



Notification of a proposal to issue an Airworthiness Directive

PAD No.: 16-093

Issued: 23 June 2016

Note: This Proposed Airworthiness Directive (PAD) is issued by EASA, acting in accordance with Regulation (EC) 216/2008 on behalf of the European Union, its Member States and of the European third countries that participate in the activities of EASA under Article 66 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):

A319, A320 and 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 2014-0166, dated 16 July 2014

ATA 52 – Doors – Main Landing Gear Door Actuator Fittings – Inspection / Replacement

Manufacturer(s):

Airbus (formerly Airbus Industrie)

Applicability:

Airbus A319-111, A319-112, A319-113, A319-114, A319-115, A319-131, A319-132, A319-133, A320-211, A320-212, A320-214, A320-215, A320-216, A320-231, A320-232, A320-233, A321-111, A321-112, A321-131, A321-211, A321-212, A321-213, A321-231 and A321-232 aeroplanes, all manufacturer serial numbers.

Reason:

On one A320 aeroplane, it was reported that one of the main landing gear (MLG) doors could not be closed. Investigations revealed the rupture of the actuator fitting at the actuator attachment area on the door side. The MLG door is attached to the aeroplane by 2 (two) hinge fittings.

This condition, if not corrected, could, under certain circumstances, lead to detachment of a MLG door from the aeroplane, possibly resulting in damage to the aeroplane, and/or injury to persons on the ground.



Prompted by these findings, DGAC France issued AD 1999-243-133 (later revised to R1), to require a MLG door actuator fitting inspection for cracks and to check the grain direction on a batch of aeroplanes. Subsequently, DGAC France issued AD 2000-257-149, retaining the requirement of DGAC France AD 1999-243-133R1, which was superseded, to require an inspection of the lower part of the MLG door actuator fitting.

After that AD was issued, additional investigations revealed that damage could also appear on the nerve area, in the upper part of the MLG door actuator fitting in the area of the hinge. Consequently, DGAC France issued AD F-2003-434 (EASA approval 2003-1436), retaining the requirements of DGAC France AD 2000-257-149, which was superseded, to require additional repetitive inspections. That AD also included an optional terminating action, by replacing the MLG door actuator fittings in accordance with the instructions of Airbus Service Bulletin (SB) A320-52-1073.

After DGAC France AD F-2003-434 was issued, in the framework of the extended service goal campaign, it was decided to make replacement of the MLG door actuator fittings a required modification. Consequently, EASA issued AD 2014-0166, retaining the requirements of DGAC France AD F-2003-434, which was superseded, and requiring replacement of the MLG door actuator fittings with new monoblock fittings, which constitutes terminating action for the repetitive inspections.

After EASA AD 2014-0166 was issued, errors were identified in the compliance time definitions. Replacement of the MLG door actuator fittings was required “before exceeding 48 000 flight cycles (FC) or 96 000 flight hours (FH), **whichever occurs later** since aeroplane first flight”, which should have been “whichever occurs **first**”. Furthermore, since the MLG door is an interchangeable part, the compliance time must be defined as FC/FH accumulated by the MLG door.

For the reason described above, this AD retains the requirement of EASA AD 2014-0166, which is superseded, but requires accomplishment of the terminating action within more stringent compliance times.

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

Required as indicated, unless accomplished previously:

- (1) For aeroplanes equipped with MLG door fittings Part Number (P/N) D52880224000 or P/N D52880224001 that were installed at the time of aeroplane first delivery on MLG doors with serial numbers (S/N) as specified in Table 1 of this AD, within 500 FH from the last inspection in accordance with the instructions of Airbus SB A320-52A1086 Revision 01, and, thereafter, at intervals not exceeding 500 FH, accomplish a high frequency eddy current (HFEC) inspection in accordance with the instructions of Airbus SB A320-52A1086 Revision 01.

Table 1 – MLG Doors

Location	S/N
LH	1206 to 1237 inclusive, 1239 to 1247 inclusive, and 1249 to 1251 inclusive
RH	1208 to 1239 inclusive, 1241 to 1249 inclusive, and 1251



