Civil Aviation Rules

CIVIL AVIATION AUTHORITY
OF NEW ZEALAND
Te Mana Rererangi Tūmatanui o Aotearoa

Part 91

General Operating and Flight Rules

23 July 2026

CAA Consolidation

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Rule Objective

The objective of Part 91 is to ensure that operators can conduct the safe operation of aircraft with the minimum endangerment to persons and property.

Part 91 forms the basis of general operating and flight rules for the New Zealand aviation environment and sets out the minimum compliance requirements applicable to all flights. Part 91 applies to all operators of aircraft as well as passengers by establishing—

- general rules applicable to operators and passengers
- operating and general flight rules
- rules for VFR and IFR operations
- instruments and equipment requirements for aircraft
- operator maintenance requirements
- special flight operating requirements such as aerobatics, air displays, towing gliders and aircraft used for parachuting
- operating foreign registered aircraft
- limitations on aircraft noise

This document is the current consolidated version of Part 91. This document combines the principal (original issue) and amendments as at the date of consolidation. This document is for reference only and has no official status. Copies of the signed principal and amendments are secondary legislation and may be obtained from the Civil Aviation Authority of New Zealand or may be downloaded from the official web site at: Civil Aviation Rules | aviation.govt.nz

Bulletin

This Part first came into force on 5 April 2025 and now incorporates the following amendments:

Amendment	Effective Date
Amendment 1	12 June 2026
Amendment 2	23 July 2026

Summary of amendments:

Amendment 1: (25/CAR/04)	New rule 91.17 is inserted; rules 91.227D, 91.411, 91.425, 91.501, 91.509, 91.523, 91.525 and 91.753 are revoked and replaced; appendices A.8, A.12, A.13 and A.14 and revoked and the appendix references are reserved.
Amendment 2: (26/CAR/02)	Rule 91.9 is amended

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Subpart A – General

91.1 Purpose

(a) This Part prescribes general operating and flight rules for the operation of civil aircraft.

(b) Subject to paragraphs (c)(1) and (d), the following also apply to members of the New Zealand Defence Force and any aircraft operated by the New Zealand Defence Force within the territorial limits of New Zealand:

(1) rule 91.129:

(2) rules 91.223 to 91.225, when operating in the vicinity of civil aircraft:

(3) rule 91.229, when operating in the vicinity of civil aircraft:

(4) rule 91.233:

(5) rule 91.241:

(6) rules 91.245 and 91.247:

(6a) rule 91.255:

(6b) paragraphs (1) and (2) of rule 91.261:

(6c) rule 91.263:

(7) rule 91.309:

(8) rule 91.313:

(9) rules 91.407 to 91.411:

(10) rules 91.425 to 91.427:

(11) rule 91.431:

(12) rule 91.541.

(c) This Part does not apply to—

(1) any member of the New Zealand Defence Force or any aircraft operated by the New Zealand Defence Force acting in connection with—

(i) any war or other like emergency; or

(ii) the defence of New Zealand and other New Zealand interests; or

(iii) aid to the civil power in time of emergency; or

(iv) the provision of any public service; or

(v) any operation performed within a restricted, danger, or military operating area designated under Part 71 for military purposes; and

(2) persons operating aircraft to which Part 101 applies; and

(2A) a person operating an aircraft under the authority of an unmanned aircraft operator certificate granted under the Act and in accordance with Part 102 unless compliance with any of the requirements in this Part is required as a condition of operation; and

(3) persons and equipment to which Part 105 applies.

(d) The following do not apply to any member of the New Zealand Defence Force or any aircraft operated by the New Zealand Defence Force performing training for an operation specified in paragraph (c)(1) if that training cannot be performed under the rule:

(1) rule 91.225(b):

(2) rule 91.233:

(3) rule 91.313, if training outside controlled airspace:

(4) rule 91.407, if training outside controlled airspace:

(5) rule 91.427, if training outside controlled airspace.

(e) The following do not apply in the case of air operations conducted in New Zealand under an Australian AOC with ANZA privileges:

(1) rule 91.111(1):

(2) rule 91.112:

(3) rule 91.115:

(4) rule 91.121:

(5) rule 91.123:

(6) rule 91.201(1)(i):

(7) rule 91.201(3):

(8) rule 91.205:

(9) rule 91.207:

(10) rule 91.209:

(11) rule 91.211:

(12) rule 91.213:

(13) rule 91.215:

(14) rule 91.221:

(15) rule 91.401:

(16) rule 91.501:

(17) rule 91.503:

(18) rule 91.505:

(19) rule 91.507:

(20) rule 91.509:

(21) rule 91.511:

(22) rule 91.513:

(23) rule 91.515:

(24) rule 91.517:

(25) rule 91.519:

(26) rule 91.521:

(27) rule 91.523:

(28) rule 91.525:

(29) rule 91.527:

(30) rule 91.529:

(31) rule 91.531:

(32) rule 91.533:

(33) rule 91.537:

(34) rule 91.539:

(35) rule 91.543:

(36) rule 91.545:

(37) rule 91.707.

91.3 *Reserved*

91.5 Compliance with crew instructions and commands

A passenger must comply with any commands given to them by the pilot-in-command pursuant to rule 91.203.

91.7 Portable electronic devices

(a) A person must not operate, and an operator or pilot-in-command of an aircraft must not allow the operation of, any cellphone or other portable electronic device that is designed to transmit electromagnetic energy, on any aircraft while that aircraft is operating under IFR.

(b) Except as provided in paragraph (c), a person must not operate, and an operator or pilot-in-command of an aircraft must not allow the operation of, any portable electronic device on any aircraft flying under IFR during an instrument approach or departure procedure or during any other critical phase of flight.

(c) Paragraph (b) does not apply to—

(1) hearing aids;

(2) heart pacemakers;

(3) portable voice recorders;

(4) electric shavers;

(5) electronic watches; or

(6) any other portable electronic device if the operator of the aircraft has determined that the portable electronic device to be operated will not cause interference with any aircraft system or equipment in the aircraft on which it is operated.

(d) In the case of—

(1) an aircraft being operated on air transport operations, the determination required by paragraph (c)(6) must be made by the operator of the aircraft on which the particular device is to be used; and

(2) any other aircraft, the determination required by paragraph (c)(6) may be made by the pilot-in-command or the operator of the aircraft on which the particular device is to be used.

91.9 Carriage and discharge of firearms

(a) Except as otherwise provided in the Act, the Aviation Crimes Act 1972, or in paragraphs (c) and (e), a person must not—

(1) carry a firearm in an aircraft; or

(2) cause a firearm to be carried in an aircraft; or

(3) permit a firearm to be carried in an aircraft.

(b) Except as provided in the Aviation Crimes Act 1972 or in paragraph (d) a person must not discharge a firearm while on board an aircraft.

(c) A firearm may be carried in an aircraft if—

(1) the firearm—

(i) is stowed in a place that is inaccessible to every person during flight; and

(ii) is disabled; or

(2) the aircraft is being used solely for the carriage of the person or group of persons associated with the firearm; and—

(i) the operator permits the carriage of the firearm; and

(ii) the firearm is disabled; or

(3) the aircraft is carrying livestock and the operator considers it may be necessary to immobilise livestock for the safety of the aircraft or its occupants; or

(4) the aircraft is being used for the purpose of shooting or immobilising animals on the ground if—

(i) the firearm is not loaded until the aircraft is in the area within which the firearm is intended to be discharged; and

(ii) the aircraft carries only those persons performing an essential function associated with the operation of the

aircraft or the shooting or immobilisation of animals on the ground; or

(5) the firearm is carried by a foreign in-flight security officer in the course of their duties

(d) A firearm may be discharged—

(1) in an aircraft carrying livestock if a crew member considers it necessary to immobilise livestock for the safety of the aircraft or its occupants; or

(2) from an aircraft for the purpose of shooting or immobilising animals on the ground if—

(i) the discharge of the firearm does not pose a hazard or cause injury or damage to persons or property on the ground; and

(ii) the firearm is not discharged over any congested area of a city, town, or settlement or over any open air assembly of persons; or

(3) by a foreign in-flight security officer in the course of their duties

(e) A firearm may be carried in an aircraft by a person employed by the police, another law enforcement agency, or a military service if—

(1) the aircraft is being operated on an air transport or commercial transport operation, carrying fare paying passengers and the person carrying the firearm—

(i) is lawfully entitled to carry a firearm in the course of their duties; and

(ii) is carrying the firearm in the course of their duties; and

(iii) has been approved to carry the firearm on the aircraft by the Director under paragraph (f); and

(iv) complies with any conditions or restrictions imposed by the Director under paragraph (f); or

(2) the aircraft is being operated solely for the carriage of constables (see ss4 and 117 of the Policing Act 2008) , law enforcement officers, members of the New Zealand Defence Force, members of a visiting force (as defined in s4 of the Visiting Forces Act 2004) and persons under the care of such officers or personnel, and the firearm is unloaded; or

(3) the aircraft is being operated for a police, law enforcement, or military operation, and only persons performing an essential function associated with the police, law enforcement, or military operation, or the operation of the aircraft, are carried in the aircraft.

(f) Upon application from the Commissioner of Police, the head of any other law enforcement agency, or the Chief of the Defence Force, the Director—

(1) may approve a constable, a law enforcement officer, or a military service person to carry a firearm in an aircraft that is being operated on an air transport or commercial transport operation, carrying fare paying passengers, if the Commissioner of Police and the operator concerned consent to the carriage of a firearm in the aircraft; and

(2) may impose such conditions or restrictions as the Director considers appropriate; and

(3) must advise the applicant, the operator, and the Commissioner of Police of the decision.

(g) Unless otherwise determined by the Director, an application for approval under paragraph (f) must be made, to the Director at least one working day before the air transport or commercial air transport operation is intended to commence.

(h) Before the commencement of an air operation where a firearm will be carried in an aircraft by an in-flight security officer, a foreign in-flight security officer, or by a person under paragraph (e)(1), the operator must inform the pilot-in-command of the number of persons carrying firearms and their position in the aircraft.

91.11 Prohibition against interference with aircraft and aviation facilities

A person must not tamper or interfere with any aircraft, any component of an aircraft, or its equipment, including, but not limited to, smoke detectors, or with fixed or mobile equipment used for the operation or navigation of any aircraft.

91.13 Aircraft noise and vibration

A person is barred by section 44 of the Act from bringing an action for nuisance in respect of the noise or vibration caused by an aircraft or aircraft engine on an aerodrome if—

(1) the aircraft is taking off or landing; or

(2) the aircraft is manoeuvring on the ground or water; or

(3) any person is operating any engine in the aircraft, prior to take-off for the purpose of ensuring—

(i) satisfactory engine performance; or

(ii) that the instruments, accessories, or other components are in a satisfactory condition.

91.15 Fuelling of aircraft

A person refuelling or defuelling an aircraft must ensure that—

(1) fuelling or defuelling of the aircraft is performed in compliance with the applicable requirements of the regulations made under the Health and Safety at Work Act 2015; and

(2) the aircraft is not refuelled or defuelled with Class 3.1A flammable liquid when a person is embarking, on board, or disembarking the aircraft, or when one or more of the propulsion engines are running; or

(3) the aircraft is not refuelled or defuelled with a Class 3.1C or a Class 3.1D flammable liquid when a person is embarking, on board, or disembarking the aircraft.

91.17 Transport instruments made for the purposes of this Part

(a) A transport instrument may be made for the purposes of this Part, subject to any requirements specified in a rule referring to the instrument.

(b) In accordance with section 431 of the Act a transport instrument made for the purposes of this part may be made by the Director.

(c) Before making a transport instrument the Director must have regard to any relevant standards, guidance and practice.

(d) The transport instrument must specify dates for compliance.

(e) The Director may amend or replace a transport instrument when necessary.

(f) A transport instrument is secondary legislation (see Part 3 of the Legislation Act 2019 for publication requirements).

Subpart B – Operating Rules

91.101 Aircraft airworthiness

(a) Except as provided in paragraph (c), Part 103, and Part 106, a person must not operate an aircraft unless—

(1) the aircraft—

(i) has a current airworthiness certificate; and

(ii) is in an airworthy condition; or

(2) the aircraft is operated in accordance with a special flight permit issued in accordance with Part 21.

(b) A person operating an aircraft that has an airworthiness certificate, or a special flight permit as required in paragraph (a) must comply with—

(1) any operating limitations issued with the airworthiness certificate or special flight permit; and

(2) the markings and placards that are required by the Civil Aviation Rules to be displayed in the aircraft.

(c) A person may operate an aircraft that does not have a current airworthiness certificate for the purpose of demonstrating the eligibility of the aircraft for the issue, renewal, or reinstatement of an airworthiness certificate if—

(1) a type certificate or type acceptance certificate for the aircraft type is in force in accordance with Subpart B of Part 21; and

(2) the aircraft complies with the requirements prescribed in rule 21.191; and

(3) a person meeting an applicable requirement in rule 43.101(a)(1) to (5) certifies that the aircraft is fit for flight; and

(4) the pilot-in-command is the holder of an appropriate, current pilot licence and type rating or a validation permit, issued in accordance with Part 61 for the aircraft; and

(5) no other person is carried unless that person performs an essential function in connection with the operation.

91.103 Restricted category airworthiness certificate – operating limitations

A person must not operate an aircraft issued with a restricted category airworthiness certificate under Part 21, Subpart H for flight instruction other than—

(1) conversion instruction for a type rating; or

(2) flight instruction for the issue of an agricultural rating; or

(3) flight instruction for the specific operational purpose for which the aircraft is certificated.

91.105 Special category airworthiness certificates – operating limitations

(a) Except as provided in paragraph (b), a person must not operate an aircraft that has a *special category* airworthiness certificate for the carriage of a person or goods for hire or reward.

(b) Paragraph (a) does not apply to a person operating an aircraft that has a *special category* airworthiness certificate if the carriage of a person is for hire or reward and—

(1) the person being carried is the holder of a flight instructor rating issued by the Director under the Act and Part 61 and—

(i) subject to paragraphs (e), (f)(2)(i), (g)(1), and (j)(2)(i) as appropriate, is giving flight instruction in the aircraft; or

(ii) is giving conversion instruction for an aircraft type rating on the aircraft; or

(2) the person being carried is required to perform a function essential to the operation of the aircraft under paragraph (e); or

(3) the aircraft has a special category – primary, special category – LSA, or special category – limited airworthiness certificate and is operated under the authority of an adventure aviation operator certificate that has been issued by the Director under the Act and Part 115.

(c) Except if taking off or landing, a person must not operate an aircraft that has a *special category* airworthiness certificate over a congested area of a city or town unless the aircraft has been authorised to do so by the Director in writing.

(d) A person operating an aircraft that has a *special category* airworthiness certificate must inform each person carried in the aircraft of the warning specified in the placard that is required by rule 21.205 to be installed in the aircraft.

(e) A person must not operate an aircraft that has a *special category*—***experimental*** airworthiness certificate for any purpose other than—

(1) researching and developing new aircraft design concepts, new aircraft equipment, new aircraft installations, new aircraft operating techniques, or new uses for aircraft; or

(2) showing that the aircraft complies with applicable airworthiness rules; or

(3) performing a flight evaluation; or

(4) giving conversion instruction for an aircraft type rating on the aircraft.

(f) A person operating an aircraft that has a *special category—**exhibition*** airworthiness certificate—

(1) must operate the aircraft in accordance with the operator statement required by rule 47.55(c) to accompany the certificate of registration for the aircraft; and

(2) must not operate the aircraft for any of the following purposes:

(i) giving flight instruction to a person for the issue of a pilot licence or rating, except for conversion instruction for an aircraft type rating on the aircraft, unless approved by the Director:

(ii) performing an agricultural aircraft operation:

(iii) performing a helicopter external load operation under Part 133 unless the performance of an external load operation is approved by the Director for participation in an aviation event:

(iv) the carriage of a person other than a person who is permitted to be carried in accordance with the operator statement required by rule 47.55(c) to accompany the certificate of registration for the aircraft, or who is carried under paragraph (2)(i).

(g) A person must not operate an aircraft that has a *special category—**amateur-built*** airworthiness certificate for any of the following purposes:

(1) giving flight instruction to a person for the issue of a pilot licence or rating, except for conversion instruction for an aircraft type rating on the aircraft, if the person is not the amateur constructor or owner of the aircraft:

(2) performing an agricultural aircraft operation:

(3) performing a helicopter external load operation under Part 133.

(h) A person must not operate an aircraft that has a *special category—**primary*** airworthiness certificate for any of the following purposes:

(1) performing an agricultural aircraft operation:

(2) performing a helicopter external load operation under Part 133.

(i) A person must not operate an aircraft that has a *special category—**LSA*** airworthiness certificate to perform an agricultural aircraft operation.

(j) A person operating an aircraft that has a *special category—**limited*** airworthiness certificate—

(1) must operate the aircraft in accordance with the operator statement required by rule 47.55(c) to accompany the certificate of registration for the aircraft; and

(2) must not operate the aircraft for any of the following purposes:

(i) giving flight instruction to a person for the issue of a pilot licence or rating, except for conversion instruction for an aircraft type rating on the aircraft, unless approved by the Director:

(ii) performing an agricultural aircraft operation:

(iii) performing a helicopter external load operation under Part 133:

(iv) the carriage of more than the following number of persons:

(A) 10 persons for an aeroplane:

(B) 5 persons for a helicopter.

91.107 Aircraft registration

(a) Except as provided in paragraph (b), and Part 106, a person must not operate an aircraft unless it is registered and displays identification markings in accordance with the requirements of—

(1) Part 47; or

(2) the appropriate aeronautical authority of an ICAO Contracting State; or

(3) the appropriate authority of another State that is party to an agreement with the Government of New Zealand or the Civil Aviation Authority of New Zealand, which provides for the acceptance of each other's registrations.

(b) Paragraph (a) does not apply to the holder of a manufacturing organisation certificate issued in accordance with Part 148 if—

(1) the certificate holder holds a *special flight permit—continuing authorisation* issued in accordance with Part 21 for the aircraft; and

(2) the aircraft is a new production aircraft undergoing flight testing.

91.109 Aircraft flight manual

A person must not operate an aircraft unless it is operated in compliance with the operating limitations specified in the aircraft flight manual.

91.111 Documents to be carried

Except as provided in Parts 103, 104, and 106, a person must not operate an aircraft unless the following documents are carried in the aircraft —

(1) except if rule 91.101(c) applies, the current airworthiness certificate or a certified copy of the current airworthiness certificate:

(2) the aircraft flight manual or an equivalent document acceptable to the Director:

(3) for New Zealand registered aircraft –

(i) the technical log required under rule 91.619, unless for aircraft operating under an air operator certificate from a fixed base an alternative means acceptable to the Director is used to inform the pilot of the maintenance status of the aircraft:

(ii) the completed appropriate CAA Weight and Balance Data form:

(iii) the completed appropriate CAA Aircraft Radio Station Equipment Approval Levels form:

(4) for New Zealand registered aircraft operating outside of New Zealand –

(i) the General User Radio Licence for Aeronautical Purposes issued by the Ministry of Business, Innovation and Employment:

(ii) the current certificate of registration for the aircraft, or a certified copy of the certificate of registration:

(iii) evidence that each flight crew member holds an applicable and current flight crew member licence and medical certificate; and

(iv) written evidence that the aircraft complies with the applicable aircraft noise standards referred to in rule 91.803(a)(1):

(5) for foreign aircraft operating within New Zealand:

(i) the current certificate of registration for the aircraft, or a certified copy of the certificate of registration:

(ii) written evidence that the aircraft is certificated or validated by the State of Registry to comply with standards that are equivalent to the applicable aircraft noise standards specified in rule 91.803(a)(2); and

(iii) evidence that each flight crew member holds an applicable and current flight crew member licence and medical certificate.

91.112 Daily flight records

(a) Except as provided in paragraph (c), an operator of an aircraft must keep accurate daily flight records that contain for each flight:—

(1) the name of the operator:

(2) the name of the pilot-in-command:

(3) the names of other crew members:

(4) the registration markings of the aircraft:

(5) the date of the flight:

(6) the purpose of the flight:

(7) the time of commencement of the flight:

(8) the name of the departure aerodrome:

(9) the flight time.

(b) An operator must retain each daily flight record for a period of 12 months after the date of the flight.

(c) A person required to keep daily flight records under rules 115.455 or 135.857 is not required to comply with paragraphs (a) and (b).

91.113 Aircraft flight crew members

A person must not operate an aircraft without at least the number of flight crew members required by the aircraft flight manual.

91.115 Flight attendant requirements

(a) Except as provided in paragraph (b), a person must not operate an aircraft carrying more than 19 passengers unless the minimum number of flight attendants carried as crew members on the aircraft are as follows—

(1) for aircraft carrying more than 19 but less than 51 passengers, at least one flight attendant:

(2) for aircraft carrying more than 50 but less than 101 passengers, at least two flight attendants:

(3) for aircraft carrying more than 100 passengers, at least two flight attendants plus one additional flight attendant per every 50 passengers carried in addition to the first 100 passengers carried.

(b) A flight attendant is not required to be carried—

(1) in an aircraft that is carrying persons engaged in parachute operations; or

(2) in a balloon; or

(3) in a DHC6-300 or DHC6-310 aircraft type; or

(4) in an aircraft when the only passengers being carried in excess of 19 are children under 4 years of age who are carried in accordance with rule 91.207(d)(1) and the total number of passengers does not exceed 24.

(c) A person must not operate an aircraft carrying flight attendants who are not—

(1) familiar with the necessary functions to be performed—

(i) in an emergency; and

(ii) in a situation requiring emergency evacuation; and

(2) capable of using the emergency equipment installed in that aircraft.

91.117 Designation of pilot-in-command

(a) A person must not operate an aircraft with more than one pilot unless, when the flight is planned, the operator designates a pilot-in-command for each period of the flight.

(b) For the purposes of this rule, operator means the person who causes or permits an aircraft to fly.

91.118 Intoxicating liquor and drugs

No crew member while acting in their official capacity may be in a state of intoxication or in a state of health in which their capacity so to act would be

impaired by reason of them having consumed or used any intoxicant, sedative, narcotic, or stimulant drug or preparation.

91.119 Aircraft taxiing

A person must not taxi an aircraft on the movement area of an aerodrome unless they are a flight crew member or they have been duly authorised by the operator or by a maintenance organisation, and in either case they—

(1) are competent to taxi the aircraft; and

(2) are competent to use the radiotelephone if radio communications are required; and

(3) are familiar with the aerodrome layout and any procedures applicable to ground movements at that aerodrome.

91.121 Stowage of passenger service equipment

A person must not taxi, take-off, or land an aircraft equipped with—

(1) any passenger food and beverage tray, or table; or

(2) any passenger serving cart; or

(3) any viewing screen that extends into the aisle—

unless that equipment is secured in a stowed position.

