Airworthiness Directive

AD No.: 2023-0215

Issued: 11 December 2023
[Correction: 13 December 2023]

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, or Annex Vb Part ML.A.301, as applicable, 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 Annex Vb Part ML.A.303, as applicable] or agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:
AIRBUS S.A.S.

Type/Model designation(s):
A350 aeroplanes

Effective Date: 25 December 2023

TCDS Number(s): EASA.A.151

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2021-0260 dated 18 November 2021.

ATA – Aircraft Flight Manual – Auto Flight System Control Panel ALT Outer Knob Use – Amendment

ATA 22 – Auto Flight – Flight Control Unit – Modification

Manufacturer(s):
Airbus

Applicability:
Airbus A350-941 and A350-1041 aeroplanes, all manufacturer serial numbers.

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

The AFM TR: Airbus A350 Airplane Flight Manual (AFM) Temporary Revision (TR) 121 Issue 1.

The SB: Airbus Service Bulletin (SB) A350-22-P016.

The FOT: Airbus Flight Operations Transmission (FOT) 999.0061/23.

Affected FCU: Flight control units (FCU), having Part Number (P/N) C31006AC01 or C31006AB01.

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Serviceable FCU: FCU standard H6.0, having P/N C31006AD01.

Groups: Group 1 aeroplanes are those that have an affected FCU installed.
Group 2 aeroplanes are those that do not have an affected FCU installed. An aeroplane on which Airbus modification (MOD) 116233 has been embodied in production or on which the SB has been embodied in service is a Group 2 aeroplane, provided the aeroplane remains in that configuration.

Reason:

Occurrences have been reported of unwanted auto flight system (AFS) altitude changes. Following investigation, it was determined that, depending on the ALT outer knob selection, failure of the ALT knob on the FCU can change the target altitude, either by 100 feet or 1 000 feet. The erroneous altitude is displayed in the AFS cockpit panel display and in the primary flight display (PFD), but may not get noticed by the crew. Further investigations indicated that these events were due to an incorrect manufacturing process on the ALT knob encoder.

This condition, if not corrected, could lead to an erroneous altitude target in descent, climb, cruise or go-around, possibly resulting in an unexpected aeroplane vertical trajectory deviation, with consequent risk to the aeroplane.

To address this potential unsafe condition, Airbus published the AFM TR, as defined in this AD, providing flight crew procedures related to the use of the AFS Control Panel ALT Knob. In addition, Airbus developed FCU standard H6.0, embodied in production through Airbus MOD 116233, and published the SB to provide in-service modification instructions that, when embodied, allowed removal of the applicable AFM TR.

Consequently, EASA AD 2021-0260 was issued to require amendment of the applicable AFM by incorporating the AFM TR. That AD also required replacement of the affected FCU with a serviceable FCU, which allowed removal of the AFM TR from the applicable AFM.

Since EASA AD 2021-0260 was issued, several operators reported uncommanded altitude changes on aeroplanes equipped with a serviceable FCU. Airbus is investigating the cause of these reported events and, as a precautionary measure, expanded the applicability of the AFM TR to all aeroplanes, including those equipped with a serviceable FCU, and issued the FOT to inform operators accordingly.

For the reasons described above, this AD partially retains the requirements of the EASA AD 2021-0260, which is superseded, and requires amendment of the applicable AFM by incorporating the AFM TR also for all aeroplanes with a FCU standard H6.0 installed.

This AD is still considered to be an interim action and further AD action may follow.

This AD is re-published to correct an editorial error in Parts Installation paragraph (5.1).

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

Required as indicated, unless accomplished previously:

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AFM Amendment:

(1) For Group 1 aeroplanes: Within 3 months after 02 December 2021 [the effective date of EASA AD 2021-0260], amend the applicable AFM by incorporating the AFM TR, as defined in this AD, inform all flight crews, and thereafter, operate the aeroplane accordingly.

(2) For Group 2 aeroplanes: Within 3 months after the effective date of this AD, amend the applicable AFM by incorporating the AFM TR, as defined in this AD, inform all flight crews, and thereafter, operate the aeroplane accordingly.

(3) Amending the applicable AFM of an aeroplane by incorporating an AFM revision, which includes the same content as the AFM TR, is acceptable to comply with the requirements of paragraph (1) or (2) of this AD, as applicable, for that aeroplane.

Modification:

(4) For Group 1 aeroplanes: Within 25 months after 02 December 2021 [the effective date of EASA AD 2021-0260], replace the affected FCU with a serviceable FCU in accordance with the instructions of the SB (see Notes 1 and 2 of this AD).

Note 1: The SB also provides instructions to modify an affected FCU, replacing the optical encoders, into a serviceable FCU. This AD does not mandate the FCU modification, only the replacement of the FCU with a serviceable part.

Note 2: Incorporation of the AFM TR is required also for Group 2 aeroplanes. Consequently, modification of an aeroplane in accordance with paragraph (4) of this AD does not allow removal of the AFM TR, introduced in the AFM of that aeroplane in accordance with paragraph (1) of this AD.

Parts Installation:

(5) Do not install an affected FCU on any aeroplane, as required by paragraph (5.1) or (5.2) of this AD, as applicable.

(5.1) For Group 1 aeroplanes: After modification of the aeroplane as required by paragraph (4) of this AD.

(5.2) For Group 2 aeroplanes: From 02 December 2021 [the effective date of EASA AD 2021-0260].

Ref. Publications:

Airbus A350 AFM TR 121 Issue 1 approved 08 August 2019.

Airbus SB A350-22-P016 original issue dated 24 June 2021 or Revision 01 dated 12 October 2021.

Airbus FOT Ref. 999.0061/23 original issue dated 09 October 2023.

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

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Remarks:

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

2. This AD was posted on 23 November 2023 as PAD 23-129 for consultation until 07 December 2023. The Comment Response Document can be found in the EASA Safety Publications Tool, in the compressed (zipped) file attached to the record for this AD.

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. This may include reporting on the same or similar components, other than those covered by the design to which this AD applies, if the same unsafe condition can exist or may develop on an aircraft with those components installed. Such components may be installed under an FAA Parts Manufacturer Approval (PMA), Supplemental Type Certificate (STC) or other modification.

5. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS A350 XWB, E-mail: continued-airworthiness.a350@airbus.com.

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