



Airworthiness Directive

AD No.: 2023-0093

Issued: 05 May 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):

A319, A320 and A321 aeroplanes

Effective Date: 19 May 2023

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 (MSN).

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.

Non-affected BSCU: Any BSCU having a P/N other than E21327307.



Serviceable BSCU: Any BSCU, eligible for installation, which is a non-affected BSCU; or an affected BSCU that has never triggered any fault signature on an aeroplane as defined in Appendix 1 of the AOT 1.

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

The AOT 2: Airbus AOT A32N030-23.

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

The MMEL update: Airbus A318/A319/A320/A321 Master Minimum Equipment List (MMEL) items listed in the Appendix 2 of this AD or in the MMEL Revision dated 05 April 2023.

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 non-affected BSCU and a type 1 relay installed.

Group 2 aeroplanes are those that are not Group 1a nor 1b (see Note 1 of this AD).

An aeroplane having an MSN listed in Table 1 of Appendix 1 of this AD is considered to be a Group 1a aeroplane, until the accomplishment of the inspection, as required by paragraph (1) of this AD, has taken place and determined which relay is installed on that aeroplane.

Note 1: An aeroplane on which Airbus modification (mod) 171984 (installation of relay P/N E0669D28A0) has been embodied in production and having an MSN not listed in Table 1 of Appendix 1 of this AD is a 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 1 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 (Electronic Centralized Aircraft Monitoring (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 1, and the amendment of the operator MEL.

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, MEL amendment instating dispatch limitation, and replacement of affected type 1 relays with type 2 relays.

Following the consultation of the PAD 22-166R1, end of January 2023, EASA was informed that the troubleshooting of a BSCU fault triggered on a post-production aeroplane revealed that the relays installed on aircraft at 24GG / 25GG FIN locations were not in conformity with the Aeroplane Inspection Report. Further investigation identified that certain MSNs are potentially affected by this issue. For this reason, the AOT 2 was issued for a dedicated inspection.

Furthermore, the compliance time dealing with the relay replacement for the Group 1a aeroplane has been extended following the recomputation of the risk exposure.

Finally, the paragraphs supporting some operational dispatch limitation, identified in PAD 22-166R1 as 'MMEL amendment 1' and 'MMEL amendment 2', have been amended as deemed not accurate to address the operational limitations inherited from the issue raised during the initial consultation.

Consequently, it has been decided to republish this PAD for additional consultation.

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

Required as indicated, unless accomplished previously:

Inspection:

- (1) For aeroplanes having an MSN listed in Table 1 of Appendix 1 of this AD, within 12 months after the effective date of this AD, visually inspect the FIN 24GG and 25GG to determine whether a relay type 1 is installed (see Note 2 of this AD).

Note 2: If during the visual inspection a relay type 1 is found, the aeroplane is a Group 1a aeroplane. If a type 2 relay is found, the aeroplane is a Group 2 aeroplane.



BSCU Replacement:

- (2) For Group 1a aeroplanes having an MSN not listed in Table 1 of Appendix 1 of this AD: 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 1 Appendix 1, before next flight, replace the affected BSCU with a serviceable BSCU in accordance with the instructions of the AOT 1.
- (3) For Group 1a aeroplanes having an MSN as listed in Table 1 of Appendix 1 of this AD: If, during any flight after the effective date of this AD, a BSCU fault signature is triggered on an aeroplane as defined in the AOT 1 Appendix 1, before next flight, replace the affected BSCU with a serviceable BSCU in accordance with the instructions of the AOT 1.

MMEL Amendment:

- (4) Before next flight after the effective date of this AD, 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.

Modification:

- (5) 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 (for the MSN not listed in Table 1 of the Appendix 1 of this AD), or in accordance with the instructions of the AOT 2 (for the MSN listed in Table 1 of the Appendix 1 of this AD), as applicable (see Note 3 of this AD).