91.123 Flight instruction

A person must not give flight instruction in an aircraft, except a balloon, unless that aircraft is equipped with—

(1) fully functioning dual controls; or

(2) pitch, roll, yaw, and engine power controls which can be operated at either crew station.

91.125 Simulated instrument flight

(a) Except as provided in paragraph (b), a person must not operate an aircraft in simulated instrument flight unless—

(1) the aircraft has two pilot stations and one pilot station is occupied by a safety pilot who is the holder of a current pilot licence; and

(2) the safety pilot has—

(i) adequate vision forward and to each side of the aircraft; or

(ii) a competent observer to adequately supplement the vision of the safety pilot; and

(3) the aircraft is equipped with—

(i) fully functioning dual controls; or

(ii) pitch, roll, yaw, and engine power controls that can be operated from either pilot station.

(b) A person may operate an aircraft in simulated instrument flight that does not comply with paragraph (a)(3) if—

(1) the simulated flight is performed outside controlled airspace; and

(2) the means of simulating instrument flight can be removed rapidly by the pilot-in-command.

91.127 Use of aerodromes

(a) A person must not use any place as an aerodrome unless that place is suitable for the purpose of taking off or landing of the aircraft concerned.

(b) A person must not operate an aircraft at an aerodrome unless—

(1) that person complies with any limitations and operational conditions on the use of the aerodrome notified by the aerodrome operator; and

(2) the runway, heliport, or water channel, is equipped with operable lighting, appropriate to that type of aircraft, when landing or taking off at night, and the lighting is activated; and

(3) that person manoeuvres the aircraft clear of any manoeuvring area or part of any manoeuvring area that has been notified or marked as unsafe for aircraft use by the aerodrome operator; and

(4) the runway, heliport, or water channel, is clear of all persons, animals, vehicles, vessels, or other obstructions during landing or take-off, other than persons, vehicles, or vessels essential to the operation.

(c) A pilot must not operate an aircraft in an aerodrome traffic circuit unless the aircraft can be manoeuvred—

(1) clear of any obstructions; and

(2) without conflicting with the aerodrome traffic circuit or instrument approach procedure of any other aerodrome.

(d) In addition to fulfilling the requirements of paragraphs (a), (b), and (c), a person must not operate a helicopter without ensuring that—

(1) any place used as a heliport or as a place to hover within a congested area of a city, town, or settlement has—

(i) physical characteristics; and

(ii) obstacle limitation surfaces; and

(iii) visual aids—

commensurate with the ambient light conditions and the characteristics of the helicopter being operated; 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) unless the helicopter is a performance Class 1 helicopter, any place used as a heliport or as a place to hover has such approach and take-off paths that an autorotative landing can be conducted without causing a hazard to any persons or property on the surface.

91.129 Restricted and danger areas

(a) A pilot must not operate an aircraft within a restricted area designated under Part 71 unless that pilot—

(1) has the approval of the administering authority responsible for the restricted area to operate within that area; and

(2) complies with any conditions promulgated for operation within the restricted area; and

(3) complies with any conditions imposed by the administering authority for operation within the restricted area.

(b) A pilot must not operate an aircraft within a danger area designated under Part 71 unless that pilot has determined that the activity associated with the danger area will not affect the safety of the aircraft.

91.131 Low flying zones

(a) A pilot must not operate an aircraft within a low flying zone designated under Part 71 —

(1) during the night or using NVIS; or

(2) during the day unless—

(i) the pilot—

(A) is receiving dual flight instruction; or

(B) holds an instructor rating issued under Part 61; or

(C) is briefed on the boundaries of the low flying zone and the method of entry and exit from the low flying zone and is authorised for that flight by the holder of an instructor rating issued under Part 61; and

(ii) the pilot has been briefed by the using agency on the conditions of operation for flight within the low flying zone; and

(iii) the pilot complies with the conditions of operation for flight within the low flying zone; and

(iv) before entering the low flying zone, the pilot broadcasts on the appropriate VHF frequency details of the flight and the proposed duration in the low flying zone; and

(v) the pilot maintains a listening watch on the appropriate VHF frequency while in the low flying zone and broadcasts or reports on vacating the low flying zone.

(aa) Despite paragraph (a), a person may operate an aircraft within a low flying zone designated under Part 71 during the night and use NVIS if the person is giving or receiving flight instruction on the use of NVIS.

(b) A pilot operating an aircraft within a low flying zone designated under Part 71 must ensure that the aircraft is operated without hazard to persons or property on the surface.

(c) A pilot operating an aircraft within a low flying zone designated under Part 71 must not carry a passenger on the aircraft.

91.133 Military operating areas

A pilot must not operate an aircraft within a military operating area designated under Part 71 unless the pilot—

(1) has the approval of the administering authority responsible for the military operating area—

(i) to operate a New Zealand registered aircraft within the military operating area; or

(ii) to operate a foreign aircraft within any portion of the military operating area that is within the territorial limits of New Zealand; and

(2) complies with any conditions promulgated for operation within the military operating area; and

(3) complies with any conditions imposed by the administering authority for operation within the military operating area.

91.135 Mandatory broadcast zones

(a) Except as provided in paragraphs (b) and (c), a pilot must not operate an aircraft within a mandatory broadcast zone designated under Part 71 unless that pilot—

(1) makes the following broadcasts on the radio frequency assigned to the mandatory broadcast zone:

(i) **at entry –** the aircraft callsign, position and altitude, and the pilot's intentions for flight within the mandatory broadcast zone:

(ii) **when joining the aerodrome traffic circuit of an aerodrome within the mandatory broadcast zone –** the aircraft callsign, position and altitude, and the pilot's intentions:

(iii) **before entering a runway for take-off from an aerodrome within the mandatory broadcast zone –** the aircraft callsign, the runway to be used for take-off, and the pilot's intentions for flight within the mandatory broadcast zone after take-off; and

(iv) **at any other time at least at the intervals prescribed for the mandatory broadcast zone –** the aircraft callsign, position and altitude, and the pilot's intentions for flight within the mandatory broadcast zone; and

(2) maintains a listening watch on the radio frequency assigned to the mandatory broadcast zone; and

(3) activates, if equipped, the aircraft's landing lights or anti-collision lights.

(b) Pilots of aircraft in formation may operate within a mandatory broadcast zone without complying with paragraphs (a)(1) and (a)(2), but only if—

(1) all the pilots of the aircraft in formation comply with paragraph (a)(3); and

(2) the pilot of the lead aircraft complies with paragraphs (a)(1) and (a)(2).

(c) A pilot-in-command of an aircraft without an operable radio may operate within a mandatory broadcast zone for the purpose of enabling repairs to be made to that radio, but only if—

(1) the pilot-in command complies with paragraph (a)(3); and

(2) if practicable, the pilot-in-command arranges for another person to make the broadcasts required in paragraph (a)(1) on the pilot's behalf.

(d) The pilot-in-command of a parachute-drop aircraft intending to drop a parachutist within or into a mandatory broadcast zone must make a broadcast on the radio frequency assigned to the mandatory broadcast zone stating the aircraft callsign, position, altitude, and the intentions of the person making the parachute descent before authorising that person to exit the aircraft to make the parachute descent.

91.137 Volcanic hazard zones

A pilot must not operate an aircraft within a volcanic hazard zone designated under Part 71—

(1) during the night or using NVIS; or

(2) in IMC; or

(3) in VMC during the day unless the pilot determines that, after considering all of the following, the volcanic hazard will not affect the safety of the flight:

(i) relevant meteorological information contained in SIGMET:

(ii) NOTAM information;

(iii) other information provided for this purpose by an organisation that holds a meteorological service certificate issued by the Director under the Act and Part 174.

91.139 General aviation areas

A pilot must not operate an aircraft within a general aviation area designated under Part 71—

(1) during the night or using NVIS; or

(2) during the day unless—

(i) the general aviation area is active permanently during the day; or

(ii) if the general aviation area is made active by the approval of the ATC unit responsible for the airspace, an approval has been given by the ATC unit to operate within the general aviation area and the pilot complies with any request from the ATC unit to vacate the general aviation area; or

(iii) if the general aviation area is made active by notification from an airspace user to the ATC unit responsible for the airspace, prior notification has been given to the ATC unit, and the ATC unit has confirmed that the general aviation area is active.

Subpart C – General Flight Rules

91.201 Safety of aircraft

A pilot-in-command of an aircraft must—

(1) before operating the aircraft, be satisfied that the aircraft is airworthy and in a condition for safe flight, after—

(i) the documents required under rule 91.111 have been inspected; and

(ii) the aircraft has been inspected; and

(2) during the flight, ensure the safe operation of the aircraft and the safety of its occupants; and

(3) on completion of the inspections required by paragraph (1), and on completion of the flight, record in the technical log or other equivalent document acceptable to the Director any aircraft defects that are identified by the crew during the inspections and during the flight.

91.203 Authority of the pilot-in-command

A pilot-in-command of an aircraft may give any commands necessary for the safety of the aircraft and of persons and property carried on the aircraft, including disembarking or refusing the carriage of—

(1) any person who appears to be under the influence of alcohol or any drug where, in the opinion of the pilot-in-command, their carriage is likely to endanger the aircraft or its occupants; and

(2) any person, or any part of the cargo, which, in the opinion of the pilot-in-command, is likely to endanger the aircraft or its occupants.

91.205 Crew members at stations

(a) Each crew member on duty during take-off and landing in an aircraft, other than in a balloon, must—

(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 fastened while at the crew member station.

(b) Each crew member on duty during take-off and landing in an aircraft, other than in a balloon, must have their shoulder harness fastened while at their crew member station, unless—

(1) the seat at the crew member station is not equipped with a shoulder harness; or

(2) the crew member would be unable to perform their duties with the shoulder harness fastened.

91.207 Occupation of seats and wearing of restraints

(a) Except as provided in paragraph (da), a pilot-in-command of an aircraft must require each passenger to occupy a seat or berth and to fasten their safety belt, restraining belt or, if equipped, shoulder harness or single diagonal shoulder belt—

(1) during each take-off and landing; and

(2) when the aircraft is flying at a height of less than 1000 feet above the surface; and

(3) at other times when the pilot-in-command considers it necessary for their safety; and

(4) during aerobatic flight; and

(5) at all times in an open cockpit aircraft.

(b) A pilot-in-command of an aircraft may permit a passenger to unfasten a shoulder harness or single diagonal shoulder belt—

(1) during take-off and landing; and

(2) when the aircraft is flying at a height of less than 1000 feet above the surface—

if the pilot-in-command is satisfied that such action is necessary for the passenger's performance of an essential function associated with the purpose of the flight.

(c) A pilot-in-command of an aircraft must require each passenger to place their seat in the take-off and landing configuration during take-off and landing.

(d) Paragraphs (a)(1), (2), and (3) do not apply to a child under 4 years of age if the child—

(1) is held by an adult who is occupying a seat or berth, and the child is secured by a safety belt attached to the adult's safety belt; or

(2) occupies a seat equipped with a child restraint system, if the child does not exceed the specified weight limit for that system and is

accompanied by a parent, guardian, or by an attendant designated by the child's parent or guardian to attend to the safety of the child during the flight.

(da) A pilot-in-command of a helicopter may allow a passenger not to fasten their safety belt, restraining belt, or if equipped, shoulder harness or single diagonal shoulder belt when the aircraft is flying at a height of less than 1000 feet above the surface in order for the passenger to enter or exit from the helicopter while it is hovering.

(db) For an operation under paragraph (da) that is performed by the holder of an air operator certificate, agricultural aircraft operator certificate, or training organisation certificate – the operator of the aircraft must establish, document and implement standard operating procedures, passenger briefing procedures, training procedures and competency assessment procedures for ensuring the risk of injury to any person entering or exiting the aircraft in the hover and any person on board the aircraft while a person is entering or exiting the aircraft in the hover, is reduced to as low as reasonably practicable.

(dc) For an operation under paragraph (da) that is performed by a person who does not hold an air operator certificate, agricultural aircraft operator certificate, or training organisation certificate –

(1) the pilot-in-command must have been trained by an appropriate instructor in the operational techniques necessary to manage the risks associated with a person entering or exiting the aircraft in a hover and have been checked by an appropriate instructor in these techniques within the last 2 years; and

(2) the pilot-in-command must identify the risks associated with persons entering or exiting the aircraft in a hover and the mitigations that will be used to reduce these risks as low as reasonably practicable; and

(3) the pilot-in-command must brief each passenger that will be on board the aircraft while a person exits the aircraft in a hover and any person intending to enter the aircraft in a hover, on the mitigations identified for entering or exiting the aircraft in a hover.

(dd) Paragraph (da) does not apply to fast roping or rappelling operations.

(e) Paragraph (a) does not apply to passengers carried in balloons or engaged in parachute operations.

91.209 Use of oxygen equipment

(a) A pilot-in-command of an unpressurised aircraft must, during any time that the aircraft is being operated above 13 000 feet AMSL and during any period of more than 30 minutes that the aircraft is being operated between 10 000 feet and up to and including 13 000 feet AMSL, require—

(1) each crew member and each passenger to use supplemental oxygen; and

(2) each crew member to use portable oxygen equipment, including a regulator and attached oxygen mask, for any duty requiring movement from their usual station.

(b) A pilot-in-command of a pressurised aircraft must—

(1) during any time the cabin pressure altitude is above 10 000 feet AMSL, require—

(i) each crew member to use supplemental oxygen; and

(ii) each crew member to use portable oxygen equipment, including a regulator and attached oxygen mask, for any duty requiring movement from their usual station; and

(2) during any time the aircraft is being operated from flight level 350 up to and including flight level 410, require—

(i) one pilot at a pilot station to wear and use an oxygen mask that either supplies supplemental oxygen at all times or automatically supplies supplemental oxygen whenever the cabin pressure altitude exceeds 13 000 feet AMSL; or

(ii) two pilots to be at their pilot stations and each pilot to have access to an oxygen mask that can be placed on the face and supplying oxygen within 5 seconds; and

(3) during any time the aircraft is being operated above flight level 410, require one pilot at a pilot station to wear and use a demand oxygen mask at all times.

(c) A pilot-in-command of a pressurised aircraft must, following pressurisation failure, require each passenger to use supplemental oxygen during any time that the cabin pressure is above 14 000 feet AMSL, unless the aircraft can descend to 14 000 feet AMSL or below within 4 minutes.

91.211 Passenger briefing

(a) A person operating an aircraft carrying passengers must ensure that each passenger has been briefed on—

(1) the conditions under which smoking is permitted; and

(2) the applicable requirements specified in rules 91.121 and 91.207; and

(3) the location and means for opening the passenger entry doors and emergency exits; and

(4) when required to be carried by this Part—

(i) the location of survival and emergency equipment for passenger use; and

(ii) the use of flotation equipment required under rule 91.525 for a flight over water; and

(iii) the normal and emergency use of oxygen equipment installed in the aircraft for passenger use; and

(5) procedures in the case of an emergency landing; and

(6) the use of portable electronic devices in accordance with rule 91.7.

(b) The briefing required under paragraph (a)—

(1) must be given by the pilot-in-command, a member of the crew, a person nominated by the operator, or by a recorded presentation; and

(2) must, for flights above FL 250, include a demonstration on the use of supplemental oxygen equipment; and

(3) must include a demonstration on the use of life preservers when required to be carried by this Part; and

(4) must include a statement, as appropriate, that Civil Aviation Rules require passenger compliance with lighted passenger signs and crew member instructions; and

(5) may be supplemented by printed cards for the use of each passenger containing—

(i) diagrams of, and methods of operating the emergency exits; and

(ii) other instructions necessary for the use of emergency equipment intended for use by passengers; and

(6) is not required if the pilot-in-command determines that all the passengers are familiar with the contents of the briefing.

(c) Where printed cards are used in accordance with paragraph (b)(5), the operator must place them in convenient locations on the aircraft for the use of each passenger and ensure that they contain information that is pertinent only to the type and model of aircraft on which they are carried.

91.213 Carry-on baggage

A person operating an aircraft, other than a balloon, must ensure that, before take-off or landing, all passenger baggage aboard the aircraft is stowed away—

(1) in a baggage locker; or

(2) under a passenger seat in such a way that it cannot—

(i) slide forward under crash impact; or

(ii) hinder evacuation of the aircraft in the event of an emergency.

91.215 Carriage of cargo

(a) An operator must not permit cargo to be carried in an aircraft unless it is—

(1) carried on a seat, in a cargo rack or bin, or in a cargo or baggage compartment; and

(2) properly secured by a safety belt or other restraining device having enough strength to ensure that the cargo does not shift under all normally anticipated flight and ground conditions; and

(3) packaged and covered to avoid injury to passengers.

(b) An operator who permits the carriage of cargo in an aircraft must not permit cargo—

(1) to exceed the load limitation for the seats, berths, or floor structure as prescribed by the aircraft flight manual, or by placards; or

(2) to be located in a position that restricts the access to or use of any required emergency exit, or the use of the aisle between the crew and the passenger compartments.

91.217 Preflight action

Before commencing a flight, a pilot-in-command of an aircraft must obtain and become familiar with all information concerning that flight including—

(1) where practicable, the current meteorological information; and

(2) the fuel requirements; and

(3) the alternatives available if the planned flight cannot be completed; and

(4) any known or likely traffic delays that have been notified by ATS; and

(5) the status of the communication and navigation facilities intended to be used; and

(6) the current conditions of the aerodrome and runway lengths at aerodromes of intended use; and

(7) any take-off and landing distance data contained in the aircraft flight manual; and

(8) in the case of aircraft powered by two or more engines—

(i) engine inoperative procedures; and

(ii) one engine inoperative performance data.

91.219 Familiarity with operating limitations and emergency equipment

Each pilot of an aircraft must, before beginning a flight, be familiar with—

(1) the aircraft flight manual for that aircraft; and

(2) any placards, listings, instrument markings, or any combination thereof, containing any operating limitation prescribed for that aircraft by the manufacturer or the Director; and

(3) the emergency equipment installed on the aircraft; and

(4) which crew member is assigned to operate the emergency equipment; and

(5) the procedures to be followed for the use of the emergency equipment in an emergency situation.

91.221 Flying equipment and operating information

(a) A pilot-in-command of an aircraft must ensure that the following equipment and information, in current and appropriate form, is accessible to every flight crew member of the aircraft:

(1) an accurate means of indicating the time:

(2) appropriate aeronautical charts:

(3) for IFR operations, every appropriate navigational en route, terminal area, approach, and instrument approach and departure chart:

(4) for night operations, an operable electric torch for every flight crew member.

(b) In addition to paragraph (a), a pilot-in-command of an aircraft in excess of 5700 kg MCTOW, or having a certificated seating capacity of 10 passenger seats or more, must ensure that every flight crew member uses a cockpit checklist covering the normal and emergency procedures for the operation of the aircraft in accordance with the aircraft flight manual.

91.223 Operating on and in the vicinity of an aerodrome

(a) Except as provided in paragraph (b), a pilot of an aeroplane operating on or in the vicinity of an aerodrome must—

(1) observe other aerodrome traffic for the purpose of avoiding a collision; and

(2) unless otherwise authorised or instructed by ATC, conform with or avoid the aerodrome traffic circuit formed by other aircraft; and

(3) perform a left-hand aerodrome traffic circuit when approaching for a landing at and after take-off from an aerodrome that is published in the AIPNZ unless—

(i) the pilot is otherwise authorised or instructed by ATC; or

(ii) the IFR procedure published in the AIPNZ for the runway being used specifies a right-hand turn and the approach for landing or the take-off is being performed in accordance with the instrument procedure; and

(4) perform a right-hand aerodrome traffic circuit when approaching for a landing at and after take-off from an aerodrome that is published in the AIPNZ, if the details published in the AIPNZ for the aerodrome specify a right-hand aerodrome traffic circuit for the runway being used unless—

(i) the pilot is otherwise authorised or instructed by ATC; or

(ii) the IFR procedure published in the AIPNZ for the runway being used specifies a left-hand turn and the approach for landing or the take-off is being performed in accordance with the instrument procedure; and

(5) unless otherwise authorised or instructed by ATC, comply with any special aerodrome traffic rules prescribed in Part 93 for the aerodrome.

(b) Paragraphs (a)(3), (a)(4), and (a)(5) do not apply to the pilot-in-command of an aircraft operating at an aviation event in accordance with rule 91.703.

(c) Notwithstanding paragraphs (a)(3) and (a)(4), a pilot-in-command of an aircraft performing an agricultural aircraft operation from an aerodrome that is published in the AIPNZ may make turns in any direction when approaching for a landing or after take-off if—

(1) the aerodrome does not have an aerodrome control service in attendance; and

(2) an aerodrome ground signal depicted in Figure 1 is displayed alongside the runway in use; and

(3) there is no conflict with other aerodrome traffic.

(d) Subject to paragraphs (b) and (c), a pilot-in-command of a helicopter operating on or in the vicinity of an aerodrome must comply with paragraph (a) or avoid the aerodrome traffic circuit being used by an aeroplane operating on or in the vicinity of the aerodrome.

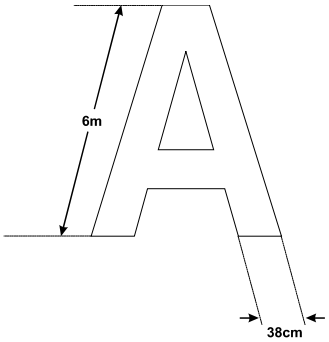

Figure 1. Agricultural operations aerodrome ground signal

91.225 Operations at aerodromes with air traffic services

(a) A pilot-in-command of an aircraft on or in the vicinity of an aerodrome with an aerodrome control service in operation must—

(1) unless otherwise authorised by ATC, maintain two-way radio communications with that service on the prescribed frequency; and

(2) obtain an ATC clearance from that service before—

(i) taxiing on any portion of the manoeuvring area; or

(ii) landing at or taking-off from any runway or heliport at that aerodrome; or

(iii) entering a control zone.

(b) A pilot-in-command of an aircraft on or in the vicinity of an aerodrome with an aerodrome flight information service in operation must—

(1) if the aircraft is equipped with radio, maintain two-way radio communications with that service on the prescribed frequency; and

(2) advise that service of the intended use of that aerodrome before —

(i) taxiing on any portion of the manoeuvring area; or

(ii) landing at or taking-off from any runway or heliport at that aerodrome; or

(iii) entering the aerodrome traffic circuit at that aerodrome.

(c) A pilot-in-command of an aircraft that is not equipped with radio and that is on or in the vicinity of an aerodrome with an aerodrome flight information service in operation must advise that service of the intended use of the aerodrome before —

(1) taxiing on to any portion of the manoeuvring area; and

(2) entering the aerodrome traffic circuit at that aerodrome.

