



Notification of a Proposal to issue an Airworthiness Directive

PAD No.: 19-053

Issued: 02 April 2019

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):

A380 aeroplanes

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

TCDS Number(s): EASA.A.110

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2017-0131R1 dated 09 October 2017.

ATA 32 – Landing Gear – Gravity Extension System – Inspection / Modification

Manufacturer(s):

Airbus

Applicability:

Airbus A380-841, A380-842 and A380-861 aeroplanes, all manufacturer serial numbers, except those that have embodied Airbus modification (mod) 77381 in production.

Definitions:

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

The AOT: Airbus Alert Operators Transmission (AOT) A32R009-16 Revision 01.

The SB: Airbus Service Bulletin (SB) A380-92-8103 Revision 02.

Reason:

During a free-fall gravity landing gear (LG) extension of an A380 aeroplane, the left-hand (LH) wing LG failed to extend, remained in up-locked position in the LG bay and an associated alert was initiated. Consequent investigation determined that the wiring of both channels, A and B, of the LG gravity extension system, providing electrical signals to the LH wing LG Emergency Up-lock Actuator (EUA), were found damaged. Similar wiring damage was also detected on channel B of the



right-hand (RH) wing LG EUA. The investigation concluded that the detected wiring failure mode was provoked by fatigue degradation present in the wing LG gear up-lock areas. No fatigue degradation of wiring was identified in the up-lock areas of nose LG, body LG and wing LG doors.

This condition, if not detected and corrected, could result in a failure of the wing LG emergency gravity extension system, possibly preventing safe landing in case of a failure of the normal LG extension system.

To address this potential unsafe condition, Airbus issued AOT A32R009-16 to provide inspection instructions. The results collected by that inspection confirmed that the fatigue degradation was present only on the wing LG up-lock EUA wiring. Consequently, Airbus issued AOT A32R009-16 Revision 01 (the AOT), providing instructions to inspect wing LG up-lock EUA wiring and accomplish on-ground LG gravity extension tests. Additionally, Airbus developed mod 77381, introducing improved attachments for harnesses connected to wing LG EUAs, and issued SB A380-92-8103 to provide instructions for in-service modification.

Consequently, EASA issued AD 2017-0131 (later revised) to require repetitive general visual (GVI) or detailed (DET) inspections of wing LG up-lock EUA wiring and functional on-ground tests of the wing LG gravity extension system, accomplishment of applicable corrective action(s) depending on findings, and modification of the electrical harness, which constituted terminating action for the repetitive inspection and functional tests.

Since EASA AD 2017-0131R1 was issued, it was determined that replacement of the wires supplied in the new bundle is necessary for post-SB aeroplanes and Airbus published SB A380-92-8103 Revision 02 accordingly to provide the necessary additional work instructions.

For the reason described above, this AD retains the requirements of EASA AD 2017-0131R1, which is superseded, and requires additional work for aeroplanes on which the SB at original issue or Revision 01 was embodied.

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

Required as indicated, unless accomplished previously:

Inspection(s):

- (1) Within the compliance time specified in Table 1 of this AD, and, thereafter, at intervals not to exceed 6 months, accomplish concurrently a DET or GVI of the wire harnesses connected to wing LG up-lock EUA, and an on-ground wing LG gravity extension test, in accordance with the instructions of the AOT.

Table 1 – Initial Wing LG Up-lock EUA DET/GVI and on-ground Wing LG Gravity test

Compliance Time (A, B or C, whichever occurs later)	
A	Within 6 months after aeroplane first flight
B	Within 6 months after the last wing LG up-lock EUA wiring inspection and LG gravity extension test in accordance with the instructions of the AOT
C	Within 30 days after 10 August 2017 [the effective date of the original issue of EASA AD 2017-0131]



Corrective Action(s):

- (2) If, during any inspection or test as required by paragraph (1) of this AD, any discrepancy is detected, before next flight, accomplish the applicable corrective action(s) in accordance with the instructions of the AOT.

Credit:

- (3) Inspection(s), wing LG gravity extension test(s) and, depending on finding(s), corrective action(s) on an aeroplane, accomplished before 10 August 2017 [the effective date of the original issue of EASA AD 2017-0131] in accordance with Airbus AOT A32R009-16 at original issue, are acceptable to comply with the initial requirements of paragraphs (1) and (2) of this AD for that aeroplane.

Modification:

- (4) Within 36 months after 10 August 2017 [the effective date of the original issue of EASA AD 2017-0131], modify the wing LG EUA electrical harnesses in accordance with the instructions of the SB.
- (5) For an aeroplane that was modified, before the effective date of this AD in accordance with the instructions of Airbus SB A380-92-8103 at original issue or Revision 01, within 12 months after the effective date of this AD, accomplish the actions identified as “additional work” in the SB.

Terminating Action:

- (6) Modification of an aeroplane as required by paragraph (4) or (5) of this AD, as applicable, constitutes terminating action for the repetitive inspections and wing LG gravity extension tests as required by paragraph (1) of this AD for that aeroplane.

Ref. Publications:

Airbus AOT A32R009-16 original issue dated 22 November 2016, or Revision 01 dated 28 February 2017.

Airbus SB A380-92-8103 original issue dated 05 May 2017, or Revision 01 dated 03 May 2018, or Revision 02 dated 22 January 2019.

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 30 April 2019.
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.
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 SAS - EIANA (Airworthiness Office), Telephone: +33 562 110 253, Fax: +33 562 110 307, E-mail: account.airworth-A380@airbus.com.

