



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1645; Project Identifier MCAI-2022-01296-T; Amendment 39-22613; AD 2023-23-11]

RIN 2120-AA64

Airworthiness Directives; Airbus SAS Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2019-12-07, which applied to all Airbus SAS Model A318-111, -112, -121, and -122 airplanes; Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-211, -212, -214, -216, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes. AD 2019-12-07 required replacement of both main landing gear (MLG) shock absorbers, an identification of affected MLG sliding tubes; inspection of affected chromium plates and sliding tube axles for damage; and replacement of the sliding tube if necessary. AD 2019-12-07 also required repetitive inspections of affected MLG sliding tubes for cracking, replacement of cracked MLG sliding tubes, and eventual replacement of each affected MLG sliding tube. This AD continues to require the actions specified in AD 2019-12-07 and requires repetitive inspections of additional MLG sliding tubes, replacement if necessary, and eventual replacement of the additional MLG sliding tubes. This AD also extends the repetitive inspection interval. This AD also prohibits the installation of affected parts under certain conditions. This AD was prompted by the FAA's determination that additional MLG sliding tubes are affected by the unsafe condition and that the repetitive inspection

interval may be extended. The FAA is 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 certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain other publications listed in this AD as of August 1, 2019 (84 FR 30579, June 27, 2019).

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of February 22, 2017 (82 FR 5362, January 18, 2017).

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of June 29, 2007 (72 FR 29241, May 25, 2007).

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of June 23, 2004 (69 FR 31867, June 8, 2004).

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1645; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, the mandatory continuing airworthiness information (MCAI), any comments received, and other information. The address for Docket Operations is U.S. Department of

Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Airbus service information identified in this final rule, contact Airbus SAS, Airworthiness Office – EIAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworth-eas@airbus.com; website airbus.com.

- For Safran and Messier-Dowty service information identified in this final rule, contact Safran Landing Systems, One Carbon Way, Walton, KY 41094; telephone 859-525-8583; fax 859-485-8827; website www.safran-landing-systems.com.

- You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at regulations.gov under Docket No. FAA-2023-1645.

FOR FURTHER INFORMATION CONTACT: Timothy Dowling, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 206-231-3667; email: Timothy.P.Dowling@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2019-12-07, Amendment 39-19662 (84 FR 30579, June 27, 2019) (AD 2019-12-07). AD 2019-12-07 applied to all Airbus SAS Model A318-111, -112, -121, and -122 airplanes; Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes; Model A320-211, -212, -214, -216, -231, -232, and -233 airplanes; and Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes. AD 2019-12-07 required replacement of both MLG shock absorbers, an 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.

AD 2019-12-07 also required repetitive inspections of affected MLG sliding tubes for cracking, replacement of cracked MLG sliding tubes, and eventual replacement of each affected MLG sliding tube. The FAA issued AD 2019-12-07 to address cracking in an MLG sliding tube, which could lead to failure of an MLG sliding tube resulting in MLG collapse, damage to the airplane, and injury to passengers.

The NPRM published in the *Federal Register* on August 1, 2023 (88 FR 50067). The NPRM was prompted by AD 2022-0204R1, dated February 15, 2023; corrected February 17, 2023, issued by The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union (EASA AD 2022-0204R1) (also referred to as the MCAI). The MCAI states that since EASA AD 2018-0135, dated June 26, 2018, was issued (which corresponds to FAA AD 2019-12-07), two additional cases have been reported of cracking at the same location of MLG sliding tubes not affected by the inspection requirements and that service information was issued to include additional actions for the newly affected MLG sliding tubes. In addition, further investigation determined the repetitive inspection interval may be extended from 5,000 flight cycles to 10,000 flight cycles.

In the NPRM, the FAA proposed to continue to require the actions specified in AD 2019-12-07 and proposed to require repetitive inspections of additional MLG sliding tubes, replacement if necessary, and eventual replacement of the additional MLG sliding tubes. In the NPRM, the FAA also proposed to extend the repetitive inspection interval and to prohibit the installation of affected parts under certain conditions. The FAA is issuing this AD to address the unsafe condition on these products.