91.227 Operating near other aircraft

A pilot must not operate an aircraft—

(1) so close to another aircraft as to create a collision hazard; or

(2) in formation flight except by prior arrangement with the pilot-in-command of each aircraft in the formation; or

(3) in formation flight while carrying passengers for hire or reward unless the requirements of paragraph (2) are met and the pilot is performing—

(i) a parachute-drop aircraft operation; or

(ii) an adventure aviation formation flight operation under the authority of an adventure aviation operator certificate issued by the Director under the Act and Part 115.

91.227B Cost sharing flight

(a) A **cost sharing flight** is one where –

(1) each person, including the pilot-in-command, carried by the aircraft shares equally in the direct costs of the flight;

(2) each person, including the pilot-in-command, receives no payment or other rewards for their services;

(3) a payment or other reward is not required of a person on the flight other than the direct costs of the flight;

(4) the aircraft that is being operated carries no more than 6 persons including the pilot-in-command;

(5) the flight is not a routine scheduled flight; and

(6) the flight is not advertised to the public and is limited to family members, friends or associates.

(b) Despite paragraph (a)(1), the pilot-in-command may pay more than an equal share of the direct costs of the flight upon prior agreement between the pilot-in-command and the passengers.

(c) A cost sharing flight is not an air transport operation or an operation for hire or reward.

(d) For the purposes of this rule, **direct costs of the flight** include the costs of any form of energy or material consumed during the flight, airport expenditure or rental fees and navigation charges.

91.227D Restrictions for crew member carrying out specified function necessary for purpose of an operation

(a) A person must not act as a crew member while carrying out a specified function necessary for the purpose of an operation, without an air operator certificate, unless—

(1) the specified function is one determined by the Director and specified in a notice under rule 91.227E(a)(1); and

(2) the circumstances under which the specified function is carried out are determined by the Director and specified in a notice under rule 91.227E(a)(2); and

(3) the person complies with all the conditions relating to the specified function as determined by the Director and specified in a notice under rule 91.227E(a)(2).

(b) This rule applies to a person acting as a crew member for the purposes of paragraph (5) of the crew member definition in rule Part 1 **Definitions and Abbreviations.**

91.227E Director may determine specified functions necessary for purpose of a flight under certain circumstances and conditions in a notice

(a) After complying with rule 91.227F, the Director may determine the following in a notice –

(1) the specified functions necessary for the purpose of an operation; and

(2) the circumstances and conditions under which those specified functions are to be carried out.

(b) A person must comply with any requirement specified in a notice referred to in paragraph (a) if the requirement applies to the person

91.227F Procedures for ADS-B notice apply to notice made under rule 91.227D

The procedures relating to the making, amending and revoking of an ADS-B notice referred to in rules 91.258A to 91.258E apply to a notice made by the Director under rule 91.227E.

91.227H Restrictions on performing an introductory flight

(a) A person must not act as a pilot-in-command of an aircraft performing an introductory flight unless –

(1) the person–

(i) is a flight instructor –

(A) who holds a current category A, B or C flight instructor rating issued under the Act and Part 61; or

(B) who holds a current instructor certificate issued under the Act and Part 149; and

(ii) is authorised by an aviation training organisation; and

(iii) meets all the applicable requirements to provide flight instruction to student pilots for the appropriate category of aircraft.

(b) The pilot-in-command of an aircraft performing an introductory flight must –

(1) ensure that the aircraft does not have more than one engine and has a certificated maximum seating capacity of 4 people;

(2) ensure that a person receiving flight instruction is allowed a basic level of manipulation of the controls;

(3) ensure that it is an A to A flight where the aircraft only lands to change the person who is to receive flight instruction;

(4) ensure that each accompanying passenger carried on the flight who is not manipulating the controls, is not charged separately;

(5) ensure that each person carried on the aircraft receives the flight briefing which consists of a basic initial training lesson; and

(6) if aerobatic manoeuvres are to be performed during the introductory flight, -

(i) ensure that the manoeuvres are not the primary purpose of the flight; and

(ii) ensure that no other person is carried except the person receiving flight instruction; and

(iii) be appropriately qualified to instruct on aerobatic manoeuvres.

(c) For the purposes of this rule –

(1) a **flight training organisation** in relation to performing an introductory flight, means an organisation that is certificated under the rules or a non-certificated organisation that provides flight instruction as part of its business;

(2) an **introductory flight** is not an air transport operation.

91.229 Right-of-way rules

(a) A pilot of an aircraft—

(1) must, when weather conditions permit, regardless of whether the flight is performed under IFR or under VFR, maintain a visual lookout so as to see and avoid other aircraft; and

(2) that has the right of way, must maintain heading and speed, but is not relieved from the responsibility of taking such action, including collision-avoidance manoeuvres based on resolution advisories provided by ACAS, that will best avert collision; and

(3) that is obliged to give way to another aircraft, must avoid passing over, under, or in front of the other aircraft, unless passing well clear of the aircraft, taking into account the effect of wake turbulence.

(b) A pilot of an aircraft must, when approaching another aircraft head-on, or nearly so, alter heading to the right.

(c) A pilot of an aircraft that is converging at approximately the same altitude with another aircraft that is to its right, must give way, except that the pilot operating—

(1) a power-driven heavier-than-air aircraft must give way to airships, gliders, and balloons; and

(2) an airship must give way to gliders and balloons; and

(3) a glider must give way to balloons; and

(4) a power-driven aircraft must give way to aircraft that are towing other aircraft or objects; and

(5) all aircraft must give way to parachutes.

(d) A pilot of an aircraft that is overtaking another aircraft must, if a turn is necessary to avoid that aircraft, alter heading to the right, until the overtaking aircraft is entirely past and clear of the other aircraft.

(e) For the purpose of paragraph (d), an overtaking aircraft is an aircraft that approaches another from the rear on a line forming less than 70 degrees with the plane of symmetry of the latter.

(f) A pilot of an aircraft in flight or on the surface must—

(1) give way to any aircraft that is in the final stages of an approach to land or is landing; and

(2) when the aircraft is one of 2 or more heavier-than-air aircraft approaching an aerodrome for the purpose of landing, give way to the aircraft at the lower altitude; and

(3) not take advantage of right-of-way under subparagraph (2) to pass in front of another aircraft, which is on final approach to land, or overtake that aircraft.

(g) A pilot of an aircraft must not take off if there is an apparent risk of collision with another aircraft.

(h) A pilot of an aircraft taxiing on the manoeuvring area of an aerodrome must—

(1) give way to aircraft landing, taking off, or about to take off; and

(2) when 2 aircraft are approaching head on, or nearly so, stop or, where practicable, alter course to the right so as to keep well clear of the other aircraft; and

(3) when 2 aircraft are on a converging course, give way to other aircraft on the pilot's right; and

(4) when overtaking another aircraft, give way and keep well clear of the aircraft being overtaken.

(i) A pilot of an aircraft must give way to any aircraft that is in distress.

91.231 Right-of-way rules – water operations

A pilot of an aircraft on the water must comply with the requirements of the International Regulations for Preventing Collisions at Sea.

91.233 Aircraft lights

(a) A pilot of an aircraft must not—

(1) operate an aircraft at night unless it has lighted position lights; or

(2) moor or move an aircraft at night on a water aerodrome unless the aircraft complies with the lighting requirement of the International Regulations for Preventing Collisions at Sea; or

(3) operate an aircraft at night that is required by Subpart F to be equipped with an anti-collision light system unless the anti-collision light system is operating or

(3a) operate an aircraft at night using NVIS unless the aircraft's internal and external lighting meets the performance requirements as specified in a notice under rule 91.273(a)(1).

(b) A person must not park or move an aircraft at night on a manoeuvring area of an aerodrome that is in use for aircraft operations unless the aircraft—

(1) is clearly illuminated; or

(2) has lighted position lights; or

(3) is in an area that is marked by obstruction lights.

(c) Despite paragraph (a)(3), a pilot of an aircraft is not required to operate the anti-collision light system if the pilot determines that, because of operating conditions, it is in the best interest of safety to turn the system off.

91.235 Dropping of objects

A pilot of an aircraft must not allow any object to be dropped from that aircraft in flight unless the pilot has taken reasonable precautions to ensure the dropping of the object does not endanger persons or property.

91.237 Aircraft speed

(a) Except as provided in paragraph (b), a pilot must not operate an aircraft at an indicated speed of more than 250 kts below an altitude of 10 000 feet AMSL when—

(1) that aircraft is operated IFR in Class D, E, F, or G airspace; or

(2) that aircraft is operated VFR in Class C, D, E, F, or G airspace.

(b) Paragraph (a) does not apply when—

(1) the minimum safe speed of the aircraft prescribed in the flight manual is more than 250 kts and the aircraft is operated at that minimum safe speed; or

(2) the aircraft is being operated at an aviation event in accordance with 91.703.

91.239 Altimeter settings

(a) A pilot of an aircraft must maintain the cruising altitude or flight level of the aircraft by reference to an altimeter that is set in accordance with the following:

(1) when operating at or above flight level 150, set altimeter to 1013.2 hPa:

(2) when operating at or below 13 000 feet, set altimeter to the appropriate area QNH zone setting or aerodrome QNH altimeter setting:

(3) when operating between 13 000 feet and flight level 150, set altimeter to the appropriate area QNH zone setting as advised by an ATC unit.

(b) A pilot of an aircraft that is ascending or descending must set the altimeter in accordance with the following:

(1) when ascending above 13 000 feet, set altimeter to 1013.2 hPa:

(2) when descending through flight level 150, set altimeter to the appropriate area QNH zone setting or aerodrome QNH altimeter setting.

91.241 Compliance with ATC clearances and instructions

(a) A pilot of an aircraft operating in a control area or control zone designated under Part 71 must—

(1) except when manoeuvring in accordance with an ACAS resolution advisory or a GPWS or TAWS alert, comply with any ATC clearance or instruction issued by the ATC unit responsible for the control area or control zone; and

(2) when a deviation from an ATC clearance or instruction is required for the safe operation of the aircraft, notify ATC of the deviation as soon as possible.

(b) A pilot of an aircraft need not comply with an ATC clearance or instruction if compliance would cause the pilot to breach any rule in this Part.

(c) A pilot of an aircraft who elects not to comply with an ATC clearance or instruction under paragraph (b) must immediately notify the appropriate ATC unit of the non-compliance.

91.243 ATC light signals

A pilot of an aircraft must comply with the clearance or instruction specified for ATC light signals in Table 1.

Table 1. ATC light signals.

Light Signal	Aircraft in Flight	Aircraft on the Ground
Steady green	Cleared to land	Cleared for take-off
Steady red	Give way to other aircraft and continue circling	Stop
Series of green flashes	Return for landing (clearance to land and to taxi will be given in due course)	Cleared to taxi
Series of red flashes	Aerodrome unsafe, do not land	Taxi clear of landing area in use
Flashing white	Land at this aerodrome and proceed to apron	Return to starting point on aerodrome
Alternating red and green flashes	Danger, be on the alert	Danger, be on the alert

91.245 Operations in controlled airspace

(a) Except as provided in paragraphs (e) and (f), a pilot-in-command of an aircraft must not enter a control area or control zone designated under Part 71 unless the pilot-in-command obtains an ATC clearance to enter the control area or control zone.

(b) A pilot-in-command of an aircraft operating in Class A airspace must—

(1) operate the aircraft under IFR; and

(2) unless otherwise authorised by the ATC unit responsible for the class A airspace, maintain two-way communications with that ATC unit on the appropriate frequency.

(c) A pilot-in-command of an aircraft that operates in the following classes of airspace must maintain two-way radio communications with the ATC unit

responsible for the airspace concerned on the appropriate frequency unless otherwise authorised by the ATC unit:

(1) Class B, C, or D airspace:

(2) Class E airspace under IFR.

(d) If different classes of airspace adjoin one above the other, a pilot operating at the common level may comply with the requirements of the less restrictive class of airspace.

(e) A pilot of an aircraft operating under VFR does not require an ATC clearance to enter a control area that is classified under Part 71 as class E airspace.

(f) Airspace within a control area and a control zone becomes uncontrolled class G airspace during those times when an air traffic control service is not being provided within that control area or control zone.

91.246 *Reserved*

91.247 Use of transponder and altitude reporting equipment

(a) Except as provided in paragraph (g), a pilot-in-command of an aircraft operating in transponder mandatory controlled airspace designated under Part 71 within the New Zealand FIR must, unless otherwise authorised or instructed by ATC—

(1) operate the transponder to transmit ADS-B data; and

(2) ensure that ADS-B data is transmitted at all times when the aircraft begins to move under its own power until it has come to a complete stop at the end of the flight.

(b) A pilot-in-command of an aircraft operating in uncontrolled transponder mandatory special use airspace designated under Part 71 within the New Zealand FIR must operate the transponder —

(1) in Mode A and Mode C; or

(2) in Mode S if the aircraft is equipped with Mode S equipment and allocated a unique Mode S code referred to in paragraph (d); or

(3) referred to in rule 91.257(1) providing an ADS-B system as specified in that rule.

(c) Except if paragraph (3) applies or if operating Mode S equipment, the pilot-in-command must set the transponder SSR code—

(1) to the code assigned by ATC for the flight; or

(2) if not assigned a code by ATC, in accordance with Table 2; and

(3) in the event of an in-flight emergency, loss of radio communications, or an act of unlawful interference, set the transponder to the appropriate code in accordance with Table 3.

(d) A pilot-in-command of an aircraft must not operate Mode S transponder equipment unless the aircraft is transmitting a unique Mode S code assigned by the State of Registry.

(e) Reserved

(f) A pilot-in-command of an aircraft operating in transponder mandatory controlled airspace must immediately advise the ATC unit having jurisdiction over the relevant airspace of any failure or partial failure of the transponder equipment.

(g) Unless otherwise required by ATC, only one of the aircraft in a formation flight is required to operate a transponder in accordance with paragraph (a) or paragraph (b).

Table 2. Airspace SSR Codes

Flight rules	Type of aircraft operation	SSR Code
VFR	For aircraft involved in fire fighting and reconnaissance duties	0111
IFR	All	2000
VFR	All - in Auckland Oceanic FIR only	2000
VFR	All - when operating in the aerodrome traffic circuit at a controlled aerodrome	2200
VFR	Aeroplanes other than Defence aeroplanes	1200
VFR	Gliders or balloons	1300
VFR	Powered aircraft in designated general aviation areas	1400
VFR	Helicopters other than Defence helicopters	1500
VFR	Defence aeroplanes	6000
VFR	Defence helicopters	6500

Table 3. Emergency SSR Codes

Occurrence	SSR Code
Unlawful interference	7500
Loss of radio communication	7600
In flight emergency when no code has been allocated by ATC	7700

91.249 Aircraft call signs

(a) If required to communicate by radiotelephony under the Civil Aviation Rules, a pilot-in-command of a New Zealand registered aircraft must use 1 of the following radiotelephony call signs—

(1) the telephony designator of the aircraft operating agency as approved by the Director, followed by the flight identification; or

(2) the telephony designator of the aircraft operating agency as approved by the Director followed by the last 3 letters of the aircraft registration marking; or

(3) the name of the aircraft manufacturer, or the aircraft model, and the last 3 letters of the aircraft registration marking; or

(4) a unique personalised call sign which is part of an identifiable paint scheme or markings approved under rule 47.104, that refers to the aircraft type or model, letters or numbers in a manner or form approved by the Director; or

(5) any other similar radiotelephony call sign that is acceptable to the Director.

(b) Despite paragraph (a)(2), the pilot-in-command may, after establishing two-way communication with an appropriate ATS unit, use an abbreviated call sign consisting of the last 3 letters of the aircraft registration marking.

(c) The Director may only approve the call signs prescribed in paragraphs (a)(1) and (2) for the use of—

(1) the holder of an air operator certificate issued under Part 119 or Part 129 conducting—

(i) a regular air transport service; or

(ii) a search and rescue flight; or

(iii) a medical transfer or medical emergency flight; and

(2) aircraft being flown on a police operation that is authorised by the Commissioner of Police.

(d) An applicant for the approval of a telephony designator must submit to the Director in writing the name of the aircraft operating agency and a payment of the appropriate application fee prescribed by regulations made under the Act.

(e) A radiotelephony call sign that was approved by the Director under general exemption 15/EXE/43 immediately before 5 April 2025 is deemed to have been approved by the Director under paragraph (a)(4).

91.251 Time-in-service recorder operation

A person must not tamper with the operation of an automatic time-in-service recorder that is required to be installed in the aircraft in accordance with rule 91.509(b).

91.253 *Reserved*

91.255 Mandatory use of ADS-B system in controlled airspace

(a) Except as provided in rules 91.253, 91.255D and 91.255E, a person must not operate an aircraft in transponder mandatory controlled airspace designated under Part 71 in the New Zealand FIR unless the aircraft is equipped with an ADS-B system which meets the minimum performance standards and requirements under rule 91.257.

(b) Paragraph (a) does not apply to an aircraft operating in any portion of the airspace within the Auckland Oceanic FIR.

91.255D Operation of aircraft without ADS-B for discreet operations

(a) Despite rule 91.255(a), a person may operate an aircraft without transmitting ADS-B data in the prescribed airspace referred to in that rule if the person is carrying out a discreet operation –

(1) for national defence or security purposes; or

(2) for intelligence or law enforcement purposes; or

(3) for any other suitable purpose approved by the Director where the transmitting of ADS-B data would compromise the security of the operation or pose a safety risk to the aircraft, crew or people and property in the air or on the ground.

(b) An operator must ensure that a discreet operation is not carried out unless –

(1) for a flight under IFR, information submitted in the flight plan as required by rule 91.407 includes that the proposed operation is a discreet operation; and

(2) the appropriate ATS unit is notified of the operation as soon as practicable before the operation is to occur; and

(3) the appropriate ATS unit approves the carrying out of the operation.

(c) A person referred to in paragraph (a)(1) or (a)(2) must inform the Director of the details of the discreet operation in the appropriate CAA form within 14 days of completing the operation unless the person is required to report an accident or incident involving the discreet operation as required under Part 12.

91.255E Operation of aircraft without ADS-B due to characteristics of aircraft type

(a) Despite rule 91.255(a), a person may operate an aircraft without transmitting ADS-B data in the prescribed airspace referred to in that rule if the aircraft cannot practicably or reasonably be equipped with an ADS-B system because of the characteristics of the aircraft type.

(b) Before operating an aircraft referred to in paragraph (a), the person must obtain specific authorisation from the ATC unit having jurisdiction over the relevant airspace as part of the ATC clearance to enter that airspace.

91.257 ADS-B system performance standards and requirements

An ADS-B system must meet the following minimum requirements –

(1) include a 1090 MHz Mode S Extended Squitter transponder, or any other suitable transponder determined by the Director as specified in a notice referred to in rule 91.258;

(2) include a GNSS position source that is compatible with the 1090 MHz Mode S Extended Squitter transponder, or any other suitable transponder referred to in paragraph (1);

(3) include a barometric altitude pressure system and any related equipment;

(4) transmit an ADS-B OUT message set determined by the Director as specified in a notice referred to in rule 91.258;

(5) meet performance standards regarding ADS-B systems determined by the Director as specified in a notice referred to in rule 91.258;

(6) meet the testing and power requirements determined by the Director as specified in a notice referred to in rule 91.258.

91.257A Prohibited transmission of non-compliant ADS-B or misleading data

(a) A person operating an aircraft in transponder mandatory controlled airspace designated under Part 71 within the New Zealand FIR must not –

(1) allow the transmission of non-compliant ADS-B data or misleading data; or

(2) use a 978 MHz Universal Access Transceiver to transmit data.

(b) In this rule, **non-compliant ADS-B data** refers to any data that does not meet the requirements of the notice referred to in rule 91.258, unless the non-compliance is caused by factors beyond the control of the aircraft operator, such as but not limited to GNSS outage.

91.258 Director may determine certain requirements regarding ADS-B as specified in a notice

(a) After complying with rule 91.258A, the Director may determine the following as specified in a notice –

(1) the requirements for an ADS-B OUT message set;

(2) the performance standards for ADS-B system;

(3) the testing and power requirements regarding an ADS-B system;

(4) the requirements regarding the installation and approval of ADS-B system;

(5) any conditions relating to ADS-B OUT system or design change requirements or combinations of position source and transponder; and

(6) any other suitable transponder that is compatible to the GNSS position source.

(b) A person must comply with any requirement specified in a notice referred to in paragraph (a) if the requirement applies to the person.

91.258A Process prior to issuing or amending a notice

Before issuing or amending a notice to specify the requirements referred to in rule 91.258, the Director must –

(1) conduct a review to assess the risk to aviation safety of the matter giving rise to particular safety concerns by taking into account –

(i) the requirements of the ATC surveillance system:

(ii) the compatibility of equipment, performance standards and procedures for an ADS-B system required under rule 91.257:

(iii) how ICAO or other ICAO Contracting States are dealing with the risk:

(iv) the practicability of the proposed requirements:

(v) any other information that the Director considers may be relevant; and

(2) consult publicly by publishing the initial or amended notice on the CAA website; and

(3) consider the following:

(i) ICAO's annexes to the Convention or legislation by ICAO Contracting States in relation to surveillance systems and ADS-B systems, including equipage:

(ii) International standards of the ICAO or ICAO Contracting States and recommended practices and guidance as set out in any document, plan, strategy or manual relating to surveillance systems and ADS-B systems, including equipage; and

(iii) any factors unique or relevant to New Zealand's operations; and

(4) determine, after conducting the review, whether or not it is necessary to impose requirements to eliminate or mitigate any risk to aviation safety.

91.258B Notice to be published

The Director must, as soon as practicable after issuing, amending or revoking a notice, publish on the CAA website—

(1) the notice; and

(2) the date the notice comes into effect; and

(3) the reasons for the notice.

91.258C Effective date of notice

(a) A notice made under rule 91.258 comes into force on the date specified by the Director.

(b) In determining the date under paragraph (a), the Director must provide reasonable time for affected parties to be made aware of the notice before it comes into force.

91.258D Amendment of notice

(a) The Director may amend a notice made under rule 91.258 at any time after following the procedures specified in rules 91.258A and 91.258B.

(b) Despite paragraph (a), rules 91.258A and 91.258C(b) do not apply to any amendment or correction that is minor and non-controversial.

91.258E Revocation of notice

(a) The Director may revoke a notice made under rule 91.258 at any time if the Director is satisfied that the notice is no longer necessary after having consulted publicly on the CAA website.

(b) A revocation takes effect from the date specified by the Director.

