

Part 91		Requirement	
Subpart A General			
91.1			Applicability
	a		Unless stated otherwise, this Part applies to:
		1	the owner, or where an aircraft is leased, the lessee of an aircraft registered in the Territory, wherever such an aircraft may be; and
		2	all aircraft operating or navigating within the Territory; and
		3	the crew of all such aircraft.
91.5			Purpose
	a		The requirements of this Part cover operation and piloting of aircraft, the arrangements for the planning and preparation for flight, and the maintenance and equipment of aircraft.
	b		These Requirements constitute Instructions given by the Governor under section 41 of the Air Navigation (Overseas Territories) Order 2007 (“the Order”) in exercise of his powers under section 57 of the Civil Aviation Act 1949 as extended to the Territories by the Civil Aviation Act 1949 (Overseas Territories) Order 1969. Failure to comply with these Instructions may constitute an offence under and in accordance with article 41 and the provisions of article 134(1) of the Order. These Requirements encompass and amplify many of the provisions of the Order, including the Rules of the Air set out in Schedule 8 to the Order. Therefore, failure to comply with these Requirements may:
		1	constitute a breach of one or more provisions of the Order; and
		2	result in proceedings for breaches of the Order; or
		3	result in the refusal of an application for renewal of an approval, certificate or licence; or
		4	result in action to suspend or revoke an approval, certificate or licence.
	c		The Order establishes the basic legal obligations governing the operation and piloting of aircraft, the planning and preparation for flight and the maintenance and equipment of aircraft but specifies these obligations in rather general terms. Therefore Article 152 of the Order requires the Governor to publish Requirements to augment, amplify and detail more precisely the manner in which these obligations shall be met. The Requirements are the means by which the operator of an aircraft or the pilot will be able to satisfy the Governor as to the fulfilment of the obligations in respect of the operation of an aircraft or their respective entitlement to hold an approval, permit, certificate or licence.

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	d	The issue of an approval, permit, certificate or licence indicates only that the holder is considered competent to secure the safe operation of aircraft. The possession of such a document does not relieve the operator of an aircraft, or the pilot-in-command, from the responsibility for compliance with the Order and any other legislation in force. Neither does it relieve them of their responsibility for the safe conduct of any particular flight, as the ultimate responsibility for the safety of flight operations always rests with the operator and the pilot-in-command.
91.10		Use of English
		All documentation, written communications and data (electronic or otherwise) for submission to the Governor in support of an application for a certificate, licence or approval shall be provided in English.
91.15		Laws, Requirements and Procedures
	a	Each holder of a certificate, licence, permit or approval shall take reasonable care to ensure that all persons employed, engaged, or contracted by the holder to perform safety-related activities, are familiar with and comply with the laws, regulations and procedures necessary to the performance of their duties.
	b	The pilot-in-command shall comply with the laws, regulations and procedures of those States in which operations are conducted.
	c	The pilot-in-command shall be familiar with the laws, regulations and procedures, pertinent to the performance of his or her duties, prescribed for the areas to be traversed, the aerodromes to be used and the air navigation facilities relating thereto. The pilot-in-command 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 aircraft.
91.20		More stringent requirements
		A pilot-in-command operating a Territory-registered aircraft in:
	a	a foreign state; or
	b	international airspace under the control of a foreign State
		shall comply with this Part unless the application of a more stringent operating and flight rule of that State or of that airspace is required.
91.25		Power to Inspect
		Each holder of a certificate, licence, permit or approval shall ensure that any person authorised by the Governor is allowed to board an aircraft, unless in the opinion of the pilot-in-command, the safety of the aircraft would thereby be endangered.
91.30		Production of documentation and records
	a	Each holder of a certificate, licence, permit or approval shall:
		1 give, any person authorised by the Governor, access to any documentation relating to aircraft operations and the safety of aircraft in flight; and

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		2 produce all such documentation and records, when requested to do so by an authorised person, within a reasonable period of time.
	b	The pilot in command shall, within a reasonable period of time of being requested to do so by a person authorised by an Authority, produce to that person the documentation required to be carried on board.
91.35		Aircraft airworthiness
		Except as authorised by the Governor, an aircraft shall not fly unless:
	a	it has a valid certificate of airworthiness issued by the State of Registry; or
	b	it has a valid Permit to Fly in accordance with OTAR Part 21 Subpart P; and
	c	the aircraft is operated in compliance with that document.
91.40		Aircraft flight manual
		An aircraft shall be operated in compliance with the operating limitations specified in the aircraft flight manual, or an equivalent document approved by the Governor.
91.45		Documents to be carried
	a	A flight shall not be commenced unless the following documents are carried:
		1 the valid certificate of airworthiness; and
		2 the flight crew licences of each member of the flight crew; and
		3 the aircraft radio station licence; and
		4 a noise certification document, if applicable; and
		5 a copy of any approvals, permissions, authorisations or exemptions relevant to the flight; and
		6 a certified true copy of any transfer agreement under Article 83 bis of the Chicago Convention; and
		7 for an international flight:
		i certificate of registration; and
		ii the journey log book or equivalent record; and
	b	Where such documents as required by paragraphs (a)(1), (a)(4) and (7)(i) are written in a language other than English, an English translation shall be provided.
	c	Before any flight is commenced the pilot-in-command shall ensure that the documents listed in (a) are in force and will remain so for the duration of the flight.
	d	The documents required by (a) shall be carried on each flight except that:
		1 where the flight is intended to begin and end at the same aerodrome; and
		2 the aerodrome is located in a UK Overseas Territory; and
		3 the planned flight does not include passage over the territory of any other State

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			the documents listed at (a) may be kept at the aerodrome of departure instead of being carried in the aircraft.
91.50		2	Manuals to be carried
	a		A flight shall not be commenced unless the following manuals are carried:
		1	the flight manual for the aircraft, or equivalent document.
91.55			Additional Information and Forms to be carried
	a		A flight shall not be commenced unless the following additional documents are carried:
		1	such documentation as will enable the pilot-in-command to record operational information; and
			Note: This may include items such as the operational flight plan, aircraft technical log etc.
		2	for an international flight, passenger and cargo manifests; and
		3	current and suitable charts to cover the route of the proposed flight and any route along which it is reasonable to expect that the flight may be diverted.; and
		4	for an international flight, a copy of the notified procedures to be followed by the pilot-in-command of an intercepted aircraft, and the notified visual signals for use by intercepting and intercepted aircraft.
91.60			Correcting lenses
			Any flight crew member assessed as fit to exercise the privileges of a licence subject to the use of suitable correcting lenses, shall have a spare set of spectacles readily available when exercising those privileges.
91.65			Radio licences
			Where an aircraft is fitted with radio transmitting equipment, such equipment shall be operated only by crewmembers who are appropriately qualified.
91.70			Ground operation of aircraft
	a		An aeroplane shall not be taxied on the movement area of an aerodrome unless the person at the controls:
		1	has been duly authorised and briefed;
		2	is fully competent to taxi the aeroplane
		3	is qualified to use the radio telephone if radio communications are required; and
		4	has received instruction from a competent person in respect of aerodrome layout, and where appropriate, information on routes, signs, marking, lights, ATC signals and instructions, phraseology and procedures, and is able to conform to the operational standards required for safe aeroplane movement at the aerodrome.
	b		A helicopter rotor shall not be turned under power, for the purpose of flight, without a qualified pilot at the controls.

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	c	A helicopter rotor shall not be turned under power, for other than purpose of flight unless the person at the controls:
		1 has been duly authorised and briefed;
		2 has been provided with training and procedures to be followed.
91.75		Portable electronic devices
	a	No person may operate on any aircraft any mobile or cell phone, computer or other electronic device that is designed to transmit or capable of transmitting electromagnetic energy otherwise than in accordance with the permission of the pilot-in-command of that aircraft.
	b	Paragraph (a) shall not apply to:
		1 hearing aids; and
		2 heart pacemakers; and
		3 portable voice recorders; and
		4 electric shavers; and
		5 electronic watches; and
		6 any other portable electronic device if the operator or pilot-in-command of the aircraft has determined that the said portable electronic device to be used will not cause interference with any aircraft system or equipment of the aircraft on which it is used.
91.80		Flight instruction and testing
		No person shall give flight instruction in an aircraft, except a balloon, unless that aircraft is equipped with fully functioning dual controls.
91.85		Common language
		The pilot-in-command shall ensure that:
	a	flight crew members demonstrate the ability to speak and understand the language used for aeronautical radiotelephony communications as specified in ICAO Annex 1.
91.90		Information on emergency and survival equipment carried
	a	Each holder of a certificate, licence, permit or approval shall have available, for immediate communication to rescue co-ordination centres, information on the emergency and survival equipment carried on board each of its aircraft.
	b	For flights over-water the information shall, where such equipment is carried, include:
		1 the number, colour, and type of life rafts; and
		2 type of pyrotechnics carried; and
		3 details of emergency medical supplies and water supplies; and
		4 the type and operating frequencies of any emergency portable radio equipment.
91.95		Stowage of baggage and cargo
	a	Baggage or cargo shall not be carried in an aircraft unless it is:
		1 stowed and restrained in accordance with any instructions given in the aircraft flight manual; and

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		2 packaged to avoid injury to any person on board.
	b	A pilot-in-command shall not permit any baggage or cargo carried to:
		1 exceed the load limitation for the seats, berths, or floor structure as prescribed by the aircraft flight manual, or by placards; or
		2 be located in a position that restricts the access to or use of any required emergency exit; or
		3 be located in a position where it may restrict access to any flight control or part of the aircraft cockpit, or may restrict visibility of any flight instrument.
91.100		Carriage of Dangerous Goods
		Dangerous goods shall not be loaded on or carried in an aircraft unless:
	a	such dangerous goods are carried in accordance with the approval in writing of the Governor:
	b	the conditions of carriage of dangerous goods meet the requirements of OTAR Part 92.
	c	an approval is not required because they are:
		1 in aircraft equipment; or
		2 carried as catering or cabin service supplies; or
		3 for use in flight as medical aid for a patient; or
		4 for use in flight as veterinary aid or a humane killer for an animal; or
		5 in the possession of passengers and crew members.
91.105		Carriage of weapons and munitions of war
	a	A flight carrying weapons or munitions of war shall be commenced only:
		1 with the written permission of the Governor and in accordance with any conditions contained in the permission; and
		2 provided that details in writing of the:
		i type, mass or quantity of any such weapon or munitions; and
		ii any conditions of the permission for carriage; and
		iii the location of the weapons or munitions;
		are carried on board the aircraft.
91.110		Carriage of sporting weapons and ammunition
	a	A flight, with sporting weapons on board, shall not be commenced unless request for carriage has been made in advance.
	b	Sporting weapon accepted for carriage shall be:
		1 stowed in the aircraft in a place which is inaccessible to passengers during flight; unless the Governor has determined that compliance is impractical and accepted that other procedures might apply; and
		2 unloaded in the case of firearms or other weapons that can contain ammunition.

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		Note: Ammunition for sporting weapons may be contained in baggage, subject to certain limitations, in accordance with OTAR Part 92.
91.120		Responsibility of pilot-in-command
	a	The pilot-in-command shall be responsible for:
		1 the safety and security of all persons on board the aircraft when the doors are closed;
		2 the operation and safety of the aircraft from the moment the aircraft has started its engine(s) for the purpose of taking-off until the moment it finally comes to rest at the end of the flight and the engine(s) used as primary propulsion units are shut down and if applicable, the rotor blades stopped;
		3 ensuring that no flight is commenced if any flight crew member will be prevented from performing his duties as a result of incapacitation by any cause such as injury, sickness, fatigue, or the effects of alcohol or drugs;
		4 ensuring that no flight will not be continued beyond the nearest suitable aerodrome or heliport when flight crew members' capacity to perform functions is significantly reduced by impairment of faculties from causes such as fatigue, sickness, or lack of oxygen;
		5 reporting all known or suspected defects in the aircraft at the termination of the flight;
		6 completion of the journey log book and any general declaration;
		7 preservation of flight recorder records and if necessary the associated flight recorders if the aircraft has been involved in an accident or incident;
		8 notifying the appropriate local authority in the event that an emergency situation that necessitates action in violation of local regulations or procedures. The report shall be made as soon as possible, but in any event, not later than 72 hours after the incident. A copy of the report shall be submitted to the Governor;
		9 the security of the aircraft during its operation; and
		10 reporting any act of unlawful interference to the Governor and to the designated local authority.
91.130		Passenger Briefing
		A flight shall not be commenced unless:
	a	Passengers are made familiar with the location and use of:
		1 seat belts or any other restraints;
		2 emergency exits;
		3 lifejackets if required to be carried;
		4 other emergency equipment provided for individual use, including passenger emergency briefing cards;
		5 flotation equipment, where carried ; and
		6 oxygen dispensing equipment, if required to be carried for the use of passengers.
	b	All passengers are made aware of the conditions under which smoking may be permitted.

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	c	All persons on board the aircraft are made aware of the location and general manner of use of the principal emergency equipment carried for use by passengers.
	d	During take off and landing and during such other times as may require it, all passengers on board the aircraft are secured in their seats by means of the seat belts or harnesses provided.
	e	In the event of an emergency occurring during flight, all persons on board are instructed in such emergency action as may be appropriate to the circumstances.
Subpart B Operational Procedures		
91.155		Operational control
		Except as otherwise specified by the operator, the pilot-in-command shall be responsible for operational control
91.185		Pre-flight action
		Each pilot-in-command shall, before beginning a flight, obtain, become familiar with and act on all information concerning that flight including the following:
	a	the current and forecast meteorological information; and
	b	the fuel and oil requirements for that flight; and
	c	all relevant details of the planned load; and
	d	the alternatives available if the flight cannot be completed as planned; and
	e	any known or likely traffic delays that have been notified by ATS; and
	f	the status of the communication and navigation facilities intended to be used; and
	g	the current conditions of the aerodrome or heliport and runway lengths at aerodromes of intended use; and
	h	all airspace restrictions that may apply on or adjacent to the planned route and alternatives available; and
	i	any volcanic activity within the vicinity of the planned route.
91.190		Flight Preparation
		A flight shall not be commenced until the pilot in command is satisfied that:
	a	the aircraft is airworthy and in a condition for safe flight;
	b	the documents, manuals and additional documents specified are on board the aircraft;
	c	the instruments and equipment installed on the aircraft are appropriate and in accordance with Subpart F, taking into account the expected flight conditions;
	d	the instruments and equipment are in operable condition except as provided in the MEL;
	e	any necessary maintenance has been carried out in accordance with Subpart G;
	f	the correct quantity and type of fuel has been loaded on the aircraft;
	g	the flight can be safely made in accordance with any given performance data for the aircraft being operated;
	h	the mass of the aircraft and centre of gravity are such that the flight can be conducted safely, taking account of the expected flight conditions;

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	i	any load carried is properly distributed and safely secured;
	j	the aircraft operating limitations, contained in the flight manual, or equivalent, will not be exceeded; and
	k	those parts of the aircraft that are visible and accessible to him have been inspected and/or checked.
91.200		ATS Flight plans
		A flight plan shall be submitted to an appropriate ATS unit prior to the start of each flight under VFR that proceeds over water more than 10 NM from shore, or is operating over any other remote or hazardous terrain.
91.210		Operating in icing conditions - ground procedures
		The pilot-in-command:
	a	shall not operate an aircraft in conditions where ground icing is known or suspected to be present, unless the aircraft has been inspected for icing and if necessary given such de-ice and anti-ice treatment as may be required;
	b	shall at no time perform a take-off in an aircraft that has snow, ice, or frost adhering to the wings, rotors, stabilisers, or control surfaces; and
	c	may only perform a take-off in an aircraft that has frost adhering to a propeller, windscreen, or powerplant installation if such action is specifically permitted by the aircraft flight manual and the take-off is performed in accordance with the aircraft flight manual procedures.
91.215		Operating in icing conditions - flight procedures
		A flight shall not be commenced nor intentionally flown into expected or actual icing conditions unless the aircraft is certificated and equipped to cope with such conditions.
91.220		Operating Facilities
	a	A flight shall not be commenced unless it has been ascertained by every reasonable means available that the ground and/or water facilities including communication facilities and navigation aids available and directly required on such flight, for the safe operation of the aircraft, are adequate for the type of operation under which the flight is to be conducted.
	b	Any inadequacy of facilities observed in the course of operations shall be reported to the authority responsible for them, without undue delay.
91.225		Use of aerodromes/landing sites
	a	An aircraft shall not be operated at an aerodrome or landing site unless:
	1	the aerodrome or landing site is satisfactory, taking account of the performance of the aircraft and the runway characteristics; and

