Airworthiness Directive

AD No.: 2018-0135

Issued: 26 June 2018

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: 10 July 2018

TCDS Number(s): EASA.A.064

Foreign AD: Not applicable

Supersedure: This AD supersedes DGAC France AD F-2005-115 (EASA approval 2005-6032) dated 06 July 2005, and EASA AD 2014-0058 dated 11 March 2014.

ATA 32 – Landing Gear – Main Landing Gear Sliding Tube – Inspection / Replacement

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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.

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

Affected MLG shock absorber: Main Landing Gear (MLG) shock absorbers, having Part Number (P/N) and serial number (s/n) as identified in Safran Service Bulletin (SB) 200-32-286 for A318, A319, and A320 aeroplanes, and in Safran SB 201-32-43 for A321 aeroplanes.

Affected part: MLG sliding tubes, having P/N and s/n as listed in Safran SB 200-32-313 for A318, A319 and A320 aeroplanes, or SB 201-32-62 for A321 aeroplanes, as applicable, except those that passed a Special Detailed Inspection (SDI) as required by paragraph (2) of this AD.

Affected MLG sliding tube: MLG sliding tubes, having P/N and s/n as identified in Appendix B of Safran SB 200-32-321 Revision 02, or SB 201-32-68 Revision 02, except those that passed an inspection in accordance with the instructions of Safran SB 200-32-321, or SB 201-32-68, as applicable, and those that, after that inspection, have been repaired, as applicable, in accordance with approved instructions provided by Safran.

Serviceable MLG sliding tube: Not affected MLG sliding tubes, or affected MLG sliding tubes, having not exceeded 10 000 flight cycles (FC) since first installation on an aeroplane, or affected MLG sliding tubes that, within the last 5 000 FC before installation on an aeroplane, passed an inspection in accordance with the instructions of Airbus SB A320-32-1441.

The applicable SB: Safran SB 200-32-313, Safran SB 201-32-62 and Airbus SB A320-32-1416, as applicable.

Reason:

Cracks were reported on MLG sliding tubes and the investigations determined metallic inclusion during production and abnormal grinding operation during overhaul as cause of these cracks. Prompted by these reports, respectively, DGAC France issued AD F-2005-115 (EASA approval 2005-6032) and EASA issued AD 2014-0058, both requiring inspections and replacement of certain MLG sliding tubes.

More recently, during overhaul, cracks were found in the lower slave link bracket lug holes on two MLG sliding tubes. Subsequent investigations determined that these cracks may have developed due to burrs, which could have been present since manufacture. Based on the fact that the sliding tube is certified as a safe life part, this is considered to be a non-compliance with the requirements of JAR 25.571(c). Cracks in the affected sliding tubes may not be found during the existing on-wing scheduled inspections.

This condition, if not detected and corrected, could lead to sliding tube failure, possibly resulting in MLG collapse, damage to the aeroplane and injury to occupants.

Prompted by these findings, Safran Landing Systems, the MLG manufacturer (formerly Messier-Dowty, Messier-Bugatti-Dowty, and hereafter referred to as “Safran” in this AD), introduced additional quality steps to eliminate burrs in the manufacturing process. To address this potential unsafe condition on delivered MLG sliding tubes, Airbus issued SB A320-32-1441, providing instructions for on-wing repetitive inspections, and Safran issued SB 200-32-321 and SB 201-32-68, as applicable to MLG configuration, providing instructions for inspection in shop.

For the reason described above, this AD partially retains the requirements of DGAC France AD F-2005-115 (EASA approval 2005-6032) and EASA AD 2014-0058, which are superseded, requires repetitive inspections of the affected MLG sliding tubes and, depending on findings, accomplishment of applicable corrective action(s). This AD also defines criteria for installation on an aeroplane of an affected MLG sliding tube.

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

Required as indicated, unless accomplished previously:

Partial restatement of Requirements of DGAC France AD F-2005-115:

(1) Before 15 December 2008, replace each affected MLG shock absorber with a not affected one. Instructions provided by the applicable Aircraft Maintenance Manual 32-11-13 page block 401 are an acceptable method to replace the MLG shock absorber.

Partial restatement of Requirements of EASA AD 2014-0058:

Inspections:

(2) Within 3 months after 25 March 2014 [the effective date of EASA AD 2014-0058], accomplish an SDI of the MLG axle and brake flange of each affected part, in accordance with the instructions of the applicable SB.

Corrective Action:

(3) If, during the SDI as required by paragraph (2) of this AD, any damage is detected, before next flight, replace the MLG sliding tube with a not affected part in accordance with the instructions of the applicable SB.

Parts installation:

(4) Do not install an affected part on an aeroplane, as required by paragraph (4.1) or (4.2) of this AD, as applicable.

