



# Notification of a Proposal to issue an Airworthiness Directive

**PAD No.: 20-043**

**Issued: 27 February 2020**

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

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

A330 and A340 aeroplanes

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

**TCDS Number(s):** EASA.A.004, EASA.A.015

**Foreign AD:** Not applicable

**Supersedure:** This AD supersedes EASA AD 2019-0314 dated 20 December 2019.

## ATA 29 – Hydraulic Power – Ground Service Manifold Manual Valve Attachment Screws – Replacement

### Manufacturer(s):

Airbus, formerly Airbus Industrie

### Applicability:

Airbus A330-201, A330-202, A330-203, A330-223, A330-243, A330-301, A330-302, A330-303, A330-321, A330-322, A330-323, A330-341, A330-342 and A330-343 aeroplanes, all manufacturer serial numbers (MSN), except those on which Airbus modification (mod) 58345 has been embodied in production; and

Airbus A340-211, A340-212, A340-213, A340-311, A340-312 and A340-313 aeroplanes, all MSN.

### Definitions:

**The AOT:** Airbus Alert Operators Transmission (AOT) A29L010-19 Revision 01.

**Affected parts:** Ground service manifold (GSM) units, having Part Number (P/N) 70902-3, P/N 70902-4, or P/N 70902-5.



**The applicable SB:** Airbus Service Bulletin (SB) A330-29-3104 and SB A340-29-4080, as applicable, which include reference to Eaton Aerospace SB 70902-29-04.

**Groups:**

Group 1 aeroplanes are those that have an affected part P/N 70902-3 or P/N 70902-4 installed, and the aeroplane is pre-AOT A29L010-19 at original issue.
Group 2 aeroplanes are those that have an affected part P/N 70902-3 or P/N 70902-4 installed, and the aeroplane is post-AOT A29L010-19 at original issue.
Group 3 aeroplanes are those that have an affected part P/N 70902-5 installed <u>and</u> the GSM has manual valves installed with screws P/N NAS1101-3H8 (deviating from its original configuration).
Group 4 aeroplanes are those that do not have an affected part installed; and those that have an affected part P/N 70902-5 installed <u>and</u> the GSM has manual valves installed with bolts P/N EWB0420D-3H-3. An aeroplane that has embodied Airbus mod 56660 in production, or the applicable SB in service, is a Group 4 aeroplane, provided that the aeroplane remains in that configuration.

**Reason:**

An occurrence of in-flight turn-back was reported by an A330 operator due to the loss of green and blue hydraulic systems. It was found that a manual valve of the green hydraulic system of an affected GSM had fully detached from the part. The results of the investigations revealed that all four screws attaching the manual valve were broken. Similar events of failed screws with single hydraulic system loss were reported by other operators.

This condition, if not detected and corrected, could lead to the loss of one or more hydraulic systems and damage to surrounding structure and components, possibly resulting in reduced control of the aeroplane, or injury to maintenance staff working in the main landing gear bay.

To address this potential unsafe condition, Airbus issued AOT A29L010-19 at original issue to provide instructions to replace the manual valve attachment screws (P/N NAS1101-3H8) of each affected part. Consequently, EASA issued AD 2019-0314 to require repetitive replacement of the four screws attaching the manual valve of each affected part.

Since that AD was issued, it was determined that the torque value specified in AOT A29L010-19 at original issue was incorrect. In addition, it was also determined that it cannot be excluded that, on an aeroplane having a GSM P/N 70902-5 installed, originally with special bolts P/N EWB0420D-3H-3, the bolts were later replaced with standard screws NAS1101-3H8. Furthermore, EASA reconsidered the compliance times for the GSM manual valve bolts replacement which led to the determination that, if known, the flight cycles (FC) of the bolts attaching the manual valve of each affected part must be taken for the initial replacement. Finally, the compliance time (grace period) for the initial replacement has been extended for the blue hydraulic circuit.

For the reasons described above, this AD, which supersedes EASA AD 2019-0314, requires repetitive replacement of the four screws attaching the manual valve of each affected part having P/N 70902-3 or P/N 70902-4 and, if a GSM P/N 70902-5 has manual valve installed with screws NAS1101-3H8, replacement of the four screws.