You may examine the MCAI in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1645.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from four commenters, including American Airlines, SIAEC, United Airlines (United), and Delta Air Lines (Delta). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Allow Parts Inspected Using Component Maintenance Manuals (CMMs)

American Airlines, SIAEC, United, and Delta requested that the proposed AD be revised to identify MLG sliding tubes that were inspected using certain CMMs identified in EASA AD 2022-0204R1 as acceptable parts. American Airlines requested that paragraph (w)(1) of the proposed AD be revised to include CMM references that include inspections as acceptable actions for the on-wing inspections. Delta requested that both paragraph (n)(2) and (w)(1) of the proposed AD be revised to include parts that have passed inspection using the CMMs. American Airlines and SIAEC stated that paragraph (w)(1) of the proposed AD does not include as serviceable parts MLG sliding tubes that have been inspected and repaired using the CMMs specified in EASA AD 2022-0204R1.

United requested the FAA definition of serviceable parts be revised to include those that were overhauled per the CMMs identified in EASA AD 2022-0204R1 and the Safran service information identified in EASA AD 2022-0204R1.

The FAA agrees to revise paragraphs (n)(2) and (w)(1) of this AD, which include definitions of affected parts with exceptions. This change addresses United's request to revise the definition of serviceable parts specified in paragraph (w)(2) of this AD. The FAA has revised the exception language in paragraphs (n)(2) and (w)(1) of this AD to include parts that have passed an inspection specified in Safran CMM task 32-11-33 (K0654), Revision 71, dated September 2020, or later; CMM task 32-12-25 (K0654), Revision 61, dated March 2020, or later; CMM task 32-12-12 (K0654), Revision 57,

dated September 2020, or later; or CMM task 32-12-22 (K0654), Revision 56, dated March 2020, or later; as applicable.

Regarding the comment that the repair of MLG sliding tubes using the CMMs specified in EASA AD 2022-0204R1 was not included in paragraph (w)(1) of the proposed AD, with the change to paragraph (w)(1) of this AD described previously, those repairs are included. As specified in paragraph (w)(1) of this AD repairs must have been done using instructions approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

Request for Revise Format

United requested that the FAA revise the format of the proposed AD. United stated that the proposed AD restates the requirements of previously issued FAA ADs under paragraph (g) through (v) of the proposed AD and adds new requirements from paragraph (w) through (cc) of the proposed AD. United stated it found the restatements to be unnecessary and that the proposed AD could be simplified and made easier to read. United recommended requiring operators to comply with the requirements of Airbus Service Bulletin A320-32-1441, Revision 2, dated August 23, 2022, with the noted exceptions of the compliance time.

The FAA acknowledges that this is a complex AD; however, the FAA disagrees with the request. In most supersedures where there are retained requirements, the FAA structures the AD by including the retained "old" requirements in "Restatement" paragraphs and the "new" requirements in the "New" paragraphs of the AD. This allows operators that already accomplished the "old" requirements of an existing AD to show compliance with the corresponding retained requirements in the new AD without having to show compliance with two ADs. The FAA has not revised this AD in this regard.

Conclusion

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered the comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on this product. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Related Service Information under 1 CFR Part 51

The FAA reviewed Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022. This service information specifies procedures for inspections of the MLG sliding tubes for cracking and corrective actions (which includes replacing the MLG sliding tubes).

The FAA also reviewed Safran Service Bulletin 200-32-321, Revision 4, dated November 3, 2021; and Safran Service Bulletin 201-32-68, Revision 4, dated November 3, 2021. These documents specify the part numbers and serial numbers of the affected MLG sliding tubes. These documents are distinct since they apply to different airplane models.

This AD also requires the following service information, which the Director of the Federal Register approved for incorporation by reference as of August 1, 2019 (84 FR 30579, June 27, 2019).

- Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017.
- Messier-Dowty Service Bulletin 200-32-286, Revision 3, dated October 3, 2008.

- Messier-Dowty Service Bulletin 201-32-43, Revision 3, dated October 3, 2008.
- Safran Service Bulletin 200-32-321, Revision 2, dated October 3, 2017.
- Safran Service Bulletin 201-32-68, Revision 2, dated October 3, 2017.

This AD also requires Airbus Service Bulletin A320-32-1416, including Appendix 01, dated March 10, 2014, which the Director of the Federal Register approved for incorporation by reference as of February 22, 2017 (82 FR 5362, January 18, 2017).

This AD also requires Airbus Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May 26, 2005, which the Director of the Federal Register approved for incorporation by reference as of June 29, 2007 (72 FR 29241, May 25, 2007).