(4.1) For an aeroplane that, on 25 March 2014 [the effective date of EASA AD 2014-0058] had an affected part installed: After the inspection as required by paragraph (2) of this AD for that aeroplane.

(4.2) For aeroplanes that, on 25 March 2014 [the effective date of EASA AD 2014-0058], did not have an affected part installed: From 25 March 2014.

New Requirements of this AD:

Repetitive Inspections:

(5) Within the compliance time as defined in Table 1 of this AD and, thereafter, at intervals not to exceed 5 000 FC, accomplish a detailed inspection (DET) of each affected MLG sliding tube in accordance with the instructions of Airbus SB A320-32-1441 Revision 01.

Table 1 – Initial SDI of MLG Sliding Tube

Compliance Time (whichever occurs later, **A** or **B**)	
A	Before exceeding 10 000 FC since first installation on an aeroplane (see Note 1 of this AD)
B	Within 5 000 FC or 25 months, whichever occurs first after the effective date of this AD

Note 1: If no reliable data is available, operators may refer to the guidance specified in the Airbus A318/A319/A320/A321 Airworthiness Limitations Section (ALS) Part 1, Section 1 chapter 5.2 (traceability) to determine the FC accumulated by the MLG sliding tube.

Corrective Action:

(6) If, during any DET as required by paragraph (5) of this AD, any crack is detected on an MLG sliding tube, before next flight, replace that MLG sliding tube with a serviceable MLG sliding tube in accordance with the instructions of Airbus SB A320-32-1441 Revision 01 (see note 2 of this AD).

Note 2: Replacement of an MLG on an aeroplane with an MLG which has a serviceable MLG sliding tube installed is an acceptable method to comply with the requirements of paragraph (6) of this AD for that aeroplane.

Part replacement:

(7) Within 10 years after the effective date of this AD, replace each affected MLG sliding tube with a not affected MLG sliding tube. Installation of a not affected MLG sliding tube on an aeroplane constitutes terminating action for the repetitive inspections required by paragraph (5) of this AD for that aeroplane (see Note 3 of this AD).

Note 3: Replacement of an MLG on an aeroplane with an MLG which does not have an affected MLG sliding tube installed is an acceptable method to comply with the requirements of paragraph (7) of this AD for that aeroplane.

Conditional Credit:

(8) An aeroplane on which Airbus modification (mod) 161202 or mod 161346 has been embodied in production is not affected by the requirements of paragraphs (1), (2), (5) and (7) of this AD, provided it is determined that no affected MLG sliding tube is installed on that aeroplane.

(9) Inspection and corrective actions accomplished on an aeroplane before the effective date of this AD in accordance with the instructions of the original issue of Airbus SB A320-32-1441 are acceptable to comply with the initial requirements of paragraphs (5) and (6) of this AD for that aeroplane.

Parts installation:

(10) From the effective date of this AD, do not install on any aeroplane an affected MLG shock absorber.

(11) Do not install an affected MLG sliding tube on any aeroplane, as required by paragraph (11.1) or (11.2) of this AD, as applicable.

(11.1) For an aeroplane that, on the effective date of this AD, has an affected MLG sliding tube installed: After replacement of each affected MLG sliding tube as required by paragraph (7) of this AD.

(11.2) For an aeroplane that, on the effective date of this AD, does not have an affected MLG sliding tube installed: From the effective date of this AD.

Ref. Publications:

Airbus SB A320-32-1441, original issue dated 28 December 2016, or Revision 01 dated 14 December 2017.

Airbus SB A320-32-1416 original issue dated 10 March 2014.

Safran SB 200-32-321 original issue dated 09 September 2015, or Revision 01 dated 01 November 2016, or Revision 02 dated 03 October 2017.

Safran SB 201-32-68 original issue dated 09 September 2015, or Revision 01 dated 01 November 2016, or Revision 02 dated 03 October 2017.

Safran SB 200-32-286 original issue dated 03 September 2004, or Revision 01 dated 01 May 2005, or Revision 02 dated 15 June 2007, or Revision 03 dated 03 October 2008.

Safran SB 201-32-43 original issue dated 03 September 2004, or Revision 01 dated 01 May 2005, or Revision 02 dated 15 June 2007, or Revision 03 dated 03 October 2008.

Safran SB 200-32-313 original issue dated 25 February 2013.

Safran SB 201-32-62 original issue dated 25 February 2013.

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 12 April 2018 as PAD 18-063 for consultation until 18 May 2018. 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 Safety 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 – Airworthiness Office – EIAS; Fax +33 5 61 93 44 51;
E-mail: account.airworth-eas@airbus.com.