
- (c) the operator meets the requirements specified in Document SA-CATS 135.

Reporting of hazardous flight conditions

135.07.9 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 air traffic services unit as soon as possible, giving such details as may be pertinent to the safety of other aeroplanes.

Refuelling and defuelling with passengers on board

135.07.10 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 135 and such procedures are included in the operator's operations manual.

Reporting acts of unlawful interference

135.07.11 Following an act of unlawful interference, the PIC shall where, in his opinion the safety of persons on board the aeroplane would not be jeopardized, report the events to the nearest ATS authority by the most discrete method possible, by the means devised for such communications.

In-flight simulation of emergencies

135.07.12 No person shall simulate any emergency or abnormal condition during flight that would effectively alter the flight characteristics of the aeroplane or otherwise induce a potentially unsafe safety condition when passengers are on board such aeroplane.

Division Two: Dispatch and flight release rules

Operational control and supervision of flight operations

135.07.13 (1) An air service operator shall establish and maintain an operational control system (OCS) that meets the requirements prescribed in Document SA-CATS 135 and which provides operational control services appropriate to the flights being operated.

(2) An operator who wishes to use flight operations officers (FOOs) in their OCS or who wishes to operate under a Type A OCS as provided in regulation 121.07.13, shall meet the appropriate provisions of Part 121 as follows –

- (a) for the use of FOOs, regulations 121.02.14 and 121.02.15 and Subpart 3, Divisions Four and Five; and
- (b) for a Type A OCS, Subpart 7, Division Two.

Services for operational control system

135.07.14 An air service operator may use the operational control system of an agent whether domestic or foreign: Provided the service agreement is approved by the Director and the methods, procedures and policies for effecting operational control are described in the operator's operations manual.

Familiarity with technical information

135.07.15 No air service operator shall permit a flight to be released unless the PIC is thoroughly familiar with any technical information relevant to the proposed flight including aeroplane performance, maintenance status, bulletins or operational directives issued by the person responsible for flight operations and that nothing in such information indicates there is a threat to the safety of the flight.

Retention of flight operations documents and reports

135.07.16 (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 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

135.07.17 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 135.07.22, a CDL approved by the State of Manufacture or as otherwise permitted in the aeroplane flight manual.

Minimum equipment list

135.07.18 (1) No person may conduct a take-off in an aeroplane with instruments or equipment that are not serviceable or that have been removed unless the aeroplane is operated in accordance with a CDL, the provisions specified in the aeroplane flight manual or the conditions or limitations specified in a MEL, which has been approved by the Director and, in the opinion of the PIC, aviation safety will not be compromised.

(2) An air service 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.

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

Aerodrome operating minima

135.07.19 (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 135.07.33.

(3) The operator shall ensure that all instrument approaches and departures are conducted 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

135.07.20 (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.

In-flight operational changes to a flight plan

135.07.21 (1) An operator shall, when practicable, coordinate with the appropriate air traffic services unit (ATSU) any in-flight operational changes to a current air traffic services flight plan before the operator communicates such changes to the aeroplane.

(2) When the coordination required by sub-regulation (1) is not practicable, the pilot shall be responsible for obtaining an appropriate approval and clearance from an ATSU, if applicable, before making a change in the flight plan.

Fuel policy

135.07.22 (1) An air service operator shall establish a fuel policy that meets the standards prescribed in Document SA-CATS 135 for the purpose of flight planning and in-flight re-planning 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 aeroplanespecific data or the operations manual referred to in regulation 135.04.2;
- (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 135.04.2.

(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 and oil supply and record keeping

135.07.23 The operator shall keep a record of all fuel uplifts, including quantities and types. Record-keeping procedures shall be published in the operations manual and shall be considered a part of the flight documents for record retention as prescribed in sub-regulation 135.07.20.

Operation of aircraft in icing conditions

135.07.24 (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 and the type certificate or the AFM 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

135.07.25 (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 critical 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 a critical surface contamination training programme approved for such the 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 operator is not required to have the programme specified in 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.

Mass and balance control

135.07.26 (1) No person shall operate an aerophane unless, during every phase of the flight, the load restrictions, mass and centre of gravity of the aerophane conform to the limitations specified in the aerophane 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 135.04.9.

Inertial navigation and inertial reference systems

135.07.27 No air service operator shall use inertial navigation or reference systems (INS/IRS) unless such operator –

- (c) is authorised to do so in its operations specifications; and
- (b) complies with the INS/IRS requirements prescribed in Document SA-CATS 135.

Low visibility operations

135.07.28 No air service operator shall assign and no person shall conduct a low visibility takeoff or Category II or III approach unless --

- (a) the operator meets the conditions prescribed in Document SA-CATS 135;
- (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 its operations manual.

Operations with head-up displays or enhanced vision systems

135.07.29 (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-CAT-OPS-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

135.07.30 (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-CATS 135.

(2) The operator shall include the procedures for use of such equipment in the operations manual referred to in regulation 135.04.2.

RVSM – aeroplane monitoring

135.07.31 (1) An air service operator authorised to operate in RVSM 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.

