

European Aviation Safety Agency

European Technical Standard Order

Subject: 406 and 121.5 MHz Emergency Locator Transmitter

1 — Applicability

This ETSO provides the requirements which 406 and 121.5 MHz Emergency Locator Transmitters that are designed and manufactured on or after the applicability date of this ETSO must meet in order to be identified with the applicable ETSO marking.

2 — Procedures

2.1 — General

Applicable procedures are detailed in CS-ETSO, Subpart A.

2.2 — Specific

None.

3 — Technical Conditions

3.1 — Basic

3.1.1 — Minimum Performance Standard

Standards set forth in the EUROCAE ED-62A, Minimum Operational Performance Specification for Aircraft Emergency Locator Transmitters 406 MHz and 121.5 MHz (Optional 243 MHz), dated February 2009.

Additionally, the use of hook and loop fasteners is not an acceptable means of attachment in complying with the Crash Safety requirements of section 4.5.7.3 of EUROCAE ED-62A for automatic fixed (AF) and automatic portable (AP) ELTs.

The shock and crash safety tests in EUROCAE ED-62A, section 4.5.7.3, require testing coincident with each orthogonal axes individually. Additionally, to better simulate more realistic aircraft crash scenarios, it is recommend that shock and crash safety testing be accomplished with simultaneous longitudinal and vertical cross-axis forces.

3.1.2 — Environmental Standard

See CS-ETSO, Subpart A, paragraph 2.1.

3.1.3 — Computer Software

See CS-ETSO, Subpart A, paragraph 2.2.

3.1.4 — Electronic Hardware Qualification

See CS-ETSO, Subpart A, paragraph 2.3

ETSO-C126b

3.2 — Specific

The battery used in the Emergency Locator Transmitter authorised under this ETSO must be appropriate for the intended operational environment, not pose a hazard to the aircraft, and meet the requirements of acceptable battery standards.

If non-rechargeable lithium cells and batteries are used to power the Emergency Locator Transmitter, ETSO-C142a 'Non-Rechargeable Lithium Cells And Batteries — Lithium Batteries' provides MPS for such lithium batteries.

If rechargeable lithium cells and batteries are used to power the Emergency Locator Transmitter, ETSO-C179a 'Permanently Installed Rechargeable Lithium Cells, Batteries, and Battery Systems' provides MPS for such batteries.

If nickel-cadmium, nickel metal-hydride or lead acid batteries are used to power the Emergency Locator Transmitter, ETSO-C173a 'Nickel-Cadmium, Nickel Metal-Hydride, and Lead-Acid Batteries' provides MPS for such batteries.

If batteries with a different chemistry are used to power the Emergency Locator Transmitter, the applicant must propose to EASA an appropriate MPS to be used for such batteries.

3.2.1 — Failure Condition Classification

See CS-ETSO, Subpart A, paragraph 2.4.

Failure of the function defined in paragraph 3.1 resulting in signal outputs not meeting the requirements of paragraph 3 is a minor failure condition. Loss of the function defined in paragraph 3.1 is a minor failure condition.

4 — Marking

4.1 — General

Marking as detailed in CS-ETSO, Subpart A, paragraph 1.2.

4.2 — Specific

None.

5 — Availability of Referenced Document

See CS-ETSO, Subpart A, paragraph 3.