This AD also requires Airbus All Operators Telex A320-32A1273, Revision 01, dated May 6, 2004, which the Director of the Federal Register approved for incorporation by reference as of June 23, 2004 (69 FR 31867, June 8, 2004).

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

The FAA estimates that this AD affects 1,525 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from paragraph (g) of AD 2019-12-07 (297 airplanes*)	8 work-hours X \$85 per hour = \$680	Up to \$45,310	Up to \$45,990	Up to \$13,659,030*
Retained actions from paragraphs (h) and (j) of AD 2019-12-07	18 work-hours X \$85 per hour = \$1,530	\$0	\$1,530	\$2,333,250

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Retained actions from paragraphs (o), (p), and (q) of AD 2019-12-07	13 work-hours X \$85 per hour = \$1,105	Up to \$3,920	Up to \$5,025	Up to \$7,663,125
New actions (in paragraphs (o), (p), and (q) of this AD)	9 work-hours X \$85 per hour = \$765	Up to \$3,920	Up to \$4,685	Up to \$7,144,625

*Operators should note that, although all U.S.-registered airplanes are subject to the retained requirements of paragraph (g) of this AD, there are only 297 possible affected MLG sliding tubes in the worldwide fleet. The FAA has no way of knowing how many affected MLG sliding tubes, if any, are installed in U.S.-registered airplanes.

The FAA estimates the following costs to do any necessary on-condition actions that would be required based on the results of any required actions. The FAA has no way of determining the number of aircraft that might need these on-condition actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
7 work-hours X \$85 per hour = \$595	\$1,960	\$2,555

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.

The FAA is 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

The FAA 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) Will not affect intrastate aviation in Alaska, and
- (3) 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.

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:

- a. Removing Airworthiness Directive (AD) 2019-12-07, Amendment 39-19662 (84 FR 30579, June 27, 2019); and

- b. Adding the following new AD:

2023-23-11 Airbus SAS: Amendment 39-22613; Docket No. FAA-2023-1645; Project Identifier MCAI-2022-01296-T.

(a) Effective Date

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

(b) Affected ADs

This AD replaces AD 2019-12-07, Amendment 39-19662 (84 FR 30579, June 27, 2019) (AD 2019-12-07).

(c) Applicability

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

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

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

(3) Model A320-211, -212, -214, -216, -231, -232, and -233 airplanes.

(4) 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 determination that cracks were found in the main landing gear (MLG) sliding tubes due to certain manufacturing defects that might not be identified using the current on-wing scheduled inspections. In addition, since AD 2019-12-07 was issued, the FAA has determined that additional MLG sliding tubes are affected by the unsafe condition. The FAA is issuing this AD to address cracking in an MLG sliding tube, which could lead to failure of an MLG sliding tube resulting in MLG collapse, damage to the airplane, and injury to passengers.

(f) Compliance

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

(g) Retained Replacement, with No Changes

This paragraph restates the requirements of paragraph (g) of AD 2019-12-07, with no changes. Within 41 months after June 29, 2007 (the effective date of AD 2007-11-11, Amendment 39-15068 (72 FR 29241, May 25, 2007) (AD 2007-11-11)), replace all MLG shock absorbers equipped with MLG sliding tubes having serial numbers listed in Airbus All Operators Telex (AOT) A320-32A1273, Revision 01, dated May 6, 2004; or the Accomplishment Instructions of Airbus Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May 26, 2005; with new or serviceable MLG shock absorbers equipped with MLG sliding tubes having serial numbers not listed in Airbus AOT A320-32A1273, Revision 01, dated May 6, 2004; or the Accomplishment Instructions of Airbus Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May-26, 2005; using a method approved by the Manager, International Section, Transport Standards Branch, FAA; or the European Aviation Safety Agency (EASA); or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature. As of June 29, 2007, only Airbus Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May 26, 2005, may be used to determine the affected MLG sliding tubes.

Note 1 to paragraph (g): Guidance on the replacement specified in paragraph (g) of this AD can be found in Airbus A318/A319/A320/A321 Aircraft Maintenance Manual Chapter 32-11-13, page block 401.

(h) Retained MLG Sliding Tube Part Number and Serial Number Identification, with No Changes

This paragraph restates the requirements of paragraph (h) of AD 2019-12-07, with no changes. Within three months after February 22, 2017 (the effective date of AD 2017-01-11, Amendment 39-18778 (82 FR 5362, January 18, 2017) (AD 2017-01-11)): 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.

