



PURSUANT to Sections 28, 29 and 30 of the Civil Aviation Act 1990

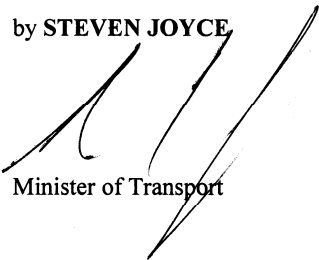
I, STEVEN JOYCE, Minister of Transport,

HEREBY MAKE the following ordinary rules.

SIGNED AT Wellington

This *17th* day of *February* 2010

by **STEVEN JOYCE**

A handwritten signature in black ink, consisting of several fluid, overlapping strokes, positioned above the printed name 'Minister of Transport'.

Minister of Transport

Civil Aviation Rules

Part 91, Amendment 21

General Operating and Flight Rules

Docket 9/CAR/1

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Rule objective

The objective of amendment 21 to Part 91 is to make minor editorial changes, to align certain existing rules with international standards, and to revoke transitional requirements for emergency locator transmitters (ELT).

Amendment 21 to Part 91 is constituent to NPRM 09-03 which contains amendments to the following Parts:

Part 1	Part 95	Part 140
Part 12	Part 105	Part 145
Part 19	Part 106	Part 148
Part 26	Part 119	Part 172
Part 43	Part 121	Part 173
Part 65	Part 125	Part 175
Part 77	Part 129	
Part 91	Part 135	
Part 93	Part 139	

Extent of consultation

A Notice of Proposed Rulemaking, NPRM 09-03, containing the proposed changes to Part 91 and changes to other rules was issued for public consultation under Docket 9/CAR/1 on 30 July 2009.

The publication of this NPRM was notified in the Gazette on 31 July 2009 and advertised in the daily newspapers in the five main provincial centres on 31 July 2009. The NPRM was published on the CAA web site on 30 July 2009.

A period of 37 days was allowed for comment on the proposed rule.

Summary of submissions

A total of 3 written submissions were received on NPRM 09-03 (1 submission related to Part 1, and 2 submissions related to Part 91). The submissions to the proposed amendments to Part 91 concern the usage of Mode S and ADS-B transponders, and ELT testing requirements.

Each submission was considered in detail. The submission regarding transponder usage was found to be outside the scope of an Omnibus rule project. The concern stated in the submission regarding ELT testing requirements is believed to be adequately addressed in an existing Part 91 rule. Consequently, none of the submissions resulted in any change to the proposed rule amendments.

A detailed summary of the submissions and the resulting CAA comments are provided in the “Consultation Details” section of this document.

The rule has also been amended to incorporate amendments regarding special category aircraft that came into force on 3 December 2009 from rule project 5/CAR/2.

The rule as amended was then referred to the Minister of Transport for signing.

Examination of submissions

Submissions may be examined by application to the Docket Clerk at the Civil Aviation Authority between 8:30 am and 4:30 pm on weekdays, except statutory holidays.

Insertion of Amendments

The amendments to the rules in this Part are reflected by the revocation of 10 existing rules and 2 appendix paragraphs, and the insertion of new rules and appendices.

Effective date of rule

Amendment 21 to Part 91 comes into force on 25 March 2010.

Availability of rules

Civil Aviation Rules are available from–

CAA web site: <http://www.caa.govt.nz/>

Freephone: 0800 GET RULES (0800 438 785)

Part 91 Amendments

Subpart A — General

Rule 91.15 is revoked and replaced by the following rule:

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 Hazardous Substances and New Organisms Act 1996; 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.

Subpart C — General Flight Rules

Rule 91.229 is revoked and replaced by the following rule:

91.229 Right-of-way rules

- (a) *Right-of-Way.* 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) **Approaching Head-On.** A pilot of an aircraft must, when approaching another aircraft head-on, or nearly so, alter heading to the right.
- (c) **Aircraft Converging.** 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) **Overtaking Aircraft.** 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) **Landing aircraft.** A pilot of an aircraft in flight or on the surface must—
- (1) give way to any aircraft that is on final 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) **Taking Off.** A pilot of an aircraft must not take off if there is an apparent risk of collision with another aircraft.
- (h) **Taxiing.** 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.

Aircraft in Distress. A pilot of an aircraft must give way to any aircraft that is in distress.