Division Three: Cabin safety

Carry-on baggage

135.07.32 (1) An air service 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) For aeroplanes operated under this Part having a MCM of greater than 5 700 kg, the minimum requirements for the procedures referred to in sub-regulation (1) shall be as prescribed in Document SA-CATS 135.

Hold baggage screening

135.07.33 An air service operator engaged in scheduled or international operations shall not carry any originating hold baggage unless such baggage has been screened prior to being loaded into the aircraft in a manner acceptable to the Director.

Securing of passenger cabin and galley

135.07.34 (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) Where service galleys are made available to the passengers on a self service basis, the cabin briefing shall include a demonstration and safety instructions in the use and stowage procedures of the galley area containing such services.

(5) No take-off or landing shall be commenced by the PIC of the aeroplane, unless he or she has completed such cabin checks as necessary to ensure the safe condition of the cabin.

Passenger services

135.07.35 (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.

Briefing of passengers

135.07.36 (1) The PIC shall ensure that passengers are given a safety briefing in accordance with Document SA-CATS 135.

(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 135.

(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

135.07.37 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 135.

SUBPART 8: AEROPLANE PERFORMANCE OPERATING LIMITATIONS

General requirements

135.08.1 (1) Any determination made for the purposes of this Subpart shall be based on approved performance data set out in the aerophane flight manual for the aerophane concerned.

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

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

(b) complies with the requirements as prescribed in SA-CATS 135.

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

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

(5) Except as authorised by the Director or as provided in regulation 135.07.5, singleengine aeroptanes shall only be operated in conditions of weather and light, and over such routes and diversions therefrom, that permit a forced landing to be executed in the event of engine failure. (6) 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.

(7) 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.

(8) 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.

(9) 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.

Take-off mass limitations

135,08.2 (1) No person shall conduct a take-off in an aeropiane if the mass of the aeropiane -

- (a) exceeds the maximum take-off mass specified in the aeroplane flight manual for the pressure attitude 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) 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).
- (3) For the purposes of sub-regulation (2), the factors to be taken into account are -
- (a) mass of the aeroplane;
- (b) specific operating procedures;
- (c) 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 bare and dry, the appropriate penalty based upon the runway condition or contaminates such as slope, ice, snow, slush, standing water or water surfaces for seaplanes shall be factored into the performance calculation; and
- (g) any other factor that may significantly affect aeroplane performance.

Net take-off flight path

135.08.3 (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;
 - subject to sub-regulation (3), using 15 degrees or less of bank at or below 400 feet; and
 - (iii) using not more than 25 degrees of bank thereafter, aeroplane speed and configuration permitting.

(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 single-engine aeroplanes

135.08.4 An air service operator shall not operate a single-engine aerophane in IMC over any route unless it is capable of meeting the requirements of regulation 135.07.1(3)(a) in the event of an engine failure.

En route limitations with one engine inoperative

135.08.5 (1) An air service operator shall not operate a twin-engine aeroplane in *IMC* over any route if the weight of the aeroplane is greater than the weight that will allow the aeroplane to meet the requirements of regulation 135.07.1(3)(b) in the event of an engine failure.

(2) An operator shall not operate a twin-engine aerophane in VMC over any route if the weight of the aerophane is greater than the weight that will allow the aerophane when operating in VFR flight, to maintain at least 500 feet above the surface in the event of an engine failure.

En route limitations with more than one englne inoperative

f35.08.6 An air service operator shall not operate an aeroplane equipped with more than two engines in IMC over any route if the weight of the aeroplane is greater than the weight that will allow the aeroplane to meet the requirements of regulation 135.07.1(3)(c) in the event of the failure of two engines.

Dispatch limitations: landing at destination and alternate aerodromes

135.08.7 (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 any turbojet- or turbofan-powered aeroplane, within 60 per cent of the landing distance available (LDA), or
- (ii) in the case of a large propeller-driven aeroplane, within 70 per cent of the LDA; and
- (b) the mass of the aeroplane on landing at any 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 LDA, and
 - (ii) in the case of a propeller-driven aeroplane, within 70 per cent of the 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, if such pressure altitude can be determined;
- (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 shall 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

135.08.8 (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, and no PIC shall 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 135.08.7(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 135.08.7, if the aeroplane flight manual includes specific information about landing distances on wet runways

SUBPART 9: MAINTENANCE CONTROL

General

135.09.1 (1) An air service operator shall not operate any aeroplane under this Part unless such aeroplane is maintained in accordance with Part 43.

(2) An air service operator shall ensure that the aeroplane is maintained in accordance with an approved aeroplane maintenance programme.

(3) An operator may contract its maintenance out as provided in regulation 135.09.3.

(4) The maintenance programme referred to in sub-regulation (2) shall contain the information required by regulation 135.09.2(1) and be provided to the maintenance personnel concerned and such other personnel as may be required.

Aeroplane maintenance programme

135.09.2 (1) The maintenance programme referred to in regulation 135.09.1(2) shall be developed for each aeroplane 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.

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

(3) The design and application of the maintenance programme shall observe human factors principles.

(4) Upon approval of the Director, copies of all amendments to the maintenance programme shall be furnished promptly to all organisations or persons to whom the maintenance programme has been issued.

