Mandatory radio communication in advisory airspace

91.06.17 The pilot-in-command of an aircraft to be operated in advisory airspace shall ensure that, before the aircraft approaches or enters such airspace –

(a) two-way radio communication with the responsible air traffic service unit is established on the designated radio frequency;

(b) if such communication is not possible, two-way radio communication is established with any air traffic service unit which is capable of relaying messages to and from the responsible air traffic service unit; or

(c) if such communication is not possible, broadcasts are made on the designated radio frequency giving information on the aircraft's intention to enter the airspace, and such pilot-in-command shall ensure that, while the aircraft is within the advisory airspace and until it departs therefrom, a continuous radio watch is maintained on the designated radio frequency and that –

(i) such further two-way radio communication as the responsible air traffic service unit may require, is established with any other air traffic service unit which is capable of relaying messages to and from such responsible air traffic service unit;

(ii) if such communication is not possible, such further two-way radio communication is established with any other air traffic service unit which is capable of relaying messages to and from the responsible air traffic service unit, as such responsible air traffic service unit may require; or

(iii) if such communication is not possible, broadcasts are made on the designated radio frequency giving information on passing reporting points and when leaving the airspace concerned: Provided that –

(aa) an aircraft maintaining a Selcal watch while operating within an advisory route in the Johannesburg flight information region and whose Selcal call-sign has been communicated to the Johannesburg flight information centre, shall be deemed to be maintaining a continuous radio watch; and

(bb) in the case of a radio failure, a flight for which an air traffic service flight plan was filed and activated by an air traffic service unit on receipt of a departure time, may continue in advisory airspace if the communication failure procedures specified in technical standard 91.06.16 of Document SA-CATS-OPS are complied with.

Compliance with rules of the air and air traffic control clearances and instructions

91.06.18 (1) The operation of an aircraft either in flight or on the movement area of an aerodrome shall be in compliance with the general operating rules in this Part and, in addition, when in flight, either with –

(a) the visual flight rules (VFR); or

(b) the instrument flight rules (IFR).

(2) The pilot of an aircraft shall –

(a) comply with any air traffic control clearance which is obtained, unless the pilot obtains an amended clearance;

(b) operate the aircraft in accordance with any instruction issued by an air traffic service unit (ATSU) in an area in which an air traffic control service is provided; and

(c) when deviating from an air traffic control clearance or instruction, notify the ATSU of the deviation, as soon as practicable.

(3) The pilot of an aircraft shall include the information specified in Document SA-CATS-OPS 91 when requesting a deviation from an air traffic control clearance or flight planned altitude or route.

(4) Nothing in these Regulations shall relieve the pilot-in-command of an aircraft from the responsibility of taking such action, including collision avoidance manoeuvres based on resolution advisories by airborne collision avoidance system (ACAS) equipment, as will best avert a collision.

Prohibited areas

91.06.19 (1) The Commissioner may by notice in the Integrated Aeronautical Information Publication (IAIP) declare any area to be a prohibited area and shall, for the purposes of the prohibition contained in sub-regulation (2), when so declaring an area to be a prohibited area –

(a) specify a height above the ground surface of such area; or

(b) specify an altitude in respect of such area, as the Commissioner may deem expedient, in the notice in question.

(2) No person shall fly any aircraft whatsoever in the air space above a prohibited area –

(a) below the height specified in terms of sub-regulation (1)(a); or

(b) below the altitude specified in terms of sub-regulation (1)(b), as the case may be, in respect of the prohibited area in question.

Restricted areas

91.06.20 (1) The Commissioner may by notice in the Integrated Aeronautical Information Publication (IAIP) declare any area to be a restricted area and shall, when so declaring an area to be a restricted area, specify in the notice in question –

(a) the nature and extent of the restriction applicable in respect of the area in question; and

(b) the authorisation under which flights in such restricted area shall be permitted.

(2) No person shall, in contravention of a restriction contemplated in sub-regulation (1)(a), fly any aircraft to which the said restriction applies, in any restricted area, unless the flight in question has been permitted by virtue of an authorisation contemplated in sub-regulation (1)(b).

Division Two: Visual Flight Rules

Visibility and distance from cloud

91.06.21 Every VFR flight shall be so conducted that the aircraft is flown with visual reference to the surface by day and to identifiable objects by night and at no time above more than three eighths of cloud within a radius of five nautical miles of such aircraft and –

(a) in the case of aircraft excluding helicopters, under conditions of visibility and distance from cloud equal to, or greater than, the conditions specified in tables 1 and 2 –

Table 1

Airspace	Flight visibility	Distance from clouds	Ground visibility and ceiling
Control zones [1]	Five km	Horizontally: 2 000 feet Vertically: 500 feet	No aircraft shall take-off from, land at, or approach to land at an aerodrome or fly within the control zone when the ground visibility at the aerodrome concerned is less than five km and the ceiling is less than 1 500 feet. [1]
Within an aerodrome traffic zone (which does not also comprise a control zone or part of a control zone)	Five km	Horizontally: 2 000 feet Vertically: 500 feet	No aircraft shall take-off from, land at or approach to land at an aerodrome or fly within the aerodrome traffic zone when the ground visibility within such aerodrome traffic zone is less than five km and the ceiling is less than 1 500 feet. [2]

Footnotes –

(1) Minima not applicable to special VFR flights.

(2) When a pilot in an aircraft maintains two-way radio communication with the aerodrome control tower or aerodrome flight information service unit, the pilot may, in respect of a cross-country flight, leave or enter the aerodrome traffic zone, as the case may be, when the ground visibility is equal to or greater than five km and the ceiling is equal to or higher than 500 feet.

(3) VFR flight not permitted at transonic or supersonic speed.

Table 2

Altitude band	Airspace class[1]	Flight visibility	Distance from cloud
At and above 10 000 ft (3 050 m) above MSL	C F G	8 km	1 500 m horizontally 1 000 ft (300 m) vertically
Below 10 000 ft (3 050 m) AMSL and above 3 000 ft (900 m) above MSL, or above 1 000 ft (300 m) above terrain, whichever is the higher	C F G	5 km	1 500 m horizontally 1 000 ft (300 m) vertically
At and below 3 000 ft (900 m) above MSL, or 1 000 ft (300 m) above terrain, whichever is the higher	C	5 km	1 500 m horizontally 1 000 ft (300 m) vertically
	F G	5 km	Clear of cloud and with the surface in sight

Footnote –

(1) VFR flight not permitted in Class A airspace.

(b) in the case of helicopters, under conditions of visibility and distance from cloud equal to, or greater than, those conditions specified in the following tables: Provided that the limitations as contained in the tables shall not prevent a helicopter from conducting hover-in-ground-effect or hover-taxi operations if the visibility is not less than 100 m –

Table 3

Airspace	Flight visibility	Distance from clouds	Ground visibility and ceiling
Control zones [1]	Two and a half km	Horizontally: 1 000 feet Vertically: Clear of cloud	Except in a case mentioned in footnote (1) no helicopter shall take-off from, land at, or approach to land at an aerodrome or fly within the control zone when the ground visibility at the aerodrome concerned is less than 2,5 km and the ceiling is less than 600 feet.
Within an aerodrome	Two	Horizontally:	No helicopter shall take-off from, land

traffic zone (which does not also comprise a control zone or part of a control zone)	and a half km	1 000 feet Vertically: Clear of cloud	at, or approach to land at an aerodrome or fly within the aerodrome traffic zone when the ground visibility at the aerodrome concerned is less than 2,5 km and the ceiling is less than 600 feet.