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		2 at the expected time of use, the aerodrome will be available and equipped with necessary ancillary services.
		Note: ancillary services include ATS, lighting, communications, weather reporting, nav aids and emergency services as appropriate.
	b	A helicopter shall not be operated unless it is assured that:
		1 at any place used as a heliport or landing site within a congested area of a city, town or settlement has physical characteristics, obstacle limitation surfaces and visual aids commensurate with the characteristics of the helicopter being operated and the ambient light conditions; and
		2 any place used as a heliport or as a place to hover that is outside a congested area of a city, town, or settlement:
		i is suitable for the helicopter to hover clear of obstructions; and
		ii for a heliport, has a surface area suitable for touchdown and lift-off; and
		3 any place used as a heliport or as a place to hover has approach and take-off paths such that, if the helicopter is not operating in Performance Class 1, an emergency landing can be conducted without causing undue risk to any persons or property on the ground; and
	c	Only helicopters operating in Performance Class 1 shall be permitted to operate from elevated heliports in congested areas.
91.230		Certificated aerodromes - requirement to use
	a	An aircraft shall not take-off or land at a place in the Territory other than at an aerodrome certificated in accordance with OTAR Part 139, or a notified government aerodrome, if that aircraft is conducting:
		1 flight training or testing of a pilot for the purpose of becoming qualified for the grant of a pilot's licence or the inclusion of any rating in a licence, unless that aircraft is a microlight aeroplane; or
		2 international operations
		Note: In this context "international operations" are operations in respect of which the point of departure of the flight and the point of destination thereof are in two different States or in respect of which the flight passes through the sovereign airspace of the territory of more than one State.
91.235		Aerodrome operating minima - applicability
	a	An aerodrome shall not be used as a departure, destination or alternate aerodrome, unless the operating minima, established by the appropriate authority of the State in which the aerodrome is situated, can be complied with.
	b	The aerodrome operating minima for a specific type of approach and landing procedure shall be applicable if:

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		1 the ground equipment shown on the respective instrument approach and landing chart required for the intended procedure, is operative; and
		2 the aircraft systems required for the type of approach, are operative; and
		3 the required aircraft performance criteria are complied with; and
		4 the flight deck crew is qualified to conduct the type of approach.
91.240		Aerodrome operating minima - determination
	a	The aerodrome operating minima for any aerodrome to be used shall not be lower than the values determined in accordance with:
		1 for aeroplanes, either Appendix 1 (Old) or Appendix 1 (New) of OPS 1.430 of EU-OPS (European Commission Regulation (EC) 859/2008 of 20 August 2008); or
		2 for helicopters, Appendix 1 to JAR-OPS 3.430 at Amendment 5, or aeroplane Category A minima where no special helicopter procedures have been promulgated.
	b	The minima determined in accordance with (a) shall not be lower than any that may be established for such aerodromes by the State in which the aerodrome is located, except when specifically approved by that State.
		Note: Minima from commercially available flight guides may be used (subject to any additional increments applied by an operations manual).
	c	The aeroplane categories referred to in Appendix 1 (Old) or Appendix 1 (New) of OPS 1.430 must be derived in accordance with the method given in Appendix 2 to OPS 1.430(c) of EU-OPS (European Commission Regulation (EC) 859/2008 of 20 August 2008).
	d	In establishing the aerodrome operating minima applicable to any particular operation, the following shall be taken into account:
		1 the type, performance and handling characteristics of the aircraft; and
		2 the composition of the flight crew, their competence and experience; and
		3 the dimensions and characteristics of the runways or touch-down areas which may be selected for use; and
		4 the adequacy and performance of the available visual and non-visual ground aids; and
		5 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; and
		6 the obstacles in the approach and missed approach areas and the climb-out areas and necessary clearance; and
		7 the obstacle clearance altitude/height for the instrument approach procedures;
		8 the means to determine and report meteorological conditions; and
		9 the flight technique to be used in the final approach.

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	e	The use of Head-up guidance landing system (HUDLS) or Enhanced vision system (EVS) may allow operations with lower visibilities than normally associated with the aerodrome operating minima, in accordance with Appendix 1 (New) of OPS 1.430, only when the appropriate approval is held.
	f	Aerodrome operating minima lower than Category I shall be used only in accordance with an approval issued by the State of Registry
	g	In the case of an aircraft registered in the Territory, approval for the use of aerodrome operating minima lower than Category I may be issued by the Governor in accordance with Subpart SPA.LVO.
		Note: See 92.415 for IFR departure limitations and approval requirements.
91.245		Noise Abatement procedures
		Operating procedures shall take into account the need to minimise the effect of aircraft noise.
91.250		Alternate aerodromes - general requirements
		An aerodrome shall not be nominated as an alternate unless:
	a	the aerodrome of intended landing has a notified instrument approach procedure; and
	b	weather forecasts indicate that at the estimated time of arrival at the alternate aerodrome the cloud ceiling and visibility will be at or above the minima prescribed; or
	c	where there is no notified instrument approach procedure, the cloud ceiling and visibility shall be at or above the VFR minima prescribed in the Rules of the Air.
91.265		Destination alternate
		For any flight conducted under IFR, at least one destination alternate aerodrome shall be nominated and specified in the flight plan unless:
	a	For aeroplanes
		1 the duration of the flight and the meteorological conditions prevailing are such that there is reasonable certainty that, at the estimated time of arrival at the aerodrome of intended landing, and for a reasonable period before and after such time, the approach and landing may be made under visual meteorological conditions; or
		2 the aerodrome of intended landing is isolated and there is no suitable alternate aerodrome; and
		i a standard instrument approach procedure is prescribed for the aerodrome of intended landing; and

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		ii 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:
		A a cloud base of at least 300 m (1 000 ft) above the minimum associated with the instrument approach procedure; and
		B visibility of at least 5.5 km or of 4 km more than the minimum associated with the procedure.
	b	For helicopters; either 1. or 2. below:
		1 current meteorological information indicates that 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, the following meteorological conditions will exist:
		i a cloud base of at least 120 m (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
		2 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.
91.280		Fuel requirements
		A flight shall not be commenced unless the aircraft carries sufficient fuel and oil, taking into account weather reports, forecasts and weather conditions, to complete the flight and shall be at least the amount sufficient to allow:
	a	For aeroplanes:

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		1 when flying in accordance with the instrument flight rules and a destination alternate is not required in accordance with 91.265 to complete the flight to the intended destination and thereafter for 45 minutes at the normal cruising speed; or
		2 when flying in accordance with the instrument flight rules and a destination alternate is required in accordance with 91.265, to complete the flight to the intended destination, thence to an alternate and thereafter for 45 minutes at the normal cruising speed; or
		3 when flying in accordance with the visual flight rules by day to complete the flight to the intended destination and thereafter for 30 minutes at the normal cruising speed; or
		4 when flying in accordance with the visual flight rules by night to complete the flight to the intended destination and thereafter for 45 minutes at the normal cruising speed.
	b	For helicopters:
		1 when flying in accordance with the instrument flight rules and a destination alternate is not required in accordance with 91.265(b)(1), to complete the flight to the intended destination and thereafter for 30 minutes at the normal cruising speed;
		2 when flying in accordance with the instrument flight rules and a destination alternate is not required in accordance with 91.265(b)(2), to complete the flight to the intended destination and thereafter for 60 minutes at the normal cruising speed;
		3 when flying in accordance with the instrument flight rules and a destination alternate is required, to complete the flight to the intended destination, thence to an alternate and thereafter for 30 minutes at the normal cruising speed;
		4 when flying in accordance with the visual flight rules, to complete the flight to the intended destination and thereafter for 20 minutes at the normal cruising speed.
91.285		Checklists
		A pilot-in-command shall ensure that, where a checklist is provided, it is used.
91.295		Use of airborne collision avoidance system (ACAS)
	a	Whenever an Airborne Collision Avoidance System (ACAS) II is installed, it shall be used in normal conditions during flight in a mode that enables Resolution Advisories (RAs) to be produced for the pilot flying when undue proximity to another aircraft is detected.
	b	When an RA is produced by ACAS II, the pilot flying shall immediately take the corrective action indicated by the RA, even if this is in conflict with an Air Traffic Control (ATC) instruction. The aircraft shall be promptly returned to the terms of the ATC instructions or clearance when the situation is resolved.
	c	Unless otherwise specified in an air traffic control instruction, pilots shall use appropriate procedures to ensure that a rate of climb or descent of less than 8 m/sec or 1 500 ft/min (depending on the instrumentation available) is achieved throughout the last 300 m (1 000 ft) of climb or descent to the assigned altitude or flight level.

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		Note: This is to avoid unnecessary ACAS II RAs in aircraft at or approaching adjacent altitudes or flight levels.
91.300		Crew members at stations
	a	The pilot-in-command shall ensure that each crew member on duty in an aircraft during take-off and landing or when he so directs:
		1 be at their crew member station unless their absence is necessary to perform duties in connection with the operation of the aircraft; and
		2 have their safety belt, or harness where so equipped, fastened while at the crew member station.
	b	The pilot-in-command shall ensure that all flight crew members required to be on flight deck duty in an aircraft other than during take-off and landing shall remain at their stations with their safety belt fastened except when their absence is necessary for the performance of duties in connection with the operation of the aircraft or for physiological needs.
	c	No crew member shall perform any activity during critical phases of flight except those required for the safe operation of the aircraft.
		1 The critical phases of flight include:
		i for flight crew members, all operations involving push back, taxi, take-off, approach and landing; and
		ii for other crew members, all ground operations after leaving the apron area to join a main taxiway, take-off until passing 1,000 feet on climb, and all flight below 5,000 feet on the landing approach phase of the flight.
91.305		In-flight fuel management
		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/landing site where a safe landing can be made.
91.310		Use of oxygen
		The pilot-in-command of an aircraft with a non-pressurised cabin shall ensure that:
	a	before the aircraft reaches flight level 130 the method of use of the oxygen provided in the aircraft is demonstrated to all passengers; and
	b	when flying above flight level 130 all passengers and crew members are instructed to use oxygen; and
	c	during any period when the aircraft is flying above flight level 100 up to and including flight level 130, oxygen is used by all the flight crew of the aircraft for that part of the flight at those altitudes that is of more than 30 minutes duration; and
	d	during any period when the aircraft is flying above flight level 130 oxygen is used continuously by all the flight crew of the aircraft.
	e	an aircraft with a non-pressurised cabin is not operated above flight level 250.
91.325		Flight crew communication

Part 91		Requirement
		When operating under IFR all crew members required to be on flight deck duty shall communicate through boom or throat microphones below the transition level/altitude.
91.335		Fuelling operations
		The pilot-in-command shall ensure that:
	a	no aircraft is refuelled or defuelled whilst passengers are embarking, on board or disembarking, or with a helicopter rotor turning; and
	b	appropriate precautions are taken when refuelling with fuels other than aviation kerosene or when refuelling results in a mixture of aviation kerosene with other aviation turbine fuels, or when an open line is used.
91.340		Fuel spillage
	a	When refuelling or defuelling, if fuel is spilled and is likely to endanger persons or property:
		1 refuelling or defuelling shall be stopped immediately and emergency services, where available, are summoned; and
		2 immediate action shall be taken to cover the fuel with sand, sawdust, dry earth, or an agent such as foam or dry chemical extinguisher powder, to reduce the fire hazard; and
		3 the aircraft shall be moved clear of the contaminated area, with the agreement of any attending emergency services, before any engine is started.
91.345		Journey log
	a	The pilot in command of an aircraft registered in the Territory shall, on the completion of the flight:
		1 complete the journey log book or equivalent record; and
		2 record in the technical log, or other documents acceptable to the Governor, the information specified in Part 39 and any aircraft defects that have been identified during the flight.
91.350		Notification of incidents and accidents
	a	The pilot-in-command shall be responsible for notifying the nearest appropriate authority by the quickest available means of any accident involving the aircraft resulting in serious injury or death of any person or substantial damage to the aircraft or property.
	b	The pilot-in-command shall notify the Governor of any incident or accident in accordance with OTAR Part 13.
91.355		Occupation of seats and wearing of restraints
	a	The pilot-in-command of an aircraft shall require each person on the aircraft to occupy a seat or berth and to fasten his safety belt, or restraining belt, or if equipped, shoulder harness or single diagonal shoulder belt:
		1 during each take-off and landing; and

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		2 when the aircraft is flying at a height of less than 1,000 feet above the surface unless operational requirements preclude such restraint and the procedures are approved by the Governor; and
		3 at other times when the pilot-in-command considers it necessary for his safety; and
		4 during aerobatic flight; and
		5 at all times in an open cockpit aircraft.
	b	The pilot-in-command of an aircraft shall require each passenger to place his seat in the take-off and landing configuration during take-off and landing.
	c	Paragraph (a)(1), (2), and (3) shall not apply to a child of less than 2 years of age if the child:
		1 is held by an adult who is occupying a seat or berth, provided the child is securely restrained; or
		2 occupies a seat equipped with an approved child restraint system, if the child does not exceed the specified mass limit for that system and is accompanied by a parent, guardian, or attendant designated by the child's parent or guardian to attend to the safety of the child during the flight.
	d	Paragraph (a) and (b) shall not apply to persons carried in balloons or engaged in parachute operations. The applicable requirements for persons engaged in parachute operations are specified in paragraph 91.370.
91.360		Familiarity with operating limitations and emergency equipment
		Each pilot-in-command of an aircraft shall before beginning a flight, be familiar with:
	a	the aircraft flight manual for that aircraft; and
	b	any placards, listings, or instrument markings containing any operating limitation prescribed for that aircraft by the manufacturer or the Governor; and
	c	the emergency equipment installed on the aircraft; and
	d	which crew member is assigned to operate each item of emergency equipment; and
	e	the procedures to be followed for the use of normal and emergency equipment in an emergency situation.
91.365		Flying displays
	a	A pilot-in-command shall not participate in a flying display unless:
		1 he holds a current display authorisation, granted by the Governor; and
		2 he has taken all reasonable steps to confirm that the organiser of the flying display has been granted any permission as may be required, and that the planned flight can be safely made in accordance with the terms of such permission; and
		3 he is operates at a height not less than that specified in either the pilot's display authorisation or any permission associated with the flying display, whichever is the greater; and
		4 he flies the aircraft aligned with reference to a display line sufficiently distanced from spectators so as not to cause undue risk to persons or property on the surface; and
		5 he does not carry any additional persons other than those crewmembers required to operate the aircraft; and
		6 he does not fly over any spectator area; and

Part 91		Requirement
		7 he does not conduct any high-energy manoeuvre between the display line and any spectator area; and
		8 he does not initiate any manoeuvre in the direction of any spectator area.
	b	Paragraph (a) shall not apply to private aviation events that are not open to the general public.
91.370		Parachute operations
	a	A pilot-in-command shall not allow parachute drop operations from an aircraft, unless the parachute drop operation is in accordance with the written approval of the Governor.
	b	Each pilot-in-command performing a parachute drop operation shall ensure that:
		1 the aircraft performing the operation has a current certificate of airworthiness which provides for parachute dropping; and
		2 the configuration of the aircraft is appropriate for the parachute-drop operation; and
		3 the aircraft has adequate interior room and satisfactory egress for the parachutists to be carried; and
		4 parachute static lines shall only be attached to strong points approved for that purpose; and
		5 the aircraft flight manual authorises flight with a door removed, or open, in flight; and
		6 any additional person carried in the aircraft, and necessary to the parachute operations:
		i occupies a seat and fastens their safety belt during take-off and landing; and
		ii wears an emergency or reserve parachute assembly; and
		iii is trained in the use of the emergency or reserve parachute assembly; and
		iv is briefed on the general procedures to be followed in an aircraft emergency including the method to be used for exiting the aircraft; and
		7 each person carried in the aircraft for the purpose of parachute operations:
		i is not in a position in the aircraft that could hazard the safety of the aircraft or its occupants through inadvertent interference with the controls; and
		ii is briefed on the general procedures to be followed in an aircraft emergency including the method to be used for exiting the aircraft; and
		iii is secure during take-off and at any other time as directed by the Pilot in Command to a standard equivalent to that of persons occupying a seat or berth.
	c	Nothing in this Subpart shall apply to a person making a parachute descent from an aircraft in an emergency.
Subpart C - Operating Limitations		
91.400		Meteorological conditions – VFR flight
		A flight to be conducted in accordance with the visual flight rules shall not be commenced 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 the visual flight rules will, at the appropriate time, be such as to render compliance with these rules possible.
91.410		Meteorological conditions – IFR flight