(i) Retained Identification of Airplanes, with an Updated Reference

This paragraph restates the requirements of paragraph (i) of AD 2019-12-07, with an updated reference. An airplane with an MSN not listed in figure 1 to paragraph (i) of this AD is not affected by the requirements of paragraph (j) of this AD, provided it can be determined that no MLG sliding tube having a part number and serial number listed in figure 2 to paragraph (i) of this AD has been installed on that airplane since first flight of the airplane.

Figure 1 to Paragraph (i) – Affected Airplanes Listed by MSN

Affected Airplanes Listed by MSN					
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

Figure 2 to Paragraph (i) – Affected MLG Sliding Tubes

Part Number	Serial Number
201160302	78B
201160302	1016B11
201160302	1144B
201371302	B4493
201371302	B4513
201371302	SS4359
201371302	B4530
201371302	B4517
201371302	B4568

Part Number	Serial Number
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
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

Part Number	Serial Number
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
201383350	B1831
201383350	B1832
201383350	SS4355B
201383350	SS4400B

(j) Retained Inspections, with an Updated Reference

This paragraph restates the inspections required by paragraph (j) of AD 2019-12-07, with an updated reference. For each MLG sliding tube identified as required by paragraph (h) of this AD, having a part number and serial number listed in figure 2 to paragraph (i) of this AD: Within 3 months after February 22, 2017 (the effective date of AD 2017-01-11) 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 MLG 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.

(k) Retained Corrective Action for Paragraph (j) of this AD, with No Changes

This paragraph restates the requirements of paragraph (k) of 2019-12-07, with no changes. If, during any inspection required by paragraph (j) of this AD, any damage is detected: Before further flight, replace the MLG sliding tube with a serviceable MLG sliding 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.

(l) Retained Definition for Serviceable MLG Sliding Tube, with Updated References

This paragraph restates the definition for serviceable MLG sliding tube specified in paragraph (l) of AD 2019-12-07, with updated references. For the purpose of paragraph (k) of this AD, a serviceable MLG sliding tube is defined as an MLG sliding tube that meets the criterion in either paragraph (l)(1) or (2) of this AD.

(1) An MLG sliding tube having a part number and serial number not listed in figure 2 to paragraph (i) of this AD.

(2) An MLG sliding tube having a part number and serial number listed in figure 2 to paragraph (i) of this AD that has passed the inspections required by paragraph (j) of this AD.

(m) Retained Parts Installation Prohibition, with Updated References

This paragraph restates the parts installation prohibition specified in paragraph (m) of AD 2019-12-07, with updated references.

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

a part number and serial number listed in figure 2 to paragraph (i) of this AD, unless that MLG sliding tube has passed the inspection required by paragraph (j) of this AD.

(2) For airplanes that, as of February 22, 2017 (the effective date of AD 2017-01-11), do not have an MLG sliding tube installed that has a part number and serial number listed in figure 2 to paragraph (i) of this AD: No person may install, on any airplane, an MLG sliding tube having a part number and serial number listed in figure 2 to paragraph (i) of this AD unless that MLG sliding tube has passed the inspection required by paragraph (j) of this AD.

(n) Retained Definitions, with New Exception in Paragraph (n)(2) of this AD

This paragraph restates the definitions specified in paragraph (n) of AD 2019-12-07, with new exception in paragraph (n)(2) of this AD. For the purpose of paragraphs (o), (p), (q), (r), and (s) of this AD, the following definitions apply.

(1) Affected MLG shock absorber: An MLG shock absorber having a part number and serial number as identified in Messier-Dowty Service Bulletin 200-32-286, Revision 3, dated October 3, 2008, for Model A318, A319, and A320 series airplanes; and Messier-Dowty Service Bulletin 201-32-43, Revision 3, dated October 3, 2008, for Model A321 series airplanes.

(2) Affected MLG sliding tube: An MLG sliding tube having a part number and serial number as identified in Appendix B of Safran Service Bulletin 200-32-321, Revision 2, dated October 3, 2017, for Model A318, A319, and A320 series airplanes, or Safran Service Bulletin 201-32-68, Revision 2, dated October 3, 2017, for Model A321 series airplanes; except parts identified in paragraphs (n)(2)(i) and (ii) of this AD and those parts that, after the inspection specified (n)(2)(i) or (ii) of this AD, have been repaired, using instructions approved by the Manager, International Section, Transport Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

Note 2 to the introductory text of paragraph (n)(2) of this AD: The affected MLG sliding tubes identified in paragraph (n)(2) of this AD are referred to as affected “Batch 1” MLG sliding tubes in EASA AD 2022-0204R1, dated February 15, 2023; corrected February 17, 2023.

