

## **Notice of Proposed Rule Making**

**NPRM 18-01**

**4 September 2017**

**Part 91 General Operating and Flight Rules**

**Part 121 Air Operations – Large Aeroplanes**

**Part 129 Foreign Air Transport Operator – Certification**

## **Aircraft Emergency Location Equipment**

*Docket 16/CAR/8*

### **Consequential Amendments:**

**Part 1**

**Part 43**

**Part 115**

## Background to the Civil Aviation Rules

The Civil Aviation Rules establish the minimum regulatory safety boundary for participants to gain entry into, operate within, and exit the New Zealand civil aviation system. The Rules are structured in a manner similar to the Federal Aviation Regulations of the USA.

Rules are divided into Parts and each Part contains a series of individual rules that relate to a particular aviation activity. Some rules empower the use of a CAA Notice. Notices contain specific mandatory requirements including detail about the approvals, standards, conditions, procedures and technical specifications that have been approved or determined by the Director as being appropriate in accordance with the corresponding enabling rule.

Advisory Circulars accompany many rule Parts and contain information about standards, practices and procedures that the Director has established to be an acceptable means of compliance with the associated rule. An Advisory Circular may also contain guidance material to facilitate compliance with the rule requirements.

The objective of the Civil Aviation Rules system is to strike a balance of responsibility between, on the one hand, the Crown and regulatory authority (CAA) and, on the other hand, those who provide services and exercise privileges in the civil aviation system. This balance must enable the Crown and regulatory authority to set standards for, and monitor performance of, aviation participants while providing the maximum flexibility for the participants to develop their own means of compliance within the safety boundary.

Section 12 of the Civil Aviation Act 1990 prescribes general requirements for participants in the civil aviation system and requires, among other things, participants to carry out their activities safely and in accordance with the relevant prescribed safety standards and practices.

Section 28 of the Act allows the Minister to make ordinary rules for any of the following purposes:

- The implementation of New Zealand's obligations under the Convention
- To allow for the mutual recognition of safety certifications in accordance with the ANZA mutual recognition agreements
- The provision of aviation meteorological services, search and rescue services and civil aviation security programmes and services
- Assisting aviation safety and security, including but not limited to personal security
- Assisting economic development
- Improving access and mobility
- Protecting and promoting public health
- Ensuring environmental sustainability
- Any matter related or reasonably incidental to any of the following:
  - i. The Minister's objectives under section 14 of the Act;
  - ii. The Minister's functions under section 14A of the Act;
  - iii. The Authority's objectives under section 72AA of the Act;
  - iv. The Authority's functions and duties under section 72B of the Act; and
  - v. The Director's functions and powers under section 72I of the Act
  - vi. The Director's powers under section 28(5) of the Act
- Any other matter contemplated by any provision of the Act.

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## 1. Purpose of this NPRM

The purpose of this rule-making proposal is to establish a performance-based regulatory framework for aircraft emergency location equipment for installation in New Zealand registered aircraft operating within the New Zealand Flight Information Region. It proposes the removal of the prescriptive requirement for one type of ELT technology and gives the Director of Civil Aviation the discretion to approve equipment that meets specified performance criteria. In addition, this proposal also adopts part of ICAO Amendment 40 to Annex 6 Part I – *Operation of Aircraft* relating to carriage of ELTs.

## 2. Background to the Proposal

### General Summary

With regard for the location of an aircraft involved in an accident, New Zealand has aligned its Civil Aviation Rules (CAR) in Part 91 – *General Operating and Flight Rules* with the Standards and Recommended Practices (SARPS) relating to aircraft emergency location equipment contained in ICAO Annex 6. These SARPS require carriage of Emergency Locator Transmitters (ELT). The current generation of ELTs were designed to provide the position of impact for a survivable accident<sup>1</sup>. In April 2016, ICAO issued a State Letter advising the adoption of Amendment 40 to Annex 6 Part I applicable on 10 November 2016. A portion of the amendment relates to the carriage of ELTs that is applicable to CAR Part 121 and Part 129.

