



Airworthiness Directive

AD No.: 2012-0032R1

Issued: 08 December 2015

Note: This Airworthiness Directive (AD) 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.

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 (EC) 216/2008, Article 14(4) exemption].

Design Approval Holder's Name:

AIRBUS

Type/Model designation(s):

A318, A319, A320 and A321 aeroplanes

Effective Date: **Original Issue:** 09 March 2012
Revision 01: 08 December 2015

TCDS Number(s): EASA.A.064

Foreign AD: Not applicable

Supersedure: This AD revises EASA AD 2012-0032, dated 24 February 2012, which superseded EASA AD 2011-0011 dated 21 January 2011.

ATA 57 – Wings – Outer Wing Main Landing Gear Support Rib 5 Fitting – Inspection / Modification

Manufacturer(s):

Airbus (formerly Airbus Industrie)

Applicability:

Airbus A318-111, A318-112, A318-121, A318-122, 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 (MSN), except those having embodied Airbus modification (mod) 155881 in production.

Reason:

Several cases of corrosion of the main landing gear (MLG) support Rib 5 fitting lug bores have been reported on A320 family aeroplanes. In some instances, corrosion pits caused the cracking of the forward lug (sometimes through its complete thickness).



This condition, if not detected, may lead to the complete failure of the fitting, possibly affecting the structural integrity of the MLG installation.

To address this unsafe condition, EASA issued AD 2007-0213 to require, for pre-mod 32025 aeroplanes, repetitive inspections of the MLG support Rib 5 fitting forward lugs and, as terminating action, the embodiment of Airbus Service Bulletin (SB) A320-57-1118.

After that AD was issued, a case of Rib 5, ruptured at the 4 o'clock position, was discovered on an aeroplane on which Airbus SB A320-57-1118 had already been embodied. Investigation of that case revealed that corrosion damage and cracking that should have been removed by repair machining was below the level of detectability of the Non Destructive Test (NDT) technique that cleared the surfaces prior to bush installation.

Prompted by these findings, EASA issued AD 2011-0011, partially retaining the requirements of EASA AD 2007-0213, which was superseded, and to require the same actions for all aeroplanes on which Airbus SB A320-57-1118 has been embodied in service, or on which Airbus SRM 57-26-13 or individual adapted approved Airbus Repair Instructions had been applied. That AD also reduced the Applicability by excluding A318 aeroplanes, since Airbus mod 32025 is embodied in production on both left-hand (LH) and right-hand (RH) wings for all A318 aeroplanes.

After EASA AD 2011-0011 was issued, three cases of corrosion of Rib 5 were discovered on aeroplanes on which Airbus mod 32025 had been embodied in production. Investigations revealed that the unsafe condition addressed by AD 2011-0011 could occur or develop on those aeroplanes as well. For the reasons described above, EASA issued AD 2012-0032, retaining the requirements of EASA AD 2011-0011, which was superseded, expanding the Applicability to all aeroplanes, and to require the same actions for post-mod 32025 aeroplanes.

Since that AD was issued, Airbus has developed mod 155881 that improves the corrosion protection and constitutes terminating action for the required repetitive inspections. For in-service aeroplanes, this solution can only be introduced through a dedicated repair.

This AD is revised to exclude post-mod 155881 aeroplanes from the Applicability and to confirm the availability of the optional terminating action, upon request from Airbus.

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

Required as indicated, unless accomplished previously:

For the purpose of this AD:

- **"Action A"** is defined as the modification of the MLG Rib Bushes in accordance with the instructions of Airbus SB A320-57-1118 at any revision.
- **"Action B"** is defined as the repair of the MLG Support Rib 5 fitting in accordance with:
 - Airbus A319 Structural Repair Manual (SRM) 57-26-13 paragraph 5.C or
 - Airbus A320/A321 SRM 57-26-13 paragraph 5.D, or
 - Airbus Repair Instruction R572-58376 at issue C or later, or Airbus Repair Instruction R572-48341 at issue A.



- “**Action C**” is defined as the replacement in service of the MLG Support Rib 5 in accordance with:
 - Airbus Repair Instructions R572-58507 and R572-58209, or
 - Airbus Repair Instructions R572-45020 and R572-45019.
- “**Action D**” is defined as the inspection in service with nil findings of the MLG Support Rib 5 in accordance with specific Airbus Repair Instructions or Airbus Technical Disposition. The affected MLG Support Ribs 5 are fitted on the MSN listed in Appendix 1 of this AD.