Maintenance contracted to approved AMO

135.09.3 (1) An air service operator contracting its maintenance out as provided in regulation 135.09.1(3) shall ensure such contract is with the holder of an AMO approval with the appropriate rating issued in terms of Part 145.

(2) The operator shall implement a system of quality assurance to ensure that all maintenance is carried out by the contracted organisation as provided in the contract.

Operator's maintenance responsibilities

135.09.4 (1) An air service operator shall establish procedures acceptable to the Director that ensure –

- each aeroplane they operate is maintained in an airworthy condition;
- (b) the operational and emergency equipment necessary for an intended flight are serviceable; and
- (c) the Certificate of Airworthiness of each aeroplane they operate, including any appropriate special conditions, remains valid.

(2) The operator shall not operate an aeroplane unless it is maintained and released to service by an organisation designated in accordance with Part 145 in the manner referred to in regulation 135.09.3.

(3) The operator shall be resourced sufficiently to ensure that all maintenance is carried out in accordance with the maintenance control manual referred to in regulation 135.09.5.

Operator's maintenance control manual

135.09.5 (1) An air service operator shall provide a maintenance control manual (MCM) that meets the requirements prescribed in Document SA-CATS 43 for the use and guidance of the maintenance and operational personnel concerned.

(2) The MCM referred to in sub-regulation (1) shall incorporate relevant principles of human factors.

(3) If the operator develops a separate MCM as part of the operations manual system, two copies of the proposed MCM shall be provided to the Director.

(4) 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. 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

135.09.6 (1) The following records shall be kept for each aeroplane for the periods prescribed in sub-regulation (3) –

- (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) An operator shall describe in its maintenance control manual who is responsible for the retention of the records required by sub-regulation (1) and where they will be kept.

(3) 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.

Continuing airworthiness information

135.09.7 (1) An air service operator operating aeroplanes in excess of 5 700 kg MCM shall, describe in its maintenance control manual -

- (a) who is responsible to monitor and assess maintenance and operational experience with respect to continuing airworthiness and obtain such other information that the Director prescribes; and
- (b) who shall report such information to the Director 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 describe in its MCM who is responsible to obtain and assess continuing airworthiness information and recommendations issued by an aeroplane manufacturer, the organisation 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

135.09.8 (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 MANAGEMENT AND QUALITY SYSTEMS

Division One: Safety management system

Requirement for safety management system

135.10.1 (1) An air service operator shall ensure 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

135.10.2 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;
- a process for identifying hazards to aviation safety and for evaluating and managing the associated risks;
- (d) a process for the early alerting of the persons responsible for operations about known or suspected hazards that would require immediate safety resolution action to be taken through the operational or maintenance control systems;
- (e) a reporting system for reporting safety concerns that, to the extent possible guarantees anonymity of the person making the report;
- (f) a policy and process defining the conditions under which immunity from

disciplinary action against any person who reports a known or suspected hazard or is involved in an occurrence will apply;

- (g) a process for conducting periodic scheduled reviews or audits of the SMS in accordance with the quality management system as provided in regulation 135.10.8(2)(a);
- (h) a process for the investigation of accidents and incidents for the purposes of implementing reactive safety measures;
- a process of enhancing safety awareness through communication and safety promotion and a feedback system of reporting safety actions and outcomes;
- scheduled safety meetings, a means of informing interested parties of those meetings and a means of informing company personnel of relevant information and actions arising out of such meetings;

Development and approval of safety management manual

135.10.3 (1) Except as provided in sub-regulation (2), an air service operator shall establish a safety management manual (SMM), either as a part of the operations manual system or a stand alone document, that is as prescribed in Document SA-CATS 135.

(2) The operator's SMM shall be submitted to the Director for approval and shall included at least –

- (a) a process for safety performance measurement of the SMS which includes verification of safety performance indicators and safety performance targets;
- (b) procedures for analysing, assessing and controlling hazards and safety risks in operations and for taking corrective actions;
- (c) training programme requirements for the persons responsible for operations and other personnel assigned duties under the SMS; and
- (d) procedures for making progress reports to the accountable executive at intervals determined by the accountable manager and other reports as needed in urgent cases.

Establishment and structure of safety management system

135.10.4 (1) The establishment of a SMS shall be as prescribed in Document SA-CATS 135 and be the responsibility of the chief executive officer (CEO) specified in regulation 135.06.2(5)(a) who, irrespective of other functions, shall have ultimate responsibility and accountability for the implementation and maintenance of the SMS.

(2) An air service operator shall submit for the approval of the Director an air safety officer (ASO), as specified in regulation 135.06.2(5)(d), who meets the qualifications of and performs the functions specified in technical standard 135.06.2 of Document SA-CATS 135.

(3) The ASO shall be responsible to the CEO for the implementation and administration of the SMS.

(4) The ASO shall, where necessary, appoint sufficient personnel to fill the key positions identified by the SMS in consideration of the scope, size and complexity of the operation and to prescribe their authority, responsibilities and lines of reporting.

(5) 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 chief executive officer and the person responsible for operations. The person responsible for operations 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.