Rule 91.247 is revoked and replaced by the following rule:

91.247 Use of SSR transponder and altitude reporting equipment

- (a) Except as provided in paragraph (e), a pilot-in-command of an aircraft operating in transponder-mandatory airspace designated under Part 71 must, unless otherwise authorised or instructed by ATC—
- (1) operate the transponder—
 - (i) in Mode A and Mode C; or

- (ii) in Mode S if the aircraft is equipped with Mode S equipment and allocated a unique Mode S code referred to in paragraph (b); and
 - (2) except if paragraph (3) applies or if operating Mode S equipment, set the transponder SSR code—
 - (i) to the code assigned by ATC for the flight; or
 - (ii) 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.
- (b) A person must not operate an aircraft with Mode S transponder equipment installed unless the State of registry has assigned the aircraft a unique Mode S address code.
- (c) A pilot-in-command of an aircraft intending to operate the aircraft without an operable transponder in transponder mandatory airspace that is within controlled airspace must obtain specific authorisation from the ATC unit having jurisdiction over the relevant airspace as part of the ATC clearance to enter that airspace.
- (d) A pilot-in-command of an aircraft operating in transponder mandatory airspace must immediately advise the ATC unit having jurisdiction over the relevant airspace of any failure or partial failure of the transponder equipment.
- (e) Unless otherwise required by ATC, only 1 of the aircraft in a formation flight is required to operate a transponder in accordance with paragraph (a).

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

Subpart E — Instrument Flight Rules

Rule 91.405 is revoked and replaced by the following rule:

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.

Rule 91.413 is revoked and replaced by the following rule:

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.

Rule 91.429 is revoked and replaced by the following rule:

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.

Subpart F — Instrument and Equipment Requirements

Rule 91.515 is revoked and replaced by the following rule:

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.

Rule 91.529 is revoked and replaced by the following rule:

91.529 Emergency locator transmitter

(a) A person must not operate an aircraft without an automatic ELT installed in the aircraft except as provided in paragraphs (b), (d), and (e), rule 121.353(b), and rule 129.109.

(b) An aircraft may be operated without an automatic ELT 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 the automatic ELT is to be installed; and
- (2) the aircraft does not carry any passenger.

(c) Despite rule 91.501(4), an aircraft may be operated with an inoperative automatic ELT if—

- (1) the operation is to ferry the aircraft from a place where repairs or replacement of the ELT cannot be made to a place where the repairs or replacement can be made; and
- (2) the aircraft does not carry any passenger.

(d) Despite rule 91.501(4) and paragraph (a), an aircraft may be operated without an operable automatic ELT 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.

- (e) Paragraph (a) does not apply to 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 took off;
 - (4) a manned free balloon.
- (f) A holder of a certificate of registration for a New Zealand registered aircraft that is equipped with an automatic ELT, or carries an ELT(S), EPIRB, or PLB that operates on 406 MHz must not operate the aircraft unless—
- (1) for an automatic ELT or ELT(S), the ELT is coded with the International Telecommunication Union (ITU) country code for New Zealand, and 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; 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 certificate of registration has notified the Rescue Coordination Centre New Zealand of—
 - (i) the code, in accordance with paragraph (f)(1) or (f)(2), for each ELT, EPIRB, or PLB that is installed or carried in the aircraft; and
 - (ii) the name and emergency contact details of the aircraft operator.
- (g) 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.

Subpart G — Operator Maintenance Requirements

Rule 91.603 is revoked and replaced by the following rule:

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 in accordance with 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 in accordance with the requirements prescribed in 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 119 or approved under rule 91.607.

(e) In spite of 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) In spite of 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.

Rule 91.605 is revoked and replaced by the following rule:

91.605 Maintenance programmes and schedules

(a) Subject to paragraphs (b), (c), and (d), the operator of an aircraft must maintain the aircraft in accordance with—

- (1) a maintenance programme approved under Part 119; or
- (2) a maintenance programme approved under rule 91.607; or
- (3) the manufacturer's maintenance schedule; or
- (4) 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 in accordance with 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 granted under section 9 of the Act and in accordance with Part 119 must maintain the aircraft in accordance with the maintenance programme that is required under Part 119 for the issue of the air operator certificate; or
 - (2) issued with a *special category* airworthiness certificate must maintain the aircraft in accordance with 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 paragraph (a)(3) 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 paragraph (a)(3) 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 in accordance with 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

