



Notification of a proposal to issue an Airworthiness Directive

PAD No.: 16-113

Issued: 27 July 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):

A318, 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 2015-0001R1 dated 15 January 2015.

ATA 52 – Doors – Main Landing Gear Fixed Fairing Assembly - Inspection

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.

Reason:

Several occurrences were reported of in-flight loss of main landing gear (MLG) fixed and hinged fairings. The majority of reported events occurred following scheduled maintenance activities. One result of the investigation was that a discrepancy between the drawing and the maintenance manuals was discovered. The maintenance documents were corrected to prevent mis-rigging of the MLG fixed and hinged fairings, which could induce fatigue cracking.

Prompted by these findings, Airbus issued Service Bulletin (SB) A320-52-1083, providing instructions for a one-time inspection of the MLG fixed fairing composite insert and the surrounding area,



replacement of the adjustment studs at the lower forward position and adjustment to the new clearance tolerances. That SB was replaced by Airbus SB A320-52-1100 (modification (mod) 27716) introducing a re-designed location stud, rod end and location plate at the forward upper and lower leg fixed-fairing positions. Subsequently, reports were received of post-mod 27716 / post-SB A320-52-1100 MLG fixed fairing assemblies with corrosion, which could also induce cracking.

This condition, if not detected and corrected, could lead to further cases of in-flight detachment of a MLG fixed fairing, possibly resulting in injury to persons on the ground and/or damage to the aeroplane.

To address this potential unsafe condition, EASA issued AD 2014-0096 to require repetitive detailed inspections (DET) of the MLG fixed fairings, and, depending on findings, accomplishment of applicable corrective actions. That AD also prohibited installation of certain MLG fixed fairing rod end assemblies and studs as replacement parts on aeroplanes incorporating Airbus mod 27716 in production, or modified in accordance with Airbus SB A320-52-1100 (any revision) in service.

Since EASA AD 2014-0096 was issued, Airbus developed an alternative inspection programme to meet the AD requirements. In addition, a terminating action (mod 155648) was developed, which was made available for in service aeroplanes through Airbus SB A320-52-1165.

Consequently, EASA issued AD 2015-0001 (later revised), retaining the requirements of EASA AD 2014-0096, which was superseded, and adding an optional terminating action for the repetitive inspections. For post-mod aeroplanes, i.e. incorporating Airbus mod 155648 in production, or modified by Airbus SB A320-52-1165 in service, the only remaining requirement was to ensure that pre-mod components are no longer installed.

Since EASA AD 2015-0001R1 was issued, Airbus revised SB A320-52-1165 to include additional work, to re-identify the fairing assembly part number (P/N). During the preparation of this additional work, it was noted that several configurations and associated P/N were not listed in the original SB, which may have an impact on aeroplanes on which SB A320-52-1165 original issue or Revision 01 was already accomplished.

For the reasons described above, this AD retains the requirement of EASA AD 2015-0001R1, which is superseded, but requires using the SB at Revision 02 (or later approved revisions). This AD also requires accomplishment of additional work for those aeroplanes on which parts were replaced in accordance with the instructions of Airbus SB A320-52-1165 at original issue or Revision 01.

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

Required as indicated, unless accomplished previously:

- (1) For aeroplanes in pre-mod 27716 and pre-SB A320-52-1100 configuration, having components installed as identified by P/N in Table 1 of this AD, within the compliance time as specified in Table 2 of this AD, and, thereafter, at intervals not exceeding 6 500 flight cycles (FC), replace both right hand (RH) and left hand (LH) MLG fixed fairing upper and lower attachment studs in accordance with the instructions of Airbus SB A320-52-1163.



Table 1 – Pre-mod 27716 (pre-SB A320-52-1100) Components

Part Name	P/N
Plate - Support	D5284024820000
	D5284024820200
Stud - Adjustment	D5284024420000
Rod end assembly (lower)	D5284000500000
Rod end assembly (upper)	D5284000600000

Table 2 – Initial Inspection for Pre-mod 27716 Aeroplanes

Aeroplanes Compliance time (whichever occurs later, A, B, C or D)	
A	Before exceeding 6 500 FC since aeroplane first flight
B	Within 6 500 FC since last installation of the pre-mod 27716 stud on an aeroplane
C	Within 1 500 FC after 07 May 2014 [the effective date of EASA AD 2014-0096]
D	Within 8 months after 07 May 2014 [the effective date of EASA AD 2014-0096]

- (2) For aeroplanes in post-mod 27716 (or post-Airbus SB A320-52-1100) configuration, having components installed as identified by P/N in Table 3 of this AD, within the compliance time as specified in Table 4 of this AD, and, thereafter, at intervals not exceeding 12 months (except as specified in paragraph (4) of this AD), accomplish a DET of each forward stud assembly, both RH and LH MLG, in accordance with the instructions of Airbus SB A320-52-1163.