Footnote –

(1) Minima not applicable to special VFR flights.

Table 4

Altitude band	Airspace class(1)	Flight visibility	Distance from cloud
At and above 10 000 ft (3 050 m) above MSL	C F G	8 km	1 500 m horizontally 1 000 ft (300 m) vertically
Below 10 000 ft (3 050 m) AMSL and above 3 000 ft (900 m) above MSL, or above 1 000 ft (300 m) above terrain, whichever is the higher	C F G	5 km	1 500 m horizontally 1 000 ft (300 m) vertically
At and below 3 000 ft (900 m) above MSL, or 1 000 ft (300 m) above terrain, whichever is the higher	C	5 km	1 500 m horizontally 1 000 ft (300 m) vertically
	F G	5 km	Clear of cloud and with the surface in sight

Footnote –

(1) VFR flight not permitted in Class A airspace.

Special VFR weather minima

91.06.22 (1) A pilot in command may conduct special VFR operations in weather conditions below the conditions prescribed in regulation 91.06.21 within a control zone –

(a) under the terms of an air traffic control clearance;

(b) by day only;

(c) with a cloud ceiling of at least 600 feet and visibility of at least 1 500m;

(d) in an aircraft equipped with two way radio equipment capable of communicating with an air traffic service unit on the appropriate frequency; and

(e) if leaving the control zone, in accordance with instructions issued by an air traffic service unit prior to departure.

(2) A pilot-in-command of a Class 1 or a Class 2 helicopter may within a control zone (CTR) under the terms of an air traffic control clearance conduct special VFR operations for the purpose of an over-water operation in weather conditions below the minima prescribed in regulation 91.06.21 –

(a) by day or by night;

(b) when clear of clouds;

(c) with a cloud ceiling of at least 300 feet;

(d) a flight visibility of at least 900 metres; and

(e) if leaving a CTR, in accordance with instructions issued by the responsible air traffic service unit prior to departure;

(f) provided that –

(i) the flight is only conducted over water;

(ii) the special VFR clearance is only valid in the CTR; and

(iii) the minima do not apply to any flight over any portion of land situated in the CTR.

VFR flight determination and weather deterioration

91.06.23 (1) Outside a control zone or an aerodrome traffic zone, the ascertainment of whether or not weather conditions permit flight in accordance with VFR, shall be the responsibility of the pilot-in-command of an aircraft.

(2) Whenever weather conditions do not permit a pilot to maintain the minimum distance from cloud and the minimum visibility required by VFR, the pilot shall –

(a) if in controlled airspace, request an amended clearance enabling the aircraft to continue in VMC to the nearest suitable aerodrome, or to leave the airspace within which an ATC clearance is required;

(b) if no clearance in accordance with paragraph (a) can be obtained, continue to operate in VMC and land at the nearest suitable aerodrome, notifying the appropriate ATC unit of the action taken;

(c) if operating within a control zone, request authorization to operate as a special VFR flight; or

(d) request clearance to operate in accordance with the instrument flight rules.

Division Three: Instrument Flight Rules

Compliance with IFR

91.06.24 A flight conducted above flight level 200 shall be flown in compliance with IFR as prescribed in this Subpart.

Aircraft equipment

91.06.25 Aircraft shall be equipped with suitable instruments and radio navigation apparatus appropriate to the route to be flown and in accordance with the provisions of Subpart 5.

Change from IFR flight to VFR flight

91.06.26 (1) The pilot-in-command of an aircraft who elects to change the conduct of flight of the aircraft from compliance with IFR to compliance with VFR shall, if a flight plan was submitted for the flight, notify the air traffic service unit concerned that the IFR flight is cancelled and communicate to such air traffic service unit the intended changes to be made to the current flight plan.

(2) When an aircraft operating under IFR is flown in or encounters visual meteorological conditions, the pilot-in-command shall not cancel its IFR flight unless it is anticipated, and intended, that the flight will be continued for a reasonable period in uninterrupted visual meteorological conditions.

IFR procedures

91.06.27 (1) Unless otherwise authorised by the responsible air traffic service unit, aircraft flown in compliance with the rules contained in this Division, shall comply with IFR procedures applicable in the relevant airspace.

(2) Unless otherwise authorized by the appropriate ATS authority, or directed by the appropriate air traffic control unit, controlled flights shall, insofar as practicable –

(a) when on an established ATS route, operate along the defined centre line of that route; or

(b) when on any other route, operate directly between the navigation facilities and/or points defining that route.

(3) An aircraft operating along an ATS route segment defined by reference to very high frequency omnidirectional radio ranges shall change over for its primary navigation guidance from the facility behind the aircraft to that ahead of it at, or as close as operationally feasible to, the changeover point, where established.

(4) Subject to the provisions of regulation 91.06.25, the pilot-in-command of an aircraft may execute, or endeavour to execute, a cloud-break or let-down procedure at an aerodrome or nominate an aerodrome as an alternate aerodrome: Provided that the requirements relating to cloud-break or let-down

procedures and to flights under IMC, as published by the Commissioner in the NOTAM, can be complied with.

Division Four: Specific Provisions Regarding Aircraft

Foreign military aircraft

91.06.28 No foreign military aircraft shall fly over or land in the Republic except on the express invitation or with the express permission of the Minister, but any such aircraft so flying over or landing in the Republic shall be exempt from these Regulations to such extent and on such conditions as are specified in the invitation or permission.

Identification and interception of aircraft

91.06.29 (1) No person shall institute in-flight surveillance against, give an interception signal in connection with or give an instruction to land to a civilian aircraft suspected to be in contravention of the Act except –

(a) on instruction by the Minister, the Commissioner, an authorized officer or authorized person designated in terms of section 5(4) of the Act, or

(b) if the person is a member of the South African Police Services or South African National Defence Force, acting within the course and scope of his or her duties; and

(c) the in-flight surveillance, interception signal or instruction to land is in the public interest.

(2) The in-flight surveillance, interception signal or instruction to land must be executed in a manner that does not unduly affect aviation safety.

(3) The intercepted aircraft must follow out the instructions of the intercepting aircraft as prescribed in Document SA-CATS-OPS 91.

(4) When the aircraft is intercepted, the pilot-in command (PIC) must immediately establish radio contact with the intercepting aircraft on 121,5 MHz.

(5) If the intercepting aircraft cannot establish radio contact with or contact in any other practical way the intercepted aircraft, visual signals as prescribed in Document SA-CATS-OPS 91 must be used.

(6) The PIC of a civil aircraft flying in South African airspace when intercepted shall comply with the procedures specified in this regulation.

