



## Notification of a Proposal to issue an Airworthiness Directive

**PAD No.: 18-063**

**Issued: 30 April 2018**

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 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

**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 a 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 failures. 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 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 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 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, and requires identification and 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

<b>Compliance Time</b> (whichever occurs later, <b>A</b> or <b>B</b> )	
<b>A</b>	Before exceeding 10 000 FC since first installation on an aeroplane (see Note 1 of this AD)
<b>B</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 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.

**Modification:**

- (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.

**Parts installation:**

- (9) From the effective date of this AD, do not install on any aeroplane an affected MLG shock absorber.
- (10) Do not install an affected MLG sliding tube on any aeroplane, as required by paragraph (10.1) or (10.2) of this AD, as applicable.
- (10.1) 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.
- (10.2) 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. This Proposed AD will be closed for consultation on 28 May 2018.
2. Enquiries regarding this PAD should be referred to the EASA Safety Information Section, Certification Directorate. E-mail: [ADs@easa.europa.eu](mailto: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](mailto:account.airworth-eas@airbus.com).