Over the years, a number of issues have been raised by industry and CAA staff relating to the post-accident reliability of ELTs. A number of aircraft operators also requested that the CAA consider allowing the use of Flight Tracking Devices (FTD) as an alternative to an ELT. As a result, in 2010 the CAA conducted a study – *Missing Aircraft Detection and Location*<sup>2</sup> – which identified a number of issues including:

- A design defect in one brand of ELT G-switches;
- Approved antennas are not crash-tolerant and can be difficult to install;
- That FTDs are not an acceptable alternate to an ELT.

As a result of this study, the g-switch issue was remedied by a modification to the operation of the switch.

In 2014, the CAA initiated a policy review of aircraft emergency location equipment for domestic operations, in particular for General Aviation. The review identified the following:

- Some aspects of ELT design and installation meant that there could be delays in locating a crashed aircraft. This could have an adverse effect on the health of injured occupants, and could also generate unnecessary costs for search and rescue providers.
- The current regulatory framework for aircraft emergency location equipment prevents operators from using potentially cheaper or more technically effective location devices.

A number of options were considered to address the issues identified in the review, and the CAA subsequently issued a public consultation document ‘Emergency Location of Aircraft’<sup>3</sup> that included these options. Sixty-four submissions were received with good support for introducing performance-based rules. Technical experts from the Ministry of Transport, from within the CAA and from Rescue Coordination Centre New Zealand (RCCNZ) were also consulted in relation to the issues.

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<sup>1</sup> Amendment 40 to ICAO Annex 6 Part I

<sup>2</sup> The Civil Aviation Authority of New Zealand (2010), “Missing Aircraft Detection and Location”.  
[www.caa.govt.nz/aircraft/Locating\\_Missing\\_Aircraft.pdf](http://www.caa.govt.nz/aircraft/Locating_Missing_Aircraft.pdf)

<sup>3</sup> Emergency Location of Aircraft, Consultation, 12 September 2014 [http://www.caa.govt.nz/policy\\_rules/emerg\\_location\\_consult.pdf](http://www.caa.govt.nz/policy_rules/emerg_location_consult.pdf)

## NPRM Development

The 2014 review resulted in the development of a number of policy objectives to guide the proposed rule amendments in this NPRM:

- The existing rules for emergency location transmitters (ELT) in respect to aircraft operating domestically need amending to be more performance-based. This will give the Director of Civil Aviation the discretion, within the limits of the rules, to approve equipment that meets specified criteria. Given the rapid advances in technology in the communications and avionics sectors, this could reduce the costs and time barriers to permitting new equipment, while maintaining an appropriate standard for search and rescue requirements.
- There were no problems reported regarding the rules for gliders, microlights and balloons. Therefore, the exceptions in the existing rules for aircraft equipped with one seat, gliders and microlights, gliders and powered aircraft operating not more than 10nm from the aerodrome and manned free balloons, will remain.
- As a signatory to the convention on international civil aviation, New Zealand is committed to aligning its regulations to ICAO SARPS, where practicable. Therefore, international operations will need to remain consistent with the requirements of ICAO Annex 6.

It was decided to amend Part 121 and Part 129 by adopting a portion of ICAO Amendment 40 to Annex 6 Part I relating to location of aircraft in distress and the carriage of ELTs. This portion of the amendment does not impose any additional cost on affected operators rather it gives operators a choice of systems and the potential reduction in the number of ELTs to be carried for these international flights.

A Regulatory Impact Statement (RIS) has been developed for this proposal.

In addition to the proposed rule amendments relating to aircraft emergency location equipment, the CAA is developing an education campaign and will update the advisory circulars. These will provide better guidance for operators and maintenance personnel on the installation and maintenance of ELTs, which was identified as an issue in the review.

## CAA Notices

The CAA is introducing a new regulatory tool called CAA Notices.<sup>4</sup> The authority for such notices is section 28(5) of the Civil Aviation Act 1990. This section permits the Minister of Transport to make rules on any terms and conditions specified in the rule to –

- require a matter to be determined or undertaken or approved by the Authority, the Director or another person; or
- empower the Authority, Director or another person to impose requirements or conditions as to the performance of any aviation activity including (but not limited to) any procedures to be followed.