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

Required as indicated, unless accomplished previously:

**Replacement:**

- (1) For Group 1 aeroplanes: Before the screws attaching the manual valve of an affected part exceed 10 000 FC since first installation on an aeroplane, or within the compliance times specified in Table 1 of this AD, whichever occurs later, and, thereafter, at intervals not to exceed 10 000 FC, for each hydraulic circuit and FIN position specified in Table 1 of this AD, replace the four screws P/N NAS1101-3H8 attaching the manual valve of each affected part with new screws P/N NAS1101-3H8 in accordance with the instructions of the AOT.

Table 1 – GSM Manual Valve Screws Replacement

Hydraulic Circuit	FIN position	Compliance Time
Green	5109JM1	Within 1 300 FH after 03 January 2020 [the effective date of EASA AD 2019-0314]
Yellow	5109JM3	
Blue	5109JM2	Within 2 300 FH after 03 January 2020 [the effective date of EASA AD 2019-0314]

Note 1: For the initial GSM manual valve screws replacement specified in paragraph (1) of this AD, if the FC accumulated by the screws attaching the manual valve of each affected part are unknown, the FC accumulated by the affected part apply. If the FC accumulated by the affected part are unknown, the FC accumulated by the aeroplane apply.

- (2) For Group 2 aeroplanes: Within 1 000 FC after accomplishment of Airbus AOT A29L010-19 at original issue, in accordance with the instructions of the AOT, and, thereafter, at intervals not to exceed 10 000 FC, for each hydraulic circuit and FIN position specified in Table 1 of this AD, replace the four screws P/N NAS1101-3H8 attaching the manual valve of each affected part with new screws P/N NAS1101-3H8 in accordance with the instructions of the AOT.

Note 2: For the interval specified in paragraph (1) and (2) of this AD, the FC are those accumulated by the screws, attaching the manual valve of each affected part, since first installation on an aeroplane.

- (3) For Group 3 aeroplanes: Within 1 300 FH after the effective date of this AD, remove the four screws P/N NAS1101-3H8 attaching the manual valve of each affected part having P/N 70902-5 and install four new (never previously installed on an aeroplane) bolts P/N EWB0420D-3H-3 or four new (never previously installed on an aeroplane) screws P/N NAS1101-3H8 in accordance with the instructions of the AOT. If new screws P/N NAS1101-3H8 are installed, before the screws exceed 10 000 FC since that installation on the aeroplane, they must be replaced with four new bolts P/N EWB0420D-3H-3, in accordance with the instructions of the AOT (see also paragraph (6) of this AD).



**Terminating Action:**

- (4) Modification of an aeroplane in accordance with the instructions of the applicable SB constitutes terminating action for the repetitive screw replacement as required by paragraph (1) or (2) of this AD, as applicable for that aeroplane.

**Part Installation:**

- (5) For Group 1 and Group 2 aeroplanes: From the effective date of this AD, installation of an affected part having P/N 70902-3 or P/N 70902-4 on an aeroplane is allowed, provided that each attachment screw is new (never previously installed on an aeroplane), the proper torque is applied and that, following installation, the attachment screws are replaced as required by this AD.
- (6) For Group 3 aeroplanes: From the effective date of this AD, do not install an affected part with attachment screws P/N NAS1101-3H8, except as specified in paragraph (3) of this AD.
- (7) For Group 4 aeroplanes: From the effective date of this AD, do not install an affected part with attachment screws P/N NAS1101-3H8.

**Ref. Publications:**

Airbus AOT A29L010-19 Revision 01 dated 18 February 2020.

Airbus SB A330-29-3104 original issue dated 13 July 2007.

Airbus SB A340-29-4080 original issue dated 13 July 2007.

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 12 March 2020.
2. Enquiries regarding this PAD should be referred to the EASA Programming and Continued Airworthiness 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](#).
4. For any question concerning the technical content of the requirements in this PAD, please contact: Airbus A330/A340 Airworthiness Office, E-mail: [airworthiness.A330-A340@airbus.com](mailto:airworthiness.A330-A340@airbus.com).

