



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-0831; Directorate Identifier 2014-NM-061-AD; Amendment 39-18778; AD 2017-01-11]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), Department of Transportation (DOT).

**ACTION:** Final rule.

**SUMMARY:** We are adopting a new airworthiness directive (AD) for all Airbus Model A318 and A319 series airplanes, Model A320-211, -212, -214, -231, -232, and -233 airplanes, and Model A321 series airplanes. This AD was prompted by a report of a rupture of a main landing gear (MLG) sliding tube axle. This AD requires identification of the part number and serial number of the MLG sliding tubes; inspection of affected chromium plates and sliding tube axles for damage; and replacement of the sliding tube if necessary. We are issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Airbus, Airworthiness Office – EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0831.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0831; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (telephone 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a supplemental notice of proposed rulemaking (SNPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus Model A318 and A319 series airplanes, Model A320-211, -212, -214, -231, -232, and -233 airplanes, and Model A321 series airplanes. The SNPRM published in the Federal Register on June 28, 2016 (81 FR 41886) (“the SNPRM”). We preceded the SNPRM with a notice of proposed rulemaking (NPRM) that published in the Federal Register on April 24, 2015 (80 FR 22939) (“the NPRM”). The NPRM proposed to require an inspection to identify the part number and serial number of the MLG sliding tubes installed on the airplane; an inspection of the axle on certain MLG sliding tubes for damage; and replacement of the sliding tube if necessary. The NPRM was prompted by a report of a rupture of a MLG sliding tube axle. The SNPRM proposed to remove certain service information that does not adequately address the identified unsafe condition and revise the compliance method. We are issuing this AD to detect and correct cracks in the axle and (partial) detachment of the axle and wheel from the sliding tube, which could result in failure of an MLG.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA Airworthiness Directive 2014-0058, dated March 11, 2014 (referred to after this as the Mandatory Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for all Airbus Model A318 and A319 series airplanes, Model A320-211, -212, -214, -231, -232, and -233 airplanes, and Model A321 series airplanes. The MCAI states:

A main landing gear (MLG) sliding tube axle rupture occurred in service. Investigation of the affected part showed that this failure was due to an abnormal grinding operation during overhaul by a certain maintenance and repair organization located in Singapore. A population of MLG sliding tubes was subsequently identified whose axles may have been subject to this grinding operation, which may have resulted in areas of residual stress on the axles on the MLG sliding tubes. In addition, the MSN [manufacturer serial number] of the aeroplanes which are known to have had the affected parts installed have been identified.

This condition, if not detected and corrected, could lead to cracks in the axle and (partial) detachment of axle and wheel from the sliding tube, possibly resulting in failure of a MLG with consequent damage to the aeroplane and injury to occupants.

To address this potential unsafe condition, Messier-Bugatti-Dowty, the MLG gear manufacturer, issued Service Bulletin (SB) 200-32-313 and SB 201-32-62 [both dated February 25, 2013], providing inspection instructions and criteria for removal from service of the affected MLG sliding tubes.

For the reasons described above, this [EASA] AD requires a one-time Special Detailed Inspection (SDI) of the axle on the affected MLG sliding tubes and, depending on findings, replacement of the MLG sliding tube.

The SDI includes a detailed visual inspection of the chromium plate for damage, and a Barkhausen noise inspection of the sliding tube axles for damage.

You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0831.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the SNPRM or on the determination of the cost to the public.

## **Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the SNPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the SNPRM.

## **Related Service Information under 1 CFR part 51**

Airbus has issued Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014. This service information describes procedures for inspecting MLG axles and brake flanges by doing a detailed visual inspection of the chromium plates for damage, a Barkhausen noise inspection of the sliding tube axles for damage, and replacement of affected parts if necessary. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

## **Costs of Compliance**

We estimate that this AD affects 3 airplanes of U.S. registry.

We also estimate that it would take about 18 work-hours per product to comply with the basic requirements of this AD. The average labor rate is \$85 per work-hour. Based on these figures, we estimate the cost of this AD on U.S. operators to be \$4,590, or \$1,530 per product.