Part 91		Requirement
		A flight to be conducted in accordance with the instrument flight rules shall not be commenced unless information is available which indicates that conditions at the aerodrome of intended landing and, where a destination alternate is required, at least one destination alternate aerodrome will, at the estimated time of arrival, be at or above the aerodrome operating minima.
91.415		IFR departure limitations
	a	A departure under IFR shall not be commenced unless:
		1 weather conditions are at or above the weather minima for IFR take-off determined in accordance with OTAR 91.240; and
		2 the relevant RVR is at least 150 m RVR (Category A, B, C aeroplanes, and helicopters) or 200 m RVR (Category D aeroplanes), unless conducted in accordance with an approval issued by the State of Registry.
		3 In the case of an aircraft registered in the Territory, approval for take-off below 150 m RVR (Category A, B, C aeroplanes, and helicopters) or 200 m RVR (Category D aeroplanes) may be issued by the Governor in accordance with Subpart SPA.LVO.
91.425		Approach and landing conditions
		A flight shall not be continued towards the aerodrome of intended landing, unless the latest available information indicates that at the expected time of arrival, a landing can be effected at that aerodrome or at least one destination alternate aerodrome, in compliance with the appropriate operating minima.
91.430		Commencement and continuation of approach
	a	An approach may be commenced regardless of the reported visibility or RVR but shall not be continued below 300 m (1 000 ft) above the aerodrome, unless the reported visibility or controlling RVR is above the specified minimum.
	b	If, after descending below 300 m (1 000 ft) above the aerodrome, the reported visibility or controlling RVR falls below the specified minimum, the approach may be continued to DA/H or MDA/H.
	c	The approach shall not be continued below the DA/H or MDA/H unless the specified visual reference is established at DA/H or MDH/A and is maintained.
Subpart D - Mass and Balance		
91.450		Aircraft load limitations

Part 91		Requirement
		Each holder of a certificate, licence, permit or approval shall ensure that the limitations contained in the aircraft flight manual, or other approved document, relating to the mass and balance of the aircraft are complied with.
Subpart E - Performance		
91.560		Performance - mass limitation
		Before a flight is commenced, it shall be determined that, having regard to performance in the conditions to be expected on the intended flight, and to any obstructions at the places of departure and intended destination and on the intended route, the aircraft is capable of safely taking off, reaching and maintaining a safe height thereafter and making a safe landing at the place of intended destination.
Subpart F Instrument and Equipment Requirements		
91.		General
	a	No person shall operate an aircraft unless it is equipped in compliance with the laws and regulations of the State in which it is registered.
	b	For an aircraft registered in the Territory, excepting any aircraft required to be operated under OTAR Parts 121, 125 or 135, the equipment to be provided is that required by this Subpart.
	c	No person shall operate an aircraft to which this Subpart applies unless:
		1 the aircraft is equipped with the type and number of instruments and equipment required by this Subpart; and
		2 the instruments and equipment shall be of a type approved by the Governor either generally or in relation to a class of aircraft or in relation to that aircraft; and
		3 the instruments and equipment have been installed in accordance with the aircraft manufacturer's instructions or other instructions acceptable to the Governor.
91.610		Inoperative instruments and equipment
	a	Except as provided in paragraph (b), an aircraft shall not commence a flight with inoperative instruments or equipment, that is legally required to carry that instrument or equipment, unless the following conditions are met:
		1 a minimum equipment list (MEL) has been approved by the Governor for use with that aircraft; and
		2 the aircraft records available to the pilot include an entry describing the inoperative instruments and equipment; and
		3 the aircraft is operated in accordance with all applicable conditions and limitations contained in the MEL.

Part 91		Requirement
	b	An aircraft that is not required to hold an MEL may be operated under this Part with inoperative instruments and equipment provided the inoperative instruments and equipment:
		1 are not:
		i part of the certification instruments and equipment prescribed in the applicable airworthiness requirements under which the aircraft was type certificated; or
		ii required by this Subpart for specific operations; or
		iii required by an airworthiness directive to be in operable condition; and
		2 are placarded "Inoperative" and the required maintenance
91.615		Minimum equipment list (MEL)
		Where a minimum equipment list is established in relation to an aircraft, the operator shall ensure:
	a	it is based upon, but no less restrictive than, the relevant master minimum equipment list (MMEL); and
	b	it has been approved by the Governor.
91.625		Location of instruments and equipment
		The operator shall ensure that:
	a	any instruments and equipment to be operated or used by one pilot can be readily seen and operated from that pilot's normally seated position with the minimum practicable deviation from normal line of sight along the flight path; and
	b	any single instrument or item of equipment to be operated or used by two pilots, is installed so that it can be readily seen and operated from each pilot's normally-seated position.
91.630		Markings and placards
		The operator shall ensure that:
	a	any placards, listings or instrument markings containing prescribed operating limitations shall be displayed in the aircraft. Each marking and placard shall be displayed in a conspicuous place and in such a manner to minimise the risk of erasure, disfigurement, obscuring, or removal; and
	b	each unit of measure used on a marking or placard shall be the same as that on any related instrument or in the related flight manual; and
	c	each fuel contents gauge shall be clearly marked to indicate the units to which the gauge is calibrated; and

Part 91		Requirement
	d	an aircraft shall be placarded in the immediate vicinity of each fuel and oil filler with the specification and/or grade of fuel or oil, as appropriate.
91.635		Seating and restraints
	a	An aircraft shall be equipped with:
	1	a seat or berth for each person on board; and
	2	a safety belt for each seat and restraining belts for each berth; and
	3	for each flight crew member seat: either a safety harness; or, if the aircraft type certificate allows, a seat belt with a diagonal shoulder strap.
	b	Notwithstanding paragraph (a)(1) and (2), a seat, berth, safety belt or restraining belt is not required for:
	1	a child being carried in accordance with paragraph 91.355(c)(1); or
	2	a person being carried during parachute operations, unless parachutist restraints are required by the aircraft flight manual.
91.640		Aircraft operating under VFR
	a	An aircraft shall be equipped with a means of measuring and indicating:
	1	magnetic heading; and
	2	the time in hours, minutes and seconds; and
	3	pressure altitude; and
	4	airspeed; and
	5	mach number, if the speed limitation prescribed by the aircraft flight manual is expressed in terms of mach number; and
	6	in a helicopter, a slip indicator.
	b	An aircraft shall be equipped with spare fuses of appropriate ratings, where necessary, for all electrical circuits that can be changed in flight (at least 3 of each rating, or 10% of the number for each rating, whichever is greater).
	c	Paragraph (a) above shall not apply to non-power driven aircraft.
91.645		VFR flights operated as controlled flights
		An aircraft flying under the visual flight rules, but as a controlled flight shall be equipped in accordance with 91.655.
91.650		Equipment for flight in icing conditions
		An aircraft shall be certificated and equipped to operate in icing conditions, for flight in circumstances in which icing conditions are reported to exist or are expected to be encountered.
91.655		Aircraft operating at night or under IFR
		An aircraft flying at night or under IFR or when the surface is not in sight shall be equipped with:

Part 91		Requirement
		Note: 'With the surface in sight' means with the flight crew being able to see sufficient surface features or surface illumination to enable the flight crew to maintain the aircraft in a desired attitude without reference to any flight instrument.
	a	A means of measuring and indicating:
		1 magnetic heading; and
		2 the time in hours, minutes and seconds; and
		3 two independent means of indicating altitude, at least one of which shall be a sensitive pressure altimeter; and
		4 airspeed, with a means of preventing malfunctioning due to either condensation or icing; and
		5 mach number, if the speed limitation prescribed by the aircraft flight manual is expressed in terms of mach number; and
		6 in an aeroplane, a means of indicating turn and slip; and
		in a helicopter, a slip indicator.
		7 for each required pilot, aircraft attitude; except
		in an aeroplane one of these may be replaced by the turn and slip indicator; and
		8 for helicopters, an additional means of indicating aircraft attitude; and
		9 stabilised aircraft heading; and
		10 a means of indicating the power supply to any gyroscopic instruments is adequate; and
		11 outside air temperature indicator; and
		12 rate of climb and descent indicator.
	b	An aircraft shall be equipped with spare fuses as described in 91.640 (b).
		Note: The flight instruments requirements may be met by combinations of instruments or by electronic displays provided that the safeguards against total failure, inherent in separate instruments, are maintained (see 91.660).
	c	When operating at night, the following lights:
		1 lights, as required by the Rules of the Air; and
		2 illumination for all flight instruments and equipment that are essential for the safe operation of the aircraft;
		4 lights in all passenger compartments; and
		5 for an aeroplane a landing light; and
		for a helicopter, a landing light which shall be trainable in the vertical plane; and
		6 an electric torch for every crew member.
91.660		Glass cockpit systems
		An aircraft with advanced cockpit automation systems (glass cockpit) shall have system redundancy that provides flight crew with attitude, heading, airspeed and altitude indications in case of failure of the primary system or display.
91.665		Altitude alerting system

Part 91		Requirement
		[not used]
91.670		Communication equipment
	a	An aircraft shall be equipped with:
		1 radio communication equipment that is capable of providing continuous two-way communications with an appropriate ATS unit or aeronautical telecommunications facility, and for receiving meteorological information, at any time during flight; and
		2 a headset with a boom or throat microphone.
	b	The radio communication equipment shall provide for communication on the emergency frequency 121.5 MHz.
	c	For flights in defined portions of airspace or on routes where a Required Communications Performance (RCP) type has been prescribed, an aircraft shall, in addition:
		1 be provided with communication equipment which will enable it to operate in accordance with the prescribed RCP type(s); and
		2 be approved by the Governor for operations in such airspace.
	d	Communication equipment shall be installed such that failure of one unit will not result in the failure of another unit.
91.675		Navigation equipment
	a	An aircraft shall be equipped with a navigation system which will enable the aircraft to proceed in accordance with:
		1 the flight plan; and
		2 in accordance with the requirements of ATC;
		except when navigation for flights under the visual flight rules is accomplished by visual reference to landmarks.
	b	An aircraft shall be sufficiently provided with navigation equipment to ensure that, in the event of the failure of one item of equipment at any stage of the flight, the remaining equipment will enable the aircraft to navigate in accordance with the applicable requirements.
	c	For operations where a navigation specification for performance-based navigation (PBN) has been prescribed, an aeroplane shall, in addition, be provided with navigation equipment which will enable it to operate in accordance with the prescribed navigation specification(s) and be approved in accordance with Subpart SPA.
	d	An aircraft operating in airspace where minimum navigation performance specifications (MNPS) are prescribed shall:
		1 be equipped with navigation equipment capable of continuously and accurately indicating to the flight crew adherence to or departure from track; and

Part 91		Requirement
		2 be approved in accordance with Subpart SPA.
	e	An aircraft operating in RVSM airspace shall be:
		1 provided with equipment capable of:
		i indicating to the flight crew the flight level being flown; and
		ii automatically maintaining a selected flight level to within ± 65 feet; and
		iii providing an aural and visual alert to the flight crew when a deviation from the selected flight level occurs. The threshold for the alert shall not exceed 300 feet (90 metres); and
		2 approved in accordance with Subpart SPA.
	f	All required radio navigation equipment shall comply with the FM-Immunity requirements of ICAO Annex 10 Volumes I and III.
	g	Any radio navigation equipment fitted on the aircraft that does not comply with the FM-Immunity requirements of ICAO Annex 10 shall be placarded to alert flight crew to the potential for radio interference.
91.680		Landing in Instrument Meteorological Conditions
		An aircraft that may require to land in instrument meteorological conditions shall be provided with radio equipment appropriate to the aids to be used. This equipment shall be capable of receiving signals to provide guidance to a point from which a visual landing can be made at any aerodrome used and for any designated alternate aerodrome.
91.685		Category II and III precision approach equipment
		An aircraft conducting a Category II or III precision approach procedure shall be equipped and approved in accordance with Subpart SPA.
91.700		Medical and emergency equipment
	a	An aircraft shall be equipped with:
		one or more first aid kits, stowed in accessible places.
	b	Contents of first aid kits shall be appropriate to the nature of the flight, and suitable to treat minor injuries.
	c	An aircraft shall be equipped with:
		1 at least one fire extinguisher, located in reach of a flight crew member and of a type that will not interfere with the proper functioning of essential aircraft equipment; and
		2 at least one fire extinguisher in each compartment that is separate from the pilots' compartment.
91.705		Emergency locator transmitter

Part 91		Requirement
	a	All required ELTs shall operate in accordance with the requirements of ICAO Annex 10, Volume III and be capable of transmitting on 121.5 MHz and 406 MHz.
	b	All ELTs capable of transmitting on 406 MHz must be coded in accordance with ICAO Annex 10 and registered with the agency responsible for the maintenance of the aircraft register.
		Aeroplanes –
	c	Except as provided in paragraph (d) an aeroplane shall carry at least one ELT of any type.
	d	An aeroplane for which the individual certificate of airworthiness was first issued after 1 July 2008 shall be equipped with at least one automatic ELT.
		Helicopters –
	e	Performance Class 1 and 2 operations –
		1 A helicopter operating in performance Class 1 or 2 shall be equipped with at least one automatic ELT; and
		2 when flying over water as described in 91.715, with at least one automatic ELT and one ELT(S) in a raft or life jacket.
	f	Performance Class 3 operations –
		1 A helicopter operating in performance Class 3 shall be equipped with at least one automatic ELT; and
		2 when flying over water as described in 91.715, with at least one automatic ELT and one ELT(S) in a raft or life jacket.
91.710		Survival Equipment
	a	An aircraft shall carry survival equipment and signalling devices appropriate to the areas to be overflown.
	b	The decision on the equipment to be carried shall be made with regard to the circumstances of the flight; and
	c	For an aircraft operating over water, consideration of the risks to survival of the occupants of the aircraft in the event of a ditching shall take into account, but not be limited to, the following:
		1 the operating environment; and
		2 conditions such as sea state, sea and air temperature; and
		3 the distance from land suitable for making an emergency landing; and
		4 the availability of search and rescue facilities.
	d	The equipment carried shall include, as appropriate, the equipment specified in paragraph 91.715.
91.715		Flights over water
	a	Liferafts, lifejackets, and signalling devices required by this paragraph shall be installed in conspicuously identified locations and easily accessible in the event of a ditching.