91.261 Requirements for navigation specification

A person must not operate an aircraft using a navigation specification referred to in rule 91.263 unless all of the following requirements are met–

(1) the aircraft meets the airworthiness and performance requirements–

(i) determined by the Director as specified in a notice referred to in rule 91.263; or
(ii) equivalent to those referred to in paragraph (i) as acceptable to the Director;

(2) the person–

(i) is suitably trained and qualified for the navigation specification applicable to the planned route and airspace as specified in a notice;

(ii) complies with the operational procedures and any limitations applicable to the navigation specification, route, or airspace as specified by the Director in a notice;

(iii) is able to navigate the aircraft safely using an alternative means of navigation acceptable to the Director if the primary means of navigation fails at any point on the planned route; and

(3) the Director has approved the operation if specified to do so in a notice.

91.263 Director may determine navigation specifications, requirements and related matters in a notice

(a) After complying with rule 91.263B, the Director may determine the following as specified in a notice –

(1) the navigation specifications applicable to PBN routes and designated airspaces;

(2) the operational requirements and limitations associated with the navigation specifications;

(3) the airworthiness and performance requirements for an aircraft operating under IFR and using a navigation specification;

(4) requirements for demonstrating compliance with the navigation specification;

(5) suitable training requirements for a person who operates an aircraft under IFR and using a navigation specification;

(6) definitions and abbreviations to give full meaning to the terms used in a notice; and

(7) unless otherwise provided for in the rules, the expiry of any transition provision for a matter determined by the Director in a notice.

(b) A person must comply with any requirement specified in a notice referred to in paragraph (a) if the requirement applies to the person.

(c) For the purposes of rule 91.261(2)(i), and this rule, **suitably trained and qualified** or **suitable training** means the person meets all the applicable training requirements specified in a notice and under Part 61.

(d) Before determining the expiry date of any transitional provision referred to in paragraph (a)(7), the Director must be satisfied that the date is reasonable after having consulted publicly on the CAA website.

91.263B Procedures for ADS-B notice apply to navigation specification notice

(a) The procedures relating to the making, amending and revoking of an ADS-B notice referred to in rules 91.258A to 91.258E apply to a navigation specification notice referred to in rule 91.263.

(b) When following the procedures, a reference to –

(1) ADS-B, ADS-B system or ADS-B systems is to be read as PBN or navigation specifications; and

(2) surveillance or surveillance systems is to be read as navigation or navigation systems.

91.263C Savings

(a) A RNP operation procedures manual and any amendments to the manual that was approved by the Director under rule 91.246(d) immediately before 1 December 2021, continue to be valid and may be used for conducting IFR operations referred to in paragraph (b)(2).

(b) A person operating an aircraft and using an aircraft navigation system in accordance with RNP performance requirements approved by the Director, on the applicable RNP routes and in RNP designated airspace under rule 91.519(c), immediately before 1 December 2021, –

(1) is deemed to have been approved by the Director to carry out a navigation specification under rule 91.261(3);

(2) may conduct IFR operations using the applicable navigation specification specified in a notice referred to in rule 91.263(a)(1); and

(3) must comply with all the requirements that apply to the applicable navigation specification specified in a notice referred to in rule 91.263(a)(2).

91.265 Requirements for PBCS

A person must not operate an aircraft under IFR using PBCS unless–

(1) the aircraft meets the airworthiness and performance requirements –

(i) determined by the Director as specified in a notice under rule 91.267(a)(2); or

(ii) which the Director accepts are equivalent to those in paragraph (i); and

(2) the person –

(i) is suitably trained and qualified to use PBCS on the planned route and airspace as specified in a notice under rules 91.267(a)(1) and (5); and

(ii) complies with the operational requirements and any limitations regarding the use of PBCS, planned route and airspace, as specified in a notice under rules 91.267(a)(1) and (3); and

(3) the Director has approved the operation if specified to do so in a notice.

91.267 Director may determine requirements for PBCS and related matters in a notice

(a) After complying with the procedures in rule 91.267B, the Director may determine and specify in a notice –

(1) the routes, airspaces and the application of horizontal separations based on PBCS;

(2) the airworthiness and performance requirements for an aircraft operating under IFR and using PBCS;

(3) the operational requirements and limitations associated with PBCS;

(4) requirements for demonstrating compliance and procedures for addressing non-compliance with PBCS;

(5) suitable training requirements for a person who operates an aircraft under IFR and using PBCS;

(6) definitions and abbreviations to give full meaning to the terms used in a notice.

(b) A person must comply with any requirement specified in a notice referred to in paragraph (a) if the requirement applies to the person.

(c) For the purposes of rule 91.265(2)(i) and this rule, **suitably trained and qualified** means the person meets all the applicable training requirements specified in a notice and under Part 61; and **suitable training** has a corresponding meaning.

91.267B Procedures for ADS-B notice apply to PBCS notice

(a) The procedures for the making, amending and revoking of an ADS-B notice under rules 91.258A to 91.258E apply to a PBCS notice referred to in rule 91.267.

(b) When following the procedures, a reference to ADS-B, ADS-B system or ADS-B systems is to be read as PBCS.

91.267C Transitional arrangements and savings

(a) An operator who was approved by the Director to operate an aircraft using PBCS immediately before 5 April 2025 –

(1) is deemed to have been approved by the Director to operate an aircraft using PBCS under rule 91.265(3);

(2) may operate an aircraft under IFR using PBCS as specified in a notice under rule 91.267(a)(1); and

(3) must comply with all the applicable operational requirements and limitations specified in a notice under rule 91.267(a)(3).

(b) Paragraphs (a)(2) and (3) come into force on 5 April 2026.

91.271 Requirements for operating an aircraft at night using NVIS

(a) A person must not operate an aircraft at night using NVIS unless –

(1) the aircraft and NVIS meet the airworthiness and performance requirements –

(i) determined by the Director as specified in a notice under rule 91.273(a)(2); or

(ii) the Director accepts as equivalent to those in paragraph (i);

(2) the person –

(i) is suitably trained and qualified to operate the aircraft using NVIS as specified under Part 61 or in a notice under rule 91.273(a)(4); and

(ii) complies with the operational procedures and any limitations regarding the use of NVIS as specified in a notice under rule 91.273(a)(6).

(b) A person operating an aircraft at night to carry out NVIS training must not carry a passenger on the aircraft.

91.273 Director may determine NVIS airworthiness and performance requirements and related matters in a notice

(a) After complying with the procedures referred to in rule 91.273B, the Director may determine the following as specified in a notice –

(1) the airworthiness and performance requirements for an aircraft being operated at night using NVIS;

(2) the airworthiness and performance requirements for NVIS;

(3) the requirements regarding the testing, installation and approval of NVIS;

(4) suitable training requirements, courses, manoeuvres or NVG aircraft operations for a person operating an aircraft at night using NVIS;

(5) the requirements for the appropriate night flight using NVIS experience;

(6) the operational procedures and any limitations associated with operating an aircraft at night using NVIS;

(7) the areas of competencies on the eligibility requirements for the issue of a NVIS rating referred to in rule 61.935(a)(4)(iii); and

(8) definitions and abbreviations to give full meaning to the terms used in a notice.

(b) A person must comply with any requirement specified in a notice referred to in paragraph (a) if the requirement applies to the person.

(c) For the purposes of rule 91.271(2)(i) and this rule, suitably trained and suitable training means the person meets all the applicable training requirements specified in a notice and under Part 61.

91.273B Procedures for ADS-B notice apply to NVIS notice

(a) The procedures for the making, amending and revoking of an ADS-B notice under rules 91.258A to 91.258E apply to a NVIS notice referred to in rule 91.273.

(b) When following the procedures, a reference to ADS-B or ADS-B systems is to be read as NVIS.

91.273C Transitional arrangements

(a) A person who was approved by the Director to carry out operations in a particular aircraft at night using NVIS immediately before 5 April 2025 may continue to carry out NVIS operations until 5 April 2026.

(b) The person must comply with all the conditions regarding NVIS operations.

(c) This rule expires on 5 April 2026.

Subpart D – Visual Flight Rules

91.301 VFR meteorological minima

(a) Except as provided in rule 91.303, and paragraphs (b) and (c), a pilot-in-command must not operate an aircraft under VFR—

(1) when the flight visibility is less than that prescribed for the corresponding class of airspace in Table 4; or

(2) at a distance from clouds that is less than that prescribed for the corresponding class of airspace in Table 4.

(b) Except as provided in rule 91.303, a pilot-in-command must not perform a take-off or landing in an aircraft, or fly in the vicinity of an aerodrome, under VFR when the flight visibility, or the cloud ceiling, is less than—

(1) at aerodromes within a control zone, that prescribed in Table 5; and

(2) at aerodromes in uncontrolled airspace, that prescribed in Table 6.

(c) A pilot-in-command of—

(1) a helicopter may operate in Class G airspace with a flight visibility of less than 5 km if manoeuvred at a speed that gives adequate opportunity to observe other traffic or any obstructions in order to avoid collisions; and

(2) an aircraft performing agricultural aircraft operations, may operate in Class G airspace with a flight visibility of less than 5 km but not less than 1500 m; and

(3) an aircraft performing flight instruction may operate within a designated low flying zone prescribed under Part 71 with a flight visibility of less than 5 km but not less than 1500 m.

Table 4. Airspace VFR meteorological minima

<table>
<tr><th colspan="2">Class of airspace</th><th>Distance from cloud</th><th>Flight visibility</th></tr>
<tr><td colspan="2">B</td><td>Clear of cloud</td><td rowspan="3">8 km at or above 10 000 feet AMSL

5 km below 10 000 feet AMSL</td></tr>
<tr><td colspan="2">C, D, and E</td><td>2 km horizontally
1000 feet vertically outside a control zone
500 feet vertically within a control zone</td></tr>
<tr><td rowspan="2">F and G</td><td>Above 3000 feet AMSL or 1000 feet above terrain whichever is the higher</td><td>2 km horizontally
1000 feet vertically</td></tr>
<tr><td>At or below 3000 feet AMSL or 1000 feet above the terrain whichever is the higher</td><td>Clear of cloud and in sight of the surface</td><td>5 km</td></tr>
</table>

Table 5. VFR minima at aerodromes within a control zone.

<table>
<tr><th colspan="2"></th><th>Ceiling</th><th>Flight visibility</th></tr>
<tr><td>All aircraft</td><td>Day and Night</td><td>1500 feet</td><td>5 km</td></tr>
</table>

Table 6. VFR minima at aerodromes in uncontrolled airspace.

		Ceiling	Flight visibility
All aircraft	Day	600 feet	1500 m
All aircraft	Night	1500 feet	8 km

91.303 Special VFR weather minima

A pilot-in-command of an aircraft may perform a VFR operation within a control zone in meteorological conditions below those prescribed in rule 91.301 if—

(1) the ceiling and flight visibility is—

(i) at least 600 feet and at least 1500 m respectively; or

(ii) for helicopters, less than 600 feet and less than 1500 m respectively if the helicopter is operated at a speed that will give adequate opportunity to observe other traffic or any obstructions in order to avoid collisions; and

(2) the aircraft is equipped with two-way radio capable of communicating with ATC on the appropriate frequency; and

(3) the operation is conducted—

(i) in compliance with an ATC clearance and any ATC instructions; and

(ii) only during the day; and

(iii) clear of clouds.

91.305 Fuel requirements for flight under VFR

(a) A pilot-in-command of an aeroplane must not begin a flight under VFR unless, in the forecast weather conditions, the aeroplane has enough fuel to

fly to the first point of intended landing at the planned normal cruising speed and to fly after that point of intended landing for at least—

(1) a further 30 minutes during the day; or

(2) a further 45 minutes at night; or

(3) for an aeroplane that has a *special category—limited* airworthiness certificate or a *special category—exhibition* airworthiness certificate, the flying time specified for the VFR minimum fuel reserve in the operator statement required under rule 47.55(c).

(b) A pilot-in-command of a helicopter must not begin a flight under VFR unless, in the forecast weather conditions, the helicopter has enough fuel to fly to the first point of intended landing at the planned cruising speed, and to fly after that point of intended landing for at least —

(1) a further 20 minutes; or

(2) for flights of less than 20 minutes duration, for a further period equal to the anticipated flight time; or

(3) for a helicopter that has a *special category—limited* airworthiness certificate or a *special category—exhibition* airworthiness certificate, the flying time specified for the VFR minimum fuel reserve in the operator statement required under rule 47.55(c).

91.307 VFR flight plan

(a) A pilot-in-command of an aircraft must submit a VFR flight plan to an appropriate ATS unit before starting any flight conducted under VFR if—

(1) the pilot-in-command plans to proceed more than 50 NM from shore; or

(2) the pilot-in-command requires an alerting service.

(b) In addition to the requirement in paragraph (a), a pilot-in-command of an aircraft may submit a VFR flight plan to an appropriate ATS unit for any other flight conducted under VFR.

(c) A VFR flight plan referred to in paragraphs (a) or (b) must include the following information:

(1) the aircraft registration and callsign:

(2) the type of aircraft to be used:

(3) the route including, if practicable for each route segment, aerodromes of departure and intended landing, estimated elapsed times, and time on the ground at each intermediate aerodrome:

(4) the SARTIME:

(5) fuel endurance:

(6) the total number of persons in the aircraft:

(7) the name and telephone contact details of the pilot-in-command:

(8) the name of the aircraft owner or operator:

(9) any additional information that may assist search and rescue operations.

(d) If a VFR flight plan has been submitted to an ATS unit under paragraphs (a) or (b), the pilot-in-command must—

(1) inform an appropriate ATS unit of any change to the details in the flight plan and of any change to the flight plan SARTIME before the expiry of that SARTIME; and

(2) terminate the flight plan by advising an appropriate ATS unit before the flight plan SARTIME.

91.309 Position reports

A pilot-in-command of an aircraft on a VFR flight must, when operating in controlled airspace, report the position of the aircraft to ATC at the times or reporting points required by ATC.

91.311 Minimum heights for VFR flights

(a) A pilot-in-command of an aircraft must not operate the aircraft under VFR—

(1) over any congested area of a city, town, or settlement, or over any open air assembly of persons at a height of less than 1000 feet above the surface or any obstacle that is within a horizontal radius of 600 metres from the point immediately below the aircraft; or

(2) over any other area—

(i) at a height of less than 500 feet above the surface; or

(ii) at a height of less than 500 feet above any obstacle, person, vehicle, vessel, or structure that is within a horizontal radius of 150 metres from the point immediately below the aircraft; and

(3) for any operation, at a height less than that required to execute an emergency landing in the event of engine failure without hazard to persons or property on the surface.

(b) Paragraph (a) does not apply to a pilot-in-command of an aircraft—

(1) conducting a take-off or landing; or

(2) conducting a balked landing or discontinued approach; or

(3) taxiing.

(c) Paragraph (a)(2) does not apply to a pilot-in-command of an aircraft if the *bona fide* purpose of the flight requires the aircraft to be flown at a height lower than that prescribed in paragraph (a)(2), but only if—

(1) the flight is performed without hazard to persons or property on the surface; and

(2) only persons performing an essential function associated with the flight are carried on the aircraft; and

(3) the aircraft is not flown at a height lower than that required for the purpose of the flight; and

(4) the horizontal distance that the aircraft is flown from any obstacle, person, vessel, vehicle, or structure is not less than that necessary for the purpose of the flight, except that in the case of an aeroplane, the aeroplane remains outside a horizontal radius of 150 metres from any person, vessel, vehicle, or structure that is not associated with the operation.

(d) Paragraph (a)(2) does not apply to a pilot-in-command—

(1) who is the holder of, or authorised by the holder of, a current instructor rating issued under Part 61 and who is conducting flight training or practice flights consisting of—

(i) simulated engine failure after take-off commencing below 1000 feet above the surface; or

(ii) simulated engine failure commencing above 1000 feet above the surface provided that descent below 500 feet above the surface is conducted within a low flying zone in accordance with rule 91.131; or

(2) who is the holder of a current instrument rating issued under Part 61 and who is conducting IFR training, testing, or practice flights under VFR, but only if the pilot-in-command conducts the flight in accordance with rules 91.413, 91.423 and 91.425; or

(3) operating an aircraft within a low flying zone in accordance with rule 91.131; or

(4) operating an aircraft at an aviation event in accordance with rule 91.703.

91.313 VFR cruising altitude and flight level

(a) A pilot-in-command of an aircraft operating within the New Zealand FIR under VFR in level cruising flight at more than 3000 feet AMSL or 1000 feet AGL (whichever is the higher) must, unless otherwise authorised by an ATC unit, maintain the following altitudes or flight levels:

(1) when operating at or below 13 000 feet AMSL and—

(i) on a magnetic track of 270° clockwise to 089°, any odd thousand foot altitude AMSL plus 500 feet; or

(ii) on a magnetic track of 090° clockwise to 269°, any even thousand foot altitude AMSL plus 500 feet:

(2) when operating at or above flight level 150, up to and including flight level 275 and—

(i) on a magnetic track of 270° clockwise to 089°, any odd flight level plus 500 feet beginning at and including flight level 155; or

(ii) on a magnetic track of 090° clockwise to 269°, any even flight level plus 500 feet beginning at and including flight level 165.

(b) A pilot-in-command of an aircraft operating within the New Zealand FIR under VFR must not maintain level cruising flight—

(1) at any level between 13 000 feet AMSL and flight level 150 unless otherwise authorised by an ATC unit for flights in controlled airspace; and

(2) at any flight level below flight level 160 when an area QNH zone setting is 980 hPa or less.

91.315 Operating in snow and ice conditions

A pilot-in-command of an aircraft must not perform a take-off under VFR in an aircraft that has snow, ice, or frost, adhering to the wings, stabilisers, or control surfaces.

Subpart E – Instrument Flight Rules

91.401 Minimum flight crew

A pilot-in-command must not operate an aircraft under IFR without another pilot, unless—

(1) the aircraft flight manual authorises operation of the aircraft with one pilot; and

(2) the aircraft is equipped with communication equipment that can be operated by the pilot without releasing the aircraft flight controls.

91.403 Fuel requirements for flights under IFR

A pilot-in-command must not operate an aircraft under IFR unless the aircraft carries sufficient fuel, taking into account weather reports and forecasts and weather conditions, to complete the flight to the aerodrome of intended landing and—

(1) when an alternate aerodrome is not required—

(i) for non-turbine-powered aeroplanes, fly after that for 45 minutes at holding speed at a height of 1500 feet above the aerodrome; or

(ii) for turbine-powered aeroplanes and helicopters, fly after that for 30 minutes at holding speed at a height of 1500 feet above the aerodrome.

(2) when an alternate is required by rule 91.405, fly from the aerodrome of intended landing to the alternate aerodrome and—

(i) for non-turbine-powered aeroplanes, fly after that for 45 minutes at holding speed at a height of 1500 feet above the aerodrome; or

(ii) for turbine-powered aeroplanes and helicopters, fly after that for 30 minutes at holding speed at a height of 1500 feet above the aerodrome.

91.405 IFR alternate aerodrome requirement

(a) A pilot-in-command of an aircraft operating under IFR must list at least 1 alternate aerodrome in the flight plan unless—

(1) the aerodrome of intended landing has a standard instrument approach procedure published in the applicable AIP; and

(2) at the time of submitting the flight plan, the meteorological forecasts indicate, for at least 1 hour before and 1 hour after the

estimated time of arrival at the aerodrome of intended landing, that—

(i) the ceiling at the aerodrome will be at least 1000 feet above the minimum published in the applicable AIP for the instrument procedure likely to be used; and

(ii) visibility will be at least 5 km, or 2 km more than the minimum published in the applicable AIP, whichever is the greater.

(b) A pilot-in-command of an aircraft must not list any aerodrome as an alternate on the IFR flight plan under paragraph (a) unless the meteorological forecasts at the time of submitting the flight plan indicate that, at the estimated time of arrival at the alternate aerodrome, the ceiling and visibility at that aerodrome will be at or above the following meteorological minima—

(1) if an instrument approach procedure with alternate minima has been published in the applicable AIP for the aerodrome, the specified alternate aerodrome minima for that instrument approach procedure; or

(2) for a precision approach procedure, a ceiling of 600 feet, or 200 feet above DA/DH, whichever is the higher, and a visibility of 3000 metres, or 1000 metres more than the prescribed minimum, whichever is the greater; or

(3) for a non-precision approach procedure, a ceiling of 800 feet, or 200 feet above MDA/MDH, whichever is the higher, and a visibility of 4000 metres, or 1500 metres more than the prescribed minimum, whichever is the greater; or

(4) if an instrument approach procedure has not been published in the applicable AIP for the alternate aerodrome, the ceiling and visibility minima prescribed under Part 91 Subpart D for an air operation performed under VFR for descent below the minimum altitude for IFR flight prescribed under rule 91.423.

(c) A pilot-in-command of an aircraft must not list any aerodrome as an alternate aerodrome in the IFR flight plan under paragraph (a) unless that

alternate aerodrome is equipped with a secondary electric power supply for—

(1) the ground based electronic navigation aids necessary for the instrument approach procedure to be used; and

(2) aerodrome lighting for night operations.

91.407 IFR flight plan

(a) A pilot-in-command of an aircraft must—

(1) submit a flight plan to an appropriate ATS unit prior to any flight under IFR; and

(2) unless otherwise authorised by ATS, submit the flight plan at least 30 minutes prior to the beginning of the flight; and

(3) unless otherwise authorised by ATS, include the following information in the flight plan—

(i) the identification of the aircraft to be used; and

(ii) the type of aircraft to be used, and its wake turbulence category; and

(iii) the radio communications equipment, and the navigation and approach aid equipment in the aircraft to be used; and

(iv) the departure aerodrome and time of departure; and

(v) the cruising speed, altitude, and route; and

(vi) the aerodrome of destination, total EET, and any alternate aerodrome required by rule 91.405; and

(vii) any additional information required for ATS purposes; and

(viii) the fuel endurance; and

(ix) total number of persons carried in the aircraft; and

(x) emergency and survival equipment carried in the aircraft; and

(4) advise the appropriate ATS unit, as soon as possible, of any delay exceeding 30 minutes in beginning the flight or departing from any aerodrome of intended landing; and

(5) terminate the flight plan as soon as practicable on completion of any flight at an aerodrome without ATS.

(b) For the purpose of this rule, aircraft wake turbulence categories are defined in ICAO Doc 8643 as amended.

91.409 Adherence to flight plan

(a) A pilot-in-command of an aircraft must, when an IFR flight plan has been submitted, adhere to that flight plan or the applicable portion of the flight plan, unless—

(1) a request for change has been made and clearance obtained from an appropriate ATC unit; or

(2) an emergency situation arises which necessitates immediate action to deviate from the flight plan.

(b) A pilot-in-command of an aircraft operating under IFR must, where practicable—

(1) when on a route published in the applicable AIP, operate along the defined centre line of the route; or

(2) when on any other route, operate directly between the navigation facilities and points defining the route; or

(3) when on an area navigation route or parallel offset route, operate along the centreline of the route specified by ATS.