In addition, we estimate that any necessary on-condition actions will take about 3 work-hours, for a cost of \$255 per product. We have received no definitive data that would enable us to provide part cost estimates for the on-condition actions specified in this AD. We have no way of determining the number of aircraft that might need these actions.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

**List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

**Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

**PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

**§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**2017-01-11 Airbus:** Amendment 39-18778; Docket No. FAA-2015-0831; Directorate Identifier 2014-NM-061-AD.

**(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the Airbus airplanes identified in paragraphs (c)(1) through (c)(4) of this AD, certificated in any category, all manufacturer serial numbers.

(1) Airbus Model A318-111, -112, -121, and -122 airplanes.

(2) Airbus Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.

(3) Airbus Model A320-211, -212, -214, -231, -232, and -233 airplanes.

(4) Airbus Model A321-111, -112, -131, -211, -212, -213, -231, and -232

airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing gear.

**(e) Reason**

This AD was prompted by a report of a rupture of a main landing gear (MLG) sliding tube axle. We are issuing this AD to detect and correct cracks in the axle and (partial) detachment of the axle and wheel from the sliding tube, which could result in failure of an MLG.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) MLG Sliding Tube Part Number and Serial Number Identification**

Within 3 months after the effective date of this AD: Do an inspection to identify the part number and serial number of the MLG sliding tubes installed on the airplane. A review of airplane maintenance records is acceptable in lieu of this inspection if the part number and serial number of the MLG sliding tubes can be conclusively determined from that review.

**(h) Identification of Airplanes Not Affected by the Requirements of Paragraph (i) of this AD**

An airplane with a manufacturer serial number (MSN) not listed in figure 1 to paragraph (h) of this AD is not affected by the requirements of paragraph (i) of this AD, provided it can be determined that no MLG sliding tube having a part number and serial number listed in table 1 to paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD has been installed on that airplane since first flight of the airplane.

**Figure 1 to Paragraph (h) of this AD**

| <b>Affected Airplanes Listed by MSN</b> |      |      |      |      |      |
|---|------|------|------|------|------|
| 0179                                    | 0214 | 0296 | 0412 | 0558 | 0604 |
| 0607                                    | 0668 | 0704 | 0720 | 0726 | 0731 |
| 0754                                    | 0771 | 0799 | 0828 | 0841 | 0855 |
| 0909                                    | 0914 | 0925 | 0939 | 0986 | 1028 |
| 1030                                    | 1041 | 1070 | 1083 | 1093 | 1098 |
| 1108                                    | 1148 | 1294 | 1356 | 2713 | 2831 |

**Table 1 to Paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD – *Affected MLG Sliding Tubes***

| <b>Part Number</b> | <b>Serial Number</b> |
|--------------------|----------------------|
| 201160302          | 78B                  |
| 201160302          | 1016B11              |
| 201160302          | 1144B                |
| 201371302          | B4493                |
| 201371302          | B4513                |
| 201371302          | SS4359               |
| 201371302          | B4530                |
| 201371302          | B4517                |
| 201371302          | B4568                |
| 201371302          | B4498                |
| 201371302          | 4490B                |
| 201371302          | B202-4598            |
| 201371302          | B165-4623            |
| 201371302          | B244-4766            |
| 201371302          | B267-4794            |
| 201371302          | B272-4813            |
| 201160302          | 1108B                |
| 201371304          | B041-4871            |
| 201371304          | B045-4869            |
| 201371304          | B001-4781            |
| 201371304          | B051-4892            |
| 201371304          | B110-1952            |
| 201371304          | B054-4891            |
| 201371304          | B063-4921            |
| 201371304          | B071-4911            |
| 201371304          | B071-4917            |
| 201371304          | B080-1933            |