These requirements must be in writing and will be set out in CAA Notices where appropriate. Only the person specified by the Minister in the empowering rule will issue CAA Notices. The provisions in CAA Notices are mandatory for those participants to whom a notice applies. Before notices may be issued, there must be a corresponding enabling Civil Aviation Rule.

The CAA intends that CAA Notices will apply in circumstances where the rules may not adequately or appropriately capture technical or procedural requirements. The aim of CAA Notices is to better support risk-based regulation, and improve the flexibility and responsiveness of the rules. Notices can be used to support performance-based regulation, for example in circumstances where new technological changes or innovations require more flexibility than a prescriptive approach and rules may become quickly out-dated, or where there is a need to respond to safety issues that the rules cannot adequately deal with.

Other existing rules and regulatory tools, such as Airworthiness Directives and Advisory Circulars will continue to be used as appropriate.

The use of CAA Notices reflects international trends in risk-based regulation, and some comparable overseas aviation regulators use similar instruments. For example, the Australian regulator, CASA, uses Civil Aviation Orders made by the Director of Aviation Safety for a wide variety of activities. These contain detailed technical requirements and

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<sup>4</sup> <http://www.caa.govt.nz/notices/>

generally supplement Civil Aviation Regulations, the Australian equivalent of the New Zealand Civil Aviation Rules. CASA also issues Manuals of Standards, which include detailed technical requirements and support the implementation of the Civil Aviation Safety Regulations.

Notices will be consulted on and will be published on the CAA's website.

The draft CAA Notice proposed in this NPRM lists approved aircraft emergency location systems that will satisfy the prescribed performance criteria in the proposed rules.

### **Key Stakeholders**

The Civil Aviation Authority identifies the following as key stakeholders for the proposed rule amendments contained in this NPRM:

- The Civil Aviation Authority
- The Minister of Transport
- The Ministry of Transport
- Aircraft operators
- Foreign Air Transport Operators
- Rescue Coordination Centre New Zealand

## **3. Issues Addressed during Development**

### **Performance Criteria**

As a result of the consultation associated with the 2014 policy review, the following performance criteria are being proposed for aircraft emergency location equipment to be installed in New Zealand registered aircraft operating within the New Zealand Flight Information Region:

- Automatically activate and broadcast a signal to search and rescue service providers without human intervention when the aircraft has crashed.
- Provide the aircraft's location as accurately as possible, to a 5-kilometre radius or less.
- Broadcast the distress position for no less than 24 hours after the aircraft has crashed.
- Operate from an independent power source.
- Utilise systems that provide sufficient coverage of New Zealand land and sea search areas.

A number of other technical criteria have been developed as a result of discussions within the Rule Drafting Group during the rule development process.

There are currently no devices on the market that are an acceptable alternative to an ELT (AF) in terms of meeting the performance requirements for an aircraft emergency location system. Therefore, the technical specifications, maintenance requirements and installation instructions for an ELT (AF) need to be retained in the rules, CAA Notices, or Advisory Circulars as applicable.

### **Consequential Amendments**

This proposal introduces a new term – aircraft emergency location system (AELS). This term will be used instead of the more prescriptive term ELT(AF) when referring to domestic operations for a New Zealand registered aircraft, and a definition of the term is proposed to be included in Part 1. There are other consequential amendments to replace the term ELT (AF) with AELS, where appropriate, in other Rule Parts.

### **Exemptions**

There are 3 current Exemptions (15/EXE/49, 7/EXE/83, 9/EXE/46) against rule 91.529 in respect to the carriage of an automatically activated ELT. The proposed rule amendments retain the provision for an automatically activated system therefore there will be no effect on these exemptions. However, the proposed rule amendments give the Director the discretion to approve systems other than the current ELTs, therefore there is a potential to reduce exemptions against this rule in the future.

### Performance-Based Rules

Submissions received from the 2014 policy review indicated strong support for introducing performance-based rules for aircraft emergency location equipment for domestic operations. It is therefore proposed that the Minister utilise the existing power provided by section 28(5) of the Civil Aviation Act to set performance requirements and allow the Director the discretion to approve specific aircraft emergency location systems that meet specified performance requirements by way of a CAA Notice. These requirements are mandatory and must be complied with.