Table 1 – Relay Replacement

| Group | Compliance Time (after the effective date of this AD) |
|-------|--|
| 1a | Within 12 months |
| 1b | Within 24 months |

Note 3: Following the modification, the aeroplane is considered to be a Group 2 aeroplane.

Part(s) Installation:

- (6) Do not install a relay P/N E0244-28A0 at FIN positions 24GG and 25GG on any aeroplane, as required by paragraph (6.1) or (6.2) of this AD, as applicable:
- (6.1) For Group 1a and 1b aeroplanes: After modification of the aeroplane as required by paragraph (5) of this AD.
- (6.2) For Group 2 aeroplanes: From the effective date of this AD.
- (7) For Group 1a: From the effective date of this AD, it is allowed to install a BSCU on an aeroplane, provided it is a serviceable BSCU, as defined in this AD.



- (8) For Group 1b aeroplanes: From the effective date of this AD, do not install an affected BSCU on an aeroplane.

Ref. Publications:

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

Airbus AOT A32N030-23 original issue dated 27 February 2023.

Airbus A318/A319/A320/A321 MMEL Revision dated 05 April 2023.

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. If requested and appropriately substantiated, EASA can approve Alternative Methods of Compliance for this AD.
2. This AD was posted on 06 December 2022 as PAD 22-166, re-published on 22 December 2022 as PAD 22-166R1 and re-published on 14 April 2023 as PAD 22-166R2 for consultation until 28 April 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 – Airworthiness Office – 1IASA; E-mail: account.airworth-eas@airbus.com.



Appendix 1

Table 1 – Affected MSN

| MSN | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-------|
| 9540 | 10127 | 10128 | 10142 | 10146 | 10161 | 10188 | 10272 |
| 10275 | 10284 | 10331 | 10353 | 10400 | 10420 | 10434 | 10448 |
| 10486 | 10546 | 10620 | 10637 | 10644 | 10655 | 10658 | 10674 |
| 10701 | 10703 | 10714 | 10724 | 10729 | 10737 | 10741 | 10756 |
| 10776 | 10779 | 10780 | 10788 | 10789 | 10795 | 10797 | 10798 |
| 10803 | 10809 | 10814 | 10816 | 10819 | 10828 | 10831 | 10832 |
| 10833 | 10837 | 10839 | 10842 | 10848 | 10850 | 10853 | 10854 |
| 10855 | 10861 | 10862 | 10866 | 10873 | 10875 | 10878 | 10881 |
| 10882 | 10884 | 10885 | 10886 | 10887 | 10888 | 10890 | 10893 |
| 10896 | 10898 | 10900 | 10901 | 10902 | 10903 | 10904 | 10907 |
| 10908 | 10909 | 10911 | 10912 | 10914 | 10916 | 10917 | 10918 |
| 10919 | 10921 | 10922 | 10923 | 10924 | 10925 | 10927 | 10932 |
| 10933 | 10934 | 10935 | 10937 | 10938 | 10939 | 10940 | 10941 |
| 10942 | 10947 | 10949 | 10950 | 10951 | 10952 | 10954 | 10957 |
| 10958 | 10960 | 10961 | 10962 | 10963 | 10964 | 10965 | 10966 |
| 10967 | 10969 | 10970 | 10972 | 10973 | 10975 | 10976 | 10977 |
| 10979 | 10980 | 10981 | 10982 | 10983 | 10984 | 10985 | 10986 |
| 10987 | 10988 | 10989 | 10990 | 10992 | 10993 | 10995 | 10996 |
| 10997 | 10998 | 11002 | 11003 | 11004 | 11005 | 11006 | 11007 |
| 11008 | 11010 | 11011 | 11012 | 11013 | 11014 | 11015 | 11016 |
| 11017 | 11018 | 11019 | 11020 | 11021 | 11022 | 11023 | 11024 |
| 11025 | 11026 | 11027 | 11028 | 11030 | 11031 | 11032 | 11033 |
| 11034 | 11035 | 11036 | 11037 | 11038 | 11039 | 11040 | 11041 |
| 11042 | 11043 | 11044 | 11045 | 11047 | 11048 | 11049 | 11050 |
| 11051 | 11052 | 11053 | 11054 | 11055 | 11056 | 11057 | 11059 |
| 11060 | 11061 | 11062 | 11064 | 11065 | 11066 | 11067 | 11068 |
| 11069 | 11070 | 11071 | 11073 | 11074 | 11075 | 11076 | 11077 |
| 11078 | 11079 | 11081 | 11082 | 11083 | 11085 | 11086 | 11087 |
| 11088 | 11090 | 11091 | 11092 | 11094 | 11097 | 11099 | 11100 |
| 11102 | 11103 | 11105 | 11108 | 11109 | 11111 | 11112 | 11114 |
| 11116 | 11117 | 11118 | 11120 | 11121 | 11122 | 11123 | 11124 |
| 11126 | 11127 | 11128 | 11130 | 11133 | 11135 | 11137 | 11138 |
| 11139 | 11140 | 11141 | 11142 | 11143 | 11145 | 11146 | 11148 |
| 11149 | 11150 | 11151 | 11152 | 11153 | 11154 | 11155 | 11157 |
| 11159 | 11160 | 11161 | 11162 | 11166 | 11169 | 11173 | 11174 |
| 11175 | 11178 | 11180 | 11181 | 11182 | 11188 | 11189 | 11190 |
| 11193 | 11194 | 11195 | 11197 | 11199 | 11201 | 11205 | 11211 |
| 11213 | 11216 | 11222 | 11224 | 11228 | 11232 | 11234 | 11235 |
| 11244 | 11245 | 11247 | 11252 | 11254 | 11258 | 11261 | 11265 |
| 11270 | 11271 | 11282 | 11287 | 11288 | 11293 | 11295 | |



