Safety Information Bulletin

Operations

SIB No.: 2025-02

Issued: 10 April 2025

Subject: Nuisance Alerts from Distress Tracking Systems

Ref. Publications:

- ICAO Annex 6 - Operation Of Aircraft - Part I, 12th Edition dated July 2022.
- Commission Regulation (EU) No 965/2012 dated 5 October 2012.
- Regulation (EU) 376/2014 dated 3 April 2014.
- Commission Implementing Regulation (EU) 2015/1018 of 29 June 2015.
- EASA Certification Specifications for Airborne Communications, Navigation and Surveillance (CS-ACNS) Issue 5 dated 24 April 2024.

Applicability:

EASA operators[1] and Third Country Operators[2] of aeroplanes equipped with a distress tracking system required to comply or intending to comply with 'Location of an Aircraft in Distress' requirements set in ICAO Annex 6, Part I, section 6.18 or in Commission Regulation (EU) 965/2012, Annex IV 'Commercial Air Transport Operations [Part-CAT]', Point CAT.GEN.MPA.210, e.g., using an Emergency Locator Transmitter of Distress Tracking type (ELT(DT)).

Production organisations of aeroplanes equipped with a distress tracking system intending to comply to 'Location of an Aircraft in Distress' requirements set in ICAO Annex 6, Part I, section 6.18 or in CAT.GEN.MPA.210, e.g., using an ELT(DT).

Approved maintenance organisations maintaining aeroplanes equipped with a distress tracking system intending to comply with 'Location of an Aircraft in Distress' requirements set in ICAO Annex 6, Part I, section 6.18 or in CAT.GEN.MPA.210, e.g., using an ELT(DT).

Description:

Distress Tracking Systems

CAT.GEN.MPA.210 introduced the requirement to equip certain aeroplanes with a new system detecting distress conditions and transmitting the accident location before the impact. Some aircraft which are not required to comply with CAT.GEN.MPA.210 also installed a similar system to comply with ICAO Annex 6, Part I, section 6.18 as required by some states (i.e. aircraft such that Maximum Operational Passenger Seating Configuration is less than or equal to 19 and Maximum Certified Take-Off Mass is more than 27 000 kg but less than 45 500 kg).

[1] Operators in the scope of article 1 of Commission Regulation (EU) No 965/2012

[2] Operators in the scope of article 1 of Commission Regulation (EU) No 452/2014

Such system is mainly using ELT(DT), but it could also use other means (ref. CS-ACNS). The alert is sent both to Search and Rescue (SAR) services and to the Location of an Aircraft in Distress Repository. The flightdeck equipment indicates that an alert is transmitted. In addition, the Air Traffic Service Unit may contact the flight crew of the transmitting aircraft to inquire about the actual distress status.

Limiting nuisance alerts

The recent introduction of ELT(DT) in different aircraft types resulted in a significant increase of nuisance alerts. They can result from weaknesses in the design or from inappropriate handling.

As an example, where an Automatic Fixed ELT (ELT(AF)) transmits only 50 seconds after activation, an ELT(DT) transmits almost instantaneously. Inappropriate test practices inherited from ELT(AF) can then result in nuisance alerts.

Also, some aircraft maintenance and production activities that are unrelated to ELT, such as troubleshooting, may require setting the aircraft artificially in airborne state (e.g., aircraft on jacks, simulated total pressure, etc.). This may put the distress tracking system in armed mode, so that it starts monitoring various parameters used to activate the ELT. In such conditions, switching the power off for some equipment (including the unit processing distress logics), or setting some parameters (e.g. excessive airspeed or vertical speed) might result in a nuisance ELT activation. Per CS ACNS.E.LAD.350(c), the Design Approval Holders (DAH) instructions for continuing airworthiness must contain the procedures to avoid that activation signals are inadvertently transmitted during maintenance of the system. These instructions should be carefully followed to ensure that no nuisance activation occurs.

Limiting the number and duration of distress nuisance alerts is of the utmost importance, as they consume resources that may impede the processing of genuine alerts and the rescue of accident survivors.

Reporting need

Furthermore, some nuisance alerts may result from flaws in the design or in the procedures used when producing, maintaining or operating the aircraft. The DAHs therefore need to be aware of these alerts to resolve the issue.