(6) Where the person responsible for operations has 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

135.10.5 (1) The holder of an AOC issued in terms of this Part who is also the holder of an approved maintenance organisation certificate issued under Part 145, shall adhere to the requirements prescribed in Part 145 with respect to a SMS when undertaking maintenance control activities.

(2) An operator who holds a certificate under more than one Part in these Regulations for which an SMS is required may integrate the requirements of these Parts into one SMS.

Size and complexity

135.10.6 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

Requirements for quality management system

135.10.7 (1) An air service operator shall establish a quality management system (QMS) that meets the requirements prescribed in Document SA-CATS 135.

- (2) The quality 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 135.

(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 135.06.2 of Document SA-CATS 135.

(4) The operator shall prepare a quality management manual that meets the requirements prescribed in Document SA-CATS 135.

(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 136: AIR TRANSPORT OPERATIONS - COMMERCIAL OPERATION OF FREE BALLOONS

SUBPART 1: GENERAL

- 136.01.1 Applicability
- 136.01.2 Intoxication
- 136.01.3 Dry lease-in of free balloons
- 136.01.4 Wet lease-in of free balloons
- 136.01.5 Dry lease-out of free balloons
- 136.01.6 Wet lease-out of free balloons
- 136.01.7 Leasing of free balloons between two South African Operators
- 136.01.8 Sub-chartering
- 136.01.9 Preservation of documents

SUBPART 2: FLIGHT CREW

- 136.02.1 Composition of flight crew
- 136.02.2 Flight crew member emergency duties
- 136.02.3 Flight time and duty periods

SUBPART 3: DOCUMENTATION AND RECORDS

- 136.03.1 Documents to be retained on ground
- 136.03.2 Operations manual
- 136.03.3 Balloon operations manual
- 136.03.4 Balloon flight manual
- 136.03.5 Flight time and duty periods
- 136.03.6 Records of emergency and equipment
- 136.03.7 Flight crew member training records
- 136,03.8 Load sheet

SUBPART 4: BALLOON INSTRUMENTS AND EQUIPMENT

- 136.04.1 Approval of instruments and equipment
- 136.04.1 Flight, navigation and associated equipment for balloon operating under VFR.

SUBPART 5: OPERATING CERTIFICATE

- 136.05.1 Operating certificate
- 136.05.2 Application for operating certificate
- 135.05.3 Adjudication of application for operating certificate
- 136.05.4 Period of validity of operating certificate
- 136.05.5 Safety inspections and audits
- 136.05.6 Duties of holder of operating certificate
- 136.05.7 Register of operating certificates

SUBPART 6: FLIGHT OPERATIONS

- 136.06.1 Establishment of procedures
- 136.06.2 Operational control and supervision
- 136.06.3 Competence of operations personnel
- 136.06.4 Use of air traffic services
- 136.06.5 Smoking in, or in the vicinity of a balloon
- 136.06.6 Fuel policy
- 136.06.7 Fuel and oil supply
- 136.06.8 Carriage of children
- 136.06.9 Carriage of passengers with disability
- 136.06.10 Limitations on carriage of infants, children and passengers with disability
- 136.06.11 Passenger services
- 136.06.12 Incidents and defects

SUBPART 7: BALLOON PERFORMANCE OPERATING LIMITATIONS

- 136.07.1 General
- 136.07.2 General provisions for all classes of balloons
- 136.07.3 Take-off

SUBPART 8: MAINTENANCE

- 136.08.1 General
- 136.08.2 Balloon maintenance schedule
- 136.08.3 Maintenance contracted to approved maintenance organisation

SUBPART 1: GENERAL

Applicability

136.01.1 (1) This Part applies to --

- (a) free balloons engaged in commercial air transport operations within the Republic;
- (b) persons acting as flight crew members of a free balloon registered in the Republic; and
- (c) persons who are on board a free balloon operated under this Part.

(2) For purposes of this Part, a free balloon 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 shall with the necessary changes apply to free balloons operated in terms of this Part.

Intoxication

136.01.2 (1) A person shall not enter or be allowed to enter a free balloon while under the influence of alcohol or a drug having a narcotic effect, to the extent where the safety of such balloon or its occupants is, or is likely to be, endangered.

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

- (a) refused embarkation; or
- (b) if such person is on board, restrained or disembarked.

Dry lease-in of free balloons

136.01.3 (1) An operator who intends to dry lease-in a free balloon for commercial air transport purposes, shall –

- (a) ensure that such balloon can be operated and is operated in accordance with the requirements prescribed in this Part; and
- (b) obtain prior approval from the Director to operate such balloon.

(2) The approval referred to in sub-regulation (1)(b) shall, subject to such conditions as the Director may determine, be granted if such balloon is –

- (a) type certificated in accordance with the requirements prescribed in Part 21;
- (b) maintained in accordance with a balloon maintenance schedule referred to in regulation 136.09.2; and
- (c) operated under the operating certificate held by the operator referred to in sub-regulation (1).

(3) The conditions of approval referred to in sub-regulation (2) shall be part of the lease agreement between the operator referred to in sub regulation (1) and the person from which the free balloon is leased.

Wet lease-in of free balloons

136.01.4 (1) An operator who intends to wet lease-in a foreign registered free balloon for commercial air transport purposes shall, subject to such conditions as the Director may determine, obtain prior approval from the Director to operate such balloon.