(7) The PIC of a civil aircraft flying in foreign airspace when intercepted shall comply with the interception procedures of that country.

Division Five: Air Traffic Rules

Air traffic service procedures

91.06.30 The pilot-in-command of an aircraft to be operated in controlled airspace shall –

(a) ensure that an air traffic service flight plan is submitted and changes thereto are notified as prescribed in regulation 91.03.4;

(b) ensure that radio contact is established with the responsible air traffic service unit and that radio communication is maintained as prescribed in regulation 91.06.16 except where such communication is accomplished using air data link; and

(c) for flight in controlled airspace, obtain and comply with air traffic control clearances and instructions: Provided that –

(i) the pilot-in-command of an aircraft may deviate from an air traffic control clearance in exceptional circumstances, but such deviation shall be reported to the responsible air traffic service unit as soon as possible; and

(ii) the pilot-in-command of an aircraft may propose an amendment to an air traffic control clearance, but such amendment shall not be applied until acceded to by the responsible air traffic service unit.

Priority

91.06.31 (1) An air traffic service unit may, with regard to arrivals and departures, give priority to aircraft operating in accordance with air traffic service flight plan clearance over aircraft not so engaged.

(2) Whenever an aircraft has requested a clearance involving priority, a report explaining the necessity for such priority shall be submitted if requested by the appropriate air traffic services unit.

Division Six: Heights and Instrument Approach and Departure Procedures

Minimum heights

91.06.32 (1) Except when necessary for taking off or landing, or except with prior written approval of the Commissioner, no aircraft –

(a) shall be flown over built-up areas or over an open-air assembly of persons at a height less than 1 000 feet above the highest obstacle, within a radius of 2 000 feet from the aircraft;

(b) when flown elsewhere than specified in paragraph (a), shall be flown at a height less than 500 feet above the ground or water; and

(c) shall circle over or do repeated overflights over an open-air assembly of persons at a height less than 3 000 feet above the surface.

(2) Except when necessary for take-off or landing, or with the express permission of the Commissioner, an aircraft shall at night, in IMC or when operated in accordance with IFR, be flown –

(a) at a height of at least 1 000 feet above the highest terrain or obstacle where the height of such terrain or obstacle does not exceed 5 000 feet above sea level within five nautical miles of the aircraft in flight; or

(b) at a height of at least 2 000 feet above the highest terrain or obstacle located within five nautical miles of the aircraft in flight where the height of such terrain or obstacle exceeds 5 000 feet above sea level: Provided that within areas determined by the Commissioner the minimum height may be reduced to 1 000 feet above the highest terrain or obstacle located within 5 nautical miles of the aircraft in flight, and provided furthermore that the aircraft is flown in accordance with such procedures as the Commissioner may determine.

Semi-circular rule

91.06.33 (1) Unless otherwise directed by an air traffic service unit, the pilot-in-command of an aircraft in level flight shall fly at an altitude or flight level, as appropriate, selected according to magnetic track from the table as prescribed in Document SA-CATS-OPS 91.

(2) Aircraft flown in accordance with VFR at a height of less than 1 500 feet above the surface, shall not be required to comply with the provisions of sub-regulation (1), unless if otherwise directed by an air traffic service unit.

(3) A flight conducted from flight level 200 and above, shall be flown in compliance with IFR.

Aerodrome approach and departure procedures

91.06.34 (1) When an instrument approach to, or instrument departure from, an aerodrome is necessary, the pilot-in-command of an aircraft shall use the instrument approach and departure procedure as published by the Commissioner in the Aeronautical Information Circular, Integrated Aeronautical Information Publication (IAIP), IAIP Supplement or NOTAM or otherwise approved by the Commissioner.

(2) No pilot-in-command of an aircraft may execute, or endeavour to execute an instrument approach or instrument departure at an aerodrome unless –

(a) the provisions of regulation 91.06.25 are complied with;

(b) the flight is conducted in accordance with procedures for instrument approach or instrument departure authorised by the Commissioner for the specific aerodrome and manoeuvre to be executed;

(c) the requirements for flights conducted under IMC authorised by the Commissioner are complied with; and

(d) where applicable, has received a clearance for the approach from the relevant air traffic services unit.

(3) No pilot-in-command of an aircraft may nominate an aerodrome as an alternate aerodrome unless –

(a) there is a procedure for an instrument approach authorised by the Commissioner;

(b) the aircraft complies with the requirements of regulation 91.06.25; and

(c) there is reasonable certainty that the requirements for flights conducted under IMC authorised by the Commissioner will be complied with.

SUBPART 7:
FLIGHT OPERATIONS

Routes and areas of operation

91.07.1 The owner or operator of an aircraft shall ensure that –

(a) operations are only conducted along such routes or within such areas, for which approval or authorisation has been obtained, where required, from the appropriate authority concerned;

(b) all flights are planned and conducted in accordance with any mandatory routings that have been published for any airspace being operated in, unless otherwise authorised in an air traffic control clearance;

(c) the performance of the aircraft intended to be used, is adequate to comply with minimum flight altitude requirements; and

(d) the instruments and equipment of the aircraft intended to be used, comply with the minimum requirements for the planned operation and will enable the flight crew to control the flight path of the aircraft, carry out any required procedural manoeuvres and observe the operating limitations of the aircraft in the expected operating conditions.

Minimum flight altitudes

91.07.2 (1) No pilot-in-command shall operate an aircraft at altitudes below –

(a) altitudes, established by the owner or operator, which provide the required terrain clearance, taking into account the operating limitations referred to in Subpart 9; and

(b) the minimum altitudes referred to in Subpart 6;

except when necessary for take-off and landing.

(2) The method of establishing minimum flight altitudes referred to in sub-regulation (1)(a) shall be as prescribed in Document SA-CATS-OPS 91.

(3) Where the minimum flight altitudes established by the appropriate authority of a foreign State are higher than the minimum flight altitudes prescribed in this regulation, the minimum flight altitudes established by such appropriate authority shall apply in respect of a South African registered aircraft flying in the airspace of the foreign State concerned.

Use of aerodromes

91.07.3 (1) No pilot shall use, and no owner or operator shall authorise the use of, an aerodrome as a destination or alternate destination aerodrome, unless such aerodrome is adequate for the type of aircraft and operation concerned.

(2) Except in an emergency, no pilot-in-command of an aircraft shall take-off or land by night, unless the place of take-off or landing is equipped with night flying facilities.

Helicopter landings and take-offs

91.07.4 (1) No pilot-in-command of a helicopter shall land at or take-off from any place unless the place is so situated to permit the helicopter, in the event of an emergency arising during such landing or take-off, to land without undue hazard to persons or property on the surface.

(2) No pilot-in-command of a helicopter shall land on, or take-off from, any building, structure or place in the area of jurisdiction of a local government, unless such building, structure or place has been approved for the purpose by the Commissioner: Provided that this restriction shall not apply –

(a) to a helicopter landing on, or taking off from, a building, structure or place within an industrial area, a commercial warehouse area or an open farm land which is suitable for such purposes and in respect of which helicopter the pilot-in-command is the holder of a valid commercial or airline transport pilot licence (helicopter) or, in the case of the holder of a private pilot licence (helicopter), with the written permission of the Commissioner, unless specifically prohibited by the local government; or

(b) to a helicopter engaged in an emergency medical service operation referred to in Part 138, or undertaking of a flight necessary for the exercising of any power in terms of any law.