For this NPRM, the high-level functional requirements for an aircraft emergency location system will be included in rule 91.529. The technical specifications, maintenance and testing requirements for an aircraft emergency location system) will be included in a CAA Notice and Advisory Circulars as appropriate. Guidance material is included in Advisory Circulars AC43-1-*Aircraft Maintenance*, AC43-11-*Emergency Locator Transmitters* and AC43-14 Appendix 2-*Avionics, Installations-Acceptable Technical Data*. These Advisory Circulars will be revised and amended where appropriate. Any notices and revised Advisory Circulars developed in association with this proposed rule amendment will come into effect at the same time as the rule changes. Advisory Circulars are developed with operator and CAA input. Draft versions are published on the CAA website inviting public comment. There is no cost to industry in the development of advisory circulars.

### ICAO SARPs and Level of Risk to New Zealand Aviation Safety

The proposed rule amendments are intended to align, where practicable, with the SARPs contained in ICAO Annexes and are written in consultation with the following Annexes:

- Annex 6 – Operation of Aircraft
- Annex 10 Vol III – Communications Systems
- Annex 12 – Search and Rescue

This proposed rule amendment incorporates part of Amendment 40 to Annex 6 Part I relating to the carriage of ELTs on international operations.

### Compliance Costs

The proposed amendments do not require aircraft operators to install new or additional equipment as current rules already require aircraft operators to have emergency location equipment installed. Therefore, the proposal does not impose any compliance costs and has the potential to reduce costs in the future. If an operator wanted to fit a system that had not yet been approved, this would be classed as a modification, and the standard CAA hourly charge would apply.

## 4. Legislative Analysis

### Power to Make Rules

The Minister may make ordinary rules under sections 28, 29, 29A, 29B and 30 of the Civil Aviation Act 1990, for various purposes including implementing New Zealand's obligations under the Convention, assisting aviation safety and security, and any matter contemplated under the Act.

These proposed rules are made pursuant to:

- (a) Section 28(1)(a) which allows the Minister to make rules for the purpose of the implementation of New Zealand's obligations under the Convention:
- (b) Section 28(1)(c) which allows the Minister to make rules for the purpose of assisting aviation safety and security, including (but not limited to) personal security:
- (c) Section 28(5) which allows the Minister to make rules that provide for matters to be determined or approved by the Authority, the Director, or any other person or empower the Authority, the Director or any other person to impose requirements, or conditions on the performance of any activity including but not limited to procedures to be followed:
- (d) Section 29(c) which allows the Minister to make rules providing for general operating rules, air traffic rules, and flight rules, including but not limited to the following:
  - (i) the conditions under which aircraft may be used or operated, or under which any act may be performed in or from an aircraft:



- (ii) the prevention of aircraft endangering persons or property.
- (e) Section 30(a) which allows the Minister to make rules for the designation, classification, and certification of all or any of the following:
- (i) aircraft:
  - (ii) aircraft pilots:
  - (iii) flight crew members:
  - (iv) air traffic service personnel:
  - (v) aviation security service personnel:
  - (vi) aircraft maintenance personnel:
  - (vii) aviation examiners or medical examiners:
  - (viii) air services:
  - (ix) air traffic services:
  - (x) aerodromes and aerodrome operators:
  - (xi) navigation installation providers:
  - (xii) aviation training organisations:
  - (xiii) aircraft design, manufacture, and maintenance organisations:
  - (xiv) aeronautical procedures:
  - (xv) aviation security services:
  - (xvi) aviation meteorological services:
  - (xvii) aviation communication services:
  - (xviii) any other person who provides services in the civil aviation system, and any aircraft, aeronautical products, aviation related services, facilities, and equipment operated in support of the civil aviation system, or classes of such persons, aircraft, aeronautical products, aviation related services, facilities, and equipment operated in support of the civil aviation system:
- (f) Section 30(b) which allows the Minister to make rules for the setting of standards, specifications, restrictions, and licensing requirements for all or any of those persons or things specified in paragraph 30(a) including the specifications of standards of design, construction, manufacture, processing, testing, supply, approval, and identification of aircraft and aeronautical products:
- (g) Section 30(c) which allows the Minister to make rules setting the conditions of operation of foreign aircraft and international flights to, from, or within New Zealand:
- (h) Section 30(d) which allows the Minister to make rules for the definitions, abbreviations, and units of measurement to apply within the civil aviation system.

