

Airworthiness Directive

AD No.: 2023-0078

Issued: 12 April 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:

ATR-GIE AVIONS DE TRANSPORT REGIONAL

Type/Model designation(s):

ATR 42 and ATR 72 aeroplanes

Effective Date: 26 April 2023

TCDS Number(s): EASA.A.084

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA Emergency AD 2021-0120-E dated 03 May 2021.

ATA 24 – Electrical Power – Direct Current Emergency Electrical Network – Tests / Modification

ATA – Aircraft Flight Manual / Master Minimum Equipment List – Amendment

Manufacturer(s):

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

Applicability:

ATR 42-400 and ATR 42-500 aeroplanes, all manufacturer serial numbers (MSN); and

ATR 72-101, ATR 72-102, ATR 72-201, ATR 72-202, ATR 72-211, ATR 72-212 and ATR 72-212A aeroplanes, all MSN.

Definitions:

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

The AOM: ATR Airworthiness Operators Message (AOM) 2021/05.

The OEB: ATR Operations Engineering Bulletin (OEB) 56, issue 3, “Potential temporary loss of all Cockpit Display Systems”.

The SB: ATR Service Bulletin (SB) ATR42-24-0062 or SB ATR72-24-1032, as applicable.

Affected part: Battery toggle switch Functional Item Number (FIN) 7PA, having Part Number (P/N) E0062C1A4AC0A or P/N 845UN01A4AC0A, which has previously been installed on another aeroplane (not new).

Groups: Group 1 aeroplanes are ATR 42-500 aeroplanes MSN 1416, 1419, 1601, 1602, 1604, 1606, and 1607 to 1612 inclusive; and ATR 72-212A aeroplanes MSN 1542, 1556, 1561, 1565, 1566, 1570, 1573, 1575, 1594, 1596, 1598, 1600, 1620, 1623, 1627 to 1632 inclusive, 1634, 1636 to 1644, 1646 to 1651 inclusive, 1654, 1655 to 1660 inclusive, 1662, 1663, 1680, 1681, 1686, 1691, 1692, 1700, 1717, 1722, 1727, 1730, 1732, 1736 and 1739.

Group 2 aeroplanes are ATR 42-500 and ATR 72-212A aeroplanes, all MSN that are not Group 1 aeroplanes and that are pre-mod 10367 and on which ATR modification (mod) 05948 (commercially known as '-600 version') have been embodied in production.

Group 3 aeroplanes are ATR 42-400, ATR 42-500 and ATR 72 aeroplanes, all MSN that are pre-mod 05948; and ATR42-500 and ATR72-212A aeroplanes, all MSN on which mod 05948 (commercially known as '-600 version') and mod 10367 have been embodied in production.

Reason:

Two occurrences were reported of temporary loss of all display units and Integrated Electronic Standby Instrument. The initial investigation results revealed that the battery toggle switch FIN 7PA and contactor FIN 1PA were two of the potential contributors to the reported cases.

This condition, if not detected and corrected, could lead to loss of control of the aeroplane.

To address this potential unsafe condition, ATR amended the Aircraft Flight Manual (AFM) and the Master Minimum Equipment List (MMEL), and issued the AOM to provide instructions for operational and electrical tests.

Consequently, EASA published AD 2021-0120-E to require temporary amendment of the applicable AFM and MMEL, an operational test of contactor FIN 1PA and, depending on findings, accomplishment of applicable corrective action(s), and an electrical test (impedance measurement) of the affected part. That AD also required reporting the results of both tests to ATR.

Since that AD was issued, ATR published the SB, as defined in this AD, to provide modification instructions.

For the reasons described above, this AD retains the requirements of EASA AD 2021-0120-E, which is superseded, and requires modification of the battery toggle switch FIN 7PA integration wiring. This AD also expands the Applicability and prohibits (re)installation of affected parts.

