Airworthiness Directive

AD No.: 2018-0144R1

Issued: 31 January 2019

Note: This Airworthiness Directive (AD) is issued by EASA, acting in accordance with Regulation (EU) 2018/1139 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 129 of that Regulation.

This AD is issued in accordance with Regulation (EU) 748/2012, Part 21.A.3B. In accordance with Regulation (EU) 1321/2014 Annex I, Part M.A.301, the continuing airworthiness of an aircraft shall be ensured by accomplishing any applicable ADs. Consequently, no person may operate an aircraft to which an AD applies, except in accordance with the requirements of that AD, unless otherwise specified by the Agency [Regulation (EU) 1321/2014 Annex I, Part M.A.303] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Change Approval Holder's Name:
AIRBUS

Type/Model designation(s):
Installation of 2KU-band Antenna

Effective Date: Revision 1: 31 January 2019
Original issue: 13 July 2018

EASA STC Number(s): 10062892 and 10064120

Foreign AD: Not applicable

Revision: This AD revises EASA AD 2018-0144 dated 06 July 2018.

ATA 53 – Fuselage – Emergency Locator Transmitter Antenna – Inspection

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Manufacturer(s):
Airbus Interiors Services (for the 2KU band antenna installation); Airbus (for the aeroplanes)

Applicability:
Airbus A330-201, A330-202, A330-203, A330-223, A330-243, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342 and A330-343 aeroplanes, and Airbus A340-642 and A340-643 aeroplanes, all serial numbers.

Definitions:
For the purpose of this AD, the following definitions apply:

The AOT: Airbus Alert Operators Transmission (AOT) A53L013-18 original issue dated 12 June 2018.

The TD: Airbus Technical Disposition (TD) 80417255/044/2018#A, dated 07 June 2018.

The applicable modification SB: Airbus Service Bulletin (SB) A330-25-3702, SB A330-25-3703 and SB A340-25-5235, as applicable.

Groups: Group 1 aeroplanes are those modified in accordance with the original issue of EASA Supplemental Type Certificate (STC) 10062892 (A330) or STC 10064120 (A340), as applicable, to have a 2KU-Band antenna installed and on which the TD has not been embodied in service.

Group 2 aeroplanes are those modified in accordance with the original issue of EASA STC 10062892 (A330) or STC 10064120 (A340), as applicable, and have the TD embodied in service.
Group 3 aeroplanes are those that, on 13 July 2018 [the effective date of the original issue of this AD], were not yet modified in accordance with the original issue of EASA STC 10062892 (A330) or STC 10064120 (A340), as applicable.

The applicable RDAS: The individualised Repair Design Approval Sheet (RDAS) provided by Airbus for those aeroplanes on which the TD has been, or will be, embodied.

Reason:
Some cases of high noise level in the aft cabin section of the fuselage were reported. Subsequent inspections of the ELT antenna installation and the surrounding fuselage structure showed cases where the ELT antenna was found loose, with damaged fixations and elongated holes. In addition, cracks were found in the ELT antenna bores and in the underlying fuselage skin and internal doubler. Analysis revealed that the ELT antenna installation can experience oscillating vibration loads, leading to the reported high noise level and also resulting in damage to the ELT antenna and its surrounding structure. This vibration could be explained by a vortex, created by the shape of 2KU-Band antenna radome, installed in front of the ELT antenna by Airbus STC 10062892 (A330) or STC 10064120 (A340) as applicable.

This condition, if not detected and corrected, could lead to reduced structural integrity of the aeroplane, possibly resulting in in-flight cabin depressurization.

To address this potential unsafe condition, Airbus issued the AOT to provide inspection instructions. In addition, Airbus developed and published the TD, which provides instructions to repair/modify the ELT antenna installation, also allowing relaxed inspection instructions.

Consequently, EASA issued AD 2018-0144 to require repetitive inspections of the ELT antenna and fuselage-to-antenna fastener holes and, depending on findings, accomplishment of applicable corrective action(s), and reporting of the inspection results, including no findings, to Airbus. That AD also allowed embodiment of the TD to provide an interim temporary repair solution through the applicable RDAS, containing amended post-repair inspection intervals. Finally, that AD also prohibited installation of EASA STC10062892 (A330), or STC 10064120 (A340), as applicable.

Since that AD was issued, Airbus developed updates (Revision 1) of the two STC, which were recently approved by EASA. Airbus also issued the applicable modification SB, providing instructions for Group 1 and Group 2 aeroplanes to relocate the affected ELT antenna out of the vortex sphere of the 2KU-Band antenna radome. After that modification, the inspections are no longer necessary. Revision 1 of the two STCs provides instructions for concurrent relocation of the ELT antenna.