#### **Matters to be taken into account**

The development of this NPRM and the proposed rule changes take into account the matters under section 33 of the Act that the Minister must take into account when making ordinary rules including the following:

#### ***ICAO Standards and Recommended Practices***

The proposed rule amendments comply with applicable sections of the following International Civil Aviation Organization (ICAO) Annexes:

- *Annex 6 – Operation of Aircraft.* The proposed amendment will adopt that portion of Amendment 40 to Annex 6 Part I relating to location of aircraft in distress and the carriage of ELTs. This only affects operations under Part 121 and Part 129 by giving the option of reducing the number of ELTs required if an autonomous reporting system is installed.
- *Annex 12 – Search and Rescue*
- *Annex 10 Vol III – Communication Systems*

#### ***Assisting Economic Development***

The proposed rule amendments will have no detrimental impact on economic development, and in some cases will reduce costs incurred by the aviation industry.

#### ***Assisting Safety and Personal Security***

The proposed rule amendments will maintain safety levels in respect to emergency location of aircraft.

#### ***Improving Access and Mobility***

The proposed rule amendments will have no impact on access and mobility.

#### ***Protecting and Promoting Public Health***

The proposed rule amendments will have no impact on protecting and promoting public health.

#### ***Ensuring Environmental Sustainability***

The proposed rule amendments will have no impact on environmental sustainability

### **Civil Aviation (Offences) Regulations**

Schedule 1 of the Civil Aviation (Offences) Regulations is made by the Governor General pursuant to section 100 of the Civil Aviation Act 1990 and contains a list of summary and infringement penalties associated with offences against various civil aviation rules.

The proposed rule amendment will require some amendments to the Offences Regulations as detailed in the Appendix.

## **5. Submissions on the NPRM**

### **Submissions are invited**

This proposal has been developed following a 2014 CAA policy review of aircraft emergency location equipment with technical advice from within the CAA, aviation organisations and the Rescue Coordination Centre New Zealand. Interested persons are invited to participate in the making of the proposed rules by submitting written data, views, or comments. All submissions will be considered before final action on the proposed rule making is taken. If there is a need to make any significant change to the rule requirements in this proposal as a result of the submissions received, then interested persons may be invited to make further submissions.

Submissions are invited on both the proposed rule amendments and the proposed draft Notice of Approval.

### **Examination of Submissions**

All submissions will be available in the rules docket for examination by interested persons both before and after the closing date for submissions. A consultation summary will be published on the CAA web site and provided to each person who submits a written submission on this NPRM.

Submissions may be examined by application to the Docket Clerk at the Civil Aviation Authority Level 15, Asteron Centre, 55 Featherston Street, Wellington 6011 between 8:30 am and 4:30 pm on weekdays, except statutory holidays.

### **Official Information Act**

Submitters should note that subject to the Official Information Act 1982 any information attached to submissions will become part of the docket file and will be available to the public for examination.

Submitters should state clearly if there is any information in their submission that is commercially sensitive or for some other reason the submitter does not want the information to be released to other interested parties. The CAA will consider this in making a decision in respect of any Official Information Act requests. It should be noted that the CAA cannot guarantee confidentiality in respect of any specific submissions.

### How to make a submission

A pre-prepared response sheet is available on the CAA web site at <http://www.caa.govt.nz/rules/nprms-2/> to assist with submissions.

Submissions may be sent by the following methods:

- by mail: Docket Clerk (NPRM 18-01)  
Civil Aviation Authority  
PO Box 3555  
Wellington 6140  
New Zealand
- delivered: Docket Clerk (NPRM 18-01)  
Civil Aviation Authority  
Asteron House  
Level 15  
55 Featherston Street  
Wellington 6011
- e-mail: [doCKET@caa.govt.nz](mailto:doCKET@caa.govt.nz) and marked NPRM 18-01

### Final date for submissions

Comments must be received before 2 October 2017.