an SSR transponder installed in the aircraft, has been tested and inspected in accordance with 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 SSR transponder that is required to be installed in the aircraft under Subpart F has been tested and inspected, in accordance with Part 43, Appendix E within the preceding 24 months; and
- (4) every ELT that is required to be installed in the aircraft under Subpart F—
- (i) has been tested and inspected in accordance with—
 - (A) Appendix F of Part 43 within the previous 12 months or 100 hours of aircraft time in service, whichever is the sooner, or
 - (B) for an aircraft maintained in accordance with a maintenance programme required under rule 119.63, the scheduled intervals, which must not be more than 12 months, as described in the approved maintenance programme; and
 - (ii) has been tested in accordance with the manufacturer's instructions within the previous 24 months; and
 - (iii) 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 in accordance with a maintenance programme referred to in paragraphs (a)(1) or (a)(2) 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 (g)(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 in accordance with 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.

Appendix A — Instrument and equipment specifications

Paragraph A.4 is revoked and replaced by the following paragraph:

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.

Paragraph A.14 is revoked and replaced by the following paragraph:

A.14 Emergency equipment

- (a) A life preserver must be equipped with a survival locator light.
- (b) A life preserver must meet the requirements of—
 - (1) for inflatable life preservers—
 - (i) TSO C13; or
 - (ii) European Norm EN 396; or
 - (iii) New Zealand Standard NZ 5823; and
 - (2) for constant wear anti-exposure coveralls, US Coastguard Type V PFD.
- (c) A life-raft must meet the requirements of TSO C70 and contain a survival kit.
- (d) The survival kit required in paragraph (c) must include—
 - (1) a canopy; and
 - (2) a radar reflector or a flare kit; and
 - (3) a life-raft repair kit; and
 - (4) a bailing bucket; and
 - (5) a signalling mirror; and
 - (6) a whistle; and
 - (7) a raft knife; and
 - (8) a compressed gas bottle for emergency inflation; and
 - (9) an inflation pump; and
 - (10) a 25 m retaining line; and

- (11) a magnetic compass; and
 - (12) a dye marker; and
 - (13) a flashlight having at least 2 'D' cells or equivalent; and
 - (14) a fishing kit; and
 - (15) 2 oars or 2 glove paddles; and
 - (16) a 2 day supply of food rations supplying at least 1000 calories per day for every person that the raft is rated to carry; and
 - (17) 1200 mls of water for every 2 persons that the raft is rated to carry, or 1 sea water desalting kit; and
 - (18) a first aid kit suitable for treatment of minor injuries; and
 - (19) a book on survival appropriate for the area over which the aircraft is operated; and
 - (20) a sea anchor; and
 - (21) a water collection bag or cups.
- (e) A survival locator light must meet the requirements of TSO C85.

Paragraph A.15 is revoked and replaced by the following paragraph:

A.15 Emergency locator transmitters

- (a) An automatic ELT and an ELT(S) must—
 - (1) meet the requirements of TSO C126; and
 - (2) transmit on both frequencies of 406 MHz and 121.5 MHz.
- (b) An automatic ELT must—
 - (1) be attached to the aircraft in such a manner that—

- (i) the probability of damage to the ELT in the event of an accident or impact is minimised; and
 - (ii) the ELT mounting is to a primary load-carrying structure provided the attachment does not degrade the structural capability of the aircraft; and
 - (iii) a force of 450 newtons applied to the ELT mounting in the most flexible direction does not cause a static deflection greater than 2.5 mm relative to a section of adjacent structure located between 0.3 m and 1.0 m from the attachment site; and
 - (iv) the ELT and any external antenna can support a 100 g load in the plus and minus directions of the 3 principal axes of the aircraft; and
 - (v) the ELT and any external antenna are as close to each other as possible; and
 - (vi) for a fixed or a deployable automatic ELT, the ELT and external antenna are attached as far aft as possible; and
- (2) have its crash activation sensor—
- (i) located so as to prevent inadvertent operation; and
 - (ii) axis orientated to sense a primary crash pulse along the longitudinal axis of the aircraft; and
- (3) have its antenna—
- (i) mounted to provide vertical polarisation with the aircraft in normal flight; and
 - (ii) for an external antenna, mounted not less than 0.6 m from any other VHF antenna unless the manufacturer specifies that a closer mounting may be used; and
 - (iii) for an internal antenna, insulated from metal parts and exposed to a window of at least 0.3 m square; and

- (4) be fitted with vibration proof RF connectors on each end of the ELT-antenna coaxial cable; and
 - (5) have its location identified near the point of access.
- (c) 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.
- (d) An ELT(S) and EPIRB must—
 - (1) be self buoyant; and
 - (2) be water resistant; and
 - (3) be portable.
- (e) 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
 - (2) be COSPAS-SARSAT type approved.
- (f) 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.