Table 3 – Post-mod 27716 (post-SB A320-52-1100) Components

Part Name	P/N
Stud – Adjustment	D5285600720000
Rod end assembly (lower)	D5285600400000
Rod end assembly (upper)	D5285600500000

When, following any DET as required by this paragraph, both RH and LH MLG forward stud assemblies on an aeroplane are replaced with new ones, the next DET for that aeroplane can be deferred up to 72 months after replacement.

Table 4 – Initial Inspection for Post-mod 27716 Aeroplanes

Compliance time (whichever occurs later, A, B, C or D)	
A	Before exceeding 72 months since aeroplane first flight
B	Within 72 months since last installation of the stud post-mod 27716 or since Airbus SB A320-52-1100 accomplishment
C	Within 1 500 FC after 07 May 2014 [the effective date of EASA AD 2014-0096]
D	Within 8 months after 07 May 2014 [the effective date of EASA AD 2014-0096]



- (3) If, during any DET as required by paragraph (2) of this AD, any crack, damage or corrosion (except as specified in paragraph (4) of this AD) is found, before next flight, replace the upper and lower RH and LH MLG fixed fairing forward attachment assemblies in accordance with the instructions of Airbus SB A320-52-1163, or in accordance with the instructions of Airbus SB A320-52-1165 Revision 02.
- (4) In case corrosion is found on any MLG fixed fairing forward attachment stud assembly (upper, lower, LH or RH), but the corroded stud is not loose, accomplish the action(s) as specified in paragraph (4.1) or (4.2) of this AD.
 - (4.1) Before next flight, replace the affected assembly in accordance with the instructions of Airbus SB A320-52-1163, or in accordance with the instructions of Airbus SB A320-52-1165 Revision 02.
 - (4.2) Within 4 months after finding corrosion and, thereafter, at intervals not exceeding 4 months, accomplish a DET (same inspection as specified in paragraph (2) of this AD – reduced intervals) of the forward stud assembly of the affected (RH or LH) MLG in accordance with the instructions of Airbus SB A320-52-1163.
- (5) If, during any DET as required by paragraph (4.2) of this AD, any crack or damage is found, before next flight, replace the affected (RH or LH) MLG fixed fairing forward attachment assembly in accordance with the instructions of Airbus SB A320-52-1163, or in accordance with the instructions of SB A320-52-1165 Revision 02.
- (6) Replacement of components on an aeroplane with components as listed in Table 1 or Table 3 of this AD, as required by paragraph (1), (3), (4.1), or (5) of this AD, as applicable, does not constitute terminating action for the repetitive DET required by this AD for that aeroplane, except as specified in paragraph (9) of this AD.
- (7) Modification of an aeroplane to post-mod 27716 configuration in accordance with the instructions of Airbus SB A320-52-1100 constitutes terminating action for the repetitive replacements as required by paragraph (1) of this AD for that aeroplane. Refer to paragraph (2) of this AD to determine the next due DET after modification and the applicable repetitive DET interval.
- (8) An aeroplane on which Airbus mod 155648 has been embodied in production is not affected by the requirements of paragraphs (1) through (5) of this AD, provided that no affected component, identified by P/N as listed in Table 1 or Table 3 of this AD, has been installed on that aeroplane since Airbus date of manufacture.
- (9) For aeroplanes on which, before the effective date of this AD, any part was installed and / or replaced in accordance with the instructions of Airbus SB A320-52-1165 original issue or Revision 01, within 12 months after the effective date of this AD, accomplish the instructions identified as “additional work” in Airbus SB A320-52-1165 Revision 02.



- (10) Modification of an aeroplane in accordance with the instructions of Airbus SB A320-52-1165 Revision 02 constitutes terminating action for the requirements of paragraphs (1) through (5) of this AD for that aeroplane.
- (11) Do not install on any aeroplane a component as listed in Table 1 of this AD, as required by paragraph (11.1) or (11.2) of this AD, as applicable.
 - (11.1) For aeroplanes in pre-mod 27716 and pre-SB A320-52-1100 configuration: After optional modification as specified in paragraph (7) of this AD.
 - (11.2) For aeroplanes in post-mod 27716 or post-SB A320-52-1100 configuration: From the effective date of this AD.
- (12) Do not install on any aeroplane a component as listed in Table 1 or Table 3 of this AD, as required by paragraph (12.1) or (12.2) of this AD, as applicable.
 - (12.1) For aeroplanes in pre-mod 155648 and pre-SB A320-52-1165 Revision 02 configuration: After optional modification as specified in paragraph (9) of this AD.
 - (12.2) For aeroplanes in post-mod 155648 or post-SB A320-52-1165 Revision 02 configuration: From the effective date of this AD.

Ref. Publications:

Airbus SB A320-52-1100 original issue dated 07 December 1998, or Revision 01 dated 12 March 1999.

Airbus SB A320-52-1163 original issue dated 04 February 2014.

Airbus SB A320-52-1165 original issue dated 03 November 2014, or Revision 01 dated 23 October 2015, or Revision 02 dated 12 February 2016.

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

Remarks:

1. This Proposed AD will be closed for consultation on 24 August 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.

