European Union Aviation Safety Agency

Safety Information Bulletin

Airworthiness

SIB No.: 2020-04

Issued: 16 March 2020

Subject: **Lithium Batteries used in Emergency Locator Transmitters**

Ref. Publications:

European Technical Standard Order (ETSO) C142a, Non-Rechargeable Lithium Cells and Batteries, dated 28 November 2008; and
EASA Special Condition on 'Non-rechargeable Lithium Battery Installations' applicable to the Large Aeroplane category.

Applicability:

HR Smith (Technical Developments) Ltd Emergency Locator Transmitters (ELT), having Part Number (P/N) 500-12() (Joint Technical Standard Order authorisation EASA.21.O.1160).
HR Smith (Technical Developments) Ltd ELT, having P/N 500-27() (Joint Technical Standard Order authorisation CAA.O.00008).
Techtest Ltd (doing business as HR Smith) ELT, having P/N 500-32-2Y and battery pack A01477 (ETSO authorisation EASA.21O.10058528 Rev. A).
Techtest Ltd (doing business as HR Smith) ELT, having P/N 500-32-2Y-S or P/N 500-32-2Y-S-D (ETSO authorisation EASA.21O.10068213).
Techtest Ltd (doing business as HR Smith) battery packs, having P/N A0696Y.

These ELT and battery packs are known to be installed on, but not limited to Certification Specification CS-23 and CS-25 aeroplanes, CS-27 and CS-29 helicopters, or equivalent certification regulations, i.e. Federal Aviation Regulations (FAR) or Joint Aviation Requirements (JAR).

Some of these ELT and battery packs may also be carried on board of an aircraft by the operator without being installed as an element of the aircraft's type design.

Description:

The affected ELT and battery packs, in case of a thermal runaway, may release gases on fire. As this fire eventually self-extinguishes, the design remains compliant with the criteria of Appendix 1 of ETSO-C142a. Nevertheless, the presence of fire may affect the performance of the surrounding equipment, especially when the ELT is located close to safety equipment such as flotation devices.

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 recommends holders of a type design approval (type certificate) or design change approval (supplemental type certificate, or minor change approval) to consider the presence of fire in addition to hot gases in assessing the effect at aircraft level of battery failures for the articles listed in the Applicability section of this SIB. This assessment should explicitly include the effect of fire or hot gases impingement on any stowed safety equipment installed in proximity of the battery such as life rafts, life jackets or emergency floatation systems. The EASA Special Condition on 'Non-rechargeable Lithium Battery Installations' provides additional considerations (also valid for CS-23, CS-27, CS-29 aircraft) to perform this assessment.

EASA recommends operators of aircraft that have any affected ELT or battery pack(s) carried on board which are not part of the approved aircraft type design, or design change, as applicable, to ensure that the presence of fire (in case of an ELT battery failure) cannot propagate to the surrounding material.

EASA recommends the use of an ELT model equivalent to those listed in the Applicability section of this SIB, but approved in accordance with RTCA DO-227A (as shown by an ETSO authorisation in accordance with ETSO-C142b or with ETSO-C142a with a deviation to use RTCA DO-227A) for the battery aspects.

Contact(s):

For further information, contact the EASA Programming and Continued Airworthiness Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.

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