Part 91		Requirement
	b	Each lifejacket required by this paragraph shall:
		1 be equipped with a whistle and a survivor locator light; and
		2 be stowed in a place which is easily accessible from the seat or berth of the person for whose use it is provided.
	c	An aircraft flying over water beyond gliding or autorotational distance from land shall be equipped with a lifejacket for every person on board.
	d	An aircraft when taking off or landing at an aerodrome or heliport where, in the opinion of the Governor, the take-off or approach path is so disposed over water that in the event of a mishap there would be a likelihood of a ditching, shall be equipped with a lifejacket for every person on board.
	e	A seaplane or amphibian aeroplane operated on water, shall be equipped with:
		1 equipment for making sound signals, as prescribed by the International Regulations for Preventing Collisions at Sea; and
		2 one sea anchor; and
		3 equipment necessary for mooring, anchoring or manoeuvring the aircraft on water, appropriate to the size, weight and handling characteristics of the aircraft.
		Aeroplanes flying over water –
	f	An aeroplane flying over water shall, where indicated by the assessment in 91.710(c), be equipped with:
		1 liferafts in sufficient numbers to carry all persons on board, stowed so as to facilitate their ready use in emergency, provided with such life-saving equipment, including means of sustaining life, as is appropriate to the flight to be undertaken; and
		2 equipment for making the distress signals described in the Rules of the Air.
		3 any additional equipment decided by reference to the assessment in 91.710(c).
		Helicopters flying over water –
	h	A helicopter operating over water shall:
		1 If required to carry more than one liferaft, have at least 50 per cent of the liferafts deployable by remote control. Rafts which are not deployable by remote control and which have a mass of more than 40 kg shall be equipped with some means of mechanically assisted deployment; and
		2 When two life-rafts are fitted, each shall be able to carry all occupants in the overload state.
		Note: The overload state is a design safety margin of 1.5 times the maximum capacity.
		Performance Class 1 and 2 operations –

Part 91		Requirement
		3 A helicopter operating in performance Class 1 or 2 when flying over water at a distance from land corresponding to more than 10 minutes at normal cruise speed, shall be equipped as follows:
		i certificated for ditching or, for coastal transit operations only, be fitted with a permanent or rapidly deployable means of flotation so as to ensure a safe ditching of the helicopter; and
		ii liferaft(s) sufficient to carry all persons on board, suitably equipped to sustain life in the expected conditions; and
		iii equipment for making the distress signals described in the Rules of the Air; and
		iv any additional equipment decided by reference to the assessment in 91.710(c).
		Performance Class 3 operations –
		4 A helicopter operating in performance Class 3 when flying beyond auto-rotational or safe forced landing distance from land, shall be equipped as follows:
		i be fitted with a permanent or rapidly deployable means of flotation so as to ensure a safe ditching of the helicopter; and
		ii when not precluded by consideration related to the type of helicopter used, life raft(s) sufficient to carry all persons on board, suitably equipped to sustain life in the expected conditions; and
		iii equipment for making the distress signals described in the Rules of the Air.
		iv any additional equipment decided by reference to the assessment in 91.710(c).
91.720		Transponder
	a	An aircraft shall be equipped with a pressure-altitude reporting transponder which operates in accordance with the provisions of Annex 10, Volume IV.
91.730		Oxygen indicators
		An aircraft operated at altitudes above flight level 130, or for more than 30 minutes between flight level 100 up to and including flight level 130, shall be equipped with a means of indicating:
	a	to the flight crew:
		1 the amount of breathing oxygen available in each source of supply and whether the oxygen is being delivered to the dispensing units; and
		2 in a pressurised aircraft, by visual or aural warning, when the cabin pressure altitude exceeds 10,000 feet; and
	b	to each user of an individual breathing oxygen dispensing unit, the amount of oxygen available and whether the oxygen is being delivered to the dispensing unit
91.735		Oxygen equipment and supplies for non-pressurised aircraft

Part 91		Requirement
		An aircraft with a non-pressurised cabin that is operated at altitudes above flight level 100 shall be equipped with oxygen storage and dispensing equipment to supply the following:
		1 at altitudes up to and including flight level 130 for any period in excess of 30 minutes:
		stored breathing oxygen for continuous use by all crew members and 10% of the passengers; and
		2 at altitudes above flight level 130:
		stored breathing oxygen for continuous use by all crew members and passengers.
91.740		Oxygen equipment and supplies for pressurised aircraft
	a	An aircraft with a pressurised cabin that is to be operated at altitudes above flight level 100 shall be equipped with:
		1 a crew member on-demand oxygen mask accessible to each flight crew member and capable of providing a continuous supply of stored breathing oxygen for that time following failure of the pressurisation system that the cabin pressure altitude would exceed 10,000 feet; and
		2 the following equipment that is readily accessible to each crew member, other than flight crew, at their normally-seated position:
		i a crew member on demand oxygen mask; or
		ii a passenger oxygen mask; and
		iii portable breathing equipment for immediate use containing the greater of 120 litres of oxygen or the quantity of oxygen required for continuous use for that time the cabin pressure altitude would exceed 10,000 feet.
	b	For the purposes of paragraph (a), the calculation of the oxygen requirements in the event of pressurisation failure is to take into account:
		1 the time necessary for an emergency descent and the recovery phase to level flight at a safe altitude; and
		2 any subsequent stage of the flight prior to landing when it may be necessary for the aircraft to be flown at an altitude above flight level 100.
	c	An aeroplane with a pressurised cabin that is to be operated at altitudes above flight level 250 shall carry the equipment and supplies in paragraph (a) and:
		1 a quick donning crew member on-demand mask readily accessible to each flight crew member at their normally seated position; and
		2 in no case less than 10 minutes' oxygen supply for all passengers carried.

Part 91		Requirement
	d	An aircraft operated above flight level 100 up to and including flight level 250 that cannot descend safely within four minutes to an altitude equal or lower than flight level 130 shall carry a minimum of 10 minutes' oxygen supply for all passengers carried.
		Flight recorders – construction and installation
	a	The operator shall ensure that any required flight data recorder (FDR) or cockpit voice recorder (CVR) is:
		1 constructed, located and installed so as to provide maximum practical protection for the recordings in order that the recorded information may be preserved, recovered and transcribed; and
		2 fitted with an underwater locating device.
	b	A helicopter required to be equipped with a FDR and a CVR, may alternatively be equipped with one combination recorder (FDR/CVR).
91.755		Flight data recorder (FDR)
	a	Flight data recorders - helicopters for which the individual certificate of airworthiness was first issued on or after 1 January 1989:
		1 A helicopter with MTOM exceeding 2,730 kg shall be equipped with a Type V FDR.
		Note: FDR performance requirements are as contained in the EUROCAE ED-112, Minimum Operational Performance Specification (MOPS) for Crash Protected Airborne Recorder Systems, or equivalent documents.
91.760		Cockpit voice recorder (CVR)
		[not used]
91.770		Ground Proximity Warning System
	a	A turbine-engined aeroplane of MTOM 5,700 kg or less and with a maximum approved passenger seating configuration of more than 5 but not more than 9 seats shall be equipped with a ground proximity warning system which has a forward looking terrain avoidance function.
	b	A ground proximity warning system required to be carried in accordance with paragraph (a) shall provide an automatic and distinctive warning to the flight crew when the aeroplane is in potentially hazardous proximity to the earth's surface.
	c	A ground proximity warning system required to be carried in accordance with paragraph (a) shall provide, as a minimum, warnings of at least the following circumstances:
		1 excessive descent rate; and
		2 excessive altitude loss after take-off or go-around; and
		3 unsafe terrain clearance.

Part 91		Requirement
		Note: Terrain Awareness and Warning System (TAWS) Class B will provide the parameters required in (c) above.
Subpart G Maintenance		
91.900		Continued airworthiness management
		The owner or lessee of an aircraft registered in the Territory shall:
	a	have continued airworthiness management arrangements in compliance with OTAR Part 39; and
	b	have appointed a person, acceptable to the Governor, who will ensure that appropriate arrangements are in place for continued airworthiness management.
Subpart H Crew Requirements		
91.905		Composition of crew
	a	An aircraft shall not fly unless it carries a flight crew of the number and description required by the law of the country in which it is registered.
	b	An aircraft shall carry a flight crew adequate in number and description to ensure the safety of the aircraft but no fewer than that specified in the flight manual, or other documents associated with the Certificate of Airworthiness or Permit to Fly.
91.910		Flight crew qualification
		The pilot-in-command shall satisfy himself that:
	a	each flight crew member assigned to duty holds an appropriate licence issued or validated by the State of Registry of the aircraft; and
	b	flight crew members are properly rated in respect of their assigned duty; and
	c	the licence is current and includes the appropriate rating, and
	d	flight crew members are competent to carry out their assigned duties.
	e	where an aircraft is equipped with an airborne collision avoidance system, each flight crew member has been appropriately trained to competency in the use of that equipment and the avoidance of collisions.
91.915		Flight Crew Recency
	a	No person shall act as pilot-in-command of an aircraft carrying passengers, unless:

Part 91		Requirement
		1 on the same type of aircraft within the immediately preceding 90 days, that pilot has made at least three take-offs and three landings; or
		2 has otherwise demonstrated competence on an approved synthetic flight training device approved for the purpose; or
		3 has satisfactorily demonstrated to a flight examiner, continued proficiency in an aircraft of the same type.
Subpart I Training		
		[not used]
Subpart J Crew Member Competency Requirements		
		[not used]
Subpart K - Fatigue of Crew		
91.1215		Fatigue - Crew member responsibilities
		A person shall not act as a flight crew member of an aircraft registered in the Territory if:
	a	that person knows or suspects that they are suffering from, or, having regard to the circumstances of the flight to be undertaken, are likely to suffer from, such fatigue as may endanger the safety of the aircraft or its occupants.
	b	at the beginning of a flight, for other than a private flight of an aircraft of which the MTOM does not exceed 1600kg, the aggregate of all that person's previous and planned flight times:
		1 during the period of 28 consecutive days expiring at the end of the day on which the flight begins — exceeds 100 hours; or
		2 during the period of 365 consecutive days expiring at the end of the day on which the flight begins — exceeds 900 hours.
Subpart L - Manuals Logs and Records		
91.1255		Journey log book or equivalent record
	a	Each owner or lessee of an aircraft an aircraft registered in the Territory shall keep accurate journey log book or equivalent records that contain for each flight or series of flights:
		1 aircraft nationality registration;
		2 date;
		3 names of crew members;
		4 duty assignments of crew members;
		5 place of departure;
		6 place of arrival;
		7 time of departure;
		8 time of arrival;

Part 91		Requirement
	9	hours of flight;
	10	nature of flight (private, aerial work, scheduled or non-scheduled commercial air transport);
	11	incidents and observations (if any); and
	12	signature of person in charge.
	b	an aircraft journey log, or parts thereof, may not be required if the relevant information is available in other documentation.
	c	all entries shall be made concurrently and be permanent in nature.
91.1265		Document Retention period
		When required for an aircraft registered in the Territory: information for the preparation and execution of a flight; reports; flight crew records; cabin crew records; records for other operational personnel; and, other specified records, shall be stored for the periods prescribed in Appendix 1 to 91.1265.
91.1270		Not used
91.1275		Aircraft Flight Manual
		The owner or lessee (where applicable) of an aircraft shall ensure that the aircraft flight manual is updated and amended to implement any change mandated by the State of Registry
Appendix 1 to 91.1065		
		Document storage periods
		When any of the following information/documentation is required, it shall be stored in an acceptable form, accessible to the Authority, for the periods shown in Tables 1 to 6 below.
		Note: Additional information relating to the retention of maintenance records is prescribed in OTAR 39.
		Tables 1 to 6
Subpart SPA - Special Approvals		
Section 1 - General Requirements		
SPA.005.GE N		Scope
		This Subpart establishes the requirements to be met by an operator to qualify for the issue or continuation of specific operational approvals.
SPA.020.GE N		Application for a specific approval
	a	Applicants for the initial issue of a specific approval shall provide the Governor with the documentation required by the applicable subpart and the following information:
	1	The official name and business name, address and mailing address of the applicant; and
	2	A description of the intended operation.
	b	Applicants for a specific approval shall demonstrate to the Governor that:
	1	they comply with the requirements of the applicable section;
	2	the aircraft and required equipment comply with the applicable airworthiness requirements/approvals;
	3	a training programme has been established for flight crew and, as applicable, personnel involved in these operations; and
	4	operating procedures in accordance with the applicable subpart have been specified in the operations manual.

Part 91		Requirement
	c	Records relating to the requirements of (a) and (b) above shall be retained by the operator in accordance with 91.1265 .
SPA.025.GEN		Privileges of an operator holding a specific approval
		The scope of the activity that the operator is approved to conduct shall be specified in the operations manual and approval certificate or, for commercial operators, in the operations specifications to the air operator certificate.
SPA.030.GEN		Changes to operations subject to a specific approval
	a	The operator shall notify the Governor of any change on the items listed in SPA.020.GEN (a) and (b) and any of the requirements in the applicable section before such change takes place.
	b	The Governor may prescribe the conditions under which the organisation may operate during such changes, unless the Governor determines that the specific approval shall be suspended or revoked.
	c	In the case of a change to a specific approval, operators shall provide the Governor with the relevant parts of the operations manual and all other relevant documentation.
SPA.035.GEN		Continued validity of a specific approval
		Specific approvals shall be issued for an unlimited duration. They shall remain valid subject to the operator remaining in compliance with this subpart and Parts 125.A.5 or 119.15 .
Section II - Operations in areas with specified navigational performance		
SPA.001.SP		Operations in areas with specified performance based navigation
	a	An aircraft shall only be operated in designated airspace, on routes or in accordance with procedures where navigation specifications are established, if the operator has been approved by the Governor.
	b	An aircraft shall only be operated in designated airspace, based on ICAO Regional Air Navigation Agreement, where minimum navigation performance specifications are established, if the operator has been approved by the Governor.
	c	To obtain such approval, the operator shall:
		1 demonstrate that the navigation equipment meets the required performance in terms of navigation functionality, accuracy, integrity, availability and continuity;
		2 establish and maintain a training programme for the flight crew involved in these operations; and
		3 establish operating procedures specifying:
		i the equipment to be carried, including its operating limitations and appropriate entries in the Minimum Equipment List (MEL);
		ii flight crew composition and experience requirements;
		iii normal procedures;
		iv contingency procedures;
		v incident reporting;
		vi specific regional operating procedures, in case of MNPS; and
		vii navigation database integrity, in case of PBN.
SPA.010.SP		Equipment requirements for operations in MNPS areas

Part 91		Requirement
	a	An aircraft conducting MNPS operations shall be equipped with navigation equipment that complies with the ICAO Regional Air Navigation Agreement.
	b	Navigation equipment shall be visible and operable by either pilot seated at his/her duty station.
SPA.030.SPN		Flight crew requirements for operations in PBN or MNPS areas
		For commercial air transport operations the minimum flight crew shall consist of at least two pilots.
Section III - Operations in airspace with reduced vertical separation minima		
SPA.001.RVSM		Operations in airspace with reduced vertical separation minima (RVSM)
	a	An aircraft shall only be operated in designated airspace where a reduced vertical separation minimum of 300 m (1 000 ft) applies above flight level (FL) 290, if:
		1 the aircraft has been issued with an RVSM airworthiness approval in accordance with Part-21; and
		2 the operator has been approved by the Governor.
	b	To obtain such approval, the operator shall:
		1 establish and maintain a training programme for the flight crew involved in these operations; and
		2 establish operating procedures specifying:
		i the equipment to be carried, including its operating limitations and appropriate entries in the Minimum Equipment List (MEL);
		ii flight crew composition and experience requirements;
		iii flight planning;
		iv pre-flight procedures;
		v procedures prior to RVSM airspace entry;
		vi in-flight procedures;
		vii post flight procedures;
		viii maintenance programme;
		ix incident reporting; and
		x specific regional operating procedures.
SPA.010.RVSM		Equipment requirements for operations in RVSM airspace
	a	In addition to the equipment required by Subpart F , aircraft used for operations in RVSM airspace shall be equipped with:
		1 two independent altitude measurement systems;
		2 an altitude alerting system;
		3 an automatic altitude control system; and
		4 a Secondary Surveillance Radar (SSR) transponder with altitude reporting system that can be connected to the altitude measurement system in use for altitude control.
SPA.030.RVSM		Flight crew requirements for operations in RVSM airspace
		For commercial air transport operations the minimum flight crew shall consist of at least two pilots.
Section IV - Low Visibility Operations		
SPA.005.LVO		Low visibility operations — General operating rules
	a	The operator shall not conduct Category II, other than Standard Category II or III operations unless:

Part 91		Requirement
		1 each aircraft concerned is certificated for operations with decision heights below 200 ft, or no decision height, and equipped in accordance with EASA CS-AWO on all weather operations or an equivalent accepted by the Governor;
		2 a suitable system for recording approach and/or automatic landing success and failure is established and maintained to monitor the overall safety of the operation;
		3 the operations are approved by the Governor;
		4 the flight crew consists of at least two pilots; and
		5 decision height is determined by means of a radio altimeter.
	b	The operator shall not conduct low visibility take-offs in less than 150 m RVR (Category A, B, C aeroplanes, and helicopters) or 200 m RVR (Category D aeroplanes) unless approved by the Governor.
	c	The operator shall not conduct lower than Standard Category I operations unless approved by the Governor.
SPA.010.LVO		Low visibility operations — Aerodrome considerations
	a	The operator shall not use an aerodrome for Category II or III operations unless the aerodrome is approved for such operations by the State in which the aerodrome is located.
	b	The operator shall verify that low visibility procedures (LVP) have been established, and will be enforced, at those aerodromes where low visibility operations are to be conducted.
SPA.015.LVO		Low visibility operations — Training and qualifications
	a	The operator shall ensure that, prior to conducting low visibility take-off, lower than Standard Category I, other than Standard Category II, Category II and III operations or approaches utilising EVS:
		1 Each flight crew member:
		i Completes the training and checking requirements prescribed in Appendix 1 including Flight simulator training in operating to the limiting values of RVR/CMV and Decision Height appropriate to the operator's approval; and
		ii Is qualified in accordance with Appendix 1 to SPA.015.LVO;
		2 The training and checking is conducted in accordance with a detailed syllabus approved by the Governor and included in the Operations Manual; and
		3 The flight crew qualification is specific to the operation and the aircraft type.
SPA.020.LVO		Low visibility operations — Operating procedures
	a	The operator shall establish procedures and instructions to be used for low visibility take-off, approaches utilising EVS, Lower than Standard Category I, other than Standard Category II, Category II and III operations. These procedures shall be included in the Operations Manual and contain the duties of flight crew members during taxiing, take-off, approach, flare, landing, roll-out and missed approach as appropriate.
	b	The pilot in command shall be satisfied that:

Part 91		Requirement
		1 The status of the visual and non-visual facilities is sufficient prior to commencing a low visibility take-off, an approach utilising EVS, a lower than Standard Category I, an other than Standard Category II, or a Category II or III approach;
		2 Appropriate LVPs are in force according to information received from Air Traffic Services, before commencing a low visibility take-off, a lower than Standard Category I, an other than Standard Category II, or a Category II or III approach; and
		3 The flight crew members are properly qualified prior to commencing a low visibility take-off in an RVR of less than 150 m (Category A, B, C aeroplanes, and helicopters) or 200 m (Cat D aeroplanes), an approach utilising EVS, a lower than Standard Category I, an other than Standard Category II or a Category II or III approach.
SPA.025.LVO		Low visibility operations — Minimum equipment
	a	The operator shall include in the Operations Manual the minimum equipment that has to be serviceable at the commencement of a low visibility take-off, a lower than Standard Category I approach, an Other than Standard Category II approach, an approach utilising EVS, or a Category II or III approach in accordance with the AFM or other approved document.
	b	The pilot in command shall be satisfied that the status of the aircraft and of the relevant airborne systems is appropriate for the specific operation to be conducted.
Appendix 1 to SPA.005.LVO		
		Low visibility operations — General operating rules
	a	General. The following procedures apply to the introduction and approval of low visibility operations.
	b	Operational demonstration. The purpose of the operational demonstration is to determine or validate the use and effectiveness of the applicable aircraft flight guidance systems, including HUDLS if appropriate, training, flight crew procedures, maintenance programme, and manuals applicable to the Category II/III programme being approved.
		1 At least 30 approaches and landings must be accomplished in operations using the Category II/III systems installed in each aircraft type if the requested DH is 50 ft or higher. If the DH is less than 50 ft, at least 100 approaches and landings will need to be accomplished unless otherwise approved by the Governor.
		2 If an operator has different variants of the same type of aircraft utilising the same basic flight control and display systems, or different basic flight control and display systems on the same type of aircraft, the operator must show that the various variants have satisfactory performance, but the operator need not conduct a full operational demonstration for each variant. The Governor may also accept a reduction of the number of approach and landings based on credit given for the experience gained by another operator using the same aircraft type or variant and procedures.

Part 91		Requirement
		3 If the number of unsuccessful approaches exceeds 5 % of the total (e.g. unsatisfactory landings, system disconnects) the evaluation programme must be extended in steps of at least 10 approaches and landings until the overall failure rate does not exceed 5 %.
	c	Data collection for operational demonstrations. Each applicant must develop a data collection method (e.g. a form to be used by the flight crew) to record approach and landing performance. The resulting data and a summary of the demonstration data shall be made available to the Governor for evaluation.
	d	Data analysis. Unsatisfactory approaches and/or automatic landings shall be documented and analysed.
	e	Continuous monitoring
		1 After obtaining the initial authorisation, the operations must be continuously monitored by the operator to detect any undesirable trends before they become hazardous. Flight crew reports may be used to achieve this.
		2 The following information must be retained for a period of 12 months:
		i the total number of approaches, by aircraft type, where the airborne Category II or III equipment was utilised to make satisfactory, actual or practice, approaches to the applicable Category II or III minima; and
		ii reports of unsatisfactory approaches and/or automatic landings, by aerodrome and aircraft registration, in the following categories:
		A airborne equipment faults;
		B ground facility difficulties;
		C missed approaches because of ATC instructions; or
		D other reasons.
		3 The operator must establish a procedure to monitor the performance
	f	Transitional periods
		1 Operators with no previous Category II or III experience
		i The operator without previous Category II or III operational experience may be approved for Category II or IIIA operations, having gained a minimum experience of six months of Category I operations on the aircraft type.
		ii On completing six months of Category II or IIIA operations on the aircraft type the operator may be approved for Category IIIB operations. When granting such an approval, the Governor may impose higher minima than the lowest applicable for an additional period. The increase in minima will normally only refer to RVR and/or a restriction against operations with no decision height and must be selected such that they will not require any change of the operational procedures.
		2 Operators with previous Category II or III experience.
		i The operator with previous Category II or III experience may obtain authorisation for a reduced transition period by application to the Governor.
		ii The operator authorised for Category II or III operations using auto-coupled approach procedures, with or without auto-land, and subsequently introducing manually flown Category II or III operations using a HUDLS shall be considered to be a "New Category II/III operator" for the purposes of the demonstration period provisions.

Part 91		Requirement
	g	Maintenance of Category II, Category III and LVTO equipment. Maintenance instructions for the on-board guidance systems must be established by the operator, in liaison with the manufacturer, and included in the operator's aircraft maintenance programme prescribed in OTAR 39.
	h	Eligible aerodromes and runways
		1 Each aircraft type/runway combination must be verified by the successful completion of at least one approach and landing in Category II or better conditions, prior to commencing Category III operations.
		2 For runways with irregular pre-threshold terrain or other foreseeable or known deficiencies, each aircraft type/runway combination must be verified by operations in standard Category I or better conditions, prior to commencing Lower than Standard Category I, Category II, or other than Standard Category II or Category III operations.
		3 If an operator has different variants of the same type of aircraft in accordance with subparagraph 4 below, utilising the same basic flight control and display systems, or different basic flight control and display systems on the same type of aircraft in accordance with subparagraph 4 below, the operator must show that the variants have satisfactory operational performance, but the operator need not conduct a full operational demonstration for each variant/runway combination.
		4 For the purpose of paragraph (h), an aircraft type or variant of an aircraft type is deemed to be the same type/variant of aircraft if that type/variant has the same or similar:
		i level of technology, including the:
		A FGS and associated displays and controls;
		B the FMS and level of integration with the FGS;
		C use of HUDLS.
		ii Operational procedures, including:
		A alert height;
		B manual landing/automatic landing;
		C no decision height operations;
		D use of HUD/HUDLS in hybrid operations.
		iii Handling characteristics, including:
		A manual landing from automatic or HUDLS guided approach;
		B manual go-around from automatic approach;
		C automatic/manual roll out.
		5 Operators using the same aircraft type/class or variant of a type in accordance with subparagraph 4 above may take credit from each others' experience and records in complying with this paragraph.
		6 Operators conducting Other than Standard Category II operations shall comply with this appendix..
Appendix 1 to SPA.015.LVO		
		Low visibility operations — Training and qualifications

Part 91		Requirement
	a	General: The operator must ensure that flight crew member training programmes for low visibility operations include structured courses of ground, flight simulator and/or flight training. The operator may abbreviate the course content as prescribed by subparagraphs 2 and 3 below provided the content of the abbreviated course is acceptable to the Governor.
		1 Flight crew members with no Category II or Category III experience must complete the full training programme prescribed in subparagraphs (b), (c) and (d) below.
		2 Flight crew members with Category II or Category III experience with a similar type of operation (autocoupled/ auto-land, HUDLS/Hybrid HUDLS or EVS) or Category II with manual land if appropriate with another Community operator may undertake an:
		i abbreviated ground training course if operating a different type/class from that on which the previous Category II or Category III experience was gained;
		ii abbreviated ground, flight simulator and/or flight training course if operating the same type/class and variant of the same type or class on which the previous Category II or Category III experience was gained. The abbreviated course is to include at least the requirements of subparagraphs (d)1, (d)2(i) or (d)2(ii) as appropriate and (d)3(i). With the approval of the Governor, the operator may reduce the number of approaches/landings required by subparagraph (d)2(i) if the type/class or the variant of the type or class has the same or similar:
		A level of technology — flight control/guidance system (FGS); and
		B operational procedures;
		C handling characteristics (See paragraph 4 below);
		as the previously operated type or class, otherwise the requirement of (d)2(i) has to be met in full;
		D use of HUDLS/hybrid HUDLS;
		E use of EVS.
		3 Flight crew members with Category II or Category III experience with the operator may undertake an abbreviated ground, Flight simulator and/or flight training course when changing:
		i aircraft type/class is to include at least the requirements of subparagraphs (d)1, (d)2(i) or (d)2(ii) as appropriate and (d)3(i);
		ii to a different variant of aircraft within the same type or class rating that has the same or similar:
		A level of technology — flight control/guidance system (FGS); and
		B operational procedures — integrity;
		C handling characteristics (See paragraph 4 below);
		D use of HUDLS/Hybrid HUDLS;
		E use of EVS
		as the previously operated type or class, then a difference course or familiarisation appropriate to the change of variant fulfils the abbreviated course requirements;
		iii to a different variant of aircraft within the same type or class rating that has a significantly different:
		A level of technology — flight control/guidance system (FGS); and

Part 91		Requirement
		B operational procedures — integrity;
		C handling characteristics (See paragraph 4 below);
		D use of HUDLS/Hybrid HUDLS;
		E use of EVS
		then the requirements of subparagraphs (d)1, (d)2(i) or (d)2(ii) as appropriate and (d)3(i) shall be fulfilled. With the approval of the Governor the operator may reduce the number of approaches/landings required by subparagraph (d)2(i).
		4 The operator must ensure when undertaking Category II or Category III operations with different variant(s) of aircraft within the same type or class rating that the differences and/or similarities of the aircrafts concerned justify such operations, taking account at least the following:
		i the level of technology, including the:
		A FGS and associated displays and controls;
		B the Flight Management System and its integration or not with the FGS;
		C use of HUD/HUDLS with hybrid systems and/or EVS;
		ii operational procedures, including:
		A fail-passive/fail-operational, alert height;
		B manual landing/automatic landing;
		C no decision height operations;
		D use of HUD/HUDLS with hybrid systems;
		iii handling characteristics, including:
		A manual landing from automatic HUDLS and/or EVS guided approach;
		B manual go-around from automatic approach;
		C automatic/manual roll out.
	b	Ground training. The operator must ensure that the initial ground training course for low visibility operations covers at least:
		i the characteristics and limitations of the ILS and/or MLS;
		2 the characteristics of the visual aids;
		3 the characteristics of fog;
		4 the operational capabilities and limitations of the particular airborne system to include HUD symbology and EVS characteristics if appropriate;
		5 the effects of precipitation, ice accretion, low level wind shear and turbulence;
		6 the effect of specific aircraft/system malfunctions;
		7 the use and limitations of RVR assessment systems;
		8 the principles of obstacle clearance requirements;
		9 recognition of and action to be taken in the event of failure of ground equipment;
		10 the procedures and precautions to be followed with regard to surface movement during operations when the RVR is 400 m or less and any additional procedures required for take-off in conditions below 150 m (200 m for Category D aeroplanes);
		11 the significance of decision heights based upon radio altimeters and the effect of terrain profile in the approach area on radio altimeter readings and on the automatic approach/landing systems;

Part 91		Requirement
		12 the importance and significance of alert height if applicable and the action in the event of any failure above and below the alert height;
		13 the qualification requirements for pilots to obtain and retain approval to conduct low visibility take-offs and Category II or III operations; and
		14 the importance of correct seating and eye position.
	c	Flight simulator training and/or flight training
		1 The operator must ensure that flight simulator and/or flight training for low visibility operations includes:
		i checks of satisfactory functioning of equipment, both on the ground and in flight;
		ii effect on minima caused by changes in the status of ground installations;
		iii monitoring of:
		A automatic flight control systems and auto land status annunciators with emphasis on the action to be taken in the event of failures of such systems; and
		B HUD/HUDLS/EVS guidance status and annunciators as appropriate, to include head down displays;
		iv actions to be taken in the event of failures such as engines, electrical systems, hydraulics or flight control systems;
		v the effect of known unserviceabilities and use of minimum equipment lists;
		vi operating limitations resulting from airworthiness certification;
		vii guidance on the visual cues required at decision height together with information on maximum deviation allowed from glide path or localiser; and
		viii the importance and significance of alert height if applicable and the action in the event of any failure above and below the alert height.
		2 The operator must ensure that each flight crew member is trained to carry out his/her duties and instructed on the coordination required with other crew members. Maximum use should be made of flight simulators.
		3 Training must be divided into phases covering normal operation with no aircraft or equipment failures but including all weather conditions which may be encountered and detailed scenarios of aircraft and equipment failure which could affect Category II or III operations. If the aircraft system involves the use of hybrid or other special systems (such as HUD/HUDLS or enhanced vision equipment) then flight crew members must practise the use of these systems in normal and abnormal modes during the flight simulator phase of training.
		4 Incapacitation procedures appropriate to low visibility take-offs and Category II and III operations shall be practised.
		5 For aircrafts with no flight simulator available to represent that specific aircraft operators must ensure that the flight training phase specific to the visual scenarios of Category II operations is conducted in a specifically approved flight simulator. Such training must include a minimum of four approaches. The training and procedures that are type specific shall be practised in the aircraft.

Part 91		Requirement
		6 Initial Category II and III training shall include at least the following exercises:
		i approach using the appropriate flight guidance, autopilots and control systems installed in the aircraft, to the appropriate decision height and to include transition to visual flight and landing;
		ii approach with all engines operating using the appropriate flight guidance systems, autopilots, HUDLS and/or EVS and control systems installed in the aircraft down to the appropriate decision height followed by missed approach; all without external visual reference;
		iii where appropriate, approaches utilising automatic flight systems to provide automatic flare, landing and rollout; and
		iv normal operation of the applicable system both with and without acquisition of visual cues at decision height.
		7 Subsequent phases of training must include at least:
		i approaches with engine failure at various stages on the approach;
		ii approaches with critical equipment failures (e.g. electrical systems, auto flight systems, ground and/or airborne ILS/MLS systems and status monitors);
		iii approaches where failures of auto flight equipment and/or HUD/HUDLS/EVS at low level require either:
		A reversion to manual flight to control flare, landing and roll out or missed approach; or
		B reversion to manual flight or a downgraded automatic mode to control missed approaches from, at or below decision height including those which may result in a touchdown on the runway;
		iv failures of the systems which will result in excessive localiser and/or glide slope deviation, both above and below decision height, in the minimum visual conditions authorised for the operation. In addition, a continuation to a manual landing must be practised if a head-up display forms a downgraded mode of the automatic system or the head-up display forms the only flare mode; and
		v failures and procedures specific to aircraft type or variant.
		8 The training programme must provide practice in handling faults which require a reversion to higher minima.
		9 The training programme must include the handling of the aircraft when, during a fail passive Category III approach, the fault causes the autopilot to disconnect at or below decision height when the last reported RVR is 300 m or less.
		10 Where take-offs are conducted in RVRs of 400 m and below, training must be established to cover systems failures and engine failure resulting in continued as well as rejected take-offs.
		11 The training programme must include, where appropriate, approaches where failures of the HUDLS and/or EVS equipment at low level require either:
		i reversion to head down displays to control missed approach; or
		ii reversion to flight with no, or downgraded, HUDLS Guidance to control missed approaches from decision height or below, including those which may result in a touchdown on the runway.

