



# Notification of a Proposal to issue an Airworthiness Directive

**PAD No.: 22-166**

**Issued: 06 December 2022**

Note: This Proposed Airworthiness Directive (PAD) 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.

In accordance with the EASA Continuing Airworthiness Procedures, the Executive Director is proposing the issuance of an EASA Airworthiness Directive (AD), applicable to the aeronautical product(s) identified below.

All interested persons may send their comments, referencing the PAD Number above, to the e-mail address specified in the 'Remarks' section, prior to the consultation date indicated.

**Design Approval Holder's Name:**

AIRBUS S.A.S

**Type/Model designation(s):**

A319, A320, A321 aeroplanes

**Effective Date:** [TBD - standard: 14 days after AD issue date]

**TCDS Number(s):** EASA.A.064

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2022-0032R1 dated 29 July 2022.

**ATA 32 – Landing Gear – Braking and Steering Control Unit – Replacement / Master Minimum Equipment List – Amendment**

**ATA 92 – Electric and Electronic Common Installation – Relays – Replacement**

**Manufacturer(s):**

Airbus S.A.S.

**Applicability:**

Airbus A319-151N, A319-153N, A319-171N, A320-251N, A320-252N, A320-253N, A320-271N, A320-272N, A320-273N, A321-251N, A321-251NX, A321-252N, A321-252NX, A321-253N, A321-253NX, A321-271N, A321-271NX, A321-272N, A321-272NX aeroplanes, all manufacturer serial numbers.

**Definitions:**

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

**Affected BSCU:** Braking and Steering Control Units (BSCU) having Part Number (P/N) E21327307.

**Serviceable BSCU:** Any BSCU, eligible for installation, which is not an affected part, or an affected part that has never triggered a fault signature on an aeroplane as specified in the AOT.



**Type 1 relay:** Relays having P/N E0244-28A0, installed at Functional Item Number (FIN) positions 24GG and 25GG.

**Type 2 relay:** A relay having P/N E0669D28A0.

**The AOT:** Airbus Alert Operators Transmission (AOT) A32N025-22.

**The SB:** Airbus Service Bulletin (SB) A320-92-1149.

**The MMEL update:** Airbus A318/A319/A320/A321 Master Minimum Equipment List (MMEL) items listed below, as provided in Airbus A318/A319/A320/A321 MMEL Major Event Revision (MER) dated 22 February 2022:

- Item 32-31-01 - Landing Gear Control and Interface Unit (LGCIU),
- Item 32-32-02 - LGCIU 2 RH L/G Shock Absorber Proximity Detector,
- Item 32-32-03 - LGCIU 2 LH L/G Shock Absorber Proximity Detector,
- Item 32-42-03 - BSCU System 1,
- Item 32-42-04 - BSCU System 2,
- Item 32-44-01 - Yellow System Brake,
- Item 32-44-03 - Brakes Pressure Indicator,
- Item 78-09-01 - ENG 1(2) REVERSER CTL FAULT Alert, and
- Item 78-30-01 - Thrust Reverser.

**The FOT:** Airbus Flight Operations Transmission (FOT) 999.0010/22.

**Aeroplane date of manufacture:** The date of transfer of title (ownership) which is referenced in Airbus documentation at the time of first delivery to an operator.

#### **Groups:**

Group 1a aeroplanes are those that have an affected BSCU and a type 1 relay installed.

Group 1b aeroplanes are those that have a serviceable BSCU and a type 1 relay installed.

Group 2 aeroplanes are those that are not Group 1a or 1b (see Note 1 of this AD).

Note 1: An aeroplane on which Airbus modification (mod) 171984 (installation of relay P/N E0669D28A0) has been embodied in production is Group 2, provided the aeroplane remains in that configuration.

#### **Reason:**

A new BSCU standard P/N E21327307 was developed and introduced through Airbus mod 165148 to answer to the obsolescence of some components fitted in the old BSCU standard P/N E21327107 and P/N E21327007. Since this new BSCU standard was introduced on aeroplanes, several BSCU channel failures were detected, inducing, in case of dual channel failures, loss of Anti-Skid function together with the reversion to the alternate braking mode, and loss of Nose Wheel Steering.

This condition, if not corrected, could lead to loss of braking performance with significant increase in aeroplane stopping distance, possibly resulting in runway excursion.