(i) Parts that passed an inspection as specified in Safran Service Bulletin 200-32-321 or Safran Service Bulletin 201-32-68, as applicable.

(ii) Parts that have passed an inspection as specified in Safran component maintenance manual (CMM) task 32-11-33 (K0654), Revision 71, dated September 2020, or later; CMM task 32-12-25 (K0654), Revision 61, dated March 2020, or later; CMM task 32-12-12 (K0654), Revision 57, dated September 2020, or later; or CMM task 32-12-22 (K0654), Revision 56, dated March 2020, or later; as applicable.

(3) Serviceable MLG sliding tube: An MLG sliding tube that is not affected, or an affected MLG sliding tube, that has not exceeded 10,000 flight cycles since first installation on an airplane, or an affected MLG sliding tube that, within the last 5,000 flight cycles before installation on an airplane, passed an inspection specified in Airbus Service Bulletin A320-32-1441.

(o) Retained Repetitive Inspections, with New Service Information and Extended Inspection Interval

This paragraph restates the repetitive inspections required by paragraph (o) of AD 2019-12-07, with new service information and extended inspection interval. At the compliance time specified in figure 3 to paragraph (o) of this AD, and thereafter at intervals not to exceed 10,000 flight cycles: Do a detailed inspection of each affected MLG sliding tube, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017; or Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022. As of the effective date of this AD, only use Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022, for the actions required by this paragraph.

Figure 3 to Paragraph (o) – Initial Compliance Time for MLG Sliding Tube Inspection

Initial Compliance Time for MLG Sliding Tube Inspection (whichever occurs later, A B, or C)	
A	Prior to exceeding 10,000 flight cycles since first installation of an affected MLG sliding tube on an airplane.
B	Before exceeding 10,000 flight cycles since last MLG sliding tube overhaul.
C	Within 5,000 flight cycles or 25 months, whichever occurs first after August 1, 2019 (the effective date of AD 2019-12-07).

Note 3 to paragraph (o): If no reliable data regarding the number of flight cycles accumulated by the MLG sliding tube are available, operators may refer to the guidance specified in Chapter 5.2, “Traceability,” of Section 1, of Part 1 of the Airbus A318/A319/A320/A321 Airworthiness Limitations Section.

(p) Retained Corrective Actions for Certain Inspections Required by Paragraph (o) of this AD, with New Service Information

This paragraph restates the corrective actions required by paragraph (p) of AD 2019-12-07 for certain inspections required by paragraph (o) of this AD, with new service information. For airplanes on which any inspection required by paragraph (o) of this AD has been done before the effective date of this AD, comply with paragraph (p)(1) or (2) of this AD, as applicable. For airplanes on which any inspection required by paragraph (o) of this AD has been done on or after the effective date of this AD, comply with paragraph (y)(1) or (3) of this AD, as applicable.

(1) If any crack is detected on an MLG sliding tube, before further flight, replace that MLG sliding tube with a serviceable MLG sliding tube, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017; or Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022.

(2) Replacement of an MLG on an airplane with an MLG having a serviceable MLG sliding tube installed is an acceptable method to comply with the requirements of paragraph (p)(1) of this AD for that airplane.

(q) Retained Part Replacement, with New Reference to New Parts Installation Limitation

This paragraph restates the parts replacement required by paragraph (q) of AD 2019-12-07, with new reference to new parts installation limitation.

(1) Within 10 years after August 1, 2019 (the effective date of AD 2019-12-07), replace each affected MLG sliding tube with an MLG sliding tube that is not affected. Installation of an MLG sliding tube that is not affected on an airplane constitutes terminating action for the repetitive inspections required by paragraph (o) of this AD for that airplane. As of the effective date of this AD, operators also must comply with the parts installation limitation specified in paragraph (aa) of this AD.

(2) Replacement of an MLG on an airplane with an MLG that does not have an affected MLG sliding tube installed is an acceptable method to comply with the requirements of paragraph (q)(1) of this AD for that airplane. As of the effective date of this AD, operators also must comply with the parts installation limitation specified in paragraph (aa) of this AD.