(c) If a deviation from a flight plan is made under paragraph (a)(2), the pilot-in-command must notify an appropriate ATS unit as soon as practicable.

91.411 Inadvertent change to flight plan

A pilot-in-command of an aircraft operating under IFR, must in the event of an inadvertent departure from the current flight plan—

(1) advise an appropriate ATS unit of—

(i) any deviation from track; and

(ii) any variation of 5% or more of the true airspeed or any variation of 0.02 or more of the Mach number given in the flight plan; and

(iii) a revised ETA when the estimated ETA to the next reporting point notified to the ATS unit is found to be in error by more than two minutes; and

(2) regain track as soon as practicable.

91.411A Pilot-in-command and operator to inform ATS unit of carriage of dangerous goods

(a) If an in-flight emergency occurs, a pilot-in-command of an aircraft must, as soon as practicable, inform the appropriate ATS unit of the information referred to in rule 92.173(c) regarding any dangerous goods on board the aircraft.

(b) The operator must, as soon as the operator is aware that an in-flight emergency has or might have occurred, inform the appropriate ATS unit of the information referred to in rule 92.173(c) regarding any dangerous goods on board the aircraft.

91.413 Take-off and landing under IFR

(a) ***Instrument approaches to aerodromes***. When an instrument approach procedure to an aerodrome is necessary, a pilot-in-command of an aircraft operating under IFR must use a standard instrument approach procedure for the aerodrome published in the applicable AIP.

(b) ***Authorised DA, DH, or MDA***. When the instrument approach procedure required by paragraph (a) provides for and requires the use of a DA, DH, or MDA, a pilot-in-command must use the DA, DH, or MDA that is the highest of the following—

(1) the DA, DH, or MDA prescribed by the instrument approach procedure; or

(2) the DA, DH, or MDA prescribed for the pilot-in-command; or

(3) the DA, DH, or MDA for which the aircraft is equipped.

(c) ***Operation below DA, DH, or MDA***. Where a DA, DH, or MDA is applicable, a pilot-in-command must not operate an aircraft at any aerodrome below the MDA, or continue an instrument approach procedure below the DA or DH prescribed in paragraph (b), unless—

(1) the aircraft is continuously in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres that allows touchdown to occur within the touchdown zone of the runway of intended landing; and

(2) the flight visibility is not less than the visibility published in the applicable AIP for the instrument approach procedure being used; and

(3) except for a Category II or Category III precision approach procedure published in the applicable AIP for the aerodrome that includes any necessary visual reference requirements, at least one of the following visual references for the intended runway is distinctly visible and identifiable to the pilot—

(i) the approach lighting system; or

(ii) the threshold markings; or

(iii) the threshold lights; or

(iv) the runway-end identification lights; or

(v) the visual approach slope indicator; or

(vi) the touchdown zone or touchdown zone markings; or

(vii) the touchdown zone lights; or

(viii) the runway or runway markings; or

(ix) the runway lights.

(d) ***Landing.*** A pilot-in-command must not land an aircraft when the flight visibility is less than the visibility published in the applicable AIP for the instrument approach procedure used.

(e) ***Missed approach procedures***. A pilot-in-command must immediately execute the missed approach procedure published in the applicable AIP if—

(1) the requirements of paragraph (c) are not met at either of the following times:

(i) when the aircraft is being operated below MDA; or

(ii) upon arrival at the missed approach point, including a DA or DH where a DA or DH is specified and its use is required, and any time after that until touchdown; or

(2) an identifiable part of the aerodrome is not distinctly visible to the pilot during a circling manoeuvre at or above MDA, unless the inability to see an identifiable part of the aerodrome results only from normal manoeuvring of the aircraft during approach.

(f) ***Take-off Minima***. Except as provided in paragraph (g), a pilot-in-command of an aircraft must not take off from an aerodrome under IFR unless weather conditions are—

(1) at or above the weather minima for IFR take-off published in the applicable AIP for the aerodrome; or

(2) if weather minima for IFR take-off are not published in the applicable AIP for a particular aerodrome, a ceiling of at least 300 feet and more than 1500 m visibility.

(g) ***Reduced Take-off Minima***. A pilot-in-command of an aircraft may take off under IFR at an aerodrome at a take-off minima of zero cloud ceiling and visibility at or above 800 m if—

(1) the runway to be used has centre-line marking or centre-line lighting; and

(2) the take-off weather visibility is confirmed by the pilot-in-command by observing the runway centre-line marking or centre-line lighting; and

(3) reduced take-off minima on the runway to be used are published in the applicable AIP; and

(4) any obstacles in the take-off flight path are taken into account; and

(5) if the aircraft is a 2 engine propeller-driven aeroplane, the aircraft is equipped with an operative auto-feather or auto-coarse system.

91.414 GNSS derived distance information

(a) A pilot-in-command of an aircraft operating under IFR using GNSS equipment must not use GNSS derived distance information if RAIM is unavailable and has been unavailable for the preceding 10 minutes.

(b) The pilot-in-command must, when using GNSS derived distance information in a position report, state the distance as a GNSS distance relative to a specified reference point that is contained in the GNSS database.

(c) The pilot-in-command must, when using GNSS derived distance information on an ILS/DME or LOC/DME instrument approach procedure, ensure —

(1) that the GNSS distance information is based on the co-ordinates of the DME that is associated with the current published instrument approach procedure; and

(2) that current data for the DME co-ordinates is permanently stored in the GNSS database.

91.415 Category II and III precision approach procedures

(a) A person must not operate an aircraft performing a Category II or III precision approach procedure unless—

(1) each flight crew member has adequate knowledge of, and familiarity with, the aircraft and the procedures to be used; and

(2) the instrument panel in front of the pilot who is controlling the aircraft has appropriate instrumentation for the type of flight-control guidance system that is being used; and

(3) the RVR information for the runway in use is provided to the pilot-in-command.

(b) Except as otherwise authorised by the Director, a person must not operate an aircraft performing a Category II or III precision approach procedure unless the ground component required for the operation, and the related airborne equipment, is installed and operating.

(c) For the purpose of paragraph (d), when the precision approach procedure being used provides for and requires the use of a DH, the authorised DH must be the highest of the following—

(1) the DH prescribed by the instrument approach procedure; or

(2) the DH prescribed for the pilot-in-command; or

(3) the DH for which the aircraft is equipped.

(d) Except as otherwise authorised by the Director, a pilot of an aircraft performing a Category II or III precision approach procedure that provides for and requires the use of a DH must not continue the approach below the authorised DH unless the following conditions are met—

(1) the aircraft is in a position from which a descent to a landing on the intended runway can be made at a normal rate of descent using normal manoeuvres, and that descent rate allows touchdown to occur within the touchdown zone of the runway of intended landing; and

(2) at least one of the following visual references for the intended runway is distinctly visible and identifiable:

(i) the runway threshold:

(ii) the runway threshold markings:

(iii) the runway threshold lights:

(iv) the runway touchdown zone or touchdown zone markings:

(v) the runway touchdown zone lights.

(e) Except as otherwise authorised by the Director, a pilot of an aircraft performing a Category II or III precision approach procedure must immediately execute a missed approach procedure whenever, prior to touchdown, the requirements of paragraph (d) are not met.

(f) A pilot of an aircraft performing a Category III precision approach procedure without a DH must not land the aircraft except in accordance with the provisions of an authorisation issued by the Director.

91.417 Category II and III precision approach procedure manual

(a) A person must not perform a Category II or III precision approach procedure in a New Zealand registered aircraft unless—

(1) there is available in the aircraft—

(i) for Category II precision approach procedures, a current Category II precision approach procedure manual approved in accordance with rule 91.419 for that aircraft; or

(ii) for Category III precision approach procedures, a current Category III precision approach procedure manual approved in accordance with rule 91.419 for that aircraft; and

(2) the Category II or III precision approach procedure is performed in accordance with the procedures, instructions, and limitations in the approved manual; and

(3) the instruments and equipment listed in the approved manual that are required for a particular Category II or III precision approach procedure have been inspected and maintained in accordance with the maintenance programme in that manual.

(b) An operator of an aircraft performing a Category II or III precision approach procedure must keep a current copy of the approved manual at its principal base of operation and must make it available for inspection upon request by the Director.

(c) The procedures manual required by paragraphs (a) and (b) may be incorporated in the operations procedures required of the holder of an air operator certificate issued under Part 119.

91.419 Approval of category II and III precision approach procedure manual

(a) An applicant for the approval of a Category II or III precision approach procedure manual, or an amendment to an approved Category II or III precision approach procedure manual, must submit the proposed manual or amendment to the Director.

(b) If the applicant requests an evaluation programme that requires the demonstration of a Category II or III precision approach procedure, the application must include the following—

(1) the location of the aircraft and the place where any demonstration is to be conducted; and

(2) the date any demonstration is to commence.

(c) Each Category II or III precision approach procedure manual must contain—

(1) the registration, make, and model of the aircraft to which it applies; and

(2) a maintenance programme including procedures for the—

(i) test and inspection of each instrument and item of equipment required for Category II or III precision approach procedures at 3 month intervals; and

(ii) bench testing of each instrument and item of equipment required for Category II or III precision approach procedures at 12 month intervals; and

(iii) test and inspection of each static pressure system in accordance with Part 43 at 12 month intervals; and

(iv) recording in the maintenance records the date, airport, and reasons for each discontinued Category II or III precision

approach procedures because of instrument or equipment malfunction; and

(3) the procedures and instructions related to—

(i) the recognition of decision height; and

(ii) the use of runway visual range information; and

(iii) approach monitoring; and

(iv) the maximum permissible deviations of the basic ILS indicator within the decision region; and

(v) a missed approach; and

(vi) the use of airborne low approach equipment; and

(vii) the minimum altitude for the use of the autopilot; and

(viii) instrument and equipment failure warning systems; and

(ix) instrument failure; and

(x) other procedures, instructions, and limitations that may be found necessary by the Director.

(d) Notwithstanding paragraph (c)(2)(i), a functional flight test may replace each alternate inspection in which case the maintenance programme must include procedures for the completion and recording of this flight test.

91.421 Operating in icing conditions

(a) Except as provided in paragraph (b), a pilot-in-command operating an aircraft under IFR must not—

(1) perform a take-off in an aircraft that has—

(i) snow, ice, or frost adhering to any propeller, windscreen, or powerplant installation, or to an airspeed, altimeter, rate of climb, or flight attitude instrument system; or

(ii) snow, ice, or frost adhering to the wings, stabilisers, or control surfaces; and

(2) fly an aircraft into known or forecast icing conditions unless the aircraft is certificated with ice protection equipment for flight in the type of known icing conditions.

(b) A pilot-in-command may perform a take-off in an aircraft that has snow, ice, or frost, adhering to the aircraft if the take-off is performed in accordance with the aircraft flight manual, or instructions and data provided by the aircraft manufacturer, for take-off in such conditions.

(c) If weather reports and briefing information immediately prior to the flight indicate to the pilot-in-command that the forecast icing conditions that would otherwise prohibit the flight will not be encountered during the flight because of changed weather conditions, the restrictions in paragraph (a)(2) based on forecast conditions do not apply.

91.423 Minimum altitudes for IFR flights

Except when necessary for take-off or landing, a pilot-in-command must not operate an aircraft under IFR below—

(1) the applicable minimum altitudes published in the applicable AIP; or

(2) if an applicable minimum altitude is not published in the applicable AIP—

(i) for operations over a mountainous zone designated under Part 71 or applicable AIP, a height of 2000 feet above the highest obstacle within a horizontal radius of 5 NM from the position of the aircraft; or

(ii) a height of 1000 feet above the highest obstacle within a horizontal radius of 5 NM from the position of the aircraft.

91.425 IFR cruising altitude or flight level

(a) A pilot-in-command of an aircraft within the New Zealand FIR operating under IFR in level cruising flight must, unless otherwise authorised

by at ATC unit for flights in controlled airspace, maintain the following altitude or flight levels:

(1) when operating at or below 13 000 feet AMSL and—

(i) on a magnetic track of 270° clockwise to 089°, any odd thousand foot altitude AMSL; or

(ii) on a magnetic track of 090° clockwise to 269°, any even thousand foot altitude AMSL:

(2) when operating at or above flight level 150 up to and including flight level 410 and—

(i) on a magnetic track of 270° clockwise to 089°, any odd flight level beginning at and including flight level 150; or

(ii) on a magnetic track of 090° clockwise to 269°, any even flight level beginning at and including flight level 160:

(3) when operating above flight level 410 and—

(i) on a magnetic track of 270° clockwise to 089°, any odd flight level, at 4000 foot intervals beginning at and including flight level 450; or

(ii) on a magnetic track of 090° clockwise to 269°, any odd flight level at 4000 foot intervals beginning at and including flight level 430.

(b) Except as provided in paragraph (c), a pilot-in-command of an aircraft within the New Zealand FIR operating under IFR must not maintain level cruising flight—

(1) at any level between 13 000 feet AMSL and flight level 150, unless authorised to do so by an ATC unit for flights in controlled airspace; and

(2) at any flight level below flight level 160 when the area QNH zone setting is 980 hPa or less; and

(3) below flight level 160 when operating in IMC within a 20 NM radius encompassing Aoraki/Mount Cook centred on S 43.36.00.0, E 170.09.00.0.

(c) A pilot-in-command of an aircraft within the New Zealand FIR operating under IFR outside controlled airspace may maintain level cruising flight between 13 000 feet AMSL and flight level 150 if the pilot-in command—

(1) is unable to operate the aircraft in level cruising flight at or below 13 000 feet AMSL or at or above flight level 150; and

(2) has established that there is no conflict with other aircraft at the altitude to be flown; and

(3) has given to the relevant ATS unit prior notification of the altitude to be flown.

91.426 Flight on unevaluated routes

(a) Subject to paragraph (b), a pilot-in-command of an aircraft operating within the New Zealand flight information region under IFR using GNSS equipment as a primary means navigation system is permitted random flight routing if operating—

(1) within the area of a circle 20 NM radius centred on 43°36'S 170° 09'E (Aoraki/ Mount Cook), at or above flight level 160; or

(2) in any other airspace, at or above flight level 150.

(b) A pilot-in-command of an aircraft is only permitted random flight routing within controlled airspace if authorised by ATC.

(c) A pilot-in-command of an aircraft operating under IFR using GNSS equipment as a primary means navigation system is permitted random flight routing below flight level 150 if—

(1) authorised by ATC; and

(2) ATC continuously radar monitor the flight for adequate terrain clearance.

91.427 IFR radio communications

(a) A pilot-in-command of an aircraft operating under IFR must, unless otherwise authorised by ATC—

(1) maintain a continuous listening watch on the appropriate frequency; and

(2) report as soon as possible to an appropriate ATS unit—

(i) the time and altitude of passing each designated reporting point, or the reporting points or the times specified by ATC; and

(ii) any other information relating to the safety of the flight.

(b) Notwithstanding paragraph (a)(2), a pilot-in-command of an aircraft operating under IFR must, while the aircraft is under radar control, report passing those reporting points specifically requested by ATC.

91.429 IFR operations – radio communications failure

(a) Unless otherwise authorised by ATC, a pilot-in-command of an aircraft that has radio communications failure when operating under IFR in VMC, or if VMC are encountered after the failure, must continue the flight under VFR and land as soon as practicable at the nearest suitable aerodrome.

(b) Unless otherwise authorised by ATC, a pilot-in-command of an aircraft that has radio communication failure when operating under IFR in IMC, or that is operating in VMC where the maintenance of such conditions is uncertain, must continue the flight in accordance with the flight plan, and;

(1) if the communication failure occurs during departure, maintain the last assigned level to the point specified then continue the flight in accordance with the flight plan;

(2) if the communication failure occurs during departure in the course of ATC radar vectoring, maintain the last assigned vector for 2 minutes while maintaining terrain clearance, then continue the flight in accordance with the flight plan;

(3) if the communication failure occurs during the en route phase of the flight—

(i) track to the destination aid or fix specified by ATC or, if not specified, to the aid or fix for the anticipated instrument approach procedure, at the last assigned level; and

(ii) if necessary at or after the estimated time of arrival or expected approach time, descend in the holding pattern then commence the instrument approach procedure;

(4) if the communication failure occurs on initial approach and the aircraft is not cleared for the approach by ATC, continue the procedure, if necessary, descending in the holding pattern to the last assigned altitude, maintaining that altitude until established on final approach then continue the instrument approach procedure;

(5) if the communication failure occurs while the aircraft is operated under ATC radar vectoring during initial or intermediate approach, maintain the last assigned altitude until the aircraft is established on final approach then continue the instrument approach procedure;

(6) if the communication failure occurs while the aircraft is being operated in a holding pattern and the weather is below instrument approach minima or the aerodrome is closed for any reason—

(i) continue in the holding pattern until the divert time notified to ATC; and

(ii) fly to the alternate aerodrome specified in the flight plan; and

(iii) conduct an instrument approach procedure to land at that aerodrome;

(7) if the communication failure occurs during the operation of the aircraft in a missed approach procedure, conduct further instrument approaches up to a period of 30 minutes past expected approach time or estimated time of arrival, whichever is the later; and if the aircraft is unable to land within that 30 minute period, proceed to an alternate aerodrome specified in the flight plan and conduct an instrument approach procedure to that aerodrome.

91.431 Notification of facility malfunctions

(a) A pilot-in-command of an aircraft operating under IFR must notify ATS as soon as practicable after a malfunction of any aeronautical telecommunication facility during flight.

(b) The notification required by paragraph (a), must include the—

(1) aircraft type; and

(2) aircraft registration and, if applicable, the flight number; and

(3) name of pilot-in-command; and

(4) name of the operator; and

(5) aircraft position and altitude; and

(6) phase of flight; and

(7) facility affected; and

(8) brief details of the malfunction; and

(9) effect on the flight.

Subpart F – Instrument and Equipment Requirements

91.501 General requirements

A person must not operate an aircraft 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 installed in the aircraft comply with—

(i) the applicable specifications and airworthiness design standards listed in the following:

(A) Appendix A to this Part or:

(AA) a transport instrument to this Part:

(B) Appendix C to Part 21:

(C) Part 26:

(D) for an aircraft that has a special category airworthiness certificate, the aircraft manufacturer's design specifications; or

(ii) an alternative specification and design standard—

(A) approved by the Director; or

(B) for an aircraft that has a special category airworthiness certificate, that is acceptable to the Director following a flight evaluation; and

(3) the instruments and equipment installed in the aircraft have been installed in accordance with the aircraft manufacturer's instructions or other equivalent instructions acceptable to the Director; and

(4) except as provided in rule 91.537, the instruments and equipment installed in the aircraft are in an operable condition.

91.503 Location of instruments and equipment

An operator must ensure that—

(1) any instruments and equipment operated or used by one pilot can be readily seen and operated from that pilot's normally seated position; and

(2) any single instrument or item of equipment operated or used by two pilots, is installed so that it can be readily seen and operated from each pilot's normally seated position.

91.505 Seating and restraints

(a) Except as provided in paragraph (b), each aircraft, other than a balloon, must be equipped with a—

(1) seat or berth for each person on board; and

(2) safety belt for each seat and restraining belts for each berth; and

(3) shoulder harness for—

(i) each seat of an aircraft certificated for aerobatic flight; and

(ii) each crew member seat of an aircraft having a certificated seating capacity of 10 passenger seats or more; and

(4) shoulder harness or a single diagonal shoulder belt for—

(i) each flight crew member seat of a helicopter; and

(ii) each flight crew member seat of an aeroplane engaged in flight training; and

(iii) each crew member seat of an aeroplane when that aeroplane is operated in accordance with rule 91.311(c).

(b) Notwithstanding paragraphs (a)(1) and (2), a seat, berth, safety belt, or restraining belt is not required for—

(1) any child being carried in accordance with rule 91.207(d)(1); and

(2) any passenger engaged in parachute operations.

91.507 Passenger information signs

Any aircraft, except a balloon, which has a certificated seating capacity of 10 passenger seats or more in passenger compartments separated from direct communication from the flight crew compartment must be equipped with signs operated by the crew that are visible to passengers and flight attendants to notify them when—

(1) smoking is prohibited; and

(2) safety belts must be fastened.

91.509 Minimum instruments and equipment

(a) A powered aircraft with an airworthiness certificate, except a powered glider, must be equipped with a means of—

(1) indicating airspeed; and

(2) indicating Mach number, if the speed limitation specified in the aircraft flight manual is expressed in terms of Mach number; and

(3) indicating altitude in feet using equipment specified in a transport instrument which may be identified as CATI 91.509; and

(4) indicating magnetic heading; and

(5) indicating fuel tank contents, other than auxiliary fuel tank contents; and

(6) indicating engine revolutions of each engine; and

(7) indicating oil pressure of each engine using a pressure lubricating system; and

(8) indicating coolant temperature of each liquid-cooled engine; and

(9) indicating oil temperature of each engine rated at over 250 brake horsepower using a pressure lubricating system; and

(10) indicating manifold pressure of each supercharged or turbocharged piston engine, and each piston engine fitted with a constant speed propeller; and

(11) indicating cylinder head temperature of each air-cooled piston engine rated at over 250 brake horsepower; and

(12) indicating flap position, if flaps are fitted, unless the position of the flaps can be determined visually by the flight crew member; and

(13) indicating landing gear position, if the aircraft has retractable undercarriage; and

(14) indicating the correct functioning of electrical power generating equipment; and

(15) indicating the presence of carbon monoxide in the cabin if the aircraft is fitted with an exhaust manifold cabin heater or a combustion cabin heater.

(b) Subject to paragraph (c), the following New Zealand registered aircraft issued with an airworthiness certificate must be equipped with a means of automatically recording and accumulating the time-in-service for the aircraft:

(1) helicopter that is used for agricultural aircraft operations conducted in accordance with Part 137:

(2) a helicopter that is used for air operations conducted in accordance with Part 135:

(3) a helicopter, except a helicopter that has a special category—experimental airworthiness certificate or a special category—amateur-built airworthiness certificate, that is used for any other type of operation:

(4) an aeroplane that is used for agricultural aircraft operations conducted in accordance with part 137.

(c) Paragraph (b) comes into force on a date to be appointed by the Minister by notice; and 1 or more notices may be made bringing different provisions of paragraph (b) into force on different dates.

(d) An aircraft equipped with a lockable door leading to any compartment normally accessible to passengers must be equipped with a means for a crew member to unlock the door.

(e) For the purposes of this rule, CATI 91.509 is a transport instrument.