(2) The duration of the lease agreement concerned shall be limited to a maximum period of six calendar months in one year.

- (3) The approval referred to in sub-regulation (1) shall, be granted if such balloon -
 - (a) is wet leased-in from an operator who is the holder of an operating certificate or similar document issued by an appropriate authority;
 - (b) has been type certificated by the appropriate authority;
 - (c) holds a valid certificate of airworthiness or similar document issued by such appropriate authority;
 - (d) is maintained and operated in accordance with safety standards at least equivalent to the safety standards referred to in this Part; and
 - (e) will be operated in terms of the operating certificate or similar document held by the operator referred to in paragraph (a).
- (4) The operator referred to in sub-regulation (1) shall -
 - (a) satisfy the Director that the safety standards of the lessor are not less than the safety standards referred to in this Part; and
 - (b) ensure that any law applicable to the balloon to be wet leased-in, the maintenance or operation thereof, is complied with.

(5) The total number of wet leased-in free balloons shall be such that an operator referred to in sub-regulation (1) will not be predominantly dependent on foreign registered free balloons.

(6) The conditions of approval referred to in sub-regulation (1) shall be part of the lease agreement between the operator referred to in sub-regulation (1) and the operator from which the foreign registered free balloon is leased.

Dry lease-out of free balloons

136.01.5 (1) Subject to the provisions of sub-regulation (2), the operator of a South African registered balloon may dry lease-out the balloon to any operator in a Contracting State.

(2) On request of the operator of a South African registered free balloon, the Director may exempt the operator from the applicable provisions of this Part and remove the balloon from the operating certificate held by such operator: Provided that –

- (a) the appropriate authority of the State of Operator to which such balloon is dry leased has accepted, in writing, responsibility for surveillance of the maintenance and operation of such balloon; and
- (b) such balloon is maintained according to an approved maintenance programme.

Wet lease-out of free balloons

136.01.6 The operator of a South African registered free balloon who intends to wet lease-out the balloon to any operator, other than an operator of a contracting State, shall remain the operator of the balloon for purposes of Subpart 6, and responsibility for surveillance of the maintenance and operation of such balloon shall not be transferred to the appropriate authority of the State of operator to which such balloon is wet leased-out.

Leasing of a free balloon between two South African operators

136.01.7 (1) A South African operator who intends to wet lease-out a free balloon to another South African operator, shall remain the operator of the balloon and shall retain the functions and responsibilities prescribed in Subpart 6.

(2) A South African operator, who intends to utilise a free balloon leased from, or to lease it to another South African operator, shall obtain prior approval from the Director for the operation, and the conditions of approval shall be part of the lease agreement between the operators.

(3) The terms of an approved lease agreement, other than an agreement in terms of which a free balloon together with crew is leased, and where no transfer of functions and responsibilities is intended, shall include –

- (a) the arrangement concerning the operating certificate under which the flights with the leased free balloon shall be operated; and
- (b) any deviation from the operating certificate under which the flights with the leased free balloon shall be operated.

Sub-chartering

136.01.8 (1) In exceptional circumstances as prescribed in Document SA-CATS 136, an operator may sub-charter a free balloon and crew from any operator who holds a valid operating certificate for the balloon, issued by an appropriate authority: Provided that –

- (a) the sub-charter period does not exceed five consecutive days; and
- (b) the operator of the balloon so sub-chartered informs the Director, within 24 hours, of such sub-charter.

(2) The provision of regulations 136.01.3 (1)(a) and (2), 136.01.4 (3) and (4)(b) and 136.01.7
(1) and (3) shall apply with the necessary changes to any sub-charter referred to in this regulation.

Preservation of documents

136.01.9 The operator of a commercial air transport balloon who is required to retain any of the documents for the 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 balloon concerned.

SUBPART 2: FLIGHT CREW

Composition of flight crew

136.02.1 (1) A minimum of one flight crew member shall be required for the operation of a commercial air transport balloon.

(2) The operator shall ensure that the flight crew member –

- (a) is competent to perform the duties assigned to them; and
- (b) holds the appropriate valid licences and ratings.

(3) The flight crew member shall hold 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.

(4) The operator shall designate a PIC and the PIC may delegate the conduct of the flight to another suitably qualified pilot.

Flight crew member emergency duties

136.02.2 (1) An operator, and where appropriate, the PIC of a commercial air transport balloon, shall perform the necessary duties 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) 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 Part 69.

Flight time and duty periods

136.02.3 Flight crew members shall -

- not work more than seven consecutive days between days off;
- (b) have two consecutive days off in any consecutive fourteen days;
- (c) have a minimum of six days off in any consecutive four weeks;
- (d) have an average of at least eight days off in each consecutive four week period, averaged over three such periods.

SUBPART 3: DOCUMENTATION AND RECORDS

Documents to be retained on ground

136.03.1 The operator of a commercial air transport free balloon shall ensure that the load sheet, the passenger list, the special loads notification, if applicable, shall be retained for a period of at least 90 days.