To address this potential unsafe condition, Airbus issued the AOT and the FOT (together with Quick Reference Handbook and Flight Crew Operating Manual updates) to provide guidance to the flight crew in the event of specific fault signatures (ECAM warning + Maintenance message). Airbus also updated the MMEL accordingly. Consequently, EASA issued AD 2022-0032 (later revised) to require, for aeroplanes with an affected BSCU installed, the accomplishment of the AOT, and the amendment of the MMEL.

Further investigation identified that a type 1 relay was embodied in a position where a type 2 relay should have been installed. The combination of a type 1 relay with an affected BSCU could induce BSCU freezing. Consequently, Airbus developed mod 171984, which was introduced on the production line, and issued the SB to provide instructions for replacement of type 1 relays. It was also determined that the type 1 relay is no longer installed on A320 family CEO aeroplanes since its mandated replacement, required through DGAC France AD F-1993-163-043 (grandfathered by EASA). CEO aeroplanes are therefore removed from the Applicability of this AD.

For the reasons described above, this AD supersedes EASA AD 2022-0032R1 and requires replacement of affected BSCU with serviceable BSCU in case of fault signatures, MMEL amendment instating dispatch limitation, and replacement of affected type 1 relays with type 2 relays, with consequent operational reliefs in line with a new MMEL update.

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

Required as indicated, unless accomplished previously:

#### BSCU Replacement:

- (1) For Group 1a aeroplanes: If, during any flight after 10 March 2022 [the effective date of EASA AD 2022-0032 at original issue], a BSCU fault signature is triggered on an aeroplane as defined in the AOT Appendix 1, before next flight, replace the affected BSCU with a serviceable BSCU in accordance with the instructions of the AOT.

#### MMEL Amendment 1:

- (2) For Group 1a aeroplanes: Before next flight after 10 March 2022 [the effective date of EASA AD 2022-0032 at original issue], implement the instructions of the MMEL update, as defined in this AD, on the basis of which the operator's MEL must be amended, inform all flight crews, and, thereafter, operate the aeroplane accordingly (see Note 2 of this AD).

Note 2: Refer to the FOT for operational recommendations.

#### Modification:

- (3) For Group 1a and 1b aeroplanes: Within the compliance time as specified in Table 1 of this AD, as applicable, replace each type 1 relay with a type 2 relay in accordance with the instructions of the SB.

Table 1 – Relay Replacement

Group	Compliance Time (after the effective date of this AD)
1a	Within 6 months
1b	Within 24 months



**MMEL Amendment 2:**

- (4) After modification of an aeroplane as required by paragraph (3) of this AD, the MEL changes implemented through the MMEL update, as required by paragraph (2) of this AD, are no longer necessary, provided that the MEL is updated with an MMEL revision published after the effective date of this AD.

**Part(s) Installation:**

- (5) Do not install a type 1 relay at FIN positions 24GG and 25GG on any aeroplane, as required by paragraph (5.1) or (5.2) of this AD, as applicable:
- (5.1) For Group 1a and 1b aeroplanes: After modification of the aeroplane as required by paragraph (3) of this AD.
- (5.2) For Group 2 aeroplanes: From the effective date of this AD.
- (6) From the effective date of this AD, it is allowed to install an affected BSCU on any aeroplane, provided that a relay type 2 is installed on that aeroplane.

**Ref. Publications:**

Airbus AOT A32N025-22 original issue dated 24 February 2022.

Airbus A318/A319/A320/A321 MMEL MER dated 22 February 2022, or Revision dated 24 February 2022.

Airbus A318/A319/A320/A321 MMEL Revision dated [final AD effective date], or any later approved MMEL Revision.

Airbus FOT 999.0010/22 original issue dated 22 February 2022, or Revision 01 dated 25 February 2022.

Airbus SB A320-92-1149 original issue dated 11 October 2022.

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

**Remarks:**

1. This Proposed AD will be closed for consultation on 03 January 2023.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto:ADs@easa.europa.eu).
3. Information about any failures, malfunctions, defects or other occurrences, which may be similar to the unsafe condition addressed by this PAD, and which may occur, or have occurred on a product, part or appliance not affected by this PAD, 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 PAD 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.

4. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – Airworthiness Office – 1IASA; E-mail: [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com).