Note: The thresholds/intervals of the inspections as required by paragraph (1) or (2) of this AD depend on the MLG support Rib 5 fitting configuration, and consequently the thresholds/intervals for the LH MLG support Rib 5 inspections may differ from the thresholds/intervals for the RH MLH support Rib 5 inspections, as applicable.

(1) For aeroplanes on which Airbus mod 32025 has not been embodied in production:

- (1.1) Within the threshold indicated in Table 1 of this AD, as applicable, inspect the forward lug of each pre-mod 155881 LH and RH MLG support Rib 5 fitting on which **none** of the actions, **Action A, B or C** as outlined above, has been performed, in accordance with the instructions of Airbus SB A320-57-1138 Revision 01. Thereafter, repeat the inspection at intervals not to exceed those defined in Paragraph 1.E.(2)(a)3 of Airbus SB A320-57-1138 Revision 01, as applicable.

Table 1 – Inspection Threshold

Aeroplane type(s)	Compliance Time
A319 and A320	<ul style="list-style-type: none"> • within 150 flight cycles (FC) following the last visual inspection carried out in compliance with EASA AD 2007-0213, or • within 940 FC following the last ultrasonic inspection carried out in compliance with EASA AD 2007-0213, or • before next flight following a hard landing.
A321	<ul style="list-style-type: none"> • within 100 FC following the last visual inspection carried out in compliance with EASA AD 2007-0213, or • within 630 FC following the last ultrasonic inspection carried out in compliance with EASA AD 2007-0213, or • before next flight following a hard landing.

- (1.2) If, during any inspection as required by paragraph (1.1) of this AD, any discrepancy (as defined in Airbus SB A320-57-1138 Revision 01) is found, accomplish the applicable corrective actions in accordance with the instructions and within the applicable compliance time(s), as defined in paragraphs 1.E.(2)(a)1 and 1.E.(2)(a)2 of Airbus SB A320-57-1138 Revision 01.



- (1.3) Except for aeroplanes on which LH and RH MLG Rib 5 bushes have been modified in accordance with Action A or on which LH and RH MLG Rib 5 fittings have been replaced in accordance with Action C, within 60 months after 21 August 2007 [the effective date of EASA AD 2007-0213], modify the MLG Rib Bushes in accordance with the instructions of Airbus SB A320-57-1118 Revision 03 or a later approved revision.
- (1.4) Modification of a MLG Rib 5 support fitting as required by paragraph (1.3) of this AD constitutes terminating action for the repetitive inspection requirements of paragraph (1.1) of this AD for that MLG Rib 5 support fitting.
- (1.5) Within 2 000 FC after modification of the MLG support Rib 5 fitting in accordance with **Action A**, or as required by paragraph (1.3) of this AD, or after repair of the MLG support Rib 5 fitting in accordance with **Action B**, as applicable, and thereafter at intervals not to exceed 500 FC, accomplish a detailed visual inspection of the forward lug of each pre-mod 155881 LH and RH MLG support rib 5 fitting on which one of the actions, **Action A or B**, has been performed, in accordance with the instructions of Airbus Alert SB A320-57A1166 Revision 01.
- (1.6) If, during any inspection as required by paragraph (1.5) of this AD, any discrepancy (as defined in Airbus Alert SB A320-57A1166 Revision 01) is found, before next flight, contact Airbus for approved corrective action instructions and accomplish those instructions accordingly.
- (1.7) After replacement of a MLG Support Rib 5 fitting at any position (LH or RH) in accordance with **Action C** the repetitive inspection requirements of paragraph (1.1) or (1.5) of this AD, as applicable, are no longer required for the MLG Support Rib 5 fitting at that position.
- (1.8) Initially, within 60 months after replacement of a MLG support Rib 5 fitting in accordance with **Action C**, or within 500 FC after 09 March 2012 [the effective date of the original issue of this AD], whichever occurs later, and thereafter at intervals not to exceed 500 FC, accomplish a detailed visual inspection of the forward lug of each pre-mod 155881 LH and RH MLG support Rib 5 fitting on which **Action C** has been performed, in accordance with the instructions of Airbus SB A320-57A1166 Revision 01.
- (1.9) If, during any inspection as required by paragraph (1.8) of this AD, any discrepancy (as defined in Airbus SB A320-57A1166 Revision 01) is found, before next flight, contact Airbus for approved corrective action instructions and accomplish those instructions accordingly.
- (1.10) Inspections and corrective actions, accomplished before 09 March 2012 [the effective date of the original issue of this AD], in accordance with the instructions of Airbus SB A320-57A1166 at original issue, are acceptable to comply with the initial requirements of paragraphs (1.5), (1.6), (1.8) and (1.9) of this AD, as applicable. After 09 March 2012 [the effective date of the original issue of this AD], repetitive inspections and applicable corrective actions as required by paragraph (1.5), (1.6), (1.8) and (1.9) of this AD, as



applicable, must be accomplished in accordance with the instructions of Airbus SB A320-57A1166 Revision 01.