Operations manual

136.03.2 (1) The operator of a commercial air transport free balloon shall draw up an operations manual containing all the 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 136.06.7; 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.

(4) The operator shall submit any amendment of 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 subregulation (3)(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.

(6) The operator shall at all times operate the commercial air transport balloon 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 121.06.3.

(9) The structure and contents of the operations manual referred to in sub-regulation (1) shall be as prescribed in Document SA-CATS 136.

Balloon operating manual

136.03.3 (1) The operator of a commercial air transport free balloon shall make use of, and make available a balloon operating manual for use by the flight crew members in such operator's employ.

(2) The manual shall contain the normal, abnormal and emergency procedures relating to the balloon.

(3) The operator shall provide each flight crew member with a copy of those parts of the balloon operating manual, which are relevant to the operational duties assigned to such flight crew member.

(4) The operator shall ensure that the balloon operating manual is provided in a hard copy or in an approved electronic format.

(5) The balloon operating manual shall be referred to in the operations manual referred in regulation 136.02.2.

Balloon flight manual

136.03.4 (1) The operator of a commercial air transport free balloon shall keep a current approved balloon flight manual for each balloon of which he or she is the operator.

(2) The balloon flight manual referred to in sub-regulation (1) may be included in the balloon operating manual referred to in regulation 136.03.3.

Flight time and duty period records

136.04.5 (1) The operator of a commercial air transport free balloon 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 136.02.5.

Records of emergency and equipment

136.03.6 (1) The operator of a commercial air transport free balloon shall compile a list of all the emergency equipment to be carried in the balloon and shall have such list available at all times for immediate communication to rescue co-ordination centres.

(2) The emergency equipment list shall be included in the operations manual referred to in regulation 136.03.2.

(3) The format and minimum information to be included in the emergency equipment list shall be as prescribed in Document SA-CATS 136.

Flight crew member training records

136.03.7 (1) The operator of a commercial air transport free balloon 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 flight deck crew member for a period of at least three years and the record of all other flight crew members 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 sheet

136.03.8 (1) The operator of a commercial air transport free balloon registered or operated in the Republic shall complete a load sheet.

(2) A load sheet shall be completed in duplicate and one copy shall be carried in the balloon and one copy shall be retained in accordance with the provisions of Regulation 136.03.1.

(3) The load 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 sheet shall be prescribed in Document SA-CATS 136.

SUBPART 4: BALLOON INSTRUMENT AND EQUIPMENT

Approval of instruments and equipment

136.04.1 (1) The operator of a commercial air transport free balloon shall ensure that a flight does not commence unless the instruments and equipment required under this subpart, or otherwise installed on the bailoon, are, 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.

- (2) The operator shall not be required to obtain approval for the -
 - (a) accurate time piece referred to in regulations 91.04.4 and 91.04.5;
 - (b) first aid equipment referred to in regulation 91.04.16;
 - (c) flight, navigation and associated equipment for balloons operated under VFR; and
 - (d) fire fighting equipment.

Flight, navigation and associated equipment for balloon operated under VFR

136.04.2 The operator of a commercial air transport balloon shall not operate the balloon in accordance with VFR, unless such balloon is equipped with –

- (a) an accurate time-piece showing the time in hours, minutes and seconds;
- (b) a sensitive pressure altimeter with a subscale setting, calibrated in hectopascal, adjustable for any barometric pressure setting likely to be encountered during flight;
- (c) a vertical-speed indicator;
- (d) a fusible temperature link and a permanent maximum temperature label to be installed;
- (e) fuel pressure gauge and fuel content indicator;
- (f) handling line;
- (g) fire extinguisher; and
- (h) first aid kit as prescribed in Document SA-CATS 136 specifically for balloons.

SUBPART 5: OPERATING CERTIFICATE

Operating certificate

136.05.1 The operator of a commercial air transport free balloon shall not operate the balloon unless such operator is the holder of 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 136.05.3.

Application for operating certificate

136.05.2 An application for an operating certificate shall be made to the Director in the appropriate prescribed form and shall be accompanied by the appropriate fee as prescribed in Part 187.

Adjudication of application for operating certificate

136.05.3 (1) In considering an application referred to in regulation 136.05.2, the Director may conduct the investigation he or she considers necessary.

(2) The Director shall grant an application and issue the operating certificate if the Director is satisfied that –

- (a) the applicant will comply with the provisions of regulation 136.05.7; and
- (b) the applicant will not operate the air service concerned contrary to any provision of the Act, the International Air Services Act, 1993 and 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 consider the application concerned.

(4) An operating certificate shall be issued on the appropriate prescribed form, under such conditions which the Director may determine.

Period of validity of operating certificate

136.05.4 (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 days prior to the expiry thereof for a new operating certificate, the existing 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 the issuing of a new operating certificate.

Safety inspections and audits

136.05.5 (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 136.05.2.

(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

136.05.6 The holder of an operating certificate shail -

- notify the Director in the manner prescribed in Document SA-CATS 136 before any change is effected to the particulars of the operating certificate; and
- (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.

Register of operating certificates

136.05.7 (1)The Director shall maintain a register of all operating certificates issued in terms of this Part.