(3) The pilot-in-command of a helicopter shall ensure that any place used for landing, take-off or hover –

(a) shall have –

(i) physical characteristics;

(ii) obstacle limitation surfaces; and

(iii) visual aids,

commensurate with the ambient light conditions and the characteristics of the helicopter being operated;

(b) allows the helicopter to operate clear of obstacles and without causing nuisance to third parties through its rotor wash; and

(c) has a surface area suitable for touch-down and lift-off.

(4) A local government may after consultation with the Commissioner, extend the scope of the provisions of sub-regulation (2)(a) to include other places in its area of jurisdiction.

(5) The Commissioner may, in the interests of aviation safety, impose conditions or institute restrictions as to the use of any building, structure or place for the landing or take-off of helicopters, or require special flight procedures to be adopted at, or special routes to be followed to or from, such building, structure or place by helicopters, and the Commissioner may impose different conditions, institute different restrictions or require different special flight procedures to be adopted in respect of different buildings, structures or places.

(6) Nothing in this regulation shall be construed as conferring any right to land at any building, structure or place against the wishes of the owner of, or any other person who has an interest in, the building, structure or place or as prejudicing the rights or remedies of any person in respect of any injury to persons or property caused by the helicopter or its occupants.

Aerodrome operating minima

91.07.5 (1) No pilot-in-command of an aircraft shall use an aerodrome as a destination or alternate aerodrome, unless the operating minima for such aerodrome, established by the appropriate authority of the State in which the aerodrome is situated, can be complied with.

(2) The aerodrome operating minima for a specific type of approach and landing procedure shall be applicable if –

(a) the ground equipment shown on the respective instrument approach and landing chart required for the intended procedure, is operative;

(b) the aircraft systems required for the type of approach, are operative;

(c) the required aircraft performance criteria are complied with; and

(d) the flight crew is qualified to conduct the type of approach.

(3) In determining or establishing the aerodrome operating minima applicable to any particular operation, the owner or operator shall take into account –

(a) the type, performance and handling characteristics of the aircraft;

(b) the composition of the flight crew, their competence and experience;

(c) the surface condition, dimensions and characteristics of the runways or touch-down areas which may be selected for use;

(d) the adequacy and performance of the available visual and non-visual ground aids;

(e) the equipment available in the aircraft for the purpose of navigation or control of the flight path, as appropriate, during the take-off, approach, flare, landing or missed approach;

(f) the obstacles in the approach and missed approach areas and the climb-out areas and necessary clearance;

(g) the obstacle clearance altitude or height for the instrument approach procedures;

(h) the means to determine and report meteorological conditions; and

(i) the availability and adequacy of emergency services.

(4) The aerodrome operating minima are those prescribed in Document SA-CATS-OPS 91 and no pilot shall conduct operations in weather conditions lower than such minima unless approved by the Commissioner to do so.

Threshold crossing height

91.07.6 The pilot-in-command of an aircraft being used to conduct an instrument approach, shall ensure that the aircraft crosses the threshold by a safe margin and in the required landing configuration and attitude.

Pre-flight selection of aerodromes

91.07.7 (1) The owner or operator of an aircraft shall select destination or alternate aerodromes in accordance with regulation 91.07.5 when planning a flight.

(2) The owner or operator shall select a departure, destination or alternate aerodrome only when the serviceability status of the aerodrome permits safe operation of the type of aircraft concerned.

(3) The owner or operator shall select and specify in the air traffic service flight plan, referred to in regulation 91.03.4, a take-off alternate aerodrome, if it would not be possible for the aircraft to return to the aerodrome of departure due to meteorological or performance reasons.

(4) The take-off alternate aerodrome referred to in sub-regulation (3), shall be located within –

(a) twenty (20) minutes flying time from the departure aerodrome in the case of single-engine aircraft;

(b) except as provided in paragraph (c), one hour flight time at the one-engine cruising speed according to the aircraft flight manual referred to in

regulation 91.03.2, in still-air standard conditions based on the actual take-off mass for a twin-engine aircraft;

(c) for aeroplanes authorized for extended range twin-engine operations (ETOPS) under Parts 93, 121 or 135, the approved ETOPS diversion time, up to a maximum of two hours of flight time, subject to any minimum equipment list restriction, at the published one-engine-inoperative cruising speed in still-air standard conditions based on the actual take-off mass; or

(d) two hours flight time at one-engine inoperative cruising speed according to the aircraft flight manual referred to in regulation 91.03.2, in still-air standard conditions based on the actual take-off mass for three-engine and four-engine aircraft:

Provided that if the aircraft flight manual referred to in regulation 91.03.2 does not contain a one-engine inoperative cruising speed as referred to in paragraphs (b) and (c), the speed to be used for calculation shall be the speed which is achieved with the remaining engine or engines set at maximum continuous power.

(5) The owner or operator of a helicopter shall select at least one destination alternate aerodrome for each IFR flight, unless the meteorological conditions prevailing are such that, for the period from one hour before until one hour after the expected time of arrival at the destination aerodrome, the approach from the minimum sector safe altitude and landing can be made in VMC.

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

(a) the meteorological conditions prevailing are such that, for the period from one hour before until one hour after the expected time of arrival at the destination aerodrome, the approach from the minimum sector safe altitude and landing can be made in VMC; or

(b) the destination aerodrome is isolated and no adequate destination alternate aerodrome exists, and –

(i) 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) for aeroplanes, 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 least 5.5 km or of 4 km more than the minimum associated with the procedure, whichever is greater.

(7) Except as provided in sub-regulations (10) and (13), when planning a flight, the owner or operator shall only select an aerodrome as a destination or alternate aerodrome if the appropriate weather reports or forecasts, or a combination thereof, are at or above the applicable planning minima for a period of one hour before to one hour after the estimated time of arrival of the aircraft at the aerodrome.

(8) The owner or operator of a helicopter shall select at least one destination alternate aerodrome for each IFR flight unless –

(a) available current meteorological information indicates that the following meteorological conditions will exist from two hours before to two hours after the estimated time of arrival, or from the actual time of departure to two hours after the estimated time of arrival, whichever is the shorter period –

(i) a cloud base of at least 400 ft above the minimum associated with the instrument approach procedure; and

(ii) visibility of at least 1.5 km more than the minimum associated with the procedure. or

(b) the heliport of intended landing is isolated and no suitable alternate is available and –

(i) an instrument approach procedure is prescribed for the isolated heliport of intended landing; and

(ii) a point of no return (PNR) is determined in case of an offshore destination.