(r) Retained Parts Installation Limitation, with a New Exception to Paragraph (r)(1) of this AD

This paragraph restates the parts installation limitation specified in paragraph (r) of AD 2019-12-07, with a new exception to paragraph (r)(1) of this AD.

(1) As of August 1, 2019 (the effective date of AD 2019-12-07) and before the effective date of this AD, no person may install on any airplane an affected MLG shock absorber assembly containing a discrepant MLG sliding tube part number. As of the effective date of this AD, comply with the parts installation limitation specified in paragraph (aa)(1) of this AD.

(2) Do not install an affected MLG sliding tube on any airplane as specified in paragraph (r)(2)(i) or (ii) of this AD, as applicable.

(i) For an airplane with an affected MLG sliding tube installed as of August 1, 2019 (the effective date of AD 2019-12-07): After replacement of each affected MLG sliding tube as required by paragraph (q) of this AD.

(ii) For an airplane that does not have an affected MLG sliding tube installed as of August 1, 2019 (the effective date of AD 2019-12-07): As of August 1, 2019.

(s) Retained Identification of Airplanes Not Affected by Certain Requirements of this AD, with No Changes

This paragraph restates the airplanes not affected provision specified in paragraph (s) of AD 2019-12-07, with no changes. An airplane on which Airbus Modification 161202 or Modification 161346 has been installed in production is not affected by the requirements of paragraphs (g), (h), (j), (o), and (q) of this AD, provided it has been verified that no affected MLG sliding tube is installed on that airplane.

(t) Retained Credit for Previous Actions, with No Changes

This paragraph restates the credit for previous actions specified in paragraph (t) of AD 2019-12-07, with no changes.

(1) This paragraph provides credit for the actions required by paragraph (g) of this AD, if those actions were performed before June 29, 2007 (the effective date of AD 2007-11-11), using Airbus AOT A320-32A1273, Revision 01, dated May 6, 2004. This document was incorporated by reference in AD 2004-11-13, Amendment 39-13659 (69 FR 31867, June 8, 2004).

(2) This paragraph provides credit for the initial inspection and applicable corrective actions required by paragraphs (o) and (p) of this AD if those actions were performed before August 1, 2019 (the effective date of AD 2019-12-07), using the Accomplishment Instructions in Airbus Service Bulletin A320-32-1441, dated December 28, 2016.

(u) Retained Service Information Exception, with No Changes

This paragraph restates the service information exception specified in paragraph (u) of AD 2019-12-07, with no changes. The service information specified in paragraph (g) of this AD has instructions to send any cracked part to Messier-Dowty. This AD does not include such a requirement.

(v) Retained No Reporting Requirement, with New Service Information

This paragraph restates the no reporting requirement provision specified in paragraph (v) of AD 2019-12-07, with new service information. Although Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017; and Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022; specify to submit certain information to the manufacturer, and specify that action as “RC” (required for compliance), this AD does not include that requirement.

(w) New Definitions for New Requirements of this AD

For the purpose of paragraphs (x), (y), (z), (aa), and (bb) of this AD, the following definitions apply.

(1) Affected MLG sliding tube: An MLG sliding tube having a part number identified in Safran Service Bulletin 200-32-321, Revision 4, dated November 3, 2021, for Model A318, A319, and A320 series airplanes, or Safran Service Bulletin 201-32-68, Revision 4, dated November 3, 2021, for Model A321 series airplanes; except those having a serial number identified in Appendix B of Safran Service Bulletin 200-32-321, Revision 2, dated October 3, 2017, for Model A318, A319, and A320 series airplanes, or Safran Service Bulletin 201-32-68, Revision 2, dated October 3, 2017, for Model A321 series airplanes; and except parts identified in paragraphs (w)(1)(i) and (ii) of this AD and those parts that, after the inspection specified (w)(1)(i) or (ii) of this AD, have been repaired, using instructions approved by the Manager, International Section, Transport

Standards Branch, FAA; or EASA; or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

Note 4 to the introductory text of paragraph (w)(1) of this AD: The affected MLG sliding tubes identified in paragraph (w)(1) of this AD are referred to as affected "Batch 2" MLG sliding tubes in EASA AD 2022-0204R1, dated February 15, 2023; corrected February 17, 2023.