### Availability of the NPRM:

Any person may obtain a copy of this NPRM from–

CAA web site: [www.caa.govt.nz](http://www.caa.govt.nz);

*or from:*

Docket Clerk  
Civil Aviation Authority  
Asteron House  
Level 15  
55 Featherston Street  
Wellington 6011  
Phone: 64-4-560 9640 (quoting NPRM 18-01)

### Further information

For further information, contact:

Peter E Williams  
Rules Drafter  
Email: [Peter.Williams@caa.govt.nz](mailto:Peter.Williams@caa.govt.nz)

## Proposed Rule Amendments

*Changes from the existing rules are highlighted in grey*

### Part 91 General Operating and Flight Rules

#### 91.529 Aircraft emergency location system (AELS) and ELT

(a) 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), (d), (e), rule 121.353(a)(1)(ii), rule 121.353(b), and rule 129.109.

(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.

(b) 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.

(c) Despite 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.

(d) Despite rule 91.501(4) and paragraph (a), 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.

(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 **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 paragraph (f)(1) or (f)(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.
- (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.

#### **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 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 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 an SSR 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 SSR 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 within the previous 12 months or aircraft manufacturer's 100 hour inspection or a manufacturer's equivalent inspection, whichever is earlier, 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 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

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- (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 subparagraphs (a)(1), (a)(2) or (a)(3) 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 subparagraph (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 subparagraphs (e)(1), (e)(2)(i), (e)(3), and the 12 month test and inspection requirement in subparagraph (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 subparagraph (h)(1) was performed.

## Appendix A.15 Emergency locator transmitters

- (a) 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) [Revoked]
- (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.

## ICAO Amendment 40 to Annex 6 Amendments

### Part 121 – Air Operations – Large Aeroplanes

#### 121.353 General

- (a) Except as provided in paragraph (b), a holder of an air operator certificate must ensure that an air transport operation does not commence unless—
- (1) the aeroplane is equipped with —
    - (i) the type of instruments and equipment required by Part 91 and this Subpart; and
    - (ii) for an aeroplane that is performing a regular air transport service to, from, and within countries outside of New Zealand and for which the individual airworthiness certificate is first issued after 1 July 2008 either:
      - (A) 3 ELTs, 1 of which must be an ELT(AF), or;
      - (B) at least 2 ELTs and a capability to autonomously transmit information from which a position can be determined by the operator at least once every minute, when in distress; and

Each ELT must meet the relevant standards referred to in Appendix A.15 to Part 91; and
    - (iii) the number of instruments and equipment to ensure that the failure of any independent system required for either communication or navigation purposes, or both, does not result in the inability to communicate and navigate safely as required for the route being flown; and
  - (2) the instruments and equipment installed in the aeroplane comply with—
    - (i) the applicable specifications and airworthiness design standards listed in the following:



- (A) Appendix B to this Part:
  - (B) Appendix C to Part 21:
  - (C) Part 26; or
- (ii) an alternative specification or design standard acceptable to the Director; and
  - (3) the instruments and equipment have been installed in accordance with the aeroplane manufacturer's instructions or equivalent instructions acceptable to the Director; and
  - (4) except as may be provided by a MEL approved under rule 91.539 for use for the aeroplane, the instruments and equipment installed in the aeroplane are in operable condition.
- (b) A holder of an air operator certificate is not required to equip an aeroplane with **AELS** as required by rule 91.529(a) if—
- (1) the individual airworthiness certificate for the aeroplane was first issued before 1 July 2008; and
  - (2) the aeroplane is performing a regular air transport service to, from, and within countries outside of New Zealand; and
  - (3) the aeroplane is equipped with 2 ELTs of any type that meet the requirements prescribed in A.15 of Appendix A to Part 91 instead of the **AELS** required by rule 91.529(a).