(9) Suitable offshore alternates for helicopters may be specified subject to the following –

(a) the offshore alternates shall be used only after passing a PNR. Prior to a PNR, onshore alternates shall be used;

(b) mechanical reliability of critical control systems and critical components shall be considered and taken into account when determining the suitability of the alternate;

(c) one-engine inoperative performance capability shall be attainable prior to arrival at the alternate;

(d) to the extent possible, deck availability shall be guaranteed; and

(e) weather information must be reliable and accurate.

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

(11) The owner or operator of an aircraft shall specify the destination alternate aerodrome, if required, in the air traffic service flight plan referred to in regulation 91.03.3.

(12) The owner or operator shall specify *en route* alternate aerodromes for extended-range operations with twin-engine aeroplanes and shall specify such *en route* alternate aerodromes in the air traffic service flight plan referred to in regulation 91.03.4.

(13) In addition to the provisions of sub-regulation (10), an owner or operator may conduct a flight in accordance with IFR to a destination for which there is no aviation weather report or forecast available: Provided the requirements specified in Document SA-CATS-OPS 91 are met.

Planning minima for IFR flights

91.07.8 (1) The owner or operator of an aircraft shall not select an aerodrome as a take-off alternate aerodrome for a flight to be conducted, wholly or partly in accordance with IFR under IMC unless the appropriate weather reports or forecasts, or any combination thereof, indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome, the weather conditions will be at or above the applicable landing minima prescribed in regulation 91.07.5.

(2) The ceiling shall be taken into account when the only approaches available are non-precision or circling approaches.

(3) Any limitation related to one-engine inoperative operations shall be taken into account.

(4) Except as provided in regulation 91.07.7(13), the owner or operator of an aircraft shall only select the destination aerodrome or destination alternate aerodrome, if required, if the appropriate weather reports or forecasts, or any combination thereof, indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome, the weather conditions will be at, or above, the applicable planning minima as follows =

(a) planning minima for a destination aerodrome –

(i) runway visual range (RVR) or visibility specified in accordance with regulation 91.07.5; and

(ii) for non-precision approach or a circling approach, the ceiling at, or above, minimum descent altitude/height (MDA/H); and

(b) planning minima for a destination alternate aerodrome shall be as prescribed in Document SA-CATS-OPS 91.

(5) The owner or operator of an aircraft shall not select an aerodrome as an *en route* alternate aerodrome unless the appropriate weather reports or forecasts, or any combination thereof, indicate that, during a period commencing one hour before and ending one hour after the estimated time of arrival at the aerodrome, the weather conditions will be at or above the planning minima as prescribed in Document SA-CATS-OPS 91.

Meteorological conditions

91.07.9 (1) On a flight to be conducted in accordance with IFR, the pilot-in-command of an aircraft shall not –

(a) commence take-off; or

(b) continue beyond the in-flight decision point,

unless information is available indicating that conditions will, at the estimated time of arrival of such aircraft, be at, or above, the applicable aerodrome operating minima –

(i) at the destination aerodrome; or

(ii) where a destination alternate aerodrome is required, at the destination aerodrome and one destination alternate aerodrome or at two destination alternate aerodromes.

(2) On a flight conducted in accordance with VFR, the pilot-in-command of an aircraft shall not commence take-off unless current meteorological reports, or a combination of current reports and forecasts, indicate that the meteorological conditions along the route, or that part of the route to be flown under VFR, shall, at the appropriate time, be such as to render compliance with the provisions prescribed in this Part possible.

VFR operating minima

91.07.10 The owner or operator of an aircraft shall ensure that –

(a) VFR flights are conducted in accordance with the visual flight rules prescribed in Subpart 6; and

(b) special VFR flights are not commenced when the visibility is less than the visibility prescribed in regulation 91.06.22(1).

Mass and balance

91.07.11 (1) The owner or operator of an aircraft shall ensure that, during any phase of the operation, the loading, mass and the centre of gravity of the aircraft complies with the limitations specified in the approved aircraft flight manual referred to in regulation 91.03.2 or the operations manual referred to in Part 93,

Part 121, Part 127 or Part 135, as the case may be, if the limitations therein are more restrictive.

(2) The owner or operator shall establish the mass and the centre of gravity of the aircraft by actual weighing prior to initial entry into operation and thereafter at intervals of five years.

(3) The accumulated effects of modifications and repairs on the mass and balance of the aircraft, shall be accounted for and properly documented by the owner or operator.

(4) The aircraft shall be weighed in accordance with the provisions of sub-regulation (2), if the effect of modifications on the mass and balance is not accurately known.

(5) The owner or operator shall determine the mass of all operating items and flight crew members included in the dry operating mass of the aircraft, by weighing or by using the appropriate standard mass as prescribed in Document SA-CATS-OPS 91.

(6) The influence of the mass of the operating items and flight crew members referred to in sub-regulation (5) on the centre of gravity of the aircraft shall be determined by the owner or operator of such aircraft.

(7) The owner or operator shall establish the mass of the traffic load, including any ballast, by actual weighing, or determine the mass of the traffic load in accordance with the appropriate standard passenger and baggage mass as prescribed in Document SA-CATS-OPS 91.

(8) The owner or operator shall determine the mass of the fuel load by using the actual specific gravity or, if approved by the Commissioner, a standard specific gravity.

Fuel supply

91.07.12 (1) The pilot-in-command of an aircraft shall not commence a flight unless he or she is satisfied that the aircraft carries at least the planned amount of fuel to complete the flight safely, taking into account operating and meteorological conditions and the expected delays.

(2) The pilot-in-command shall ensure that the amount of usable fuel remaining in flight is not less than the fuel required to proceed to an aerodrome or, in the case of a helicopter, a suitable landing place, where a safe landing can be made.

(3) If the usable fuel on board the aircraft is less than the final reserve fuel, the pilot-in-command of such aircraft, shall –

(a) in the case of an aeroplane, declare an emergency; or

(b) in the case of a helicopter, land as soon as possible.

(4) The method of calculating the amount of fuel to be carried for each flight shall be as prescribed in Document SA-CATS-OPS 91.

Refuelling or defuelling with passengers on board

91.07.13 (1) Except as provided for in Parts 93, 121, 127 and 135, the owner or operator of an aircraft shall ensure that the aircraft is not refuelled or defuelled with aviation gasoline or wide-cut type fuel when passengers are embarking, on board or disembarking such aircraft.

(2) In cases other than the cases referred to in sub-regulation (1), necessary precautions shall be taken and the aircraft shall be properly manned by qualified personnel ready to initiate and direct an evacuation of such aircraft by the most practical and expeditious means available.

Smoking in aircraft

91.07.14 (1) No person shall smoke in a South African registered aircraft or in any foreign registered aircraft when in or over the Republic.

(2) In all South African registered aircraft, notices shall be displayed in a prominent place in all passenger and flight crew compartments, indicating that smoking is prohibited.

Instrument approach and departure procedures

91.07.15 (1) The owner or operator of an aircraft shall ensure that the instrument approach and departure procedures, established by the appropriate authority of the State in which the aerodrome to be used, is located, are used.