Appendix 2

Table 2 – Affected MMEL Items

| ITEM | Title | Ident MI | Date | Effectivity |
|----------|--|---------------------------|-----------|---|
| 32-31-01 | Landing Gear Control and Interface Unit (LGCIU) | MI-32-31-00007688.0006001 | 22 FEB 22 | A320neo with BSCU P/N E21327307, without ACT |
| | | MI-32-31-00007688.0007001 | 22 FEB 22 | A320neo with BSCU P/N E21327307, with ACT |
| 32-32-02 | LGCIU 2 RH L/G Shock Absorber Proximity Detector | MI-32-32-00007694.0002001 | 22 FEB 22 | A320neo with BSCU P/N E21327307 |
| 32-32-03 | LGCIU 2 LH L/G Shock Absorber Proximity Detector | MI-32-32-00007695.0002001 | 22 FEB 22 | A320neo with BSCU P/N E21327307 |
| 32-42-03 | BSCU System 1 | MI-32-42-00007739.0003001 | 24 FEB 22 | A319/A320/A321neo, with BSCU P/N E21327307 |
| 32-42-04 | BSCU System 2 | MI-32-42-00007740.0003001 | 22 FEB 22 | A319/A320/A321neo, with BSCU P/N E21327307 |
| 32-44-01 | Yellow System Brake | MI-32-44-00007746.0002001 | 22 FEB 22 | A319/A320/A321neo, with BSCU P/N E21327307 |
| 32-44-03 | Brakes Pressure Indicator | MI-32-44-00007748.0003001 | 22 FEB 22 | A319/A320/A321neo, with BSCU P/N E21327307 |
| 78-09-01 | ENG 1(2) REVERSER CTL FAULT Alert | MI-78-09-00016199.0002001 | 22 FEB 22 | A319/A320/A321neo, with BSCU P/N E21327307 |
| 78-30-01 | Thrust Reverser | MI-78-30-00008603.0005001 | 22 FEB 22 | A319/A320/A321neo with PW1100 engines and with BSCU P/N E21327307 |
| | | MI-78-30-00008603.0006001 | 22 FEB 22 | A319/A320/A321neo with LEAP engines and with BSCU P/N E21327307 |

