Airworthiness Directive

AD No.: 2020-0012

Issued: 29 January 2020

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, 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 agreed with the Authority of the State of Registry [Regulation (EU) 2018/1139, Article 71 exemption].

Design Approval Holder's Name:
AIRBUS

Type/Model designation(s):
A380 aeroplanes

Effective Date: 12 February 2020

TCDS Number(s): EASA.A.110

Foreign AD: Not applicable

Supersedure: This AD supersedes EASA AD 2018-0118R1 dated 11 June 2018.

ATA 52 – Doors – Auxiliary Wing Landing Gear Doors – Inspection

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Manufacturer(s):
Airbus

Applicability:
Airbus A380-841, A380-842 and A380-861 aeroplanes, all manufacturer serial numbers.

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

The SB: Airbus Service Bulletin (SB) A380-52-8165 (any revision).

The modification SB: Airbus SB A380-52-8170.

Affected part: Right-hand (RH) or left-hand (LH) auxiliary wing landing gear doors (WLGD), having a serial number (s/n) as listed in Table 1 of this AD, except those that have a Part Number where the last two digits are '95', indicating it has been modified and re-identified in accordance with the instructions of the modification SB.

Groups: Group 1 aeroplanes are those that have an affected part installed. Group 2 aeroplanes are those that do not have an affected part installed. An aeroplane that has embodied Airbus modification (mod) 76693 in production, or the modification SB in service, is a Group 2 aeroplane, provided it is determined that no affected part is installed.

Reason:

Prompted by an occurrence where, during a scheduled routine maintenance check on an A380 body landing gear door (BLGD), one of the two forward (FWD) hinge fitting lugs was found sheared and separated from the fitting, EASA issued AD 2014-0171 (later superseded by EASA AD 2015-0208) to require repetitive High Frequency Eddy Current (HFEC) inspections of the RH and LH BLGD FWD hinge fitting lugs. Based on laboratory analysis, it was determined that the fracture mechanism was associated with fatigue phenomenon. Within the framework of the investigation of that occurrence, it was determined that the auxiliary WLGD hinge fittings have geometrical features, similar to those of the centre BLGD hinge fittings, and are therefore also subject to reduced fatigue life.

This condition, if not detected and corrected, could lead to reduced structural integrity of the auxiliary WLGD hinge fittings, possibly resulting in in-flight loss of an auxiliary WLGD, and consequent injury to persons on the ground.

To address this unsafe condition, Airbus developed production mod 76693, installing new WLGD with reinforced hinge fittings and counter-fittings, and issued the SB to provide inspection instructions for in-service pre-mod aeroplanes. Consequently, EASA issued AD 2016-0251, requiring repetitive special detailed inspections (SDI, using a HFEC testing method) and detailed inspections (DET) of the affected parts and, depending on findings, accomplishment of applicable corrective action(s). That AD was later revised to add reference to the modification SB (in-service embodiment of Airbus mod 76693) as optional terminating action for the repetitive inspections.

Since EASA AD 2016-0251R1 was issued, it was determined that, since the affected parts are subject to removal from one aeroplane and installation on another, the compliance times (threshold, intervals) must address time accumulated by each affected part, not by the aeroplane.

For the reason described above, EASA issued AD 2018-0118 (later revised), retaining the requirements of EASA AD 2016-0251R1, which was superseded, introducing the new compliance times and expanding the Applicability to include post-mod aeroplanes. That AD also prohibited, for aeroplanes in post-mod / post-SB configuration, (re)installation of affected parts.

Since EASA AD 2018-0118R1 was issued, 2 additional WLGD s/n have been identified as potentially affected.

For the reason stated above, this AD retains the requirements of EASA AD 2018-0118R1, which is superseded, and expands the affected parts to include 2 additional WLGD s/n.

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

Required as indicated, unless accomplished previously:

Inspection(s):

(1) For Group 1 aeroplanes: Before exceeding the threshold and, thereafter, at intervals not to exceed the value defined in Table 2 or 3 of this AD, as applicable to aeroplane configuration and affected part Group, accomplish an SDI and DET of the RH and LH inboard hinge fittings of each affected part, and their corresponding counter-fittings, in accordance with the instructions of the SB.