(2) **For aeroplanes on which Airbus mod 32025 has been embodied in production:**

- (2.1) Initially, within the threshold indicated in Table 2 of this AD, as applicable to the MLG support rib 5 fitting configuration, and thereafter at intervals not to exceed 500 FC, accomplish a detailed visual inspection of the forward lug of each pre-mod 155881 LH and RH MLG support rib 5 fitting in accordance with the instructions of Airbus Alert SB A320-57-1168.

Table 2 – Detailed inspection threshold

MLG Support Rib 5 Fitting configuration [on 09 March 2012, the effective date of the original issue of this AD]	Compliance Time (whichever occurs later, A or B)
MLG Support Rib 5 has not been modified nor repaired since the aeroplane first flight	A. Within 60 months after the aeroplane first flight, B. Within 500 FC after 09 March 2012 [the effective date of the original issue of this AD]
MLG Support Rib 5 has been replaced with a pre-mod 155881 part, in accordance with Action C	A. Within 60 months after replacement of the MLG support Rib 5 fitting in accordance with Action C B. within 500 FC after 09 March 2012 [the effective date of the original issue of this AD]
MLG Support Rib 5 has been repaired in accordance with the SRM or a Repair Approval Sheet (RAS)	A. Within 2 000 FC after repair of the MLG support Rib 5 fitting in accordance with the SRM or a RAS B. Within 250 FC or 3 months, whichever occurs first after 09 March 2012 [the effective date of the original issue of this AD]
MLG Support Rib 5 has been inspected with nil findings in accordance with Action D	A. Within 2 000 FC after the last inspection in accordance with Action D, or within 60 months after the aeroplane first flight, whichever occurs later B. Within 250 FC or 3 months, whichever occurs first after 09 March 2012 [the effective date of the original issue of this AD]

- (2.2) If, during any inspection as required by paragraph (2.1) of this AD, any discrepancy (as defined in Airbus SB A320-57-1168) is found, before next flight, contact Airbus for approved corrective action instructions and accomplish those instructions accordingly.



- (3) Modification of an aeroplane, including replacement of both MLG Support Ribs 5 with post-mod 155881 parts, in accordance with an approved Airbus Repair Design Approval Sheet, constitutes (optional) terminating action for the repetitive inspections required by paragraphs (1) and (2) of this AD for that aeroplane.

Ref. Publications:

Airbus SB A320-57-1118 Revision 03 dated 23 April 2007, or Revision 04 dated 04 June 2008.

Airbus SB A320-57-1138 Revision 01 dated 27 October 2006.

Airbus Alert SB A320-57A1166 Revision 01 dated 19 October 2011.

Airbus Repair Instructions R572-58376 Issue C, R572-58507 Issue A, R572-58209 Issue A, R572-45020 Issue A, R572-45019 Issue A, R572-48341 Issue A.

Airbus SB A320-57-1168 original issue dated 07 November 2011.

The use of later approved revisions or issues of these 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. Based on the required actions and the compliance time, EASA have decided to issue a Final AD with Request for Comments, postponing the public consultation process after publication.
3. Enquiries regarding this AD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: ADs@easa.europa.eu.
4. For any question concerning the technical content of the requirements in this AD, please contact: AIRBUS – Airworthiness Office – EIAS, Fax +33 5 61 93 44 51, E-mail: account.airworth-eas@airbus.com.



Appendix 1

List of aeroplanes, identified by MSN, on which the MLG Support Ribs 5 have been inspected, before 09 March 2012 [the effective date of the original issue of this AD], in accordance with specific Airbus Repair Instructions, or Airbus Technical Disposition.

MSN		
1965	2056	2155
2274	2278	2288
2321	2478	2586
2588	2612	2672
2688	2707	2929
2942	3089	3117
3361	3427	3486
3489	3806	3891
3937	4243	4345