Part 91		Requirement
		12 The operator shall ensure that when undertaking low visibility take-off, lower than Standard Category I, other than Standard Category II, and Category II and III Operations utilising a HUD/HUDLS or hybrid HUD/HUDLS or an EVS, that the training and checking programme includes, where appropriate, the use of the HUD/HUDLS in normal operations during all phases of flight.
	d	Conversion training requirements to conduct low visibility take-off, lower than Standard Category I, other than Standard Category II, approach utilising EVS and Category II and III Operations. The operator shall ensure that each flight crew member completes the following low visibility procedures training if converting to a new type/class or variant of aircraft in which low visibility take-off, lower than Standard Category I, Other than Standard Category II, Approach utilising EVS with an RVR of 800m or less and Category II and III Operations will be conducted. The flight crew member experience requirements to undertake an abbreviated course are prescribed in subparagraphs (a)2, (a)3 and (a)4, above:
		1 Ground Training. The appropriate requirements prescribed in subparagraph (b) above, taking into account the flight crew member's Category II and Category III training and experience.
		2 Flight simulator training and/or flight training.
		i A minimum of six (eight for HUDLS with or without EVS) approaches and/or landings in a flight simulator. The requirements for eight HUDLS approaches may be reduced to six when conducting Hybrid HUDLS operations. See subparagraph 4.(i) below.
		ii Where no Flight simulator is available to represent that specific aircraft, a minimum of three (five for HUDLS and/or EVS) approaches including at least one go-around is required on the aircraft. For Hybrid HUDLS operations a minimum of three approaches are required, including at least one go-around.
		ii Appropriate additional training if any special equipment is required such as head-up displays or enhanced vision equipment. When approach operations utilising EVS are conducted with an RVR of less than 800m, a minimum of five approaches, including at least one go-around are required on the aircraft.
		3 Flight crew qualification. The flight crew qualification requirements are specific to the operator and the type of aircraft operated.
		i The operator must ensure that each flight crew member completes a check before conducting Category II or III operations.
		ii The check prescribed in subparagraph (i) above may be replaced by successful completion of the flight simulator and/or flight training prescribed in subparagraph (d)2. above.
		4 Line flying under supervision. The operator must ensure that each flight crew member undergoes the following line flying under supervision (LIFUS):
		i for Category II when a manual landing or a HUDLS approach to touchdown is required, a minimum of:

Part 91		Requirement
		A three landings from autopilot disconnect;
		B four landings with HUDLS used to touchdown;
		except that only one manual landing (two using HUDLS to touchdown) is required when the training required in subparagraph (d)2 above has been carried out in a flight simulator qualified for zero flight time conversion.
		ii For Category III, a minimum of two auto lands except that:
		A only 1 autoland is required when the training required in subparagraph (d)2. above has been carried out in a flight simulator qualified for zero flight time conversion;
		B no autoland is required during LIFUS when the training required in subparagraph (d)2 above has been carried out in a flight simulator qualified for zero flight time (ZFT) conversion and the flight crew member successfully completed the ZFT type rating conversion course;
		C the flight crew member, trained and qualified in accordance with paragraph (B) above, is qualified to operate during the conduct of LIFUS to the lowest approved DA(H) and RVR as stipulated in the Operations Manual.
		iii For Category III approaches using HUDLS to touchdown a minimum of four approaches.
	c	Type and command experience.
		1 Before commencing Category II operations, the following additional requirements are applicable to pilot in command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type/class:
		i 50 hours or 20 sectors on the type, including line flying under supervision; and
		ii 100 m must be added to the applicable Category II RVR minima when the operation requires a Category II manual landing or use of HUDLS to touchdown until:
		A a total of 100 hours or 40 sectors, including LIFUS has been achieved on the type; or
		B a total of 50 hours or 20 sectors, including LIFUS has been achieved on the type where the flight crew member has been previously qualified for Category II manual landing operations with a Community operator;
		C for HUDLS operations the sector requirements in paragraphs (e) 1. and (e) 2. (i) shall always be applicable, the hours on type/class does not fulfil the requirement.
		2 Before commencing Category III operations, the following additional requirements are applicable to pilots in command, or pilots to whom conduct of the flight may be delegated, who are new to the aircraft type:
		i 50 hours or 20 sectors on the type, including line flying under supervision; and
		ii 100 m must be added to the applicable Category II or Category III RVR minima unless he has previously qualified for Category II or III operations with a Community operator, until a total of 100 hours or 40 sectors, including line flying under supervision, has been achieved on the type.
		3 The Governor may authorise a reduction in the above command experience requirements for flight crew members who have Category II or Category III command experience.
	f	Low visibility take-off with RVR less than 150/200 m

Part 91		Requirement
		1 The operator must ensure that prior to authorisation to conduct take-offs in RVRs below 150 m (below 200 m for Category D aeroplanes) the following training is carried out:
		i normal take-off in minimum authorised RVR conditions;
		ii take-off in minimum authorised RVR conditions with an engine failure between V1 and V2, or as soon as safety considerations permit; and
		iii take-off in minimum authorised RVR conditions with an engine failure before V1 resulting in a rejected take-off.
		2 The operator must ensure that the training required by subparagraph 1 above is carried out in a flight simulator. This training must include the use of any special procedures and equipment. Where no flight simulator is available to represent that specific aircraft, the Governor may approve such training in an aircraft without the requirement for minimum RVR conditions.
		3 The operator must ensure that a flight crew member has completed a check before conducting low visibility takeoffs in RVRs of less than 150 m (less than 200 m for Category D aeroplanes) if applicable. The check may only be replaced by successful completion of the flight simulator and/or flight training prescribed in subparagraph (f)1. on conversion to an aeroplane type.
	g	Recurrent training and checking — Low visibility operations
		1 The operator must ensure that, in conjunction with the normal recurrent training and operator proficiency checks, a pilot's knowledge and ability to perform the tasks associated with the particular category of operation, for which he/she is authorised is checked. The required number of approaches to be undertaken in the flight simulator within the validity period of the operators proficiency check is to be a minimum of two, (four when HUDLS and/or EVS is utilised to touchdown) one of which must be a landing at the lowest approved RVR; in addition one (two for HUDLS and/or operations utilising EVS) of these approaches may be substituted by an approach and landing in the aircraft using approved Category II and III procedures. One missed approach shall be flown during the conduct of the operators proficiency check. If the operator is authorised to conduct takeoff with RVR less than 150/200 m at least one LVTO to the lowest applicable minima shall be flown during the conduct of the operators proficiency check.
		2 For Category III operations an operator must use a flight simulator.
		3 The operator must ensure that, for Category III operations on aircrafts with a fail passive flight control system, including HUDLS, a missed approach is completed at least once over the period of three consecutive operator proficiency checks as the result of an autopilot failure at or below decision height when the last reported RVR was 300 m or less.
		4 The Governor may authorise recurrent training and checking for Category II and LVTO operations in an aircraft type where no flight simulator to represent that specific aircraft or an acceptable alternate is available.

Part 91		Requirement
		Note: Recency for LVTO and Category II/III based upon automatic approaches and/or auto-lands is maintained by the recurrent training and checking as prescribed in this paragraph.
	h	Additional training requirements for operators conducting lower than Standard Category I, approaches utilising EVS and other than Standard Category II Operations.
		1 Operators conducting lower than Standard Category I operations shall comply with the requirements for low visibility operations — training and qualifications applicable to Category II operations to include the requirements applicable to HUDLS (if appropriate). The operator may combine these additional requirements where appropriate provided that the operational procedures are compatible. During conversion training the total number of approaches required shall not be an additional to the standard requirements provided the training is conducted utilising the lowest applicable RVR. During recurrent training and checking the operator may also combine the separate requirements provided the above operational procedure requirement is met, provided that at least one approach using lower than Standard Category I minima is conducted at least once every 18 months.
		2 Operators conducting other than Standard Category II operations shall comply with the requirements for low visibility operations — training and qualifications applicable to Category II operations to include the requirements applicable to HUDLS (if appropriate). The operator may combine these additional requirements where appropriate provided that the operational procedures are compatible. During conversion training the total number of approaches required shall not be less than that required to complete Category II training utilising a HUD/HUDLS. During recurrent training and checking the operator may also combine the separate requirements provided the above operational procedure requirement is met, provided that at least one approach using other than Standard Category II minima is conducted at least once every 18 months.
		3 Operators conducting approach operations utilising EVS with RVR of 800 m or less shall comply with the requirements for Low Visibility Operations — Training and Qualifications applicable to Category II operations to include the requirements applicable to HUD (if appropriate). The operator may combine these additional requirements where appropriate provided that the operational procedures are compatible. During conversion training the total number of approaches required shall not be less than that required to complete Category II training utilising a HUD. During recurrent training and checking the operator may also combine the separate requirements provided the above operational procedure requirement is met, provided that at least one approach utilising EVS is conducted at least once every 12 months.
Appendix 1 to SPA.020.LVO		
		Low visibility operations — Operating procedures
	a	General. Low visibility operations include:
		1 manual take-off (with or without electronic guidance systems or HUDLS/Hybrid HUD/HUDLS);

Part 91		Requirement
		2 auto-coupled approach to below DH, with manual flare, landing and roll-out;
		3 approach flown with the use of a HUDLS/Hybrid HUD/HUDLS and/or EVS);
		4 auto-coupled approach followed by auto-flare, auto landing and manual roll-out; and
		5 auto-coupled approach followed by auto-flare, auto landing and auto-roll-out, when the applicable RVR is less than 400 m.
		Note 1: A hybrid system may be used with any of these modes of operations.
		Note 2: Other forms of guidance systems or displays may be certificated and approved.
	b	Procedures and operating instructions
		1 The precise nature and scope of procedures and instructions given depend upon the airborne equipment used and the flight deck procedures followed. The operator must clearly define flight crew member duties during take-off, approach, flare, roll-out and missed approach in the Operations Manual. Particular emphasis must be placed on flight crew responsibilities during transition from non-visual conditions to visual conditions, and on the procedures to be used in deteriorating visibility or when failures occur. Special attention must be paid to the distribution of flight deck duties so as to ensure that the workload of the pilot making the decision to land or execute a missed approach enables him/her to devote himself/herself to supervision and the decision making process.
		2 The operator must specify the detailed operating procedures and instructions in the Operations Manual. The instructions must be compatible with the limitations and mandatory procedures contained in the Flight Manual and cover the following items in particular:
		i checks for the satisfactory functioning of the aircraft equipment, both before departure and in flight;
		ii effect on minima caused by changes in the status of the ground installations and airborne equipment;
		iii procedures for the take-off, approach, flare, landing, roll-out and missed approach;
		iv procedures to be followed in the event of failures, warnings to include HUD/HUDLS/EVS and other nonnormal situations;
		v the minimum visual reference required;
		vi the importance of correct seating and eye position;
		vii action which may be necessary arising from a deterioration of the visual reference;
		viii allocation of crew duties in the carrying out of the procedures according to subparagraphs (i) to (iv) and (vi) above, to allow the pilot in command to devote himself/herself mainly to supervision and decision making;
		ix the requirement for all height calls below 200 ft to be based on the radio altimeter and for one pilot to continue to monitor the aircraft instruments until the landing is completed;
		x the requirement for the Localiser Sensitive Area to be protected;

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		xi the use of information relating to wind velocity, wind shear, turbulence, runway contamination and use of multiple RVR assessments;
		xii procedures to be used for:
		A lower than Standard Category I;
		B other than Standard Category II;
		C approaches utilising EVS; and
		D practice approaches and landing on runways at which the full Category II or Category III aerodrome procedures are not in force;
		xiii operating limitations resulting from airworthiness certification; and
		xiv information on the maximum deviation allowed from the ILS glide path and/or localiser.
Appendix B - Emergency Equipment (see Part 135 or Part 121 for guidance)		
Appendix C (not used)		
Appendix D - Rules of the Air (unchanged)		
Appendix E - Performance Classes (E1 and E2 unused)		
		The sections of Appendix E contain the technical description of the Performance Classes. The requirement to apply a Performance Class is not contained in the appendix but in the respective OTARs.
Appendix E3 Aeroplanes - Performance Class A		
E3.005		Take-off mass
	a	The take-off mass does not exceed the maximum take-off mass specified in the Aeroplane Flight manual for the altitude of the aerodrome and for the ambient temperature existing at the time of the take-off.
	b	The maximum take-off mass is calculated assuming that the critical engine fails at VREF and using a single value of V1, ensure that:
		1 the accelerate-stop distance required does not exceed the accelerate-stop distance available; and
		2 the take-off distance required does not exceed the take-off distance available; and
		3 any clearway forming part of the take-off distance available shall not exceed half the length of the take-off run available; and
		4 the take-off run required does not exceed the take-off run available using V ₁ for the rejected and continued take-off; and
		5 on a wet or contaminated runway, the take-off mass does not exceed that permitted for a take-off on a dry runway under the same conditions; and
		6 in the case of a wet or contaminated runway, the take-off distance is calculated to the point at which the aircraft reaches a height of at least 15 feet above the take-off surface using a reduced V ₁ .
	c	The maximum take-off mass takes account of:
		1 aerodrome elevation; and

Part 91		Requirement
		2 the pressure altitude of the aerodrome when the atmospheric pressure varies by more than 1% from the International Standard Atmosphere; and
		3 ambient temperature at the aerodrome; and
		4 the type of runway surface and the runway surface condition ; and
		5 the runway gradient in the direction of take-off; and
		6 not more than 50% of the reported head-wind component or not less than 150% of the reported tail-wind component.
E3.010		Take-off flight path
	a	With the critical engine inoperative, all obstacles within the net take-off flight path are cleared by at least a vertical margin of at least 35 ft, or by a horizontal distance of $90m + (0.125 \times D)$, (where D is the distance the aeroplane has travelled from the end of the take-off distance available, or the end of the take-off distance if a turn is scheduled before the end of the take-off distance available), or for aeroplanes with a wingspan of less than 60m a horizontal distance of half the aeroplane wingspan + $(0.125 \times D)$.
	b	When calculating the net take-off flight path:
		1 the following factors are taken into account:
		i take-off mass at the commencement of the take-off run; and
		ii aerodrome elevation; and
		iii pressure altitude at the aerodrome when the atmospheric pressure varies by more than 1% from the International Standard Atmosphere; and
		iv ambient temperature at the aerodrome; and
		v not more than 50% of the reported head-wind component or not less than 150% of the reported tail-wind component; and
		2 a track change exceeding 15° is not made before a height of 50 feet above the take-off surface has been achieved; and
		3 unless otherwise authorised by the Governor:
		i the bank angle up to and including a height of 400 feet above the take-off surface does not exceed 15°; and
		ii the bank angle above a height of 400 feet above the take off surface does not exceed 25°; and
		4 allowance is made for:
		i the effect of the bank angle on operating speeds and flight path; and
		ii distance increments resulting from increased operating speeds; and
		iii retention of stall margin and loss of climb gradient.
	c	For those cases where the intended flight path does not require track changes of more than 15°, obstacles do not have to be considered if they have a lateral distance greater than:

Part 91		Requirement
		1 300 m, if the flight is conducted under conditions allowing visual course guidance navigation, or if navigation aids are available enabling the pilot to maintain the intended flight path with the same accuracy; and
		2 600 m for flights under all other conditions.
	d	For those cases where the intended flight path does require track changes of more than 15°, obstacles do not have to be considered if they have a lateral distance greater than:
		1 600 m, if the flight is conducted under conditions allowing visual course guidance navigation;
		2 900 m for flights under all other conditions.
E3.015		Engine inoperative – gradient and stall corrections
		Unless performance data is available, retention of adequate stall margin and calculation of loss of climb gradient may be obtained by applying the factors in Table 1.
		Table 1.
E3.020		En-route - one engine inoperative
	a	In the meteorological conditions expected for the flight and using the one engine inoperative en-route net flight path data:
		1 the flight path has a positive gradient at 1,500 feet above the aerodrome where the landing is assumed to be made after engine failure, taking account of any ice protection system if meteorological conditions require their operation; and
		2 the net flight path clears all terrain and obstructions within 10 NM either side of the intended track, by at least 1,000 feet vertically and with a positive gradient; or
		3 the net flight path permits the aeroplane to continue flight from the cruising altitude to an aerodrome where a landing can be safely made, clearing vertically by at least 2,000 ft all obstacles within 10 NM either side of the intended track, and taking account of:
		i engine failure at the most critical point along the route; and
		ii the effect of the icing protection systems if the meteorological conditions require their operation; and
		iii the forecast ambient temperature; and
		iv the effects of forecast wind on the flight path; and
		v fuel jettisoning to an extent consistent with reaching the aerodrome with the required fuel reserves; and
	b	The aerodrome where the aeroplane is assumed to land after engine failure meets the following criteria:
		1 the performance requirements at the expected landing mass are met; and

Part 91		Requirement
		2 weather reports and forecasts, and aerodrome condition reports, indicate that a safe landing can be made at the time of the intended landing.
	c	Track clearance to 5NM either side of track may be used if navigational accuracy reaches at least 95% containment level.
E3.025		En-route – aeroplanes with three or more engines, two engines inoperative
	a	Except as provided in paragraph (b) below, each aeroplane with three or more engines is not more than 90 minutes away (at the all engines long-range cruising speed at standard temperature and in still air) from an aerodrome at which a safe landing can be made
	b	An aircraft with three or more engines may be operated at more than 90 minutes away from an aerodrome at which a safe landing can be made, provided that:
		1 the two engine inoperative en-route flight path data permits the aeroplane to continue the flight, in the expected meteorological conditions, from the point where two engines are assumed to fail simultaneously, to an aerodrome at which it is possible to land using the prescribed procedure for a landing with two engines inoperative; and
		2 the net flight path, taking into account the effect of any ice protection systems if the meteorological conditions require their operation must clear vertically by an altitude of at least 2,000 feet all terrain and obstructions within 10 NM of the intended track to be flown; and
		3 the net flight path has a positive gradient at an altitude of 1,500 feet above the aerodrome where the landing is assumed to be made after the failure of two engines; and
		4 fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required reserves; and
		5 the expected mass of the aeroplane at the point where the two engines are assumed to fail shall be not less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of at least 1500 feet directly over the aerodrome and after that to fly level for at least 15 minutes.
		5 It is assumed that the two engines fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes (at the all-engines long-range cruising speed at standard temperature and still air) away from an aerodrome at which a safe landing can be made.

Part 91		Requirement
	c	Track clearance to 5NM either side of track may be used if navigational accuracy reaches at least 95% containment level.
E3.030		Landing – destination and alternate aerodromes
	a	The landing mass of the aeroplane does not exceed the maximum landing mass, taking into account the altitude and the ambient temperature expected for the estimated time of landing at the destination and alternate aerodrome; and
	b	For instrument approaches with decision heights below 200 feet, the approach mass of the aeroplane, taking into account the take-off mass and the fuel expected to be consumed in flight, allows a missed approach net climb gradient, assuming that the critical engine is inoperative in the approach configuration, of:
		1 at least 2.5%; or
		2 at least the net climb gradient required to clear any obstacles in the missed approach flight path in accordance with paragraph 121.303(b)(3) and (4).
E3.035		Landing – dry runways
	a	The landing mass for the estimated time of landing does not exceed the landing mass specified in the aeroplane flight manual.
	b	the landing mass for the estimated time of landing at the destination aerodrome and at any alternate aerodrome allows a full stop landing on a dry runway from a point 50 feet above the threshold within:
		1 60% of the landing distance available at the destination and at any alternate aerodrome for a turbojet powered aeroplane; and
		2 70% of the landing distance available at the destination aerodrome and at any alternate aerodrome for a turbo-propeller powered aeroplane; and
	c	The landing mass takes account of:
		1 the altitude of the aerodrome; and
		2 the type of runway surface and the runway surface condition; and
		3 the runway gradient in the direction of landing; and
		4 not more than 50% of the reported head-wind component or not less than 150% of the reported tail-wind component.
	d	It is assumed that the aeroplane will land on:
		1 the most favourable runway in still air; and
		2 the aeroplane will land on the runway most likely to be assigned considering the probable wind speed and direction and the ground handling characteristics of the aeroplane, and also considering other conditions such as landing aids and terrain.

Part 91		Requirement
	e	If unable to comply with (d)(1) and (2) for the destination aerodrome, the aeroplane may be dispatched if an alternate aerodrome is designated that permits compliance, except when operating to a destination with a single runway requiring a favourable wind component, two suitable alternate aerodromes shall be designated.
	e	If unable to comply with (d)(1) and (2) for the destination aerodrome, the aeroplane may be dispatched if an alternate aerodrome is designated that permits compliance, except when operating to a destination with a single runway requiring a favourable wind component shall require two suitable alternate aerodromes.
E3.040		Landing – wet and contaminated runways
	a	When the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be wet, the landing distance available is at least 115% of the landing distance required by paragraph 121.315; and
	b	When the appropriate weather reports or forecasts, or a combination thereof, indicate that the runway at the estimated time of arrival may be contaminated, the landing distance available is at least:
		1 115% of the landing distance required by paragraph 121.315; or
		2 115% of the landing distance determined in accordance with the approved contaminated landing distance data, whichever is the greater.
	c	a landing distance on a wet runway shorter than that required by paragraph 121.317(a), but not less than that required by paragraph 121.315, may be used if performance data allows a shorter landing distance on wet runways.
Appendix E4 Aeroplanes - Performance Class B		
E4.005		Take-off mass
		The take-off mass does not exceed the maximum take-off mass specified in the Aeroplane Flight Manual for the altitude of the aerodrome and for the ambient temperature existing at the time of the take-off.
E4.010		Take-off distance
	a	The unfactored take-off distance as specified in the aeroplane flight manual does not exceed, when multiplied by a factor of 1.25, the take-off run available; or
	b	when a stopway and/or clearway is available, the unfactored take-off distance does not exceed:
		1 the take-off run available; and
		2 when multiplied by a factor of 1.15, the take-off distance available; and

Part 91		Requirement
		3 when multiplied by a factor of 1.3, the accelerate-stop distance available.
	c	Account is taken of the following:
		1 the mass of the aeroplane at the commencement of the take-off run;
		2 the pressure altitude at the aerodrome; and
		3 the ambient temperature at the aerodrome; and
		4 the runway surface condition and the type of runway surface; and
		5 the runway gradient in the direction of take-off; and
		6 not more than 50% of the reported head-wind component, or not less than 150% of the reported tail-wind component.
	d	For seaplane operations account is taken of the following:
		1 the wind component normal to the direction of take off;
		2 the water state and density;
		3 the water surface condition; and
		4 the strength of the current.
E4.015		Take-off and landing climb
		Two engine aeroplanes which do not meet the following climb requirements are treated as a single engine aeroplane.
	a	Take-off climb, all engines operating:
		1 The steady gradient of climb after take-off shall be at least 4% with:
		i take-off power selected on each engine;
		ii the landing gear extended, except that if the landing gear can be retracted in not more than 7 seconds, it may be assumed to be retracted;
		iii the wing flaps in the take-off position;
		iv a climb speed not less than the greater of $1.1V_{MC}$ and $1.2V_{SI}$.
	b	Take-off climb, one engine inoperative:
		1 The steady gradient of climb at an altitude of 400 ft above the take-off surface shall be measurably positive with:
		i the critical engine inoperative and its propeller in the minimum drag position; and
		ii the remaining engine at take-off power; and
		iii the landing gear retracted; and
		iv the wing flaps in the take-off position; and
		v a climb speed equal to that achieved at 50 ft.
		2 The steady gradient of climb shall be not less than 0.75% at an altitude of 1,500 ft above the take-off surface with:
		i the critical engine inoperative and its propeller in the minimum drag position; and
		ii the remaining engine at not more than maximum continuous power; and
		iii the landing gear retracted; and
		iv the wing flaps retracted; and
		v a climb speed not less than $1.2V_{SI}$.
	c	Landing climb, all engines operating:

Part 91		Requirement
		1 The steady gradient of climb shall be at least 2.5% with:
		i not more than the power of thrust that is available 8 seconds after initiation of movement of the power controls from the minimum flight idle position; and
		ii the landing gear extended; and
		iii the wing flaps in the landing position; and
		iv a climb speed equal to V_{REF} .
	d	Landing climb, one engine inoperative:
		1 The steady gradient of climb shall be not less than 0.75% at an altitude of 1,500 ft above the landing surface with:
		i the critical engine inoperative and its propeller in the minimum drag position; and
		ii the remaining engine at not more than maximum continuous power; and
		iii the landing gear retracted; and
		iv the wing flaps retracted; and
		v a climb speed not less than $1.2V_{SI}$.
	e	Landing gear requirements shall be applied equally to floats and skis where appropriate.
E4.020		Take-off flight path – multi-engined aeroplanes
	a	The take-off flight path of aeroplanes with two or more engines, determined in accordance with this sub-paragraph clears all obstacles by a vertical margin of at least 50 ft, or by a horizontal distance of half the aeroplane wingspan + (0.125 x D) (where D is the distance the aeroplane has travelled from the end of the take-off distance available, or the end of the take-off distance if a turn is scheduled before the end of the take-off distance available).
	b	when showing compliance with paragraph (a) above, account is taken of the following:
		1 the take-off flight path begins at a height of 50 ft above the surface at the end of the take-off distance required, and ends at a height of 1,500 ft above the surface;
		2 the aeroplane is not banked before the aeroplane reaches a height of 50 ft above the surface, and that thereafter the angle of bank does not exceed 15°;
		3 failure of the critical engine occurs at the point on the all engine take-off flight path where visual reference for the purposes of avoiding obstacles is lost;
		4 the gradient of the take-off flight path from 50 ft to the assumed engine failure height is equal to the average all engines operating gradient during climb and transition to the en-route configuration multiplied by a factor of 0.77; and

Part 91		Requirement
		5 the gradient of the take-off flight path from the height reached in accordance with paragraph (b)(4) to the end of the take-off flight path is equal to the one engine inoperative en-route climb gradient shown in the aeroplane flight manual.
	c	For those cases where the intended flight path does not require track changes of more than 15°, obstacles do not have to be considered if they have a lateral distance greater than:
		1 300 m, if the flight is conducted under conditions allowing visual course guidance navigation, or if navigation aids are available enabling the pilot to maintain the intended flight path with the same accuracy; and
		2 600 m for flights under all other conditions.
	d	For those cases where the intended flight path does require track changes of more than 15°, obstacles do not have to be considered if they have a lateral distance greater than:
		1 600 m, if the flight is conducted under conditions allowing visual course guidance navigation; or
		2 900 m for flights under all other conditions.
	e	when showing compliance with sub-paragraphs (a), (b), (c) and (d) above, account is taken of the following:
		1 the mass of the aeroplane at the commencement of the take-off run; and
		2 the pressure altitude at the aerodrome; and
		3 the ambient temperature at the aerodrome; and
		4 not more than 50% of the reported head-wind component, or not less than 150% of the reported tail-wind component.
E4.025		En-route – multi-engined aeroplanes
	a	In the meteorological conditions expected for the flight, and in the event of failure of one engine, with the remaining engines operating within the maximum continuous power conditions specified, the aeroplane is capable of continuing flight at or above the relevant minimum altitudes for safe flight to a point 1,000 ft above an aerodrome at which the performance requirements can be met.
	b	When showing compliance with sub-paragraph (a) above:
		1 the aeroplane shall not be assumed to be flying at an altitude exceeding that at which the rate of climb equals 300 ft per minute with all engines operating within the specified maximum continuous power conditions specified; and
		2 the assumed en-route gradient with one engine inoperative shall be the gross gradient of descent or climb, as appropriate, respectively increased by a gradient of 0.5%, or decreased by a gradient of 0.5%.
E4.030		En-route – single- engined aeroplanes

Part 91		Requirement
	a	In the meteorological conditions expected for the flight, and in the event of failure of the engine, the aeroplane is capable of reaching a point from which a safe forced landing can be made. For landplanes, a place on land is required unless otherwise approved by the Governor.
	b	When showing compliance with sub-paragraph (a) above:
		1 the aeroplane shall not be assumed to be flying, with the engine operating within the specified maximum continuous power conditions, at an altitude exceeding that at which the rate of climb equals 300 ft per minute; and
		2 the assumed en-route gradient shall be the gross gradient of descent increased by a gradient of 0.5%.
E4.035		Landing – destination and alternate aerodromes
		The landing mass at the destination or alternate does not exceed the maximum landing mass specified in the aeroplane flight manual for the altitude and ambient temperature expected for the estimated time of landing at the destination and alternate aerodrome.
E4.040		Landing – dry runways
	a	The landing mass of the aeroplane for the estimated time of landing at the destination aerodrome and at any alternate aerodrome allows a full stop landing from 50ft above the threshold within 70% of the landing distance available. The Governor may approve the use of factored landing distance data based on a screen height of less than 50 ft, but not less than 35 ft.
	b	When showing compliance with paragraph (a) above, account is taken of the following:
		1 the altitude of the aerodrome;
		2 the runway surface condition and the type of runway surface;
		3 the runway gradient in the direction of landing.
		4 not more than 50% of the reported head-wind component, or not less than 150% of the reported tail-wind component;
	c	When showing compliance with sub-paragraph (a) above, it is assumed that:
		1 the aeroplane will land on the most favourable runway, in still air; and
		2 the aeroplane will land on the runway most likely to be assigned considering the probable wind speed and direction and the ground handling characteristics of the aeroplane, and also considering other conditions such as landing aids and terrain.