91.511 Night VFR instruments and equipment

(a) A powered aircraft with an airworthiness certificate operated under VFR by night must be equipped in accordance with rule 91.509 and have—

(1) except as provided in paragraph (b), a means of indicating rate of turn and slip; and

(2) position lights; and

(3) an anti-collision light system; and

(4) illumination for each required instrument or indicator.

(b) An aircraft equipped with a third attitude instrument indicator that is usable through 360° of pitch and roll does not need to be equipped with a means of indicating rate of turn.

91.513 VFR communication equipment

(a) Unless authorised by ATC to operate under VFR without radio communication, an aircraft operating under VFR in controlled airspace classified under Part 71 as Class B, C, D, or in Class E airspace at night, must be equipped with radio communications equipment that—

(1) meets level 1 or 2 standards specified in Appendix A, A.9; and

(2) is capable of providing continuous two-way communications with an appropriate ATC unit.

(b) An aircraft operating under VFR outside controlled airspace must be equipped with radio communications equipment that meets level 1 or 2 standards specified in Appendix A, A.9 if the equipment is to be used for communication with any ATS unit.

91.515 Communication and navigation equipment – VFR over water

An aircraft operating under VFR over water, at a distance that is more than 30 minutes flying time from the nearest shore, must be equipped with—

(1) communication equipment that—

(i) meets level 1 or 2 standards specified in Appendix A, A.9; and

(ii) is capable of providing continuous two-way communications with an appropriate ATS unit or aeronautical telecommunications facility; and

(2) navigation equipment that is capable of being used to navigate the aircraft in accordance with the flight plan.

91.517 IFR instruments and equipment

A powered aircraft issued with an airworthiness certificate and operating under IFR, must be equipped in accordance with rules 91.509 and 91.511 and have the means of indicating—

(1) aircraft attitude, by gyroscopic or inertial means; and

(2) magnetic heading, by gyroscopic or inertial means; and

(3) that the power supply to any gyroscopic instruments is adequate; and

(4) sensitive pressure altitude, in feet, adjustable for barometric pressure in hectoPascals or millibars; and

(5) outside air temperature; and

(6) time in hours, minutes, and seconds; and

(7) airspeed in knots, with a means of preventing malfunctioning due to either condensation or icing; and

(8) rate of climb and descent.

91.519 IFR communication and navigation equipment

(a) An aircraft operating under IFR must be equipped with communication equipment that—

(1) meets level 1 standards specified in Appendix A.9; and

(2) is capable of providing continuous two-way communications with an appropriate ATS unit or aeronautical telecommunications facility.

(b) Except as provided in paragraph (ba), an aircraft operating under IFR must be equipped with a navigation system that—

(1) meets level 1 standards specified in Appendix A.9; and

(2) will enable the aircraft to proceed in accordance with—

(i) the flight plan required under rules 91.407; and

(ii) reserved

(iii) the requirements of ATC.

(ba) Paragraph (b)(1) does not apply to an aircraft operating under IFR using a navigation specification referred to in rule 91.263.

(c) *Reserved*

(d) An aircraft operating in airspace with an MNPS designated under ICAO Doc 7030 must—

(1) be equipped with navigation equipment capable of continuously indicating to the flight crew adherence to or departure from track, in accordance with the MNPS, at any point along that track; and

(2) be approved by the Director for MNPS operations.

(e) An aircraft operating in airspace where a RVSM of 1000 feet is applied by ATC above flight level 290 must be—

(1) approved by the Director for operation in the airspace concerned; and

(2) equipped with equipment capable of—

(i) indicating to the flight crew member the flight level being flown; and

(ii) automatically maintaining a selected flight level; and

(iii) for aircraft first issued with a type certificate before 1 January 1997, providing an aural and visual alert to the flight crew when a deviation of 300 feet from the selected flight level occurs; and

(iv) for aircraft first issued with a type certificate after 31 December 1996, providing an aural and visual alert to the flight crew member when a deviation of 200 feet from the selected flight level occurs; and

(v) automatically reporting pressure altitude with the capability for switching to operate from either altitude measurement system referred to in paragraph (f).

(f) The equipment required in paragraph (e)(2)(i) must consist of at least 2 altitude measurement systems.

(g) If any independent system for either communication or navigation purposes fails, an aircraft operating in MNPS airspace must have the equipment required by paragraphs (a), (b), and (d)(1) installed in such number as to ensure that the remaining equipment will enable the aircraft to continue the flight in compliance with paragraphs (a), (b), and (d).

91.521 Category II and III precision approach equipment

(a) An aircraft performing a Category II or III precision approach procedure must be equipped in accordance with rules 91.509, 91.511, and 91.517, and have—

(1) two localiser and glide slope receiving systems that—

(i) each provide a basic ILS display at each pilot station; and

(ii) have at least one localiser antenna and one glide slope antenna; and

(2) at least one ILS system required under paragraph (1) that is not affected by the use of the aircraft communication equipment; and

(3) a marker beacon receiver that provides distinctive aural and visual indications of the outer and middle markers; and

(4) two gyroscopic or inertial aircraft attitude indicators; and

(5) two gyroscopic or inertial magnetic heading indicators; and

(6) two airspeed indicators calibrated in knots with a means of preventing malfunctioning due to either condensation or icing; and

(7) two sensitive altimeters, calibrated in feet, each having a placarded correction for altimeter scale error and for the wheel height of the aircraft; and

(8) two rate of climb and descent indicators; and

(9) a flight control guidance system that consists of—

(i) an automatic approach coupler, with, at least, automatic steering in relation to an ILS localiser at one pilot station; or

(ii) a flight director system that displays computed information as steering commands in relation to an ILS localiser, and on the same instrument, either computed information as pitch commands in relation to an ILS glide slope or basic ILS glide slope information; and

(10) for operation with a decision height below 150 feet—

(i) a marker beacon receiver providing aural and visual indications of the inner marker; or

(ii) a radio altimeter; and

(11) warning systems, for immediate detection by the pilot of system faults in—

(i) items required by subparagraphs (1), (4), (5), and (9); and

(ii) if installed for use in Category III precision approach procedures, the radio altimeter and autothrottle system; and

(12) fully functioning dual controls; and

(13) an externally vented static pressure system with an alternate static pressure source; and

(14) a windshield wiper, or equivalent means of providing adequate cockpit visibility for a safe transition, by either pilot, to touchdown and rollout.

(b) The number of instruments and equipment required under paragraphs (a)(4), (5), (6), (7), and (8) includes the instruments and equipment required for IFR operations under rule 91.517.

91.523 Emergency equipment

(a) An aircraft with a certificated seating capacity of 10 passenger seats or more must be equipped with—

(1) the number of first aid kits, location, distribution, and storage as specified in a transport instrument which may be identified as CATI 91.523; and

(2) the number, extinguishing agent, location and distribution of hand-held fire extinguishers which must be readily accessible, as specified in a transport instrument which may be identified as CATI 91.523.

(b) An aircraft with a certificated seating capacity of 20 passenger seats or more must be equipped with an axe that is readily accessible to the crew.

(c) An aircraft with a certificated seating capacity of 61 passenger seats or more must be equipped with the number and location of portable battery-powered megaphones—

(1) readily accessible from the flight attendant seat for the crew members who are assigned to direct emergency evacuations; and

(2) distributed as specified in a transport instrument which may be identified as CATI 91.523.

(d) Each item of equipment that is required under paragraphs (a)(2) and (c) must clearly indicate its method of operation.

(e) Each compartment or container that contains an item of equipment that is required under paragraph (a), must be marked to indicate its contents.

(f) Paragraph (c) does not apply when the aircraft is carrying cargo exclusively in any passenger compartment converted for the carriage of cargo.

(g) For the purposes of this rule, CATI 91.523 is a transport instrument.

91.525 Flights over water

(a) An aircraft that is operated on a flight over water must be equipped with 1 life preserver for each person on board and stowed in a position that is readily accessible from the seat or berth occupied by the person if—

(1) the aircraft is a single-engine aircraft and the flight distance to shore is more than gliding distance for the aircraft; or

(2) the aircraft is a multi-engine aircraft that is unable to maintain a height of at least 1000 feet AMSL with 1 engine inoperative, and the flight distance to shore is more than gliding distance for the aircraft; or

(3) the aircraft is a multi-engine aircraft that is capable of maintaining a height of at least 1000 feet AMSL with 1 engine inoperative and the flight distance to shore is more than 50 NM.

(aa) The life preserver required in paragraph (a) must meet the requirements specified in in a transport instrument which may be identified as CATI 91.525.

(b) A single-engine aircraft, or multi-engine aircraft that is unable to maintain a height of at least 1000 feet AMSL with 1 engine inoperative, that is operated on a flight over water that extends to more than 100 NM from shore must be equipped with the survival equipment specified in a transport instrument which may be identified as CATI 91.525.

(c) A multi-engine aircraft that is capable of continuing flight with 1 or more engines inoperative that is operated on a flight over water that extends

to more than 200 NM from shore must be equipped with the survival equipment specified in a transport instrument which may be identified as CATI 91.525.

(d) An aircraft in excess of 5700 kg MCTOW that is operated on a flight over water that extends to more than 200 NM from shore must be equipped with—

(1) the survival equipment specified in a transport instrument which may be identified as CATI 91.525; and

(2) an additional ELT(S) or EPIRB.

(e) A manned balloon must be equipped with 1 life preserver for each person on board stowed in a position that is readily accessible from the position occupied by the person if—

(1) the flight crosses or might cross the shore of any lake or sea; or

(2) the flight takes off from or intends to land at a site where the takeoff or approach path is so disposed over water that in the event of a mishap there is a likelihood of a ditching; or

(3) the flight takes off from a site that is located within 1 NM of water at the ordinary high water mark and the wind is offshore or is less than 5 knots onshore.

(f) The life preservers, life-rafts, signalling devices, ELT(S), and EPIRB required under any of paragraphs (a) to (e) must be installed in conspicuously identified locations and must be easily accessible in the event of a ditching of the aircraft.

(g) For the purposes of this rule, CATI 91.525 is a transport instrument.

91.527 Aircraft operations on water

An aircraft operating on water must be equipped with—

(1) one life preserver for each person on board, stowed in a position readily accessible from each seat or berth; and

(2) for each aircraft in excess of 5700 kg MCTOW, one sea anchor.

91.529 Aircraft emergency location system (AELS) and ELT

(d) A person must not operate a New Zealand registered aircraft within the New Zealand Flight Information Region without an AELS installed in the aircraft that has been approved by the Director in a notice under paragraph (ab).

(aa) Despite paragraph (a), a person may operate without an AELS in accordance with paragraphs (b), (c), (d), (e), rule 121.353(a)(1)(ii), and rule 121.353(b).

(ab) The Director may issue a notice that approves an AELS if satisfied that it:

(1) automatically broadcasts a signal in the event of an accident for at least 24 hours that:

(i) alerts search and rescue providers without human intervention; and

(ii) identifies the aircraft's location to at least a 5 kilometre radius; and

(iii) contains the aircraft's identifying information required by paragraph (f)(1); and

(2) broadcasts a homing signal; and

(3) has an independent power source; and

(4) is suitable for the aircraft type in which it is installed; and

(5) is constructed so as to remain operable after an accident, as far as is reasonably practicable.

(ac) Before approving an AELS under paragraph (ab) the Director must:

(1) be satisfied that the AELS is not contrary to the interests of aviation safety; and

(2) consult with any party that the Director considers appropriate.

(ad) An approval made under paragraph (ab) comes into force on the date specified by the Director.

(ae) The Director must as soon as practicable after making an approval under paragraph (ab) publish it on the CAA website.

(e) Despite paragraph (a) an aircraft may be operated without an AELS installed if—

(1) the operation is to ferry the aircraft from the place where the operator takes possession of the aircraft to a place where an AELS is to be installed; and

(2) the aircraft does not carry a passenger.

(f) Despite paragraph (a) and rule 91.501(4), an aircraft may be operated with an inoperative AELS if—

(1) the operation is to ferry the aircraft from a place where repairs or replacement of the AELS cannot be made to a place where the repairs or replacement can be made; and

(2) the aircraft does not carry a passenger.

(g) Despite paragraph (a) and rule 91.501(4), an aircraft may be operated without an operable AELS for a period of not more than 7 days if the aircraft is equipped with an ELT(S) or PLB that is accessible to any person on board the aircraft.

(h) Paragraph (a) does not apply to any of the following aircraft:

(1) an aircraft that is equipped with no more than 1 seat if the pilot is equipped with an ELT(S) or PLB:

(2) a glider or microlight aircraft if at least 1 person carried in the glider or microlight aircraft is equipped with an ELT(S) or PLB:

(3) a glider, or powered aircraft, including a microlight aircraft, that is equipped with no more than 2 seats, if the glider or powered aircraft is operated not more than 10 NM from the aerodrome from which the glider or powered aircraft takes off:

(4) a manned free balloon.

(i) A holder of a certificate of registration for a New Zealand registered aircraft that is equipped with an AELS or carries an ELT(S), EPIRB, or PLB that operates on 406 MHz must not operate the aircraft unless—

(1) for an AELS or ELT(S), the AELS or ELT(S) is coded with the International Telecommunication Union (ITU) country code for New Zealand, and any of the following:

(i) the AELS or ELT(S) serial number:

(ii) the 24-bit aircraft address:

(iii) the ICAO aircraft operating agency designator and a serial number allocated by the operator:

(iv) the aircraft nationality and registration marks; and

(2) for an EPIRB or PLB, the EPIRB or PLB is coded with—

(i) the International Telecommunication Union (ITU) country code for New Zealand; and

(ii) a unique code to identify the EPIRB or PLB; and

(3) the holder of the aircraft certificate of registration has notified the Rescue Coordination Centre New Zealand of—

(i) the code, in accordance with subparagraph (1) or (2), for each AELS, EPIRB, ELT(S), or PLB that is installed or carried in the aircraft; and

(ii) the name and emergency contact details of the aircraft operator.

(j) A person must not operate a foreign aircraft in New Zealand that is equipped with or carries an ELT that operates on 406 MHz unless the ELT is coded with—

(1) the International Telecommunication Union (ITU) country code of the State of registry; and

(2) any of the following:

(i) the ELT serial number:

(ii) the 24-bit aircraft address:

(iii) the ICAO aircraft operating agency designator and a serial number allocated by the operator:

(iv) the aircraft nationality and registration marks.

91.531 Oxygen indicators

An aircraft operated at altitudes above 13 000 feet AMSL, or for more than 30 minutes between 10 000 feet up to and including 13 000 feet AMSL, must be equipped with a means of indicating—

(1) to the flight crew—

(i) the amount of oxygen available in each source of supply and whether the oxygen is being delivered to the dispensing units; and

(ii) of a pressurised aircraft, by visual or aural warning when the cabin pressure altitude exceeds 10 000 feet AMSL; and

(2) to each user of an individual dispensing unit, the amount of oxygen available and whether the oxygen is being delivered to the dispensing unit.

91.533 Supplemental oxygen for non-pressurised aircraft

(a) An aircraft with a non-pressurised cabin that is operated at altitudes above 10 000 feet AMSL must—

(1) if operating at altitudes up to and including 13 000 feet AMSL be equipped with—

(i) supplemental oxygen for continuous use by every crew member and 10% of passengers if the aircraft is operated above an altitude of 10 000 feet AMSL for any period in excess of 30 minutes; and

(ii) therapeutic oxygen for continuous use by not less than 3% of the passengers; and

(2) if operating at altitudes above 13 000 feet AMSL and up to and including 25 000 feet AMSL be equipped with—

(i) supplemental oxygen for continuous use by every crew member and passenger; and

(ii) therapeutic oxygen for continuous use by not less than 1% of the passengers; and

(iii) portable oxygen equipment for each flight attendant that is readily accessible for immediate use and containing the greater of 120 litres of oxygen or the quantity of oxygen required for continuous use during the period that the cabin pressure altitude exceeds 10 000 feet.

(b) The requirements in paragraph (a) may be satisfied by substituting an equivalent quantity of supplemental oxygen for therapeutic oxygen or an equivalent quantity of therapeutic oxygen for supplemental oxygen.

91.535 Supplemental oxygen for pressurised aircraft

Flights above 10 000 ft AMSL and up to 25 000 ft AMSL

(a) An aircraft with a pressurised cabin that is to be operated at altitudes above 10 000 feet AMSL and up to and including 25 000 feet AMSL must be equipped with—

(1) an on-demand oxygen mask for each flight crew member, that is readily accessible to the flight crew member at their normally-seated position and capable of providing a continuous supply of supplemental oxygen for the period that the cabin pressure altitude exceeds 10 000 feet AMSL if the cabin pressurisation system fails; and

(2) the following equipment that is readily accessible to each flight attendant at their normally-seated position:

(i) a passenger oxygen mask:

(ii) portable oxygen equipment that is readily accessible for immediate use and containing the greater of 120 litres of oxygen or the quantity of oxygen required for continuous use for the period that the cabin pressure altitude exceeds 10 000 feet AMSL if the cabin pressurisation system fails; and

(3) sufficient spare oxygen masks, or portable oxygen equipment, distributed to provide immediate availability of oxygen to each crew member regardless of their location; and

(4) subject to paragraph (b), a minimum quantity of supplemental oxygen that must provide—

(i) 45 minutes supply for each flight crew member; and

(ii) 12 minutes supply for each flight attendant, and each passenger; and

(5) subject to paragraph (b), the greater of the quantity of supplemental or therapeutic oxygen that may be required by any one of the following:

(i) if the aircraft is capable of descending from its flight altitude to below 14 000 feet AMSL within 4 minutes—a quantity to provide oxygen for 10% of the passengers for any period that the cabin pressure altitude exceeds 10 000 feet AMSL:

(ii) if the aircraft cannot descend to below 14 000 feet AMSL within 4 minutes—a quantity to provide oxygen for all the passengers for the period that the cabin pressure altitude exceeds 14 000 feet AMSL:

(iii) a quantity to provide oxygen for 10% of the passengers for a period of 30 minutes:

(iv) a quantity to provide oxygen for continuous use by 1% of the passengers.

(b) The calculation of the quantity of oxygen that is required to meet the requirements under paragraphs (a)(4) and (a)(5) in the event of a cabin pressurisation system failure must take into account—

(1) the time that is required for the aircraft to make an emergency descent and recover to level flight at a safe altitude; and

(2) the time that is required for the aircraft to be flown at a pressure altitude above 10 000 feet during any subsequent stage of the flight prior to landing.

Flights above 25 000 ft AMSL and up to 30 000 ft AMSL

(c) An aircraft with a pressurised cabin that is operated at altitudes above 25 000 feet AMSL and up to and including 30 000 feet AMSL must be equipped with the equipment required under paragraph (a) and—

(1) a quick donning on-demand mask for each flight crew member that is readily accessible to the flight crew member at their normally seated position; and

(2) oxygen masks capable of providing supplemental oxygen—

(i) to every passenger and flight attendant; and

(ii) in each washroom and each separate lavatory; and

(3) therapeutic oxygen capable of providing not less than 15 minutes supply in addition to the oxygen required under paragraph (a)(5)(iii), for 10% of the passengers carried.

Flights above 30 000 ft AMSL

(d) An aircraft with a pressurised cabin that is to be operated at altitudes above 30 000 feet AMSL must be equipped with the equipment required under paragraphs (a) and (c) with the following additional requirements:

(1) the total number of oxygen outlets and masks in the passenger compartments, including those in each washroom and lavatory, must be at least 10% greater than the number of passenger seats:

(2) the extra oxygen units must be uniformly distributed throughout the aircraft:

(3) the oxygen masks must be automatically presented to the passengers and flight attendants in the passenger compartment if the cabin pressure altitude exceeds 14 000 feet AMSL:

(4) the flight crew must be provided with a manual means of making the passenger masks available if the automatic system fails.

91.537 Inoperative instruments and equipment

(a) An aircraft with inoperative instruments or equipment may be operated if—

(1) an MEL has been approved for the aircraft in accordance with rule 91.539; and

(2) the aircraft is certified for release-to-service with the inoperative instruments or equipment in accordance with the requirements of rule 43.107; and

(3) the aircraft is operated in accordance with every applicable condition and limitation contained in the MEL.

(b) An aircraft that does not exceed 5700 kg MCTOW and does not have a MEL approved under rule 91.539 may be operated under this Part with inoperative instruments and equipment if—

(1) the inoperative instruments and equipment are—

(i) not instruments and equipment prescribed for VFR day certification in the applicable airworthiness requirements under which the aircraft was type certificated; and

(ii) not required by this Subpart for specific operations; and

(iii) not required by an airworthiness directive to be in operable condition; and

(2) the aircraft is certified for release-to-service with the inoperative instruments or equipment in accordance with the requirements of rule 43.107.

(c) An aircraft that does not meet the requirements of paragraphs (a) or (b) may be operated with inoperative instruments and equipment if a *special flight permit* has been issued in respect of the aircraft in accordance with Subpart I of Part 21.

91.539 Approval of minimum equipment list

(a) An applicant for the approval of a MEL must complete the appropriate CAA form, and submit it to the Director together with a payment of the appropriate application fee prescribed by regulations made under the Act.

(b) A MEL must contain—

(1) the type and model of the aircraft to which it applies; and

(2) a list of instruments and equipment for the aircraft that may be partially or fully inoperative that—

(i) has been approved by the manufacturer of the aircraft; or

(ii) has been approved by the ICAO Contracting State that issued the type certificate for the aircraft; or

(iii) is acceptable to the Director on the grounds that the inoperative instruments and equipment do not affect the safe operation of the aircraft.

(c) A MEL must not contain any instruments or equipment that are—

(1) either specifically or otherwise required by the airworthiness requirements under which the aircraft is type certificated; or

(2) required by this subpart for specific operations; or

(3) required by an AD to be in operable condition.

(d) The Director may specify operating conditions and limitations on the MEL that the Director considers necessary in the interests of aviation safety.

91.541 Transponder and altitude reporting equipment

(a) Where an aircraft is equipped with ATCRBS transponder equipment, the transponder must have—

(1) Mode 3/A 4096 code capability replying to Mode 3/A interrogations with the code specified by ATC; and

(2) Mode C capability that automatically replies to Mode C interrogations by transmitting pressure altitude information in 100 foot increments.

(b) Where an aircraft is equipped with Mode S transponder equipment, the transponder must be capable of replying to—

(1) Mode 3/A interrogations with the code specified by ATC;

(2) intermode; and

(3) Mode S interrogations.

(c) An ADS-B system installed in an aircraft must meet the minimum performance standards and requirements under rule 91.257.