- (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 is issued;
 - (e) Particulars of the category of balloons 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 was 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 6: FLIGHT OPERATIONS

Establishment of procedures

- 136.06.1 The operator of a commercial air transport free balloon shall -
 - (a) establish procedures and instructions, for each balloon type, containing ground personnel and flight crew member's duties for all types of operations on the ground and in flight; and
 - (b) establish a checklist system to be used by flight deck 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 136.03.2, are followed.

Operational control and supervision

136.06.2 The operator of a commercial air transport free balloon shall exercise operational control and establish and maintain an approved method of supervision of flight operations.

Competence of operations personnel

136.06.3 The operator of a commercial air transport free balloon 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 whote.

Use of air traffic services

136.06.4 The operator of a commercial air transport free balloon shall ensure that air traffic services are used for all flights whenever applicable.

Smoking in, or in the vicinity of a balloon

136.06.5 (1) No person shall smoke in and within a 10m radius around a free balloon.

(2) The operator shall display signs indicating "No Smoking" in relevant areas.

Fuel policy

136.06.6 (1) The operator of a commercial air transport free balloon shall establish a fuel policy for the purpose of flight planning and in-flight pre-planning 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-
 - (a) procedures, tables or graphs which are contained in or derived from the operations manual referred to in regulation 136.03.2, or current free balloon-specific data; and
 - (b) the operating conditions under which the flight is to be conducted, including -
 - (i) realistic free balloon fuel consumption data;
 - (ii) anticipated masses; and
 - (iii) expected meteorological conditions.

Fuel supply

136.06.7 The operator of a commercial air transport free balloon shall establish a procedure to ensure that in-flight fuel checks and fuel management are carried out.

Carriage of children

136.06.8 The operator of a commercial air transport free balloon shall ensure that a child younger than seven years is only carried when all the conditions as prescribed in the operations manual have been met.

Carriage of passengers with disability

136.06.9 (1) The operator of a commercial air transport free balloon shall establish procedures, including identification, seating positions and handling in the event of an emergency, for the carriage of passengers with disability.

- (2) The operator shall ensure that --
 - the PIC of the free balloon is notified when a passenger with a disability is to be carried on board;
 - (b) individual briefings on emergency procedures are given to a passenger with a disability and his or her able-bodied assistant, appropriate to the needs of such passenger; and
 - (c) the person giving the briefing shall enquire as to the most appropriate manner of assisting the passenger with a disability so as to prevent pain or injury to such passenger.
- (3) A mentally disturbed person shall not be carried in the balloon 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 such mentally disturbed person's suitability for carriage by air, and confirming that there is no risk of violence from such person.

(4) An operator shall undertake the carriage of a mentally disturbed person who, according to his or her medical history, may become violent, only after special permission has been obtained from the Director by such operator.

(5) A passenger with a disability may travel unaccompanied provided he or she is able to assist himself or herself.

(6) Any supporting aids or equipment of a passenger referred to in this sub-regulation shall not obstruct emergency equipment.

(7) A passenger with a splinted or artificial limb who cannot assist himself or herself shall be accompanied by an able-bodied assistant.

Limitations on carriage of infants, children and passengers with disability

136.06.10 (1) Only one passenger with a disability or one unaccompanied minor may be carried in a flight in a commercial air transport balloon under the operator's discretion.

(2) An able-bodied assistant shall accompany a passenger with a disability who cannot assist himself or herself, and such assistant shall be assigned with the responsibility of the safety of such passenger.

(3) The operator may establish procedures, other than the procedures referred to in subregulations (1) and (2), for the carriage of infants, children, and passengers with a disability: Provided that –

- such procedures do not jeopardise aviation safety; and
- (b) prior written approval is obtained from the Director.

Passenger services

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

(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 balloon.

Incidents and defects

136.06.12 (1) The operator of a commercial air transport free balloon shall establish adequate inspection and reporting procedures to ensure that defective equipment is reported to the PIC of the balloon before take-off.

(2) The procedures referred to in sub-regulation (1) shall be extended to include the reporting to the operator of all incidents or the exceeding of limitations that may occur while the flight crew are embarked on the balloon 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.

SUBPART 7: BALLOON PERFORMANCE OPERATING LIMITATIONS

General

136.07.1 The operator of a free balloon shall not operate the balloon free flight by night or in IMC unless tethered and except under special VFR or under special conditions as approved by the Director.

General provisions for all classes of free balloons

136.07.2 The operator of a commercial air transport balloon shall ensure that the mass of the free balloon, at the start of the take-off, is not greater than the mass at which the requirements prescribed in the appropriate flight manual can be complied with for the flight to be undertaken, allowing for expected reductions in mass as the flight proceeds.

Take-off

136.07.3 The operator of a free balloon shall ensure that the mass of the balloon does not exceed the MCM for the pressure altitude and the ambient temperature at the point of departure.

SUBPATR 8: MAINTENANCE

General

136.08.1 The operator of a commercial air transport free balloon shall not operate the balloon unless such balloon is maintained in accordance with the regulations in Part 43.

Balloon maintenance schedule

136.08.2 (1) The operator of a commercial air transport free balloon shall ensure that the balloon is maintained in accordance with a balloon maintenance schedule established by the manufacturer.