Appendix C is revoked:

Consultation Details

(This statement does not form part of the rules contained in Part 91. It provides details of the consultation undertaken in making the rules.)

A Notice of Proposed Rulemaking, NPRM 09-03 Omnibus 2009, containing the proposed rule amendments for Part 91, and other proposed rule amendments in various Parts, was issued for public consultation under Docket 9/CAR/1 on 30 July 2009.

A period of 37 days was allowed for comment on the proposed rule. A total of 3 responses to the NPRM were received, and 2 of the responses were directly related to proposed amendments in Part 91.

The purpose of NPRM 09-03 was to make minor editorial and minor technical amendments to various Parts of the Civil Aviation Rules (CAR). The proposed amendments included the correction of spelling and grammatical errors, the updating of various rules in accordance with current International Civil Aviation Organization (ICAO) standards, definitions and abbreviations, and the revocation of specific transitional arrangements.

List of Submitters for Part 91

- Airways New Zealand
- Liviu Avionics & Instruments

Details of Public Submissions and CAA Response

Usage of Mode S and ADS-B Transponders

Rule 91.247

The CAA received 1 submission regarding the “incorrect” usage of Mode S and ADS-B transponders.

The submitter stated that Mode S and ADS-B transponders are not being operated correctly in terms of the ICAO requirements and/or the transponder capability. The submitter acknowledges that there are currently no New Zealand Civil Aviation Rules (CAR) requiring the

installation and operation of Mode S or ADS-B transponders on New Zealand aircraft. However, the submitter would like to see the introduction of a rule requirement that would ensure consistent operation of Mode S and ADS-B transponders, and accommodate future changes to the air traffic management system.

CAA Response

The CAA acknowledges the issue presented by the submitter, however the issue is unrelated to any specific change that has been proposed in the Omnibus 2009 NPRM, as well as being outside the scope of an Omnibus rule project. Omnibus rule amendments are limited to minor editorial and minor technical changes, whereas the submitter's request for a rule amendment would have a more significant impact upon aircraft equipment and air operator requirements. Although the CAA agrees that the issue presented by the submitter may be valid, such an amendment would not constitute a minor change and is therefore precluded from addition to an Omnibus rule project.

Testing of Emergency Locator Transmitters (ELT)

Part 91 Appendix F

The CAA received 1 submission regarding the removal of the 121.5/243 MHz ELT reference from Part 43, Appendix F.

The submitter stated that Part 43, Appendix F, paragraph (3) should remain in place and that the first line of paragraph (3) should be amended to read “for a 121.5/243/406 MHz emergency locator transmitter:”. The submitter indicated that some ELT manufacturers fabricate ELTs in both 121.5/406 MHz and 121.5/243/406 MHz frequency ranges, and that by removing paragraph (3), the CAA is removing the requirement to test the impact switch. The submitter also indicated that testing of the mechanical impact switch [as required by paragraph (3)(i)] could not be satisfactorily accomplished by performing a self test, and that the rule should retain the requirement for a specific test of the impact switch.

CAA Response

Part 43, Appendix F, paragraph (3) is applicable to 121.5/243 MHz ELTs which are required to be manufactured under the specifications of

TSO C91. The CAA prohibited the installation and operation of 121.5/243 MHz ELTs after 1 July 2008. Currently all ELTs are required to operate in the 406 MHz frequency range and must meet the specifications stated in TSO C126.

While the CAA acknowledges that all ELTs transmit on 121.5/406 MHz, and some transmit on 121.5/243/406 MHz, the testing requirements for all ELTs are currently specified in Part 43, Appendix F, paragraph (2). The requirements include not only operation of the ELT self test function, but also the checking for satisfactory ELT system performance in accordance with the manufacturer's instructions. In order to mitigate future obsolescence of the rule, paragraph (2) is intentionally worded in a manner that excludes the need for testing beyond the manufacturer's instructions, or specifying any particular testing solution.

In the event that the need arises to require testing of impact switches independently from performing the ELT self test, and in addition to complying with the ELT manufacturer's maintenance instructions, the CAA would first seek to resolve the matter in cooperation with the ELT manufacturer. If necessary, under rule 91.605(d) the Director can require specific maintenance actions to be carried out if he considers the manufacturer's maintenance schedule to be deficient.