- (2) If, during any HFEC inspection as required by paragraph (1) of this AD, any crack is found, within the compliance time (threshold) specified in Airbus SB A320-52A1086 Revision 01, replace the MLG door actuator fittings in accordance with the instructions of Airbus SB A320-52-1073 Revision 05.
- (3) If, during any HFEC inspection as required by paragraph (1) of this AD, no crack is detected, before next flight, accomplish a low frequency eddy current (LFEC) inspection to determine the grain direction of the raw material of each actuator fitting in accordance with the instructions of Airbus SB A320-52A1086 Revision 01.
 - (3.1) If, during the LFEC inspection as required by paragraph (3) of this AD, the grain direction of the raw material of the fitting is found to be correct, the repetitive inspections of paragraph (1) of this AD can be terminated.
 - (3.2) If, during the LFEC inspection as required by paragraph (3) of this AD, the grain direction of the raw material of the fitting is found to be incorrect, continue the HFEC inspections as required by paragraph (1) of this AD, or replace the MLG door actuator fittings in accordance with the instructions of Airbus SB A320-52-1073 Revision 05.
- (4) For aeroplanes equipped with MLG door fittings P/N D52880224000, P/N D52880224001, P/N D52880235000, or P/N D52880235001, within 400 FC after 20 December 2003 [the effective date of DGAC France AD F-2003-434], or before exceeding 9 000 FC since aeroplane first flight, whichever occurs later, and, thereafter, at intervals not exceeding 800 FC, accomplish a HFEC inspection in both hinge and nerve areas in accordance with the instructions of Airbus SB A320-52-1096 Revision 02.
- (5) If, during any HFEC inspection as required by paragraph (4) of this AD, any crack is found on the hinge area, or on the nerve area, within the compliance time (threshold) specified in Airbus SB A320-52-1096 Revision 02, replace the MLG door actuator fittings in accordance with the instructions of Airbus SB A320-52-1073 Revision 05.
- (6) If, during any HFEC inspection as required by paragraph (4) of this AD, any crack is found on both hinge and nerve areas, before next flight, replace the affected fitting(s) in accordance with the instructions of Airbus SB A320-52-1096 Revision 02 or, within the compliance time (threshold) specified in Airbus SB A320-52-1096 Revision 02, replace the MLG door actuator fittings in accordance with the instructions of Airbus SB A320-52-1073 Revision 05.
- (7) Inspections and corrective actions, accomplished before 30 July 2014 [the effective date of EASA AD 2014-0166] in accordance with the instructions of Airbus SB A320-52-1096 Revision 01 are acceptable to comply with the initial requirements of paragraphs (4) and (6) of this AD.
- (8) For all aeroplanes equipped with a MLG door fitting with a P/N as listed in Table 2 of this AD, before that MLG door exceeds 48 000 FC or 96 000 FH, whichever occurs first since first installation on an aeroplane (see Note 1 of this AD), replace the MLG door actuator fittings in accordance with the instructions of Airbus SB A320-52-1073 Revision 05.



Table 2 – MLG Door Actuator Fittings P/N

D52880102000	D52880220000	D52880224000	D52880235000
D52880102001	D52880220001	D52880224001	D52880235001

Note 1: If no reliable data is available, operators may refer to the guidance specified in ALS Part 1 Section 1 chapter 5.2 (traceability) to determine the FC and / or the FH accumulated by a MLG door.

- (9) Modification of an aeroplane, prior to 30 July 2014 [the effective date of EASA AD 2014-0166] in accordance with the instructions of Airbus SB A320-52-1073 (at any revision) is acceptable to comply with the requirements of paragraph (8) of this AD for that aeroplane.
- (10) An aeroplane on which Airbus modification (mod) 24903, or mod 25372, or mod 36979 has been embodied in production is not affected by the requirements of this AD, except as specified below, provided that no MLG door actuator fitting with a P/N as listed in Table 2 of this AD has been reinstalled on that aeroplane since first flight.

Paragraph (13.1) of this AD remains applicable to post-mod 24903, post-mod 25372 and post-mod 36979 aeroplanes.

- (11) Modification of an aeroplane in accordance with the instructions of Airbus SB A320-52-1073 (at any revision) to install fittings with P/N D52880246002 and P/N D52880246003 is acceptable to comply with the requirements of paragraph (8) of this AD for that aeroplane.
- (12) Modification of an aeroplane as required by paragraph (2) or (5) or (8) of this AD, as applicable, or as specified in paragraph (3.2) or (6) of this AD, as applicable, constitutes terminating action for the repetitive inspections required by this AD for that aeroplane.
- (13) Do not install on any aeroplane a MLG door actuator fitting with a P/N as listed in Table 2 of this AD, as required by paragraph (13.1) or (13.2) of this AD, as applicable.
 - (13.1) For an aeroplane that, on 30 July 2014 [the effective date of EASA AD 2014-0166], has fittings installed with a P/N not listed in Table 2 of this AD: From 30 July 2014.
 - (13.2) For an aeroplane that, on 30 July 2014 [the effective date of EASA AD 2014-0166], has fittings installed with a P/N as listed in Table 2 of this AD: After modification of the aeroplane as required by paragraph (2) or (5) or (8) of this AD, or as specified in paragraph (3.2) or (6) of this AD.
- (14) Modification of an aeroplane by installing a version (P/N) of the MLG door actuator fitting approved after 30 July 2014 [the effective date of EASA AD 2014-0166] is equal to compliance with the requirements of paragraph (8) of this AD for that aeroplane, provided the conditions, as specified in paragraphs (14.1) and (14.2) of this AD, are met.
 - (14.1) The MLG door actuator fitting (P/N) must be approved by EASA, or approved under Airbus DOA; and



- (14.2) The modification must be accomplished in accordance with instructions approved by EASA, or approved under Airbus DOA.

Ref. Publications:

Airbus SB A320-52-1073 original issue dated 02 February 1996, or Revision 01 dated 26 April 1996, or Revision 02 dated 07 April 1997, or Revision 03 dated 01 October 1998, or Revision 04 dated 10 August 1999, or Revision 05 dated 28 September 2006.

Airbus SB A320-52A1086 Revision 01 dated 10 September 1999.

Airbus SB A320-52-1096 Revision 01 dated 23 October 2003, or Revision 02 dated 12 July 2006.

Airbus ISI 00.05.00002 Revision 02, dated 28 September 2015.

The use of later approved revisions of this document is acceptable for compliance with the requirements of this AD.

Remarks:

1. This Proposed AD will be closed for consultation on 21 July 2016.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
3. For any question concerning the technical content of the requirements in this PAD, please contact: AIRBUS – Airworthiness Office – EIAS; Fax +33 5 61 93 44 51;
E-mail: account.airworth-eas@airbus.com.