Table 1 – Affected Parts (WLGD)

Affected Part	s/n
Group A	ALS1181 to ALS1207 inclusive, and ALS1209 to ALS1213 inclusive
	CC1013 to CC1058 inclusive, and CC9002
	CG1004, CG1006 to CG1008 inclusive, CG1010 to CG1012 inclusive
	SKC1059 to SKC1178 inclusive and SKC1180
Group B	ALS1208 and ALS1215

Table 2 – Group A Affected Parts – RH/LH Inboard Hinge Fittings Inspection (see Note 1 of this AD)

Aeroplane configuration	Threshold	Interval
Pre-mod 69807	Before exceeding 4 800 flight cycles (FC), or within 380 FC after 29 December 2016 [the effective date of the original issue of EASA AD 2016-0251], whichever occurs later	2 000 FC
Post-mod 69807	Before exceeding 4 800 FC, or within 250 FC after 29 December 2016 [the effective date of the original issue of EASA AD 2016-0251], whichever occurs later	2 800 FC

Note 1: Unless stated otherwise, the FC specified in Tables 2 and 3 of this AD are those accumulated by the affected part since its first installation on an aeroplane.

Table 3 – Group B Affected Parts – RH/LH Inboard Hinge Fittings Inspection (see Note 1 of this AD)

Aeroplane configuration	Threshold	Interval
Pre-mod 69807	Before exceeding 4 800 FC, or within 3 months after the effective date of this AD, whichever occurs later	2 000 FC
Post-mod 69807		2 800 FC

Corrective Action(s):

(2) If, during any inspection (SDI or DET) as required by paragraph (1) of this AD, any crack is detected, before next flight, remove the affected part from the aeroplane and accomplish a repair by replacing the cracked hinge fitting(s) on the affected part, and by replacing the corresponding counter-fitting(s) on the aeroplane with serviceable parts in accordance with the instructions of the SB.

Reporting:

(3) Within 30 days after accomplishment of an inspection (SDI or DET) as required by paragraph (1) of this AD, report those inspection results (including no findings) to Airbus. Using the inspection report attached to the SB is an acceptable method to comply with this requirement.

Terminating Action:

(4) Repair of an affected part and replacement of the corresponding counter-fittings on an aeroplane, as required by paragraph (2) of this AD, does not constitute terminating action for

the repetitive inspections (SDI and DET), as required by paragraph (1) of this AD for that affected part or that aeroplane.

(5) Modification of an aeroplane in accordance with the instructions of the modification SB constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that aeroplane. Replacing each affected part with a not affected part on an aeroplane also constitutes terminating action for the repetitive inspections as required by paragraph (1) of this AD for that aeroplane. Using the instructions of the applicable maintenance manual is an acceptable method to replace a part, as specified in this paragraph.

Parts Installation:

(6) For Group 1 aeroplanes: From 12 June 2018 [the effective date of the original issue of EASA AD 2018-0118], except as required by paragraph (7) of this AD, it is allowed to install an affected part on an aeroplane, provided that the affected part has passed an inspection (no crack detected) in accordance with the instructions of the SB, or has been repaired as required by paragraph (2) of this AD.

(7) Do not install a Group A affected part on any aeroplane, as required by paragraph (7.1) or (7.2) of this AD, as applicable.

(7.1) For Group 1 aeroplanes: After modification of the aeroplane, as specified in paragraph (5) of this AD.

(7.2) For Group 2 aeroplanes: From 12 June 2018 [the effective date of the original issue of EASA AD 2018-0118].

(8) Do not install a Group B affected part on any aeroplane, as required by paragraph (8.1) or (8.2) of this AD, as applicable.

(8.1) For Group 1 aeroplanes: After modification of the aeroplane, as specified in paragraph (5) of this AD.

(8.2) For Group 2 aeroplanes: From the effective date of this AD.

Ref. Publications:

Airbus SB A380-52-8165 original issue dated 26 October 2016, or Revision 01 dated 01 June 2017, or Revision 02 dated 12 September 2019.

Airbus SB A380-52-8170 original issue dated 11 October 2017.

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 20 December 2019 as PAD 19-221 for consultation until 17 January 2020. 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 Programming and Continued Airworthiness 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.

5. For any question concerning the technical content of the requirements in this AD, please contact: Airbus – IIANA (Airworthiness Office), Telephone: +33 562 110 253, Fax: +33 562 110 307, E-mail: account.airworth-A380@airbus.com.