Part 91		Requirement
	d	If unable to comply with sub-paragraph (c)(2) for the destination aerodrome, the aeroplane may be despatched if an alternate aerodrome is designated which permits full compliance with paragraphs (a), (b) and (c) above.
E4.045		Landing – wet and contaminated runways
	a	When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be wet, the landing distance available is at least 115% of the landing distance required by 135.347.
	b	When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be contaminated, the landing distance, determined in accordance with data acceptable to the Governor for those conditions, does not exceed the landing distance available
E4.050		Landing - Seaplanes
	a	For seaplanes:
		1 the landing distance required is the horizontal distance between the point at which the seaplane is 50ft above the water surface to the point where the seaplane has reached a speed of 3 knots (6km/hr);
		2 the landing mass of the aeroplane allows a safe landing to be made in the landing distance available;
	b	When complying with (a)(1) account is taken of:
		1 the altitude of the water aerodrome; and
		2 the ambient temperature at the water aerodrome; and
		3 the water density; and
		4 the water surface condition; and
		5 the strength of the current.
Appendix E5 Aeroplanes - Performance Class C		
E5.005		Take Off Mass
		The take-off mass does not exceed the maximum take-off mass specified in the Aeroplane Flight manual for the altitude of the aerodrome and for the ambient temperature existing at the time of the take-off.
E5.010		Take Off distance
	a	Aeroplanes that have take off field length data in the Aeroplane Flight manual which does not allow for engine failure, that the distance from the start of the take off roll required by the aeroplane to reach a height of 50 ft above the surface with all engines operating, when multiplied by the following factors:
		1 1.33 for two engined aeroplanes; or
		2 1.25 for three engined aeroplanes; or
		3 1.18 for four engined aeroplanes,
		does not exceed the take off run available at the departure aerodrome.
	b	where field length data which allows for engine failure is available:

Part 91		Requirement
		1 the accelerate-stop distance must not exceed the accelerate-stop distance available; and
		2 the take off distance must not exceed the take off distance available, with a clearway not exceeding half the take off run available; and
		3 the take off run must not exceed the take off run available; and
		4 these parameters must be met using a single value of V_1 for the rejected and continued take off; and
		5 on a wet or contaminated runway the take off mass must not exceed the permitted take off on a dry runway under the same conditions.
	c	when complying with paragraphs (a) or (b) above, account is taken of the following:
		1 the pressure altitude at the aerodrome; and
		2 the ambient temperature at the aerodrome; and
		3 the runway surface condition and the type of runway surface; and
		4 the runway gradient in the direction of take-off; and
		5 not more than 50% of the reported head-wind component, or not less than 150% of the reported tail-wind component.
E5.020		Take off flight path
	a	The take-off flight path with one engine inoperative clears all obstacles by a vertical margin of at least 50 ft plus $0.01 \times D$, or by a horizontal distance of at least $90\text{m} + (0.125 \times D)$ (where D is the horizontal distance the aeroplane has travelled from the end of the take-off distance available), or for aeroplanes with a wingspan of less than 60m a horizontal distance of half the aeroplane wingspan + $(0.125 \times D)$; and
	b	The take off flight path begins at a height of 50 ft above the surface at the end of the take off distance required by 121.363(a) or (b), and end at a height of 1500 ft above the surface; and
	c	When showing compliance with sub-paragraphs 121.365(a) above account shall be taken of the following:
		1 the mass of the aeroplane at the commencement of the take-off run; and
		2 the pressure altitude at the aerodrome; and
		3 the ambient temperature at the aerodrome; and
		4 not more than 50% of the reported head-wind component, or not less than 150% of the reported tail-wind component.
	d	Track changes are not allowed up to that point in the take off path where a height of 50 ft above the surface has been achieved. Thereafter until a height of 400 ft, the aeroplane should not be banked more than 15° . Above 400 ft bank angles greater than 25° should not be planned.

Part 91		Requirement
	e	For those cases where the intended flight path does not require track changes of more than 15°, obstacles do not have to be considered if they have a lateral distance greater than:
		1 300 m, if the flight is conducted under conditions allowing visual course guidance navigation, or if navigation aids are available enabling the pilot to maintain the intended flight path with the same accuracy; and
		2 600 m for flights under all other conditions.
	f	For those cases where the intended flight path does require track changes of more than 15°, obstacles do not have to be considered if they have a lateral distance greater than:
		1 600 m, if the flight is conducted under conditions allowing visual course guidance navigation; or
		2 900 m for flights under all other conditions.
	g	Allowance shall be made for the effect of bank angle on operating speeds and flight path, and greater distances that will result from increased speeds.
E5.025		En-route – all engines operating
		In the meteorological conditions expected for the flight, at any point on its route or on any planned diversion from that route, the aeroplane is capable of a rate of climb of at least 300 ft per minute with all engines operating at no more than maximum continuous power at:
	a	the minimum altitudes for safe flight for each stage of the route to be flown, or of any planned diversion; and
	b	the minimum altitudes necessary to comply with the condition prescribed in 121.371 and 121.373.
E5.030		En-route – one engine inoperative
	a	In the meteorological conditions expected for the flight, and in the event of one engine becoming inoperative and the other engine or engines operating at no more than maximum continuous power, the aeroplane is capable of continuing the flight from the cruising altitude to an aerodrome where a safe landing can be made, clearing all obstacles within 10nm either side of track by at least:
		1 1000ft when rate of climb is zero or greater; or
		2 2000ft when rate of climb is less than zero.
	b	the flight path shall have a positive gradient at 1500 ft above the aerodrome where the landing is assumed to be made following engine failure.
	c	for the purposes of these calculations the available rate of climb of the aeroplane shall be taken as 150 ft per minute less than the gross rate of climb specified.
	d	fuel jettisoning is permitted to the extent consistent with reaching the aerodrome with the required fuel reserves.

Part 91		Requirement
	e	Track clearance to 5NM either side of track may be used if navigational accuracy reaches at least 95% containment level.
E5.035		En-route – aeroplanes with three or more engines, two engines inoperative
	a	Except as provided in paragraph (b) below, each aeroplane with three or more engines is not more than 90 minutes away (at the all engines long-range cruising speed at standard temperature and in still air) from an aerodrome at which a safe landing can be made
	b	An aircraft with three or more engines may be operated at more than 90 minutes away from an aerodrome at which a safe landing can be made, provided that:
		1 the two engine inoperative flight path must permit the aeroplane to continue the flight, in the expected meteorological conditions expected for the flight, clearing all obstacles within 10 NM of the intended track to be flown, vertically by an altitude of at least 2,000 feet to an aerodrome at which a safe landing can be made; and
		2 the rate of climb of the aeroplane for the purpose of this paragraph shall be taken to be 150 ft per minute less than that specified; and
		3 fuel jettisoning is permitted to an extent consistent with reaching the aerodrome with the required reserves; and
		4 the expected mass of the aeroplane at the point where the two engines are assumed to fail shall be not less than that which would include sufficient fuel to proceed to an aerodrome where the landing is assumed to be made, and to arrive there at an altitude of at least 1500 feet directly over the aerodrome and after that to fly level for at least 15 minutes.
		5 It is assumed that the two engines fail at the most critical point of that portion of the route where the aeroplane is more than 90 minutes (at the all-engines long-range cruising speed at standard temperature and still air) away from an aerodrome at which a safe landing can be made.
	d	Track clearance to 5NM either side of track may be used if navigational accuracy reaches at least 95% containment level.
E5.040		Landing – destination and alternate aerodromes
		The landing mass of the aeroplane does not exceed the maximum landing mass, taking into account the altitude and the ambient temperature expected for the estimated time of landing at the destination and alternate aerodrome.
E5.045		Landing – dry runways

Part 91		Requirement
	a	The landing mass of the aeroplane allows a full stop landing from 50 ft above the threshold within 70% of the landing distance available at the destination and alternate aerodromes.
	b	The landing mass takes account of:
	1	the altitude at the aerodrome;
	2	the type of runway surface;
	3	the runway gradient in the direction of landing; and
	4	not more than 50% of the reported head-wind component or not less than 150% of the reported tail-wind component.
	c	It is assumed that the aeroplane will land on:
	1	the most favourable runway in still air; and
	2	the aeroplane will land on the runway most likely to be assigned considering the probable wind speed and direction and the ground handling characteristics of the aeroplane, and also considering other conditions such as landing aids and terrain.
	d	If unable to comply with sub-paragraph (c)(2) for the destination aerodrome, the aeroplane may be despatched if an alternate aerodrome is designated which permits full compliance with paragraphs (a), (b) and (c) above.
E5.050		Landing – wet and contaminated runways
	a	When the appropriate weather reports and/or forecasts indicate that the runway at the estimated time of arrival may be wet, the landing distance available is at least 115% of the landing distance required by 121.377;
	b	When the appropriate weather forecasts and reports indicate that the runway expected at the time of landing may be contaminated, the landing distance required does not exceed the landing distance available.
Appendix E6 Helicopters - Performance General		
E6.005		Significant performance factors
		To determine the performance of the helicopter, account should be taken of at least the following factors:
	a	mass of the helicopter;
	b	elevation or pressure-altitude and temperature; and
	c	wind; for take-off and landing, accountability for wind should be no more than 50 per cent of any reported steady headwind component of 5 knots or more. Where take-off and landing with a tailwind component is permitted in the flight manual, not less than 150 per cent of any reported tailwind component should be allowed. Where precise wind measuring equipment enables accurate measurement of wind velocity over the point of take-off and landing, these values may be varied with the approval of the Governor.
E6.0010		Obstacle accountability area

Part 91		Requirement
	a	For the purpose of the obstacle clearance requirements, an obstacle should be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than:
		1 for VFR operations:
		i half of the minimum width of the FATO (or the equivalent term used in the helicopter flight manual) defined in the helicopter flight manual (or when no width is defined, 0.75 D), plus 0.25 times D (or 3 m, whichever is greater), plus:
		A 0.10 DR for VFR day operations
		B 0.15 DR for VFR night operations
		2 for IFR operations:
		i 1.5 D (or 30 m, whichever is greater), plus:
		A 0.10 DR for IFR operations with accurate course guidance
		B 0.15 DR for IFR operations with standard course guidance
		C 0.30 DR for IFR operations without course guidance
		3 for operations with initial take-off conducted visually and converted to IFR/IMC at a transition point, the criteria required in 2.4.1 a) apply up to the transition point then the criteria required in 2.4.1 b) apply after the transition point.
		4 in addition, for a take-off using a backup take-off procedure, an obstacle located below the backup flight path should be considered if its lateral distance from the nearest point on the surface below the intended flight path is not further than half of the minimum width of the FATO (or the equivalent term used in the helicopter flight manual) defined in the helicopter flight manual (when no width is defined, 0.75 D plus 0.25 times D, or 3 m, whichever is greater) plus:
		i 0.10 distance travelled from the back edge of the FATO for VFR day operations;
		ii 0.15 distance travelled from the back edge of the FATO for VFR night operations.
	b	Obstacles may be disregarded if they are situated beyond:
		1 7 R for day operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;
		2 10 R for night operations if it is assured that navigational accuracy can be achieved by reference to suitable visual cues during the climb;
		3 300 m if navigational accuracy can be achieved by appropriate navigation aids; and
		4 900 m in the other cases.

Part 91		Requirement
		Note.— Standard course guidance includes ADF and VOR guidance. Accurate course guidance includes ILS, MLS, or other course guidance providing an equivalent navigational accuracy.
	c	The transition point should not be located before the end of TODRH for helicopters operating in performance Class 1 and before the DPATO for helicopters operating in performance Class 2.
	d	When considering the missed approach flight path, the divergence of the obstacle accountability area should only apply after the end of the take-off distance available.
Appendix E7 Helicopters - Performance Class 1		
E7.005		Take-off
	a	The mass of the helicopter at take-off does not exceed the maximum take-off mass specified in the flight manual for the procedures to be used and to achieve a rate of climb of 100 ft/min at 60 m (200 ft) and 150 ft/min at 300 m (1 000 ft) above the level of the heliport with the critical power-unit inoperative and the remaining power-units operating at an appropriate power rating, taking into account the parameters specified in E6.005.
	b	The take-off mass is such that:
		1 the rejected take-off distance required does not exceed the rejected take-off distance available; and
		2 the take-off distance required does not exceed the take-off distance available.
	c	As an alternative, the requirement in (b)(2) above may be disregarded provided that the helicopter, with the critical power unit failure recognised at TDP can, when continuing the take-off, clear all obstacles to the end of the take-off distance required by a vertical margin of not less than 10.7 m (35 ft).
	d	That part of the take-off up to and including TDP shall be conducted with the surface in sight.
E7.010		Take-off flight path
		From the end of the take-off distance required with the critical power-unit inoperative:
	a	the take-off mass is such that the climb path provides a vertical clearance of not less than 10.7 m (35 ft) for VFR operations and 10.7 m (35 ft) + 0.01DR for IFR operations above all obstacles located in the take-off flight path. Only obstacles specified in E6.010 have to be considered.
	b	Where a change of direction of more than 15° is made, obstacle clearance requirements are to be increased by 5 m (15 ft) from the point at which the turn is initiated. This turn is not initiated before reaching a height of 60 m (200 ft) above the take-off surface.

Part 91		Requirement
E7.015		En-route
	a	The take-off mass is such that it is possible, in case of the critical power-unit failure occurring at any point along the flight path, to continue the flight to an appropriate landing site and achieve the minimum flight altitudes for the route to be flown.
	b	Fuel jettisoning can be planned to take place only to an extent consistent with reaching the heliport with the required fuel reserves. Fuel jettisoning shall not be planned below 1,000 ft above terrain, and shall be carried out utilising a safe procedure.
	c	In the case of helicopters having three or more power units, on any part of the route where the location of suitable intermediate operating sites and the total duration of the flight are such that the probability of a second power-unit becoming inoperative shall be allowed for, the helicopter shall be able, in the event of any two power-units becoming inoperative, to continue the flight to such suitable operating site and carry out a landing.
E7.020		Approach, landing and baulked landing
	a	the estimated landing mass at the destination or alternate is such that:
		1 the mass of the helicopter at landing does not exceed the maximum take-off mass specified in the flight manual for the procedures to be used and to achieve a rate of climb of 150 ft/min at 300 m (1 000 ft) above the level of the heliport with the critical power-unit inoperative and the remaining power-units operating at an appropriate power rating, taking into account the parameters specified in E6.005.
		2 the landing distance required does not exceed the landing distance available unless the helicopter, with the critical power-unit failure recognized at LDP can, when landing, clear all obstacles in the approach path;
		3 in case of the critical power-unit failure occurring at any point after the LDP, it is possible to land and stop within the FATO; and
		4 in case of the critical power-unit failure occurring at any point before the LDP, it is possible either to land and stop within the FATO, or to overshoot meeting the condition of E7.010(a) and (b).
	b	That part of the landing from the LDP to touchdown is with the surface in sight.
Appendix E8 Helicopters - Performance Class 2		
E8.005		Take-off

Part 91		Requirement
	a	The mass of the helicopter at take-off should not exceed the maximum take-off mass specified in the flight manual for the procedures to be used and to achieve a rate of climb of 150 ft/min at 300 m (1,000 ft) above the level of the heliport with the critical power-unit inoperative and the remaining power-units operating at an appropriate power rating, taking into account the parameters specified in E6.005.
	b	That part of the take-off prior to or at the defined point after take-off shall be conducted with the surface in sight.
E8.010		Take-off flight path
	a	The mass is such that the initial climb path provides a vertical clearance of not less than 10.7 m (35 ft) above all obstacles located along the climb path, all engines operating. Only obstacles specified in E6.010 have to be considered.
	b	From DPATO or, as an alternative, no later than 60 m (200 ft) above the take-off surface with the critical power-unit inoperative, the conditions of E7.010(a) and (b) are met.
E8.015		En-route
		The conditions of E7.015 are met.
E8.020		Approach, landing and baulked landing
	a	The estimated mass at the destination or alternate is such that:
		1 it does not exceed the maximum mass specified in the flight manual for a rate of climb of 150 ft/min at 300 m (1 000 ft) above the level of the heliport with the critical power-unit inoperative and the remaining power units operating at an appropriate power rating, taking into account the parameters specified in E6.005;
		2 it is possible, in case of the critical power-unit failure occurring at or before the DPBL, either to land, or to overshoot satisfying the conditions of E7.010(a) and (b).
	b	That part of the landing from the defined point before landing to touchdown is conducted with the surface in sight.
Appendix E9 Helicopters - Performance Class 3		
E9.005		Take-off
	a	The mass of the helicopter at take-off does not exceed the maximum mass specified in the flight manual for a hover in ground effect with all power-units operating at take-off power, taking into account the parameters specified in E6.005; or

Part 91		Requirement
	b	If conditions are such that a hover in ground effect is not likely to be established, the take-off mass does not exceed the maximum mass specified for a hover out of ground effect with all power-units operating at take-off power, taking into account the parameters specified in E6.005.
E9.010		Initial climb
		The mass is such that the climb path provides a vertical clearance of not less than 10.7 m (35 ft) above all obstacles located along the climb path, all engines operating. Only obstacles specified in E6.010 have to be considered.
E9.015		En-route
		The take-off mass is such that it is possible to achieve the minimum flight altitudes for the route to be flown, all engines operating.
E9.020		Approach, landing and baulked landing
	a	The estimated mass at the destination or alternate is such that:
		1 it does not exceed the maximum mass specified in the flight manual for a hover in ground effect with all power-units operating at take-off power, taking into account the parameters specified in E6.005. If conditions are such that a hover in ground effect is not likely to be established, the take-off mass should not exceed the maximum mass specified for a hover out of ground effect with all power-units operating at take-off power, taking into account the parameters specified in E6.005; and
		2 it is possible to perform a baulked landing, satisfying the conditions of E9.010.