For the reasons described above, this AD is revised to remove the prohibition on STC installation when applying the STC at Revision 1. This revised AD also provides an optional terminating action for the repetitive inspections required by this AD.

Required Action(s) and Compliance Time(s):

Required as indicated, unless accomplished previously:

Initial and Repetitive Inspection(s):

(1) For Group 1 aeroplanes: Within the compliance time as defined in Table 1 of this AD, as applicable, depending on the number of flight hours (FH) accumulated by the aeroplane since installation of the STC (2KU-Band antenna) on the aeroplane, and, thereafter, at intervals not to exceed 250 FH, accomplish a visual inspection of the ELT antenna, followed by a special detailed inspection (SDI) (rototest) of the six fuselage-to-antenna fastener holes, in accordance with the instructions of the AOT.

Table 1 – Initial ELT Installation Inspection (see Note 1 of this AD)

FH Accumulated	Compliance Time
Less than 1 685 FH	Before exceeding 1 735 FH
1 685 FH or more	Within 50 FH after 13 July 2018 [the effective date of this AD at original issue]

Note 1: Unless specified otherwise, the FH in Table 1 of this AD are those accumulated by the aeroplane on 13 July 2018 [the effective date of this AD at original issue] since installation of the applicable STC modification, STC 10062892 (A330) or STC 10064120 (A340), original issue.

(2) For Group 1 aeroplanes: The TD can be requested from Airbus and can be embodied at any time in service, the aeroplane effectively being modified to Group 2. Together with the TD, Airbus will provide the applicable RDAS.

(3) For Group 2 aeroplanes: Within the compliance times as specified in the applicable RDAS, and, thereafter, at intervals not to exceed the applicable value in the applicable RDAS, without exceeding the values (threshold, interval) as specified in Table 2 of this AD, accomplish a visual inspection of the ELT antenna, followed by an SDI (rototest) of the six fuselage-to-antenna fastener holes, in accordance with the instructions of the AOT.

Table 2 – Not-to-exceed Values for Inspection of ELT-Antenna (see Note 2 of this AD)

Threshold	Interval
3 000 FH	500 FH

Note 2: The inspection threshold FH in Table 2 of this AD are those accumulated by the aeroplane after accomplishment of the TD.

Corrective Action(s):

(4) If, during any inspection as required by paragraph (1) or (3) this AD, as applicable, any cracks and/or damage of the ELT antenna are found, before next flight, replace the ELT antenna with a new antenna in accordance with the instructions of the AOT.

(5) If, during any inspection as required by paragraph (1) or (3) of this AD, as applicable, any cracks are found in the fuselage, before next flight, contact Airbus in accordance with the instructions of the TD to obtain an approved RDAS and, within the compliance time specified in the instructions of that RDAS, accomplish those instructions accordingly.

Note 3: The AOT also contains instructions that, in case of experiencing a high noise level (excessive vibration) in the aft cabin section, a visual check of the ELT antenna/attachment area should be accomplished. Reporting of such occurrences can be subject to Regulation (EU) 376/2014.

Terminating Action(s):

(6) Modification of a Group 1 or Group 2 aeroplane in accordance with the instructions of the applicable modification SB constitutes terminating action for the repetitive inspections as required by this AD for that aeroplane.

Reporting:

(7) Within 30 days after each inspection as required by this AD, report the results to Airbus in accordance with the instructions of the AOT.

STC installation:

(8) For Group 3 aeroplanes: From 13 July 2018 [the effective date of this AD at original issue], do not modify an aeroplane in accordance with the original issue of EASA STC 10062892 (A330), or STC 10064120 (A340), as applicable.

(9) For Group 3 aeroplanes: From the effective date of this revised AD, it is allowed to modify an aeroplane in accordance with the instructions of EASA STC 10062892 Revision 01 (A330), or STC 10064120 Revision 01 (A340), as applicable, or any later approved revision.

Ref. Publications:

Airbus AOT A53L013-18 original issue dated 12 June 2018.

Airbus TD 80417255/044/2018#A, dated 07 June 2018.

Airbus SB A330-25-3702 original issue dated 24 October 2018.

Airbus SB A330-25-3703 original issue dated 24 October 2018.

Airbus SB A340-25-5235 original issue dated 29 October 2018.

The use of later approved revisions of the above-mentioned documents is acceptable for compliance with the requirements of this AD.

Remarks:

1. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.

2. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process until after publication.

3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.

4. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this AD, and which may occur, or have occurred on a product, part or appliance not affected by this AD, can be reported to the EU aviation safety reporting system.

5. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – EIAL (Airworthiness Office), E-mail: airworthiness.A330-A340@airbus.com.