91.543 Altitude alerting system or device – turbojet or turbofan

(a) Except as provided in paragraph (b), a turbojet or turbofan powered aeroplane must be equipped with an altitude alerting system or device that—

(1) alerts the pilot upon approaching a preselected altitude in either ascent or descent—

(i) by a sequence of both aural and visual signals in sufficient time to establish level flight at that preselected altitude; or

(ii) by a sequence of visual signals in sufficient time to establish level flight at that preselected altitude, and when deviating above or below that preselected altitude, by an aural signal; and

(2) provides the required signals from sea level to the highest operating altitude approved for the aeroplane in which it was installed; and

(3) enables use of preselected altitudes in increments that are commensurate with the altitudes at which the aeroplane can be operated; and

(4) may be tested without special equipment to determine proper operation of the alerting signals; and

(5) accepts barometric pressure settings if the system or device operates on barometric pressure.

(b) Paragraph (a) does not apply—

(1) to the operation of any aeroplane that has an airworthiness certificate issued in the restricted, or special category; or

(2) to the operation of any aeroplane for the purposes of—

(i) ferrying a newly acquired aeroplane from the place where possession of it was taken to a place where the altitude alerting system or device is to be installed; or

(ii) conducting an airworthiness flight test of the aeroplane; or

(iii) ferrying an aeroplane to a place outside New Zealand for the purpose of registering it in a foreign country; or

(iv) conducting a sales demonstration of the operation of the aeroplane; or

(v) training foreign flight crews in the operation of the aeroplane before ferrying to a place outside New Zealand for the purpose of registering it in a foreign country.

91.545 Assigned altitude indicator

(a) Except as provided in paragraph (c), an aeroplane operating under IFR that is not equipped with an altitude alerting system or device must be equipped with a means of indicating an altitude assigned by ATC.

(b) The means of indicating assigned altitude required by paragraph (a) must—

(1) be located so that it may be readily adjusted for setting from each pilot station; and

(2) display assigned altitude information that is clearly visible to every flight crew member whose duty involves altitude assignment monitoring; and

(3) enable use of preselected altitudes in increments that are commensurate with the altitudes at which the aeroplane can be operated.

(c) An aeroplane that has a *special category—exhibition* airworthiness certificate or a *special category—limited* airworthiness certificate is not required to be equipped with a means of indicating assigned altitude.

91.547 Ejection seats and explosive devices

An ejection seat or associated egress or jettison system containing an explosive device, and fitted to an aircraft that has a special category airworthiness certificate must comply with rule 91.501(2)(i)(D) or rule 91.501(2)(ii)(B).

Subpart G – Operator Maintenance Requirements

91.601 Purpose

(a) This subpart prescribes the requirements to maintain New Zealand registered aircraft operating within or outside of New Zealand.

(b) Except for the following, this subpart does not apply to a microlight aircraft that is maintained under Part 103:

(1) rule 91.605(e)(2) (test and inspection of automatic pressure altitude reporting system if the microlight aircraft is equipped with a surveillance transponder):

(2) rule 91.605(e)(3) (surveillance transponder):

(3) rule 91.605(e)(8) (flotation equipment):

(4) rule 91.616 (maintenance logbook - Class 2 microlight aircraft):

(5) rule 91.617 (maintenance records - Class 2 microlight aircraft):

(6) rule 91.621 (transfer of maintenance records):

(7) rule 91.623 (retention of records).

(c) Except for the following, this subpart does not apply to a glider that is maintained under Part 104:

(1) rule 91.605(e) (maintenance of instruments and equipment):

(2) rule 91.613 (operational flight check):

(3) rule 91.615 (annual review of airworthiness):

(4) rule 91.616 (maintenance logbook):

(5) rule 91.617 (maintenance records):

(6) rule 91.621 (transfer of maintenance records):

(7) rule 91.623 (retention of records).

91.602 Maintenance requirements before flight

(a) Except as provided in paragraph (b) and rule 91.611, a person must not operate an aircraft unless the requirements prescribed in rules 91.603, 91.605, and 91.615 have been complied with.

(b) Paragraph (a) does not apply to a person operating an aircraft if a *special flight permit* has been issued for the aircraft in accordance with Part 21.

91.603 General maintenance requirements

(a) The operator of an aircraft must ensure that—

(1) the aircraft is maintained in an airworthy condition; and

(2) every applicable airworthiness directive is complied with in accordance with the requirements prescribed in Part 39; and

(3) the aircraft is inspected under this Subpart; and

(4) except for instruments and equipment that are permitted to be inoperative under rule 91.537, every defect is rectified before flight; and

(5) any inoperative instrument or item of equipment that is permitted to be inoperative under rule 91.537, is repaired, replaced, removed, or inspected at the next inspection required by the maintenance programme under which the aircraft is maintained; and

(6) maintenance on the aircraft is performed in accordance with the requirements prescribed in this Subpart, Part 43, and any other applicable rule; and

(7) the aircraft is certified for release-to-service under Part 43 after the performance of any maintenance on the aircraft; and

(8) every system that is required under Subpart F for indicating the presence of carbon monoxide in the cabin of the aircraft is serviceable and within any applicable life limit for the system.

(b) The operator of an aircraft must ensure compliance with the airworthiness limitations mandated by the airworthiness authority of the State of Design in the instructions for continued airworthiness issued for the aircraft.

(c) Except as provided in paragraphs (d) to (f), the operator of an aircraft must ensure compliance with—

(1) the manufacturer's recommended overhaul intervals; and

(2) for an aircraft that has a *special category—exhibition* airworthiness certificate or a *special category—limited* airworthiness certificate, the replacement of lifed components as specified in the maintenance programme for the aircraft.

(d) Products and components may be operated beyond the manufacturer's recommended TBO if the operator complies with TBO escalation procedures that are detailed in a maintenance programme that is approved under Part 115, Part 119 or approved under rule 91.607.

(e) Despite paragraph (d), a piston engine fitted to an aircraft that is not used for hire or reward operations may be operated beyond the manufacturer's recommended TBO if the piston engine is maintained in accordance with an engine TBO escalation programme that is acceptable to the Director.

(f) Despite paragraph (d), a propeller fitted to an aircraft that is not used for air operations may be operated beyond the manufacturer's recommended calendar TBO if the propeller is inspected in accordance with methods acceptable to the Director at 5 yearly intervals, except that propellers must be overhauled at the manufacturer's recommended operating hours TBO.

91.605 Maintenance programmes and schedules

(a) Subject to paragraphs (b), (c), and (d), the operator of an aircraft must maintain the aircraft under—

(1) a maintenance programme approved under Part 115; or

(2) a maintenance programme approved under Part 119; or

(3) a maintenance programme approved under rule 91.607; or

(4) the manufacturer's maintenance schedule; or

(5) if the aircraft is powered by a piston engine and has a MCTOW of 2730 kg or less, a maintenance programme that is acceptable to the Director and includes at least the following:

(i) details of the responsibilities and standards for maintenance of the aircraft under the applicable rule requirements:

(ii) details of pre-flight checks:

(iii) details of scheduled maintenance checks and inspections.

(b) The operator of an aircraft that is—

(1) used for air operations under the authority of an air operator certificate issued by the Director under the Act and Part 119 must maintain the aircraft under the maintenance programme that is required by Part 119; or

(2) used for adventure aviation operations under the authority of an adventure aviation operator certificate issued by the Director under the Act and Part 115 must maintain the aircraft under the maintenance programme that is required by Part 115; or

(3) issued with a special category airworthiness certificate must maintain the aircraft under a valid maintenance programme approved under rule 91.607 for the holder of the certificate of registration for the aircraft.

(c) If the manufacturer's maintenance schedule referred to in subparagraph (a)(4) does not provide for an aircraft that operates for less than 100 hours of time in service per year, the operator must ensure that the manufacturer's 100-hour inspection or an equivalent inspection is completed within the preceding 12 months.

(d) If the Director determines that a manufacturer's maintenance schedule referred to in subparagraph (a)(4) is deficient, the Director may require the operator to submit a maintenance programme for approval under rule 91.607.

(e) Except as provided in paragraph (f) and rule 91.611, the operator of an aircraft must not operate the aircraft unless—

(1) every aircraft radio station that is required to be installed in the aircraft under Subpart F for operations under IFR has been tested and inspected under Part 43, Appendix B within the preceding 24 months; and

(2) every static pressure system, altimeter instrument, or automatic pressure altitude reporting system that is required to be installed in the aircraft under Subpart F, or required for a surveillance transponder installed in the aircraft, has been tested and inspected under Part 43, Appendix D—

(i) within the preceding 24 months; and

(ii) following any opening and closing of the static pressure system, except for the use of system drain and alternate

static pressure valves, or where self-sealing disconnect coupling is provided; and

(iii) following installation of, or maintenance on, the automatic pressure altitude reporting system where data correspondence error could be introduced; and

(3) every surveillance transponder that is required to be installed in the aircraft under Subpart F has been tested and inspected, under Part 43, Appendix E within the preceding 24 months; and

(4) every ELT or AELS that is required to be installed in the aircraft under Subpart F—

(i) has been tested and inspected under—

(A) Appendix F of Part 43, as required by paragraphs (AA) or (AB), whichever occurs earlier—

(AA) within the preceding 12 months; or

(AB) the aircraft manufacturer's 100 hour inspection or an equivalent inspection, or

(B) for an aircraft maintained under a maintenance programme required by rule 119.63, the scheduled intervals, which must not be more than 12 months, as described in the approved maintenance programme; and

(ii) has the battery replaced in accordance with the manufacturer's instructions, when the life of the battery, as established by the manufacturer, has expired; and

(5) every compass that is required to be installed in the aircraft under Subpart F has been calibrated—

(i) within the preceding 24 months; and

(ii) following any out of phase event that may affect the calibration of the compass unless the aircraft manufacturer specifies otherwise; and

(6) every first aid kit that is required to be installed in the aircraft under Subpart F has been inspected—

(i) within the preceding 12 months to ensure that appropriate quantities of items are included and time-expired items are replaced; and

(ii) after every reported use to ensure that appropriate quantities of items are included; and

(7) every portable fire extinguisher that is required to be installed in the aircraft under Subpart F has been inspected for condition and tested in accordance with the manufacturer's instructions or other equivalent instructions acceptable to the Director within the preceding 12 months; and

(8) all flotation equipment that is required to be installed in the aircraft under Subpart F has been inspected for condition and tested in accordance with the manufacturer's instructions or other equivalent instructions acceptable to the Director within the preceding 12 months; and

(9) the aircraft's empty weight and centre of gravity is re-established if—

(i) changes have been made to the aircraft that could affect the empty weight and centre of gravity; or

(ii) the operator has any reason to suspect that the information in the aircraft's flight manual is no longer accurate; and

(10) for a powered aircraft with a maximum certificated seating capacity of 4 or more seats, the aircraft has been weighed within the preceding 10 years.

(f) The operator of an aircraft that is maintained under a maintenance programme referred to in paragraphs (a)(1), (a)(2), (a)(3), or (a)(5) is not required to comply with any particular requirement in paragraph (e) if the maintenance programme for the aircraft includes a test, inspection, or other action that is equivalent to the particular requirement in paragraph (e).

(g) The operator of an aircraft must—

(1) identify in the maintenance logbook for the aircraft which maintenance option under paragraph (a) is to be used for the aircraft; and

(2) if the maintenance programme is one that is approved under Part 119 or approved under rule 91.607, identify in the maintenance programme the person who is responsible for scheduling the maintenance that is required in the programme; and

(3) if changing from the maintenance programme or option identified under paragraph(1) to another programme or option under paragraph (a), schedule the inspections required by the new programme or schedule, to provide for the continued airworthy condition of the aircraft; and

(4) provide a copy of the applicable maintenance programme or schedule to the person who performs maintenance on the aircraft, and upon request to the Director.

(h) The tests and inspections required by paragraphs (e)(1), (e)(2)(i), (e)(3), and the 12 month test and inspection requirement in paragraph (e)(4)(i)(A) do not need to be performed if—

(1) the aircraft has been inspected for the grant of an airworthiness certificate under section 9 of the Act and Part 21 within the preceding 12 months; and

(2) the applicable equipment was installed in the aircraft when the inspection specified in paragraph (1) was performed.

91.607 Approval of maintenance programmes

(a) An applicant for the approval of a maintenance programme referred to in rule 91.605(a)(3) must complete the appropriate CAA form, and submit it to the Director together with the document required by paragraph (b) and a payment of the appropriate application fee prescribed by Regulations made under the Act.

(b) The applicant for the approval of a maintenance programme must provide the Director with a document containing—

(1) a description of the maintenance programme; and

(2) procedures for maintenance control; and

(3) procedures for the compilation and retention of records, reports, and technical reference material; and

(4) instructions and procedures for the conduct of the maintenance for the particular aircraft type, including required inspections and tests; and

(5) an inspection schedule that is consistent with—

(i) the manufacturer's recommendations; and

(ii) the operator’s service experience; and

(iii) the type of operation in which the aircraft is engaged; and

(6) procedures for extending inspection intervals in accordance with rule 91.611, if applicable; and

(7) procedures for assessing and controlling engine, propeller and component TBO escalations, if applicable; and

(8) procedures for changing an inspection interval on the basis of service experience, if applicable; and

(9) sample inspection forms, and instructions for their use; and

(10) sample reports and records, and instructions for their use.

(c) The Director may approve a maintenance programme for an applicant if the Director is satisfied that—

(1) the programme meets the requirements of paragraph (b); and

(2) the approval of the maintenance programme is not contrary to the interests of aviation safety.

(d) An applicant for approval of a maintenance programme for an aircraft that has a *special category—exhibition* airworthiness certificate or a *special category—limited* airworthiness certificate must, in addition to paragraph (b), provide the Director with a document containing—

(1) details of a pre-flight inspection that must be carried out before the first flight of the day for the aircraft; and

(2) details of a post-flight inspection if a post-flight inspection is specified by the manufacturer or recognised military authority for the aircraft type; and

(3) details of an annual maintenance inspection; and

(4) if applicable, a schedule of lifed components and their associated life as specified by—

(i) the aircraft manufacturer; or

(ii) a military authority acceptable to the Director; or

(iii) the Director; and

(5) provisions for ensuring the continuing airworthiness of the aircraft; and

(6) additional inspections consistent with—

(i) the manufacturer's recommendations; and

(ii) service experience, including military operations; and

(iii) the type of operations in which the aircraft is engaged; and

(iv) the complexity of the aircraft.

(e) A maintenance programme required by rule 91.605(b)(3) to which paragraph (d) applies must include the airframe, engines, propellers, rotors, appliances, survival equipment and emergency equipment.

(f) Subject to any change that the Director may require under rule 91.609, a maintenance programme approved under paragraph (c) for an aircraft that has a *special category* airworthiness certificate is only valid for the period that the certificate of registration remains valid under rule 47.65.

91.609 Changes to maintenance programmes and schedules

(a) An operator of an aircraft must, upon a written request from the Director, amend a maintenance programme or schedule for an aircraft if the Director considers that an amendment is necessary to satisfy the continuing airworthiness requirements for the aircraft.

(b) If an operator discontinues a maintenance programme that is approved under rule 91.607, the operator must—

(1) notify the Director in writing, within 7 days of the maintenance programme being discontinued; and

(2) reschedule the inspections required by the new maintenance programme from the date or time, as applicable, that the equivalent inspection was last completed for the aircraft.

91.611 Inspection planning latitude

(a) Unless expressly prohibited by these rules, an airworthiness directive, or a manufacturer's mandatory inspection requirement, the inspection intervals required by rule 91.605 may be extended by up to 10% to allow for maintenance planning purposes.

(b) If the extension provisions of paragraph (a) are applied to an aircraft—

(1) the new extended date, or aircraft operating hours or cycles, whichever is applicable, for the inspection must be recorded in the appropriate maintenance logbook or technical log; and

(2) the next required inspection interval must start from the beginning of the extension period to ensure that any extension that is applied to an inspection interval is not cumulative.

91.613 Operational flight check

(a) A person performing an operational flight check that is required by rule 43.103(a)(4)(i) must—

(1) hold a valid pilot licence and type rating for the aircraft; and

(2) check that the flight characteristics of the aircraft have not appreciably changed as a result of the maintenance; and

(3) record any defects found during the operational flight check in the technical log.

(b) A person performing an operational flight check under paragraph (a) must not carry any other person on the aircraft unless that person is required to perform an essential function that is associated with the flight check.

91.615 Review of airworthiness

(a) Except as provided in paragraphs (b) and (c), a person must not operate an aircraft unless—

(1) a review of airworthiness for the aircraft has been certified as completed under Subpart D of Part 43 within—

(i) the preceding 12 months; or

(ii) for an aircraft that is not operated for hire or reward, the preceding 24 months; or

(2) the aircraft has been issued with an airworthiness certificate under Part 21 within the preceding 12 months.

(aa) A review of airworthiness may be required more frequently than the period specified in paragraph (a)(1)(ii) in a particular case, if the Director determines that it is in the interests of aviation safety.

(b) Paragraph (a) does not apply to an aircraft that is operated under the following Parts:

(1) Part 121:

(2) Part 125:

(3) Part 135 if the aircraft is subject to a maintenance review under rule 135.415(a).

(c) A person may operate an aircraft after the date at which a review of airworthiness is required under paragraph (a) or paragraph (aa)—

(1) for a period of not more than 36 days to allow for maintenance planning purposes if a new extended date, within the 36 day period, for the review of airworthiness is recorded in the technical log; or

(2) if the sole purpose of operating the aircraft is to enable the review of airworthiness to be completed.

91.616 Maintenance logbooks

An operator of an aircraft, except a Class 1 microlight aeroplane, must—

(1) provide appropriate maintenance logbooks for the aircraft; and

(2) ensure that the maintenance logbooks are not carried in the aircraft.

91.617 Maintenance records

(a) An operator of an aircraft, except a Class 1 microlight aeroplane, must ensure that for each airframe, and each product and component that has a finite life or a TBO recommended by the manufacturer, accurate records are compiled in the appropriate maintenance logbook for the total time-in-service, and if applicable the total cycles.

(b) An operator of an aircraft, except a Class 1 microlight aeroplane, must ensure that for each product and component, the maintenance records required under rule 43.69 are compiled and retained.

(c) An operator of an aircraft that is involved in an accident must ensure that descriptive details of the circumstances of the accident, and descriptive details of the resultant damage to the aircraft are recorded in the appropriate maintenance logbook.

(d) The records required in paragraphs (a), (b), and (c) may be kept in plain language form, or in coded form provided that the coded form provides for the preservation and retrieval of information that is required to be recorded.

91.619 Technical log

(a) Except as provided in paragraph (c), the operator of an aircraft must provide a technical log for the aircraft with provision for recording the following information:

(1) the name of the operator:

(2) the registration mark, type, and model of the aircraft:

(3) the identity of the maintenance programme or schedule required under rule 91.605(a), to which the aircraft is maintained:

(4) a statement of the maintenance status of the aircraft including—

(i) the identity of the next scheduled inspection and the date or hours due; and

(ii) any requirement under rule 43.103(a)(4)(i) for an operational flight check to be carried out:

(5) the date or hours at which any other maintenance is due prior to the next scheduled inspection:

(6) the date at which the next annual review of airworthiness or maintenance review is due:

(7) the daily hours flown:

(8) the total time in service:

(9) if applicable,—

(i) the daily cycles used; and

(ii) the total cycles:

(10) any defects found during the pre-flight inspection, during a flight, or following a flight:

(11) details of the rectification of defects that occur between scheduled inspections and the certification for release-to-service for the rectification:

(12) details of any deferred rectification of defects including any instruments and equipment that are inoperative in accordance with rule 91.537.

(b) The operator of an aircraft must ensure that the information specified in paragraph (a) is accurately recorded in the technical log and that the information is current.

(c) The holder of an air operator certificate issued in accordance with Part 119 may record the following information in a format other than in the technical log, if that format and the associated procedures are acceptable to the Director, and the information is accurate and available to the pilot-in-command on request:

(1) the identity of the next scheduled inspection and the date or hours due:

(2) the date or hours at which any other maintenance is due prior to the next scheduled inspection:

(3) the total time-in-service:

(4) the total cycles.

91.621 Transfer of maintenance records

The holder of a New Zealand certificate of registration for an aircraft who transfers the possession of the aircraft to another person in accordance with Part 47 must, at the time of the transfer of the aircraft, transfer to that person—

(1) the records specified in rule 91.617(b); and

(2) the records specified in rule 91.617(a) if they are not included in the records transferred under paragraph (1).

91.623 Retention of records

(a) Except as provided in paragraph (b), the operator of an aircraft must retain the records specified in rule 91.617 for at least 12 months after the product or component is withdrawn from service.

(b) The record of maintenance information required under rule 43.69(a)(1) only needs to be retained until the maintenance is repeated or superseded by other maintenance of equivalent scope and detail, or for a period of at least 5 years after the maintenance is performed, whichever occurs first.

(c) *Reserved*

(d) The operator of an aircraft must retain the technical log required under rule 91.619 for a period of at least 12 months after the date of the last entry in the technical log.

Subpart H – Special Flight Operations

91.701 Aerobatic flight

(a) Except as provided in paragraph (e), a pilot-in-command must not operate an aircraft in aerobatic flight—

(1) over an area that is within a horizontal distance of 600 metres of a congested area of a city, town, or settlement; or

(2) over an area that is within a horizontal distance of 600 metres of an open air assembly of persons; or

(3) within any controlled airspace except with the authorisation of ATC.

(b) Except as provided in paragraphs (c) and (f), a pilot-in-command must not operate an aircraft in aerobatic flight below a height of 3000 feet above the surface.

(c) A pilot-in-command may operate an aircraft in aerobatic flight below a height of 3000 feet above the surface—

(1) but not less than 1500 feet above the surface if the pilot holds an aerobatic rating issued in accordance with Part 61; and

(2) below a height of 1500 feet above the surface if the pilot—

(i) holds an aerobatic rating issued in accordance with Part 61; and

(ii) does not perform aerobatic flight below the height authorised in their aerobatic rating; and

(iii) is participating in an aviation event.

(d) A pilot-command must not operate an aircraft in aerobatic flight carrying a passenger unless—

(1) the pilot holds an aerobatic rating issued in accordance with Part 61; and

(2) the flight is conducted at a height not less than 3000 feet above the surface.

(e) A pilot-in-command may operate an aircraft in aerobatic flight over an area that is within a horizontal distance of 600 metres of spectators at an aviation event if the pilot is participating in that aviation event in accordance with rule 91.703.

(f) A pilot of a glider may operate a glider in aerobatic flight below a height of 3000 feet above the surface without holding an aerobatic rating issued in accordance with Part 61 if—

(1) the aerobatic flight is for the purpose of spin training; and

(2) the flight is conducted at a height not less than 1000 feet above the surface.

91.703 Aviation events

(a) A person must not conduct an aviation event or operate an aircraft in an aviation event, unless the organiser of the event is the holder of an aviation event authorisation issued by the Director.

