

Airworthiness Directive

AD No.: 2021-0024

Issued: 19 January 2021

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 Approval Holder's Name: ATR-GIE AVIONS de TRANSPORT RÉGIONAL
Type/Model designation(s): ATR 42 aeroplanes

Effective Date: 02 February 2021

TCDS Number(s): EASA.A.084

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2020-0221 dated 13 October 2020.

ATA 31 – Instruments – Angle of Attack Probe Electrical Routing – Inspection / Modification

ATA – Aircraft Flight Manual - Amendment

Manufacturer(s):

ATR-GIE Avions de Transport Régional, formerly EADS ATR - Alenia, Aerospatiale Matra ATR - ALENIA, Aerospatiale - Alenia, Aerospatiale – Aeritalia

Applicability:

ATR 42-200, ATR 42-300 and ATR 42-320 aeroplanes, all manufacturer serial numbers.

Definitions:

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

The AOM: ATR Airworthiness Operators Message (AOM) 2020/13 Issue 1.

The SB: ATR Service Bulletin (SB) ATR42-27-0113.

Affected wiring: Electrical wire routing of the left-hand and right-hand side Angle of Attack (AOA) probes.

Groups: Group 1 aeroplanes are those which do not have ATR modification (mod) 01845 embodied in production; and those which have mod 01845 and mod 03294 embodied in production, or have embodied SB ATR42-31-0059 in service; and those which have mod 01845 embodied in production and mod 08690 embodied in service in accordance with Conversion Instruction ATR42-98-356A. Group 2 aeroplanes are those which are not Group 1 aeroplanes.

Reason:

Several events have been reported by ATR 42 operators of experiencing spurious activation of the stall warning system. Such activation can lead to one or a combination of the following events:

- Autopilot disconnection
- Stick pusher activation
- Stick shaker activation
- Aural stall warning (cricket audio alert)
- Master CAUTION light flashing amber
- STICK PUSHER green light ON
- FLT CTL amber light on CAP
- Stick PUSHER/SHAKER pushbutton 'FAULT' amber light illumination
- Whooler Audio alert

Subsequent investigation results indicated that wiring damage on the wire bundle between an AOA probe and the Crew Alerting Computer can trigger the above scenario.

This condition, if not detected and corrected, could lead to loss of control of the aeroplane during take-off and landing phases.

To initially address this potential unsafe condition, ATR issued the AOM to provide inspection instructions. Consequently, EASA published AD 2020-0221 to require a one-time visual inspection of the affected wiring and, depending on findings, accomplishment of applicable corrective action(s). That AD also required reporting of the inspection results to ATR.

Since that AD was issued, ATR developed a wiring modification, and issued the SB to provide the modification instructions. ATR also developed an amendment of the Aircraft Flight Manual (AFM) by incorporation of the actions described in Appendix 1 of this AD into the Systems Limitations section.

For the reasons described above, this AD retains the requirements of EASA AD 2020-0221, which is superseded, and requires a wiring modification for certain aeroplanes, and an amendment of the applicable AFM for all aeroplanes.

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

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

Required as indicated, unless accomplished previously:

Inspection:

- (1) For Group 1 and Group 2 aeroplanes: Within 2 months after 27 October 2020 [the effective date of EASA AD 2020-0221], accomplish a visual inspection of the affected wiring in accordance with the instructions of the AOM.

Corrective Action(s):

- (2) If, during the inspection as required by paragraph (1) of this AD, discrepancies are detected as identified in the AOM, before next flight, contact ATR for approved repair instructions and accomplish those instructions accordingly.

Reporting:

- (3) Within 30 days after the inspection as required by paragraph (1) of this AD, report the inspection results (including no findings) to ATR. This can be accomplished in accordance with the instructions of the AOM.

Modification:

- (4) For Group 1 aeroplanes: Within 12 months after the effective date of this AD, modify the captain stick shaker wiring in accordance with the instructions of the SB.

AFM Amendment:

- (5) For Group 1 aeroplanes: Concurrently with modification of an aeroplane as required by paragraph (4) of this AD, amend Systems Limitations section of the applicable AFM of that aeroplane by inserting the AFM change provided in Appendix 1 of this AD, inform all flight crews, and, thereafter, operate the aeroplane accordingly.
- (6) For Group 2 aeroplanes: Within 12 months after the effective date of this AD, amend Systems Limitations section of the applicable AFM of that aeroplane by inserting the AFM change provided in Appendix 1 of this AD, inform all flight crews, and, thereafter, operate the aeroplane accordingly.
- (7) Amending the applicable AFM of an aeroplane by incorporating a later approved AFM revision that contains the changes of Appendix 1 of this AD, is an acceptable method to comply with the requirements of paragraphs (5) or (6) of this AD, as applicable, for that aeroplane.

Ref. Publications:

ATR AOM 2020/13 Issue 1 dated 28 September 2020.

ATR SB ATR42-27-0113 original issue dated 09 December 2020.

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. This AD was posted on 18 December 2020 as PAD 20-204 for consultation until 15 January 2021. 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: ATR - GIE Avions de Transport Régional, Continued Airworthiness Service, Telephone: +33 (0)5 62 21 62 21, Fax: +33 (0) 5 62 21 67 18; E-mail: continued.airworthiness@atr-aircraft.com.

APPENDIX 1 – AFM Amendment**27.2 Stick Pusher**

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In the take-off and landing phases the STICK PUSHER / SHAKER pushbutton must be selected to OFF.

	1845 or 3442
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In the take-off and landing phases the STICK PUSHER pushbutton must be selected to OFF.