(2) The schedule shall contain details, including frequency, of all maintenance required to be carried out on the balloon.

(3) The schedule shall include a reliability programme if the Director determines that such a reliability programme is necessary.

(4) The schedule referred to in sub-regulation (1) and any subsequent amendment thereof shall be approved by the Director.

Maintenance contracted to approved maintenance organisation

136.08.3 If maintenance on a commercial air transport free balloon is carried out by the holder of an AMO approval with the appropriate rating issued in terms of Part 145, the operator of the balloon shall ensure that all contracted maintenance is carried out in accordance with the regulations in Part 43.

PART 137: AGRICULTURAL OPERATIONS

List of regulations

SUBPART 1: GENERAL PROVISIONS

- 137.01.1 Applicability
- 137.01.2 Requirements for ratings
- 137.01.3 Requirements for commercial agricultural operations
- 137.01.4 Aircraft equipment

SUBPART 2: FLIGHT RULES

- 137.02.1 Dispensing agricultural chemicals
- 137.02.2 Direction of turns at aerodrome
- 137.02.3 Heights of turns at aerodromes
- 137.02.4 Operation without position lights
- 137.02.5 Operation over populous areas
- 137.02.6 Operation over non-populous area
- 137.02.7 Fuel Reserves

SUBPART 2: FLIGHT RULES

- 137.02.1 Dispensing agricultural chemicals
- 137.02.2 Direction of turns at aerodrome
- 137.02.3 Heights of turns at aerodromes
- 137.02.4 Operation without position lights
- 137.02.5 Operation over populous areas
- 137.02.6 Operation over non-populous area
- 137.02.7 Fuel Reserves

SUBPART 3: SPECIAL FLIGHT RULES

- 137.03.1 General
- 137.03.2 Maximum certificated mass
- 137.03.3 Take-off distance and flight path
- 137.03.4 Take-off flight path

SUBPART 4: COMMERCIAL OPERATIONS

- 137.04.1 Records
- 137.04.2 Remote bass operations
- 137.04.3 Operations over populous areas

SUBPART 1: GENERAL PROVISIONS

Applicability

137.01.1 (1) This Part applies to -

- aircraft engaged in commercial or non-commercial agricultural operations within the Republic;
- (b) aircraft registered in the Republic and engaged in commercial or noncommercial International agricultural operations; and
- (c) persons acting as flight crew members of the aircraft operated in terms of this Part.

(2) Unless the context otherwise indicates, agricultural operations shall be conducted in accordance with and in addition to the provisions of Part 91 and Part 121, Part 127 or Part 135, as the case may be.

Requirements for ratings

137.01.2 The pilot of an aircraft engaged in an agricultural operation, shall hold -

- (a) a valid agricultural pilot rating issued in terms of subpart 48 of Part 61 for the category of aircraft used; and
- (b) a pest control operator's certificate issued in terms of the Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947).

Requirements for commercial agricultural operations

137.01.3 The operator of an aircraft engaged in commercial agricultural operations, shall not operate the aircraft unless such operator is the holder of a valid –

- (a) licence issued in terms of the Air Services Licensing Act, 1990, (Act No. 115 of 1990), or the International Air Services Act, 1993 (Act No. 60 of 1993); and
- (b) operating certificate issued in terms of Part 121, Part 127 or Part 135, as the case may be.

Aircraft equipment

137.01.4 Each owner or operator of an aircraft engaged in an agricultural operation shall ensure that the aircraft has, in addition to the equipment prescribed in Part 91, an approved and properly installed shoulder harness for each person on board.

SUBPART 2: FLIGHT RULES

Dispensing agricultural chemicals

137.02.1 (1) The pilot of an aircraft dispensing an agricultural chemical in an agricultural operation, shall dispense the agricultural chemical –

- (a) for its registered use; and
- (b) in accordance with the safety instructions of use limitations on its label.

(2) Notwithstanding the provisions of sub-regulation (1), the pilot may, if the operation is for experimental purposes -

- (a) under the supervision of a Government department conducting research in the field; or
- (b) in terms of a permit from the applicable authority controlling such chemicals, dispense the agricultural chemical as necessary for the particular experiment.

Direction of turns at aerodrome

137.02.2 The pilot of an aircraft performing an agricultural operation may turn in a direction other than that prescribed in Part 91, when approaching for a landing at, or after take-off from, an aerodrome if –

- (a) the aerodrome is used solely for agricultural operations; or
- (b) in any other case, the aerodrome displays the visual ground signal prescribed in Part 91 indicating that an agricultural operation is being conducted from that aerodrome.

Height of turns at aerodromes

137.02.3 The pilot of an aircraft performing an agricultural operation may commence a turn after take-off from an aerodrome at an altitude other than that prescribed in Part 91 if –

- the turn does not cause the aircraft to fly over a populous area; and
- (b) the aerodrome -
 - (i) is used solely for agricultural operations; or
 - (ii) has an aerodrome control service in operation and the turn is performed in accordance with air traffic control clearance; or
 - (iii) in any other case, displays the visual ground signal prescribed in Part 91 indicating that an agricultural operation is being conducted from that aerodrome.