Per CS ACNS.E.LAD.290, the Distress Tracking System must contain “means to determine, after a flight without an accident, the condition that triggered the automatic activation”. This information intends to support the operator in performing a quick and effective analysis. It should allow to identify the aircraft, and to determine the time of each case of activation. That information should be recorded by an airborne equipment or transmitted during the flight for recording on the ground. Additional information about this function for each specific type is available from the aircraft DAH.

The recommendations of the SIB intend to avoid nuisance alerts resulting from mishandling or not adhering to the appropriate procedures, and to remind of the importance of proper reporting in accordance with Regulation (EU) 376/2014.

At this time, the safety concern described in this SIB does not warrant the issuance of a Safety Directive under Commission Regulation (EU) 965/2012, Annex II, ARO.GEN.135.

Recommendation(s):

Operators, production organisations and approved maintenance organisations should take measures so that their personnel are aware that:

- Setting the ELT in manual mode even for a few seconds (most often labelled “ON”) position from the cockpit ELT control panel result in immediate transmission for ELT(DT);
- Should a nuisance alert be transmitted, the nearest Mission Control Centre, Rescue Coordination Centre and Air Traffic Services unit for the location of the alert transmission should be advised so that no SAR resources will be deployed. This can be done through the contact identified in the following page of COSPAS-SARSAT website: Inadvertent Alerts - International COSPAS-SARSAT;
- Any unintended ELT alert should be stopped as early as possible, either by resetting the ELT (for alerts resulting from the distress logics) or by using the ELT switch (for alerts generated by the manual activation switch or by the crash acceleration sensor). In all cases, all ELT activations should be terminated before the aircraft takes off;
- Testing should be undertaken only by using the test-switch position intended for that purpose. If activation of the distress-switch function is required, electromagnetic shielding of the beacon antenna should be considered prior to the “live” distress-switch-activated test;
- Aircraft maintenance and production activities (e.g., troubleshooting stimulating aircraft systems) should follow the DAH instructions to avoid nuisance activations. Furthermore, the absence of ELT activation should be checked (e.g., through the dedicated cockpit indication or a 406 MHz monitoring device) regularly during and after production and maintenance tests during which the avionics equipment is powered on.

Operators, production organisations and approved maintenance organisations should report each nuisance alert from an ELT(DT) or from other Distress Tracking means (following guidance provided in the Appendix 1 of this SIB) to the DAH and to the competent authority.

Contact(s):

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

Appendix 1

Reporting guidelines for ELT(DT) and other Distress Tracking nuisance activations

The following guidelines are only valid for nuisance activations of ELT(DT), irrespective of the source of activation - manual, resulting from the distress logics, or other sources; as well as for other Distress Tracking devices used to comply either with Commission Regulation (EU) No 965/2012 (EU) CAT.GEN.MPA.210 Location of an aircraft in distress — Aeroplanes or with ICAO Annex 6 Part I Section 6.18.

When reporting, a person or organisation should consider, without prejudice of other data requested by any form or by any recipient organisation, the following:

- The “Headline” should contain the keywords “Distress Tracking (DT) nuisance activation”.
- The “Occurrence category”, as applicable, should be:
  - “OTHR: Other”, if the triggering action is not known, or was caused by, for example, maintenance/crew action,
  - “SCF-NP: System/component failure or malfunction”, if it is known that the triggering action was caused by a system/component failure/malfunction.
- The “Reporter’s description” should include:
  - A repetition of the keywords “Distress Tracking (DT) nuisance activation”.
  - The type of activation between:
    - “Manual” when resulting from a flight crew or maintenance personnel action on the cockpit switch,
    - “Autonomous” when activated by the distress tracking logics,
    - “Automatic” when activated by the acceleration sensors, if any.
  - The phase of flight during which the activation occurred, or at least, when it was detected by the organisation, including, when on ground, during maintenance. In this latter case, which type of maintenance activity was under way.
  - Any specific circumstances to the event.
  - The suspected source of the nuisance activation (e.g., power-on phase, …).
  - When the activation has been triggered by the Distress Tracking logics, the time of the nuisance activation and the condition that triggered it as recorded by the aircraft system.