| <b>Part Number</b> | <b>Serial Number</b> |
|--------------------|----------------------|
| 201371304          | B117-5010            |
| 201371304          | B120-4989            |
| 201371304          | B132-2023            |
| 201371304          | B114-1956            |
| 201371304          | B208-2009            |
| 201371304          | B133-1947            |
| 201371304          | B154-5037            |
| 201371304          | B89 4952             |
| 201371304          | B129-1964            |
| 201371304          | B227-2010            |
| 201371304          | B170-5031            |
| 201371304          | B182-5047            |
| 201371304          | B239-2053            |
| 201371304          | B1401-2856           |
| 201371304          | B1813-3142           |
| 201371304          | B116-5004            |
| 201522353          | B011-149             |
| 201522350          | B014-25              |
| 201522350          | B019-56              |
| 201522350          | B019-57              |
| 201522350          | B021-69              |
| 201522350          | B022-60              |
| 201522353          | B03-111              |
| 201522353          | B03-110              |
| 201522353          | B112-317             |
| 201522353          | B174-351             |
| 201522353          | B179-392             |
| 201383350          | 4377B                |
| 201383350          | 4393B                |

| <b>Part Number</b> | <b>Serial Number</b> |
|--------------------|----------------------|
| 201383350          | B1831                |
| 201383350          | B1832                |
| 201383350          | SS4355B              |
| 201383350          | SS4400B              |

**(i) Inspections**

For each MLG sliding tube identified as required by paragraph (g) of this AD, having a part number and serial number listed in table 1 to paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD: Within 3 months after the effective date of this AD, inspect affected MLG axles and brake flanges by doing a detailed visual inspection of the chromium plates for damage, and a Barkhausen noise inspection of the sliding tube axles for damage, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014. For Model A318 series airplanes, use the procedures specified for Model A319 series airplanes in Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014.

**(j) Corrective Action**

If, during any inspection required by paragraph (i) of this AD, any damage is detected: Before further flight, replace the MLG sliding tube with a serviceable tube, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014. For Model A318 series airplanes, use the procedures specified for Model A319 series airplanes in Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014.

**(k) Definition of Serviceable Sliding Tube**

For the purpose of this AD, a serviceable sliding tube is defined as a sliding tube that meets the criterion in either paragraph (k)(1) or (k)(2) of this AD.

(1) A sliding tube having a part number and serial number not listed in table 1 to paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD.

(2) A sliding tube having a part number and serial number listed in table 1 to paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD that has passed the inspections required by paragraph (i) of this AD.

**(l) Parts Installation Prohibitions**

(1) For airplanes that have an MLG sliding tube installed that has a part number and serial number listed in table 1 to paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD: After an airplane is returned to service following accomplishment of the actions required by paragraphs (g), (h), and (i) of this AD, no person may install on any airplane an MLG sliding tube having a part number and serial number listed in table 1 to paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD unless that sliding tube has passed the inspection required by paragraph (i) of this AD.

(2) For airplanes that, as of the effective date of this AD, do not have an MLG sliding tube installed that has a part number and serial number listed in table 1 to paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD: No person may install on any airplane an MLG sliding tube having a part number and serial number listed in table 1 to paragraphs (h), (i), (k)(1), (k)(2), (l)(1), and (l)(2) of this AD unless that sliding tube has passed the inspection required by paragraph (i) of this AD.

**(m) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Required for Compliance (RC):** If any service information contains procedures or tests that are identified as RC, those procedures and tests must be done to comply with this AD; any procedures or tests that are not identified as RC are recommended. Those procedures and tests that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the procedures and tests identified as RC can be done and the airplane can be put back in an airworthy

condition. Any substitutions or changes to procedures or tests identified as RC require approval of an AMOC.

**(3) Contacting the Manufacturer:** For any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(n) Special Flight Permits**

Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the airplane can be modified (if the operator elects to do so), provided the MLG remains extended throughout the flight.

**(o) Related Information**

Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2014-0058, dated March 11, 2014, for related information. This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0831.

**(p) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014.

(ii) Reserved.

(3) For service information identified in this AD, contact Airbus, Airworthiness Office – EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to: <http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on January 4, 2017.

Michael Kaszycki,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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