(i) Parts that passed an inspection as specified in Safran Service Bulletin 200-32-321 or Safran Service Bulletin 201-32-68, as applicable

(ii) Parts that have passed an inspection as specified in Safran CMM task 32-11-33 (K0654), Revision 71, dated September 2020, or later; CMM task 32-12-25 (K0654), Revision 61, dated March 2020, or later; CMM task 32-12-12 (K0654), Revision 57, dated September 2020, or later; or CMM task 32-12-22 (K0654), Revision 56, dated March 2020, or later; as applicable.

(2) Serviceable MLG sliding tube: Any MLG sliding tube other than those identified in paragraphs (w)(2)(i) thru (iii) of this AD.

(i) Any MLG sliding tube having a part number and serial number listed in figure 2 to paragraph (i) of this AD.

(ii) Any affected MLG sliding tube identified in paragraph (n)(2) of this AD.

(iii) Any affected MLG sliding tube identified in paragraph (w)(1) of this AD.

(x) New Inspections for Additional Affected MLG Sliding Tubes

At the compliance time specified in figure 4 to paragraph (x) of this AD, and thereafter at intervals not to exceed 10,000 flight cycles: Do a detailed inspection of each affected MLG sliding tube, as defined in paragraph (w)(1) of this AD, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022.

Figure 4 to Paragraph (x) – Initial Compliance Time for MLG Sliding Tube Inspection

Initial Compliance Time for MLG Sliding Tube Inspection (whichever occurs later, A B, or C)	
A	Prior to exceeding 10,000 flight cycles since first installation of an affected MLG sliding tube on an airplane.
B	Before exceeding 10,000 flight cycles since last MLG sliding tube overhaul.
C	For affected MLG sliding tubes: Within 2,000 flight cycles after the effective date of this AD.

Note 5 to paragraph (x): If no reliable data regarding the number of flight cycles accumulated by the MLG sliding tube are available, operators may refer to the guidance specified in Chapter 5.2, “Traceability,” of Section 1, of Part 1 of the Airbus A318/A319/A320/A321 Airworthiness Limitations Section.

(y) New Corrective Actions

(1) For airplanes on which any inspection required by paragraph (o) of this AD has been done on or after the effective date of this AD: If any crack is detected on an MLG sliding tube, before further flight, replace that MLG sliding tube with a serviceable MLG sliding tube, as defined in paragraph (w)(2) of this AD, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022.

(2) If, during any inspection required by paragraph (x) of this AD, any crack is detected on an MLG sliding tube: Before further flight, replace that MLG sliding tube with a serviceable MLG sliding tube, as defined in paragraph (w)(2) of this AD, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022.

(3) Replacement of an MLG on an airplane with an MLG having a serviceable MLG sliding tube, as defined in paragraph (w)(2) of this AD, installed is an acceptable method to comply with the requirements of paragraph (y)(1) or (2) of this AD for that airplane.

(z) New Replacement for Additional Affected Parts

(1) Within 10 years after the effective date of this AD, replace each affected MLG sliding tube, as defined in paragraph (w)(1) of this AD, with a serviceable MLG sliding tube, as defined in paragraph (w)(2) of this AD. Replacement on an airplane of all affected MLG sliding tubes with serviceable MLG sliding tubes constitutes terminating action for the repetitive inspections required by paragraph (x) of this AD for that airplane.

(2) Replacement of an MLG on an airplane with an MLG that has a serviceable MLG sliding tube, as defined in paragraph (w)(2) of this AD, installed is an acceptable method to comply with the requirement of paragraph (z)(1) of this AD for that airplane.

(aa) New Parts Installation Limitation

(1) As of the effective date of this AD, no person may install on any airplane an MLG shock absorber assembly that contains any MLG sliding tube identified in paragraphs (aa)(i) through (iii) of this AD.

(i) Any MLG sliding tube having a part number and serial number listed in figure 2 to paragraph (i) of this AD.

(ii) Any affected MLG sliding tube identified in paragraph (n)(2) of this AD.

(iii) Any affected MLG sliding tube identified in paragraph (w)(1) of this AD.

(2) Do not install an affected MLG sliding tube identified in paragraph (w)(1) of this AD on any airplane as specified in paragraph (aa)(2)(i) or (ii) of this AD, as applicable.

(i) For an airplane with an affected MLG sliding tube installed as of the effective date of this AD: After replacement of each affected MLG sliding tube as required by paragraph (z) of this AD.

(ii) For an airplane that does not have an affected MLG sliding tube installed as of the effective date of this AD: As of the effective date of this AD.