(2) Notwithstanding the provisions prescribed in sub-regulation (1), a pilot-in-command may accept an air traffic control clearance to deviate from a published approach or departure route: Provided that –

(a) obstacle clearance criteria are observed and full account is taken of the operating conditions; and

(b) the final approach is flown visually..

(3) The owner or operator of an aircraft shall ensure that the appropriate temperature corrections to all published altitudes are applied when conducting approaches at an aerodrome in temperatures below standard.

Noise abatement procedures

91.07.16 No person shall operate an aircraft contrary to noise abatement procedures established for an aerodrome in terms of the provisions of the regulations of the State into or out of which the aircraft is being flown.

Submission of air traffic service flight plan

91.07.17 The owner or operator of an aircraft shall ensure that a flight is not commenced unless an air traffic service flight plan referred to in regulation

91.03.4, has been filed, or adequate information has been deposited in order to permit alerting services to be activated, if required.

Seats, safety belts and harnesses

91.07.18 (1) Before take-off and landing, and whenever deemed necessary in the interests of aviation safety, the pilot-in-command of an aircraft shall ensure that each person on board such aircraft occupies a seat or berth with his or her safety belt or harness, where provided, properly secured.

(2) The pilot-in-command shall ensure that multiple occupancy of aircraft seats does not occur other than by one adult and one infant who is properly secured by a child restraint device.

Passenger seating

91.07.19 (1) The owner or operator of an aircraft shall ensure that passengers are seated where, in the event that an emergency evacuation is required, such passengers may best assist and not hinder evacuation from the aircraft.

(2) The owner or operator of an aircraft shall ensure that if a disabled passenger is carried together with other passengers, such passenger shall not be positioned in such a way that access to emergency exits is blocked.

(3) Passengers may be carried in an aircraft, other than an air ambulance aircraft operated and equipped in terms of Part 138, on a stretcher only if such stretcher and the manner in which it is secured to the aircraft have been approved by the Commissioner and the condition of the passenger does not require the attention of an aviation health care provider or require the passenger to be connected to any external medical equipment.

(4) In the case of an emergency medical situation, where no air ambulance aircraft operated and equipped in terms of Part 138 can be made available within a reasonable time span at or near the place where the situation exists, an aircraft owner or operator may disregard sub-regulations (1), (2) and (3) in the interest of saving human life.

(5) Any non-standard emergency transport in terms of sub-regulation (4) shall be reported by the operator to the Commissioner on the appropriate form as described in Document SA-CATS-OPS 138, explaining the reasons for the deviation from regulation 91.07.19, within fourteen days of the flight having taken place.

Passenger movements and briefing

91.07.20 (1) The owner or operator of an aircraft shall take reasonable steps to provide for the safe movement of his or her passengers to or from the aircraft while on the aerodrome movement area.

(2) The owner or operator of an aircraft shall ensure that –

(a) passengers are verbally briefed about safety matters, parts or all of which may be given by an audio-visual presentation; and

(b) in an emergency during flight, passengers are instructed in such emergency action as may be appropriate to the circumstances.

(3) The owner or operator shall ensure that, before take-off –

(a) passengers are briefed, to the extent applicable, on –

(i) the smoking prohibition;

(ii) when the back of the seat is to be in the upright position and the tray table stowed;

(iii) the location of emergency exits;

(iv) the location and use of floor proximity escape path markings;

(v) the stowage of carry-on baggage;

(vi) any restrictions on the use of portable electronic devices; and

vii) the location and the contents of the safety briefing card; and

(b) passengers receive, to the extent applicable, a demonstration of –

(i) the use of safety belts or safety harnesses, including the manner in which the safety belts or safety harnesses are to be fastened and unfastened;

(ii) the location and use of oxygen equipment; and

(iii) the location and use of life jackets.

(4) The owner or operator shall ensure that, after take-off, passengers are reminded of –

(a) the smoking prohibition; and

(b) the use of safety belts or safety harnesses.

(5) The owner or operator shall ensure that, before landing, passengers are reminded of –

(a) the smoking prohibition;

(b) the use of safety belts or safety harnesses;

(c) when the back of the seat is to be in the upright position and the tray table stowed, if applicable;

(d) the re-stowage of carry-on baggage; and

(e) any restrictions on the use of portable electronic devices.

(6) The owner or operator of an aircraft shall ensure that, after landing, passengers are reminded of –

(a) the smoking prohibition while on board the aircraft and any prohibitions after disembarkment; and

(b) the use of safety belts or safety harnesses.

Passenger health and safety

91.07.21 (1) The pilot-in-command of an aircraft shall notify air traffic control or the South African Port Health Authority (PHA), as applicable, where it appears that any person displays the symptoms of a communicable disease as provided in Document SA-OPS-CATS 91.

(2) Immediately upon landing, a report shall be made to the PHA containing the information contained in Document SA-OPS-CATS 91.

Emergency equipment

91.07.22 (1) The owner or operator of an aircraft shall ensure that emergency equipment, carried or installed in the aircraft in order to meet the requirements prescribed in this Part and the Minimum Equipment List (MEL), is in such condition that it will satisfactorily perform its design function.

(2) The pilot-in-command of the aircraft shall ensure that the emergency equipment concerned remains easily accessible for immediate use by the flight crew.

Illumination of emergency exits

91.07.23 When an aircraft, which is equipped with an emergency lighting system referred to in regulation 91.04.25, is in flight and below 1 000 feet above ground level, or on the ground with passengers on board –

(a) the emergency lighting system shall be switched on; or

(b) the normal cabin lighting system shall be switched on and the emergency lighting shall be armed.

Use of supplemental oxygen

91.07.24 (1) The pilot-in-command of an aircraft shall ensure that flight crew members engaged in performing duties essential to the safe operation of an aircraft in flight, use supplemental oxygen –

(a) continuously when the flight deck pressure altitude exceeds 10 000 feet for more than 120 minutes intended flight time, and

(b) at all times when the flight deck pressure altitude exceeds 12 000 feet.

(2) The pilot-in-command of an aircraft shall ensure that, with the exception of supersonic aeroplanes, when a flight is conducted above FL 410, at least one pilot at a pilot station wears an oxygen mask when the other pilot leaves the flight deck for any reason.

Approach and landing conditions

91.07.25 Before commencing an approach to land, the pilot-in-command of an aircraft shall satisfy himself or herself that, according to the information available to him or her, the weather at the aerodrome and the condition of the runway or touch-down area intended to be used, will not prevent a safe approach, landing or missed approach, having regard for the performance information contained in the aircraft flight manual referred to in regulation 91.03.2 or similar document.

Approach ban

91.07.26 (1) Except as provided for in sub-regulation (3), when operating in IMC and in accordance with IFR, the pilot-in-command (PIC) of an aircraft may commence an approach regardless of the reported runway visual range (RVR) or visibility, but the approach shall not be continued beyond the final approach fix (FAF) or equivalent published position, or, in the case of a non-precision approach, below 1 000 feet above the aerodrome, unless the reported RVR or visibility for the runway or touch-down area is equal to, or better than, the applicable operating minima.