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

Required as indicated, unless accomplished previously:



Re-statement of the Requirements of EASA AD 2021-0120-E**AFM Amendment:**

- (1) For Group 1 and Group 2 aeroplanes: Within 7 days after 05 May 2021 [the effective date of EASA AD 2021-0120-E], amend the Systems Limitations section of the applicable AFM by inserting the AFM change as provided in Appendix 1 of this AD, inform all flight crews, and, thereafter, operate the aeroplane accordingly.

MMEL / Minimum Equipment List (MEL) Amendment:

- (2) For Group 1 and Group 2 aeroplanes: From 7 days after 05 May 2021 [the effective date of EASA AD 2021-0120-E], ensure that no aeroplane will be dispatched with any equipment identified in Table 1 of this AD inoperative, which can be accomplished by marking these items as “NO GO” items.

Amendment of the operator’s MEL in accordance with the above instructions is considered as an acceptable method to comply with this requirement.

Concurrently with that action, inform all flight crews, and, thereafter, operate the aeroplane accordingly.

Table 1 – MMEL Item / Equipment

MMEL Item	Equipment
24-30-02	DC Transformer Rectifier Unit (TRU)
24-22-01	ACW Generation (Generator and (or) Related GCU)
24-22-03	ACW Generation Bus Tie Contactor (BTC)
24-22-02	ACW GEN FAULT Light

Operational Test:

- (3) For Group 2 aeroplanes: Within 30 days after 05 May 2021 [the effective date of EASA AD 2021-0120-E], accomplish an operational test of contactor FIN 1PA in accordance with the instructions of the AOM.

Corrective Action(s):

- (4) If, during the operational test as required by paragraph (3) of this AD, discrepancies are detected, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the AOM.

New Requirements of this AD**AFM Amendment:**

- (5) For Group 1 and Group 2 aeroplanes: Within 30 days after the effective date of this AD, amend the applicable AFM by implementing the procedures as specified in the OEB, inform all flight crews, and, thereafter, operate the aeroplane accordingly.

Modification:

- (6) For Group 1 and Group 2 aeroplanes: Within 12 months after the effective date of this AD, modify the aeroplane in accordance with the instructions of the SB.



AFM and MMEL / MEL Amendment:

- (7) Concurrently with the modification of an aeroplane as required by paragraph (6) of this AD, amend the applicable AFM of that aeroplane by removing the changes as required by paragraph (1) of this AD.
- (8) After modification of an aeroplane as required by paragraph (6) of this AD, the dispatch restrictions, as required by paragraph (2) of this AD, are no longer necessary and can be removed from the operator's MEL of that aeroplane.
- (9) After modification of an aeroplane as required by paragraph (6) of this AD, the AFM amendment, as required by paragraph (5) of this AD, is no longer necessary and the procedures as specified in the OEB can be removed from the AFM of that aeroplane.

Part(s) Installation:

- (10) Do not install (see Note 1 of this AD) on an aeroplane an affected part, as required by paragraph (10.1) or (10.2) of this AD, as applicable.
 - (10.1) For Group 1 and Group 2 aeroplanes: After modification of the aeroplane as required by paragraph (6) of this AD.
 - (10.2) For Group 3 aeroplanes: From the effective date of this AD.

Note 1: Removal of an affected part from an aeroplane and subsequent reinstallation of that affected part on the same aeroplane, accomplished during a single maintenance visit, is not considered as 'install' as specified in paragraph (10) of this AD.

Ref. Publications:

ATR AOM 2021/05 issue 1 dated 19 April 2021, issue 2 dated 03 May 2021, issue 3 dated 11 May 2021, issue 4 dated 16 March 2022 and issue 5 dated 30 November 2022.

ATR OEB 56, issue 3, "Potential temporary loss of all Cockpit Display Systems" dated 24 November 2022.

ATR SB ATR42-24-0062 and SB ATR72-24-1032, both dated 01 March 2023.

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 07 March 2023 as PAD 23-030 for consultation until 21 March 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: 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.

REVISED



Appendix 1 – AFM amendment

24.2 Transformer Rectifier Unit (TRU)

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The TRU must be set to 'ON' during before taxi procedure application and must be set to 'OFF' during after landing procedure application.

REVISED