## Part 129 Foreign Air Transport Operator - Certification

### 129.109 Emergency Locator Transmitter

- (a) A holder of a foreign air operator certificate conducting a foreign air transport operation with an aeroplane is not required to comply with rule 91.529(a).
- (b) Despite paragraph (a), a holder of a foreign air operator certificate must not conduct a foreign air transport operation using an aeroplane unless the aeroplane is equipped in accordance with the following:
- (1) if the aeroplane is authorised to carry more than 19 passengers and the individual airworthiness certificate for the aeroplane was first issued before 1 July 2008, the aeroplane must be equipped with at least 1 automatic ELT or 2 ELTs of any type:
  - (2) if the aeroplane is authorised to carry more than 19 passengers and the individual airworthiness certificate for the aeroplane is first issued after 1 July 2008, the aeroplane must be equipped with **either**:
    - (i) at least 2 ELTs, one of which must be automatic, **or**
    - (ii) at least 1 ELT and a capability to autonomously transmit information from which a position can be determined by the operator at least once every minute, when in distress:
  - (3) if the aeroplane is authorised to carry 19 passengers or less and the individual airworthiness certificate for the aeroplane was first issued before 1 July 2008, the aeroplane must be equipped with at least 1 ELT of any type:
  - (4) if the aeroplane is authorised to carry 19 passengers or less and the individual airworthiness certificate for the aeroplane is first issued after 1 July 2008, the aeroplane must be equipped with at least 1 automatic ELT:
  - (5) every ELT installed or carried in the aeroplane must—
    - (i) meet the requirements of FAA TSO C-126; **or**
    - (ii) **meet the international standards of ICAO relating to aviation safety**; and
    - (iii) transmit on both frequencies of 406 MHz and 121.5 MHz **or other frequency as required by the international standards of ICAO.**

## Consequential Amendments

### Part 1 – Definitions and Abbreviations

#### 1.1 General definitions

**Aircraft Emergency Location System:** means a system installed in an aircraft that automatically broadcasts the aircraft location to search and rescue services in the event of a crash:

#### 1.3 Abbreviations

**AELS** means an Aircraft Emergency Location System

### Part 43 - General Maintenance Rules

#### 43.65 ELT and AELS tests and inspections

A person performing a test and inspection of an ELT or AELS system as required under subpart G of Part 91 must perform the applicable tests and inspections specified in Appendix F.

#### Appendix F — ELT and AELS Inspections and Tests

The following inspection and tests must be carried out by the person referred to in rule 43.65 to ensure compliance with the requirements prescribed in Subpart G of Part 91 for the inspection and testing of ELTs and AELS:

- (1) inspect the ELT or AELS and its mountings and aerial connection for general condition particularly for corrosion or corrosion deposits:
- (2) operate the self-test function of the ELT or AELS and check for satisfactory performance in accordance with the manufacturer's instructions.

### Part 115 – Adventure Aviation-Certification and Operation

#### 115.603 Instruments and equipment – glider

A holder of an adventure aviation operator certificate conducting an adventure aviation operation using a glider must ensure that—

- (1) each glider used for the operation is equipped under the applicable instrument and equipment requirements prescribed in Subpart F of Part 91, Subpart C of Part 104, and this Part; and
- (2) the instruments and equipment required by Part 104 have been installed under the glider manufacturer's instructions or other equivalent instructions acceptable to the Director; and
- (3) despite rule 91.529(e), each glider used for the operation is equipped with an AELS, or the pilot-in-command is equipped with an ELT(S) or PLB that meets the applicable standard in Part 91 Appendix A.

#### 115.753 Instruments and equipment

A holder of an adventure aviation operator certificate conducting a special aircraft operation must ensure that each aircraft used for the special aircraft operation is equipped with—

- (1) instruments and equipment that meet the requirements of Part 91 and this Part; and
- (2) an AELS under rule 91.529.

#### 115.803 Instruments and equipment – microlight aircraft

A holder of an adventure aviation operator certificate conducting an adventure aviation operation using a microlight aircraft must ensure that each microlight aircraft used for the operation—

- (1) is equipped with the applicable instruments and equipment specified in rules 91.509, 103.221(a), and 103.221(c)(2); and

- (2) despite rule 91.529(e), is equipped with an **AELS**, or the pilot-in-command is equipped with an ELT(S) or PLB that meets the applicable standard in Part 91 Appendix A and is maintained under rule 91.605(e)(4).