(2) Where RVR is not available, the PIC may derive an RVR value by converting the reported visibility in accordance with the provisions as prescribed in section 8 of technical standard 91.07.5 of Document SA-CATS-OPS 91.

(3) The PIC may continue the approach to decision altitude/height or minimum descent altitude/height if –

(a) at the time the RVR report is received, the aircraft has passed the FAF inbound or, where there is no FAF, the point where the final approach course is intercepted or, in the case of a non-precision approach, below 1 000 feet above the aerodrome;

(b) the aircraft is on a training flight where a landing is not intended and the appropriate air traffic control unit is informed that a missed approach procedure will be initiated at or above the decision height or minimum descent altitude, as appropriate; or

(c) the RVR is varying between distances less than and greater than the minimum RVR.

(4) The PIC may continue the approach below decision altitude/height or minimum descent altitude/height and the landing may be completed: Provided that the required visual reference is established at the decision altitude/height or minimum descent altitude/height and is maintained.

(5) Where no FAF or equivalent published position exists for a precision approach, the PIC shall decide whether to continue or abandon the approach before descending below 1 000 feet above the aerodrome on the final approach segment.

In-flight testing on passenger- and cargo-carrying flights

91.07.27 The owner or operator of an aircraft, when passengers or cargo are on board such aircraft, shall ensure that no person –

(a) simulates emergency situations in the aircraft affecting the flight characteristics of such aircraft;

(b) conducts flight testing for the initial skills test or renewal of an instrument rating;

(c) conducts any flight or skills test other than a route proficiency test; or

(d) conducts any skills test for a class or type rating.

Turning helicopter rotors

91.07.28 (1) Except as provided for in sub-regulation (2), no person engaged in helicopter operations shall permit helicopter rotors to be turned under power without a qualified pilot at the controls of such helicopter.

(2) A licensed aircraft maintenance engineer, who has undergone instruction from a qualified Grade II or higher qualified helicopter flight instructor on the ground-running of the relevant helicopter type, and thereafter has been certified as competent to undertake such a task by the instructor in his or her aircraft maintenance engineer's Record of Experience (TV2/308), may turn helicopter rotors under power for the purposes of blade tracking on condition that –

(a) the collective has been locked in the down position; and

(b) ground-runs are carried out when the helicopter is stationary, and wind conditions do not require major cyclic inputs.

Starting and running of engines

91.07.29 (1) Except when the brakes are serviceable and are fully applied, chocks shall be placed in front of the wheels of an aeroplane before starting the engine or engines, and a competent person shall be seated at the controls when the engine or engines are running.

(2) Where the pilot of an aeroplane is the only person present and it has been necessary for chocks to be used, he or she shall ensure that the chocks are removed prior to starting the engine, unless the aircraft is equipped with a parking brake, in which case the parking brake shall be set before the pilot removes the chocks.

(3) Except as provided in sub-regulation (2), the pilot seat of an aircraft shall not be left unattended while the engines are running and such person shall be qualified to occupy the pilot seat.

Acrobatic flights

91.07.30 (1) No aircraft shall be flown acrobatically so as to endanger air traffic.

(2) Except by individual permission from the Commissioner, aircraft shall not be flown acrobatically –

(a) unless the manoeuvre can be concluded and the aircraft brought on an even keel at a height of not less than 2 000 feet above the ground or water;

(b) within a five nautical mile distance of an aerodrome reference point of an aerodrome licensed and approved in terms of Part 139 unless at a height not less than 4 000 feet above ground level;

(c) in the vicinity of air traffic services routes; or

(d) over any populous area or public gathering.

Simulated instrument flight in aircraft

91.07.31 (1) The owner or operator of an aircraft shall ensure that no person operates the aircraft in simulated instrument flight in visual meteorological conditions unless –

(a) the other aircraft control seat is occupied by a safety pilot who possesses at least a private pilot licence with category and class ratings appropriate to the aircraft being flown;

(b) the safety pilot has adequate vision forward and to each side of the aircraft, or there is a competent observer in the aircraft who adequately supplements the vision of the safety pilot; and

(c) except in the case of lighter-than-air aircraft, the aircraft is fitted with fully functioning dual controls: Provided that simulated instrument flight may be conducted in a single-engine aircraft, equipped with a single, functioning throw-over control wheel in place of fixed dual controls of the elevator and ailerons, when –

(i) the safety pilot has determined that the flight can be conducted safely; and

(ii) the person manipulating the controls has at least a private pilot licence with appropriate category, class and type ratings.

(2) When simulated instrument flight is being practised by a pilot, at least one of the two pilots shall hold the appropriate valid type rating in respect of the aircraft being flown and shall act as the pilot-in-command.

(3) When a simulated instrument flight takes place at night in VMC, the safety pilot shall be the holder of a valid instrument rating.

(4) When simulated instrument flight is being practised for the purpose of obtaining an instrument rating, the safety pilot shall be an appropriately rated flight instructor.

Aeroplane operating procedures

91.07.32 Unless otherwise specified in an air traffic control instruction, the pilot-in-command of an aircraft shall climb or descend to an assigned altitude or flight level at a rate less than 1 500 ft/min throughout the last 1 000 ft of climb or descent to the assigned altitude or flight level.

Head-up displays and enhanced vision systems

91.07.33 No owner or operator shall use a head-up display or enhanced vision system while operating in accordance with the instrument flight rules unless he or she meets the requirements specified in Document SA-CATS-OPS 91 and is approved to do so by the Commissioner.

Electronic flight bags

91.07.34 No owner or operator shall use an electronic flight bag unless he or she meets the requirements specified in Document SA-CATS-OPS 91 and is approved to do so by the Commissioner.

SUBPART 8:
PERFORMANCE OPERATING LIMITATIONS

General provisions

91.08.1 (1) The owner or operator of an aircraft shall ensure that, under all conditions that could reasonably be expected to be encountered, the aircraft is operated in compliance with –

(a) the terms and conditions of the certificate of airworthiness and aircraft flight manual issued in respect of such aircraft;

(b) the operating limitations, the markings and placards as prescribed by the appropriate authority of the State of Registry; and

(c) the mass limitations prescribed in Part 21 or as imposed by compliance with the applicable noise certification standards under which the aircraft was certified unless otherwise authorized in exceptional circumstances by the competent authority of the State in which the aerodrome is situated for a certain aerodrome or a runway where there is no noise disturbance problem.

(2) In complying with sub-regulation (1), the owner or operator shall take account of airframe configuration, environmental conditions and the operation of systems which may have an effect on the performance of the aircraft, when appropriate, including aircraft mass, operating procedures, the pressure altitude appropriate to the elevation of the aerodrome, temperature, wind, runway gradient and condition of runway.

(3) The operator of an aircraft engaged in a commercial air transport operation, shall comply with the provisions of the appropriate regulations in Part 121, Part 127 or Part 135, as the case may be.

Helicopter operating limitations

91.08.2 (1) Except as provided in Part 127, performance Class 3 helicopters shall only be operated in conditions of weather and light, and over such routes and diversions therefrom, which may permit a safe forced landing to be executed in the event of an engine failure.