(b) Each applicant for an aviation event authorisation must submit an aviation event plan to the Director at least 90 days prior to the start of the aviation event.

(c) The aviation event plan required by paragraph (b) must —

(1) contain the following information about the proposed aviation event—

(i) name, position, and address of the organiser; and

(ii) place, date, and time; and

(iii) type of event; and

(iv) details of the structure of the organisation including persons who are responsible for supervising the aviation event; and

(v) details of the flying programme; and

(vi) detailed plan and description of the site with sufficient detail to show compliance with the requirements of paragraph (d); and

(vii) details of control methods to be used for the safety of the spectators; and

(viii) details of emergency services to be provided; and

(2) be acceptable to the Director.

(d) A pilot-in-command of an aircraft participating in an aviation event must—

(1) for display flights, other than a display of agricultural operations or helicopter operations, operate at a height of at least 100 feet above the surface; and

(2) fly 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

(3) not carry any passengers; and

(4) not fly over any spectator area; and

(5) not conduct any manoeuvre between the display line and any spectator area; and

(6) with the exception of a helicopter hovering or taxiing, not initiate any manoeuvre in the direction of any spectator area.

(e) Paragraph (a) does not apply to aviation events at which—

(1) not more than 500 people are in attendance; or

(2) there are no more than three participating aircraft; or

(3) the aircraft are in one formation.

91.705 Parachute-drop operations

(a) A pilot-in-command of an aircraft performing a parachute-drop operation must hold a parachute-drop rating issued by the Dirctor under the Act and Part 61.

(b) An operator of an aircraft performing a parachute-drop operation must ensure that—

(1) the aircraft used to perform the operation has a valid standard category airworthiness certificate; 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 each parachutist to be carried; and

(4) the aircraft cabin has no handles or fittings which could cause the inadvertent opening of a parachute in the aircraft or during egress by any parachutist; and

(5) suitable points on the aircraft are used for the attachment of static lines; and

(6) the aircraft flight manual authorises flight with a door removed, or open, in flight; and

(c) A pilot-in-command of an aircraft performing a parachute-drop operation must ensure that—

(1) each person carried in the aircraft, other than a person intending to make a parachute descent, —

(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

(2) each person carried in the aircraft who intends to make a parachute descent —

(i) is not in a position in the aircraft that could hazard the safety of the operation or the aircraft 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.

(d) A pilot-in-command of an aircraft performing a parachute-drop operation must not permit a person to make a parachute descent from the aircraft, unless—

(1) the person or persons making the descent have provided the pilot with the details of the proposed descent prior to take-off; and

(2) the pilot is satisfied that each person's descent is—

(i) authorised by a parachute organisation; or

(ii) authorised by a holder of an adventure aviation operator certificate issued by the director under the Act and Part 115 if the certificate authorises tandem parachute operations; or

(iii) approved by the Director.

91.707 Emergency parachute assemblies

A pilot-in-command of an aircraft must not allow a parachute assembly that is available for emergency use to be carried in the aircraft unless the parachute assembly—

(1) meets the requirements of Appendix A.25; and

(2) has been adequately protected from damage from any condition or substance that may be harmful to the materials from which the parachute assembly has been constructed; and

(3) has been maintained in accordance with the manufacturer's instructions and packed within the preceding calendar year by—

(i) the holder of a parachute technician rating issued by a parachute organisation; or

(ii) the parachute manufacturer; or

(iii) a New Zealand Defence Force parachute technician; or

(iv) a person otherwise approved by the Director; and

(4) is accompanied by a packing card containing certification of serviceability by the person who maintained or packed the parachute.

91.709 Towing gliders

(a) A person must not tow a glider in flight unless that person holds a glider tow rating issued under Part 61.

(b) A person must not tow a glider in flight unless—

(1) the aircraft used for towing is operated at airspeeds below the maximum airspeed specified for aero-tow in the glider flight manual; and

(2) the towing load does not exceed the maximum load specified in the aircraft flight manual; and

(3) the person has checked the operation of the tow hook of the aircraft to be used before the flight; and

(4) the person uses the take-off, glider release, airspeed, and emergency signals established by a gliding organisation for the pilots of tow aircraft and gliders; and

(5) the take-off distance to clear a 50 foot obstacle with the glider in tow does not exceed 85% of the take-off run available; and

(6) the aircraft is capable of maintaining a rate of climb of at least 200 feet per minute at 1000 feet above the aerodrome with the glider in tow.

(c) A person must not operate an aircraft to tow a glider in flight unless—

(1) the aircraft to be used is equipped with—

(i) a tow hook and attachment assembly; and

(ii) a pilot-activated quick release capable of releasing the tow line from the tow hook with the glider in tow and while the tow aircraft is in flight; and

(2) the tow line to be used meets the requirements of Appendix A.26; and

(3) if more than one glider is being towed, the tow lines to be used are—

(i) one for each glider; and

(ii) of a length that provides a distance of not less than 50 m between any glider and the towing aircraft; and

(iii) of a length that provides a trailing separation of not less than 30 m between each glider; and

(iv) attached by a single tow ring to the aircraft, and capable of separation on release from the aircraft.

(d) Paragraphs (a), (b), and (c) do not apply to the towing of a hang glider in flight.

91.711 Towing objects other than gliders

(a) A pilot must not tow an object other than a glider in flight unless—

(1) they hold—

(i) a private pilot licence and a tow rating issued under Part 61; or

(ii) a commercial pilot licence issued under Part 61; or

(iii) an airline transport pilot licence issued under Part 61; and

(2) the aircraft—

(i) is equipped with a tow hook and attachment assembly which has a quick release mechanism; and

(ii) has a positive rate of climb at the altitudes to be operated.

(b) A pilot operating an aircraft that is towing an object other than a glider must not carry any passengers.

Subpart I – Foreign Registered Aircraft Operations and Operation of NZ Registered Aircraft Outside New Zealand

91.751 Applicability

This Subpart applies to the operation of New Zealand registered aircraft outside New Zealand and the operation of foreign registered aircraft within New Zealand.

91.753 Operations of New Zealand registered aircraft outside New Zealand

A person operating a New Zealand registered aircraft must —

(1) when over the high seas, comply with ICAO Annex 2; and

(2) when operating within a foreign State, comply with the operating and flight rules of that State; and

(3) comply with this Part 91 so far as it is not inconsistent with applicable rules of the foreign country where the aircraft is being operated, or ICAO Annex 2; and

(4) if conducting commercial air transport operations under VFR between New Zealand and another State, or operating commercial air transport operations under VFR between other States, be fitted with a sensitive pressure altimeter that meets the requirements specified in a transport instrument which may be identified as CATI 91.509.

91.755 Special rules for foreign aircraft operations

(a) ***General***. In addition to the other applicable rules of this Part, a person operating a foreign registered aircraft within New Zealand must comply with this rule.

(b) ***VFR***. A person must not conduct an aircraft operation under VFR that requires two-way radio communications under this Part unless at least one flight crew member on the aircraft is able to conduct two-way radio communications in the English language and is on duty during the operation.

(c) ***IFR.*** A person must not operate an aircraft under IFR unless—

(1) the aircraft is equipped with—

(i) radio equipment allowing two-way radio communications with ATS when the aircraft is being operated in controlled airspace; and

(ii) a navigation system which will enable the aircraft to proceed in accordance with its flight plan; and

(2) the person piloting the aircraft—

(i) holds a current New Zealand instrument rating, or holds a current instrument rating issued by the country of that aircraft's registry; and

(ii) is familiar with the New Zealand IFR en route, holding, and approach procedures published in the AIPNZ; and

(3) at least one flight crew member of the aircraft is able to conduct two-way radio telephone communications in the English language and the flight crew member is on duty while the aircraft is operating under IFR.

91.757 Operation within New Zealand of foreign aircraft

(a) Subject to the provisions of paragraph (b), a foreign registered aircraft must not be operated within New Zealand for hire or reward, other than on an air transport operation, except with the approval of the Director who may impose such conditions and limitations on the operation of the aircraft as the Director considers necessary in the interests of aviation safety.

(b) The holder of an approval issued under paragraph (a) must comply with any conditions or limitations imposed on the approval.

(c) Nothing in this rule applies to an aircraft engaged in an international scheduled or international non-scheduled flight.

(d) Nothing in paragraph (a) or paragraph (b) applies to aircraft engaged in air operations conducted in New Zealand under an Australian AOC with ANZA privileges.

Subpart J – Operating Noise Limits

91.801 Purpose

This Subpart prescribes limitations on the operation of civil aircraft in New Zealand in respect to aircraft noise and engine emission.

91.803 Aircraft noise level compliance

(a) A person must not operate an aircraft to or from an aerodrome within New Zealand, unless —

(1) for New Zealand registered aircraft, the Director is satisfied that the aircraft complies with the applicable aircraft noise standards specified in Appendix C to Part 21; and

(2) for foreign registered aircraft, that aircraft is certificated or validated by the State of Registry to comply with standards that are equivalent to the applicable aircraft noise standards specified in ICAO Annex 16, Volume I.

(b) Notwithstanding paragraph (a), a person may not operate a subsonic turbojet or turbofan powered aeroplane to or from an aerodrome within New Zealand unless that aeroplane is certificated to comply with noise standards that are at least equal to the aircraft noise standards specified in ICAO Annex 16, Volume I, Chapter 3.

91.805 Aircraft sonic boom

(a) A person must not operate an aircraft at a Mach number greater than 0.92 unless approved by the Director and in compliance with any conditions and limitations specified in the approval.

(b) A person must not operate an aircraft that has a maximum operating speed in excess of a Mach number of 0.92 within the territorial limits of New Zealand unless the information that is available to the pilot-in-command includes flight limitations to ensure that flights entering or leaving New Zealand do not cause a sonic boom to reach the surface within New Zealand.

(c) A pilot-in-command of an aircraft that has a maximum operating speed in excess of a Mach number of 0.92 must comply with the flight limitations required under paragraph (b).

91.807 Engine emission compliance

A person must not operate a turbojet or turbofan powered aircraft to or from an aerodrome within New Zealand unless —

(1) for New Zealand registered aircraft, the Director is satisfied that the aircraft complies with the applicable aircraft engine emission standards specified in Appendix C to Part 21; and

(2) for foreign registered aircraft, that aircraft is certificated or validated by the State of Registry to comply with standards that

are equivalent to the applicable aircraft engine emission standards specified in ICAO Annex 16, Volume II.

Appendix A – Instrument and equipment specifications

Instruments and equipment required by Subpart F must meet the following specifications and requirements:

A.1 Markings and placards

(a) A marking or placard that is required to be displayed on or in an aircraft must be displayed in a conspicuous place and in such a manner to minimise the risk of erasure, disfigurement, obscuring, or removal.

(b) Each unit of measure used on a marking or placard must be the same as that on any related instrument or in the related flight manual.

A.2 Fuel and oil markings

(a) ***Fuel contents gauge.*** Each fuel contents gauge calibrated in US gallons must be clearly marked to show that the calibration is in US gallons.

(b) ***Fuel and oil placards.*** Each aircraft must be placarded in the immediate vicinity of each fuel and oil filler with the specification and/or grade of fuel or oil as appropriate.

A.3 Seating

A seat and berth must meet the requirements of TSO C25, TSO C39, or TSO C127 as applicable.

A.4 Restraints

(a) Each safety belt must—

(1) meet the requirements of—

(i) TSO C22; or

(ii) ISO/FIA 8853; or

(iii) FIA 8854; or

(iv) for ex-military aircraft, a military drawing and order number or any other appropriate military designation or specification number; or

(2) be proof loaded to 50% of the rated strength required by those standards every 12 months if the identification labels required by the standards in paragraph (a)(1) are missing.

(b) A torso restraint—

(1) must meet the requirements of—

(i) TSO C114; or

(ii) for ex-military aircraft, a military drawing and order number or any other appropriate military designation or specification number.

(c) If a shoulder harness is fitted with an inertia reel, the inertia reel must meet the requirements of US Military Specification MIL-R-8236.

A.5 Child restraint systems

A child restraint system must—

(1) be secured to the aircraft seat or berth by a safety belt meeting the requirements of TSO C22; and

(2) not be fitted with a tether strap that secures the top of the infant or child seat; and

(3) meet the requirements of—

(i) TSO C100; or

(ii) New Zealand Standard 5411; or

(iii) Australia / New Zealand Standard AS/NZS/1754; or

(iv) United States Standard FMVSS 213; or

(v) European Standard ECE 44.

A.6 Aircraft lights

(a) An aircraft anti-collision light system must comprise—

(1) a red rotating beacon; or

(2) an aviation red or aviation white capacitor discharge light that meets the requirements of—

(i) TSO C96; or

(ii) the minimum standards of the applicable aircraft design; or

(iii) another standard acceptable to the Director.

(b) For an aircraft that was first issued with a type certificate before 11 August 1971, the anti-collision light system must meet the requirements of FAR Part 23, 25, 27, or 29 as applicable, except that the colour may be either aviation red or aviation white.

(c) Aircraft position lights must—

(1) meet the requirements of TSO C30; and

(2) consist of—

(i) an unobstructed steady red light projected above and below the horizontal plane through an angle from dead ahead to 110 degrees left; and

(ii) an unobstructed steady green light projected above and below the horizontal plane through an angle from dead ahead to 110 degrees right; and

(iii) an unobstructed steady white light projected above and below the horizontal plane rearward through an angle of 140 degrees equally distributed on the left and right sides.

A.7 Aircraft time-in-service recorders

An aircraft time-in-service recorder must meet the requirements of NZTSO 2001.

A.8 *Reserved*

A.9 Communication and navigation equipment

(a) Except as provided in paragraph (c), radio communication and navigation equipment must meet the requirements of—

(1) for Level 1—

(i) communication equipment, one of the following TSO as applicable: C31, C32, C37, C38, or C50; or

(ii) navigation equipment, one of the following TSO as applicable: C34, C35, C36, C40, C41, C60, C94, or C129; or

(iii) United Kingdom Civil Aviation Authority approval for Category WR, VC, or LA Class I; or

(iv) Australian Airborne Radio Navigation Publication No. 50 (Pub 50) Class I; or

(2) for Level 2—

(i) United Kingdom Civil Aviation Authority approval for Category LA Class II; or

(ii) Pub 50 V or L; or

(3) for Level 3, United Kingdom Civil Aviation Authority approval for Category LA Class III or Category G; or

(4) for Level 4—

(i) the requirements of the Radiocommunications Regulations 2001; and

(ii) compass safe distances determined in accordance with British Standard 3G,100: Part 2, Section 2.

(b) If two independent radio communication systems are required—

(1) each system must have an independent antenna; or

(2) the two systems may use a single rigidly supported non-wire antenna.

(c) The following equipment may be used to meet the radio communication equipment requirements for operations in gliders, amateur

built aircraft, and microlight aircraft, if the equipment installation conforms to acceptable technical data, and the transceiver is connected to a quarter-wave antenna permanently mounted on the aircraft—

(1) equipment listed in United Kingdom Civil Aviation Authority approval for Category G(a); or

(2) any other equipment shown by a test programme and accepted by the Director as capable of meeting the applicable requirements of the United Kingdom Civil Aviation Authority approval referred to in paragraph(c)(1).

A.10 MNPS and VSM equipment

Navigation systems and equipment installed for operation in MNPS or VSM airspace must—

(1) meet the performance requirements of ICAO Regional Supplementary Procedures Doc 7030 applicable to the airspace and routes being flown; and

(2) *reserved*

(3) meet the equipment and functional requirements—

(i) *reserved*

(ii) for operation in airspace designated with a VSM of 1000 feet above flight level 290, contained in the ICAO Manual on Implementation of a 300m (1000ft) Vertical Separation Minimum Between FL 290 and FL 410 Inclusive Doc 9574.

A.11 Category II and III equipment

(a) ILS localiser and glide slope equipment must meet the requirements of Radio Technical Commission for Aeronautics (RTCA) document number DO-195 for ILS localiser equipment and DO-192 for ILS glide slope equipment.

(b) A flight control guidance system must meet the performance requirements of an evaluation programme.

(c) A radio altimeter must—

(1) display to the flight crew the wheel height of the main landing gear above the terrain to an accuracy of plus or minus 5 feet or 5%, whichever is greater, when the—

(i) pitch angle is plus or minus 5 degrees about the mean approach attitude; and

(ii) roll angle is 20 degrees in either direction; and

(iii) forward velocity is between the minimum approach speed and 200 knots; and

(iv) sink rate is not greater than 15 feet per second at altitudes from 100 feet to 200 feet; and

(v) over level ground track actual altitude without significant lag or oscillation; and

(2) when the aircraft is below 200 feet altitude and a change in terrain representing 10% of the aircraft's altitude occurs,—

(i) not unlock; and

(ii) have its display respond within 0.1 seconds; and

(iii) if the radar altimeter unlocks, re-acquire the signal in less than 1 second; and

(3) if using a push to test feature, test the entire system at a simulated altitude of less than 500 feet; and

(4) incorporate a positive failure warning any time there is a power loss or absence of ground return signals within the desired range of operating altitudes.

(d) Other required instruments and equipment must be capable of performing the necessary Category II or III operations as listed in the operator's precision approach procedure manual required by rule 91.417.

A.12 *Reserved*

A.13 *Reserved*

A.14 *Reserved*

A.15 Emergency locator transmitters

(e) An ELT(S) must—

(1) be TSO-C126 certified; and

(2) transmit on both frequencies of 406 MHz and 121.5 MHz.

(f) Reserved

(g) An EPIRB must—

(1) meet the requirements of Australian/New Zealand Standard AS/NZ 4280.1; and

(2) transmit on both frequencies of 406 MHz and 121.5 MHz.

(h) An ELT(S) and EPIRB must—

(1) be self-buoyant; and

(2) be water resistant; and

(3) be portable.

(i) A PLB must operate on both frequencies of 406 MHz and 121.5 MHz, and must—

(1) meet the requirements of Australian/New Zealand Standard AS/NZS 4280.2; or

(3) be COSPAS-SARSAT type approved.

(j) An ELT(S) must be stowed in the aircraft in a manner that allows it to be readily available to any person on the aircraft in the event of an emergency.

A.16 Oxygen

Oxygen used in aircraft must be of Aviation Oxygen Standard which is gaseous oxygen with a minimum purity of 99%, maximum moisture of 0.0056 grams per cubic metre, and nil carbon monoxide.

A.17 Passenger oxygen masks

Each passenger oxygen mask must meet the requirements of TSO C64.

A.18 Crew member on-demand oxygen masks

(a) Each crew member on-demand oxygen mask must meet the requirements of TSO C78.

(b) Each on-demand oxygen mask for flight crew members must, without causing undue delay in proceeding with emergency duties, be—

(1) capable of being placed on the face with one hand from the stowed position; and

(2) properly secured, sealed, and capable of supplying oxygen upon demand within five seconds; and

(3) able to provide for—

(i) the use of corrective eyeglasses without undue impairment of vision or loss of protection; and

(ii) communication by interphone with each flight crew member while in their normally seated position; and

(iii) communication between each of two flight crew member stations and at least one crew member station in each passenger compartment.

A.19 Oxygen equipment

(a) Flight crew member oxygen equipment must provide an oxygen flow rate—

(1) for continuous flow equipment, that is the greater of—

(i) 2 litres per minute STPD; or

(ii) that required to maintain a MTOPP of 149 mm Hg when breathing 15 litres per minute BTPS with a tidal volume of 700 millilitres; and

(2) for on-demand equipment—

(i) for flights up to 35 000 feet AMSL, not less than that required to maintain a MTOPP of 122 mm Hg; and

(ii) for flights above 35 000 feet AMSL, not less than 20 litres per minute BTPS; and

(iii) for flights above 41 000 feet AMSL, that progressively increases until not less than 15 mm Hg above ambient pressure and 30 litres per minute BTPS is achieved at 45 000 feet AMSL; and

(3) for protective equipment, of 30 litres per minute BTPD at a pressure altitude of 8 000 feet AMSL.

(b) Crew member and passenger oxygen equipment must provide an oxygen flow rate—

(1) for flights from 10 000 feet to 18 500 feet AMSL, not less than that required to maintain a MTOPP of 100 mm Hg when breathing 15 litres per minute BTPS with a tidal volume of 700 millilitres; and

(2) for flights from 18 500 feet to 40 000 feet AMSL, not less than that required to maintain a MTOPP of 83.8 mm Hg when breathing 30 litres per minute BTPS with a tidal volume of 1100 millilitres; and

(3) for flights from 40 000 feet to 45 000 feet AMSL, not less than that required to maintain a MTOPP of 55 mm Hg when breathing 30 litres per minute BTPS with a tidal volume of 1100 millilitres.

(c) Portable oxygen equipment must provide an oxygen flow rate of not less than—

(1) 2 litres per minute STPD on a low setting; and

(2) 4 litres per minute STPD on a high setting.

(d) On-demand oxygen regulators must meet the requirements of TSO C89.

A.20 Protective breathing equipment

Protective breathing equipment must—

(1) meet the requirements of TSO C99; and

(2) protect users from the effects of—

(i) smoke; or

(ii) carbon dioxide; or

(iii) other harmful gases; or

(iv) an oxygen deficient environment caused by other than aeroplane depressurisation.

A.21 Crew member portable protective breathing equipment

(a) Except as provided in paragraph (b), crew member portable protective breathing equipment must meet the requirements of TSO C116.

(b) Crew member portable protective breathing equipment may consist of a portable oxygen supply connected to protective breathing equipment that allows unrestricted performance of crew member duties.

A.22 Transponder equipment

Each SSR transponder must meet–

(1) the requirements of TSO C74c; or

(2) for Mode S capable equipment, the appropriate class of TSO C112.

A.23 Altitude encoder equipment

Each altitude encoder must meet the requirements of TSO C88.

A.24 Altitude alerting system or device

For operation below 3000 feet AGL, the altitude alerting system or device need only provide one signal, either visual or aural.

A.25 Parachute assembly for emergency use

A parachute assembly for emergency use must meet the requirements of—

(1) an applicable type certificate; or

(2) TSO C23; or

(3) a military drawing and order number or any other military designation or specification number; or

(4) LTF 35/03; or

(5) European Norm EN 12491; or

(6) AFNOR and DHV standards.

A.26 Glider tow lines

A Glider tow line must—

(1) except as provided in paragraph (2), have a breaking strength of not less than 80% or more than 200% of the MCTOW of the glider to be towed; and

(2) if the tow line used has a breaking strength of more than 200% of the MCTOW of the glider to be towed, have a safety link installed at the point of attachment to—

(i) the glider with a breaking strength of not less than 80% of the glider's MCTOW but not more than twice the glider's MCTOW; and

(ii) the aircraft with a breaking strength of at least 100% of the glider's MCTOW but not more than twice the glider's MCTOW.