(bb) New Identification of Airplanes Not Affected by Certain Requirements of this AD

An airplane on which Airbus Modification 161202 or Modification 161346 has been installed in production is not affected by the requirements for affected MLG sliding tubes in paragraph (x) of this AD and the requirement of paragraph (z) of this AD, provided it has been verified that no affected MLG sliding tube, as defined in paragraph (w)(2) of this AD, is installed on that airplane.

(cc) No Reporting Requirement for New Actions

Although Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017; and Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022; specify to submit certain information to the manufacturer, and specify that action as “RC” (required for compliance), this AD does not include that requirement.

(dd) Additional AD Provisions

(1) *Alternative Methods of Compliance (AMOCs)*: The Manager, International Validation Branch, 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 responsible Flight Standards Office, as appropriate. If sending information directly to the manager of the International Validation Branch, mail it to the address identified in paragraph (ee)(2) of this AD or email to: 9-AVS-AIR-730-AMOC@faa.gov. If mailing information, also submit information by email.

(i) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(ii) AMOCs approved for AD 2019-12-07 are approved as AMOCs for the corresponding provisions of this AD.

(2) *Contacting the Manufacturer*: For any requirement in this AD to obtain instructions from a manufacturer, the instructions must be accomplished using a method approved by the Manager, International Validation Branch, FAA; or the European Union

Aviation Safety Agency (EASA); or Airbus SAS's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC)*: Except as required by paragraphs (u), (v), and (dd)(2) of this AD, 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.

(ee) Additional Information

(1) Refer to EASA AD 2022-0204R1, dated February 15, 2023; corrected February 17, 2023; for related information. This EASA AD may be found in the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2023-1645.

(2) For more information about this AD, contact Timothy Dowling, Aviation Safety Engineer, FAA, 1600 Stewart Avenue, Suite 410, Westbury, NY 11590; phone: 206-231-3667; email: Timothy.P.Dowling@faa.gov.

(3) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (ff)(8) and (10) of this AD.

(ff) 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.

(3) The following service information was approved for IBR on [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(i) Airbus Service Bulletin A320-32-1441, Revision 02, dated August 23, 2022.

(ii) Safran Service Bulletin 200-32-321, Revision 4, dated November 3, 2021.

(iii) Safran Service Bulletin 201-32-68, Revision 4, dated November 3, 2021.

(4) The following service information was approved for IBR on August 1, 2019 (84 FR 30579, June 27, 2019).

(i) Airbus Service Bulletin A320-32-1441, Revision 01, dated December 14, 2017.

(ii) Messier-Dowty Service Bulletin 200-32-286, Revision 3, dated October 3, 2008.

(iii) Messier-Dowty Service Bulletin 201-32-43, Revision 3, dated October 3, 2008.

(iv) Safran Service Bulletin 200-32-321, Revision 2, dated October 3, 2017.

(v) Safran Service Bulletin 201-32-68, Revision 2, dated October 3, 2017.

(5) The following service information was approved for IBR on February 22, 2017 (82 FR 5362, January 18, 2017).

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

(ii) [Reserved]

(6) The following service information was approved for IBR on June 29, 2007 (72 FR 29241, May 25, 2007).

(i) Airbus Service Bulletin A320-32A1273, Revision 02, including Appendix 01, dated May 26, 2005.

(ii) [Reserved]

(7) The following service information was approved for IBR on June 23, 2004 (69 FR 31867, June 8, 2004).

(i) Airbus All Operators Telex A320-32A1273, Revision 01, dated May 6, 2004.

(ii) [Reserved]

(8) For Airbus service information identified in this AD, contact Airbus SAS, Airworthiness Office – EIAS, Rond-Point Emile Dewoitine No: 2, 31700 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email account.airworth-eas@airbus.com; website airbus.com.

(9) For Safran and Messier-Dowty service information identified in this AD, contact Safran Landing Systems, One Carbon Way, Walton, KY 41094; telephone (859) 525-8583; fax (859) 485-8827; internet www.safran-landing-systems.com.

(10) You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(11) [You may view this material at the National Archives and Records Administration \(NARA\)](#). For information on the availability of this material at NARA, visit www.archives.gov/federal-register/cfr/ibr-locations or email fr.inspection@nara.gov.

Issued on November 16, 2023.

Ross Landes, Deputy Director for Regulatory Operations,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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