(2) The provisions of sub-regulation (1) shall apply to performance Class 2 helicopters prior to the take-off decision point or after passing the landing decision point.

(3) Only performance Class 1 helicopters shall be permitted to operate from elevated heliports in built-up urban areas.

Helicopter performance classification

91.08.3 For performance purposes, helicopters are classified as follows:

(a) Class 1 helicopter – a helicopter with performance such that, in case of critical power unit failure, the helicopter is able to safely continue the flight to an appropriate landing, unless the failure occurs prior to reaching the take-off decision point or after passing the landing decision point, in which cases the helicopter must be able to land within the rejected take-off or landing area;

(b) Class 2 helicopter – a helicopter with performance such that, in case of critical power unit failure, the helicopter is able to safely continue the flight, except when the failure occurs early during the take-off manoeuvre or late in the landing manoeuvre, in which case a forced landing may be required; and

(c) Class 3 helicopter – a helicopter with performance such that, in case of power unit failure at any point in the flight profile, a forced landing has to be performed.

Aeroplane performance classification

91.08.4 For performance purposes, aeroplanes are classified as follows –

(a) Class A aeroplanes –

(i) multi-engine aeroplanes powered by turbo-propeller engines with a maximum certificated mass exceeding 5 700 kilograms; and

(ii) multi-engine turbojet-powered aeroplanes;

(b) Class B aeroplanes – propeller-driven aeroplanes, other than single-engine aeroplanes, with a maximum certificated mass of 5 700 kilograms or less;

(c) Class C aeroplanes – aeroplanes powered by two or more reciprocating engines with a maximum certificated mass exceeding 5 700 kilograms; and

(d) Class D aeroplanes – single-engine aeroplanes.

Performance limitations Class A and Class C aeroplanes

91.08.5 (1) No owner or operator of a Class A or C aeroplane shall start a take-off unless the aeroplane is able, in the event of a critical power-unit failing at any point in the take-off, either to discontinue the take-off and stop within either the accelerate-stop distance available or the runway available, or to continue the take-off and clear all obstacles along the flight path by an adequate margin until the aeroplane is in a position to safely transition to the *en route* phase of flight.

(2) The adequate margin referred to in sub-regulation (1) shall be determined as prescribed in Document SA-CATS-OPS 91.

(3) For the purposes of sub-regulation (1), in determining the length of the runway available, account shall be taken of the loss, if any, of runway length due to alignment of the aeroplane prior to take-off.

(4) No owner or operator of a Class A or C aeroplane shall operate such aeroplane unless it is able, in the event of the critical engine becoming inoperative at any point along the route or planned diversions there from, to continue the flight to an aerodrome at which the requirements of sub-regulation (5) can be met, without flying below the minimum obstacle clearance altitude at any point.

(5) No owner or operator of a Class A or C aeroplane shall operate such aeroplane unless it is able, at the aerodrome of intended landing and at any alternate aerodrome, after clearing all obstacles in the approach path by a safe margin, be able to land, with assurance that it can come to a stop or, for a seaplane, to a satisfactorily low speed, within the landing distance available. Allowance shall be made for expected variations in the approach and landing techniques, if such allowance was not made during the establishment of the aeroplane's performance data.

(6) An owner or operator may, in meeting the requirements of sub-regulations (4) and (5), make allowance for normal fuel consumption and if applicable, the ability to jettison fuel *en route*.

(7) An owner or operator of aeroplanes without approved performance data may submit an alternative means of meeting the requirements of sub-regulations (1), (4) and (5) to the Commissioner for approval.

SUBPART 9: MAINTENANCE

General

91.09.1 (1) No owner, operator or pilot-in-command of an aircraft shall operate the aircraft unless such aircraft is maintained and released to service in accordance with the provisions of Part 43.

(2) An owner or operator may assign the responsibility for the maintenance and release of his or her aircraft to an approved maintenance organisation by means of a written agreement.

Aeroplane maintenance programme

91.09.2 Each owner or operator shall ensure that the aeroplane is maintained in accordance with an aeroplane maintenance programme as specified in Document SA-CATS-GMR.

Maintenance responsibilities

91.09.3 (1) The owner or operator of an aircraft, or maintenance organisation so assigned in accordance with regulation 91.09.01(2), shall ensure that, in accordance with procedures acceptable to the Commissioner –

(a) the aircraft is maintained in an airworthy condition;

(b) the operational and emergency equipment necessary for an intended flight is serviceable; and

(c) the certificate of airworthiness of the aircraft remains valid.

(2) The owner or operator shall not operate the aircraft unless it is maintained and released to service under a system acceptable to the Commissioner.

(3) When the maintenance release is not issued by an approved maintenance organization in accordance with the provisions of Part 145, the person signing the maintenance release shall be licensed in accordance with the provisions of Part 66.

(4) The owner or operator shall ensure that the maintenance of the aircraft is performed in accordance with a maintenance programme acceptable to the Commissioner.

Maintenance records

91.09.4 (1) The owner or operator of an aircraft, or maintenance organisation so assigned in accordance with regulation 91.09.01(2), shall ensure that the following records are kept for the periods mentioned in sub-regulation (2) –

(a) the total time in service (hours, calendar time and cycles, as appropriate) of the aircraft and all life-limited components;

(b) the current status of compliance with all applicable 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 aircraft or its components subject to a mandatory overhaul life;

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

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

(2) The records in sub-regulations (1)(a) to (e) shall be kept for a minimum period of 90 days 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 one year after the signing of the maintenance release.

(3) In the event of a temporary change of owner or lessee, the records shall be made available to the new owner or lessee. In the event of any permanent change of owner or lessee, the records shall be transferred to the new owner or lessee.

Modifications and repairs

91.09.5 All modifications and repairs shall comply with airworthiness requirements acceptable to the Commissioner. Procedures shall be established to ensure that the substantiating data supporting compliance with the airworthiness requirements are retained.

Maintenance release

91.09.6 (1) A maintenance release shall be completed and signed, as prescribed by the Commissioner, to certify that the maintenance work performed has been completed satisfactorily and in accordance with data and procedures acceptable to the Commissioner.

(2) A maintenance release shall contain a certification including –

(a) basic details of the maintenance performed;

(b) the date such maintenance was completed;

(c) when applicable, the identity of the approved maintenance organization;

(d) the identity of the authorized person or persons signing the release;

(e) the expiry date of the release where a calendar limit exists;

(f) the hours at which the release will expire;

(g) if the maintenance program makes provision for such, the hours or time by which the inspection may be extended.

(3) An owner shall, notwithstanding an extension as contemplated in sub-regulation (2)(g), ensure that a maintenance release remains valid by meeting the requirements of sub-regulation (2)(d) and (e) or (f), as applicable, with respect to such extension.

Continuing airworthiness information

91.09.7 An owner or operator of an aeroplane of a maximum certificated take-off mass in excess of 5 700 kg shall monitor and assess maintenance and operational experience with respect to continuing airworthiness and provide such information as required by the Commissioner and shall report said information to him or her using a reporting system the Commissioner has developed for that purpose.