## Advisory Circular AC and CAA Notice

The AC43-11, AC43-1 and AC43-14 Appendix 2 are being revised to include ELT test and installation guidance. Material from Part 91 Appendix A, paragraph (b) is proposed to be transferred from Part 91 into AC 43-11.

The updated versions of these documents will be consulted separately to this NPRM.

Please find the draft CAA Notice of Approval for Aircraft Emergency Location Systems below.

This notice is proposed to be empowered by rule 91.529.



# Notice of Approval

## NTC 91.529

### Aircraft Emergency Location Systems

Revision DRAFT  
DD MMM YYY

### Preliminary

The Director issues the following approvals for aircraft emergency location systems (AELS) that are permitted to be installed in New Zealand registered aircraft operating within the New Zealand Flight Information Region under rule 91.529(a) of the Civil Aviation Rules.

### Purpose

Rule 91.529(a) requires a New Zealand registered aircraft (with certain exceptions) to have an aircraft emergency location system that has been approved by the Director to be installed. The purpose of this notice is to list those systems that have been approved by the Director.

### General

Civil Aviation Authority (CAA) Notices contain approvals and requirements including the detail about the approvals, standards, conditions, procedures and technical specifications that have been approved or determined by the Director under the Civil Aviation Rules. These details must be complied with by parties to whom it applies. They apply in particular circumstances to particular aviation document holders as specified in the notice.

CAA notices are issued under Civil Aviation Rules made according to section 28(5) of the Civil Aviation Act. This section permits the Minister of Transport to make ordinary rules, and to specify any terms and conditions within the rules:

- to require a matter to be determined, or undertaken or approved by the Authority, the Director or another person; or
- to empower the Authority, Director, or another person to impose requirements or conditions as to the performance of any activity, including (but not limited to) any procedures to be followed.

CAA Notices support a performance-based approach to regulation, and improve the flexibility and responsiveness of the Civil Aviation Rules. They may be used where performance-based regulation is the appropriate way to achieve the desired regulatory outcome, for example, in circumstances where new technological changes or challenges require more flexibility than prescribing requirements in the rules (and rule making may get quickly out-dated), or where there is a need to respond to safety issues which the rules do not adequately deal with.

The provisions stated in this notice are mandatory and must be complied with.

### Related Rules

Rule 91.529

**Effective date**

This notice comes into effect on [effective date].

**Revision History**

DRAFT	FOR CONSULTATION

# Aircraft Emergency Location Systems

## NTC 91.529



### 1. Preliminary

The Director issues the following approvals for aircraft emergency location systems installed in New Zealand registered aircraft operating within the New Zealand Flight Information Region under rule 91.529(a) of the Civil Aviation Rules.

### 2. Application

These requirements apply to New Zealand registered aircraft that are subject to rule 91.529(a).

### 3. Approved Equipment

The following Aircraft Emergency Location Systems are approved by the Director as meeting rule 91.529(ab):

- an ELT (AF) that has been certified as meeting the performance standards in FAA TSO-C126.

END

## Appendix

### Table of Amendments to Civil Aviation (Offences) Regulations

The following amendments are proposed to the Civil Aviation (Offences) Regulations as a consequence of the proposed amendments to Part 91:

Provision	Brief Description	Fines and Fees (\$)			
		Summary Conviction	Infringement Fees		
		Individual	Body Corporate	Individual	Body Corporate
Part 91	General Operating and Flight Rules				
<i>Rule Number</i>	91.529(a) Amend to read responsibility of aircraft operator of New Zealand registered aircraft for aircraft emergency location system (AELS)	5,000	30,000	2,000	12,000
<i>Rule Number</i>	91.529(f) Amend to read responsibility of holder of certificate of registration for New Zealand registered aircraft regarding coding and notifying details of AELS, ELT, EPIRB and PLB	10,000	50,000	2,000	12,000