

## Safety Information Bulletin

Airworthiness

**SIB No.: 2013-04R1**

**Issued: 18 May 2022**

**Subject: Hook and Loop Style Fasteners as Mounting Mechanism for an Emergency Locator Transmitter**

**Revision:**

This SIB revises EASA SIB 2013-04 dated 13 February 2013.

**Ref. Publications:**

Federal Aviation Administration (FAA) Special Airworthiness Information Bulletin (SAIB) [HQ-12-32](#) dated 23 May 2012.

**Applicability:**

Emergency Locator Transmitters (ELT) secured with hook and loop (also referred to as Velcro®) and other textile fastener mountings. Hereafter the phrase 'textile style fastener' is used in this SIB.

**Description:**

In several aircraft accidents, ELTs mounted with textile style fasteners have detached from their aircraft mounting. The separation of an ELT from its mount could cause the antenna connection to sever, rendering the ELT ineffective. The separation of an ELT from its mounting may also cause damage to other parts of the aircraft or pose a risk of Parts Detached from Aeroplanes (see [EASA Certification Memorandum CM-21.A-A-001 Issue 01](#)).

Inconsistent installation and reinstallation practices can lead to the textile style fastener not having the necessary tension to perform its intended function. Additionally, the retention characteristics of the textile style fastener degrade over time, due to wear and environmental degradation from vibration, temperature, or contamination. In addition, the textile style fastener can sever where it has contact to other materials (buckles, loops, rings, housing, bracket) or where it is glued or welded. The degradation effect occurs even though the textile style fastener was tested during initial ETSO (European Technical Standard Order) compliance verification against crash shock requirements. FAA SAIB HQ-12-32 addresses the same issue.

The safety concern about these attachments increases when the ELT manufacturer's instructions for continued airworthiness (ICA) do not contain specific instructions for regularly inspecting the textile style fasteners, or a replacement interval (e.g. Velcro life limit). This concern applies regardless of how the textile style fastener is installed in the aircraft.

This SIB is revised to extend the Applicability to other textile style fasteners.

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This is information only. Recommendations are not mandatory.



At this time, the safety concern described in this SIB is not considered to be an unsafe condition that would warrant Airworthiness Directive (AD) action under Regulation (EU) [748/2012](#), Part 21.A.3B.

### Recommendation(s):

EASA endorses the recommendations of the FAA, as addressed in the referenced SAIB.

EASA recommends in addition that textile style fasteners are inspected for signs of damage, loss of function, wear, or onset of deterioration over its entire length but especially where contact to other materials (buckles, loops, rings) or where it is glued or welded.

Finally, EASA recommends aircraft manufacturers and ELT installation (i.e. aircraft modification) designers to review the ELT manufacturer's existing ICA to ensure that the ICA for the aircraft or modification, as applicable, are appropriately addressing scheduled maintenance requirements for textile style fasteners used for ELT retention.

Note 1: United States Federal Regulations (14 CFR § 91.207 (d)) require a 12 month period for inspections, to check for:

- *Proper ELT installation;*
- *Battery corrosion;*
- *Operation of the controls and crash sensor; and*
- *The presence of a sufficient signal radiated from its antenna.*

Note 2: The FAA has issued TSO-C126b, 406 MHz Emergency Locator Transmitter (ELT) to add the following:

*The use of hook and loop fasteners is not an acceptable means of attachment in complying with the Crash Safety requirements of section 2.2.5 of RTCA/DO-204A for automatic fixed (AF) and automatic portable (AP) ELTs.*

A similar update was implemented in ETSO-C126b.

*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.*

### Contact(s):

For further information contact the EASA Safety Information Section, Certification Directorate, E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).

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