## DEPARTMENT OF TRANSPORTATION

## Federal Aviation Administration

## 14 CFR Part 39

**[Docket No. FAA–2025–0912; Project Identifier MCAI–2024–00571–T; Amendment 39–23178; AD 2025–22–01]**

**RIN 2120–AA64**

## Airworthiness Directives; Airbus SAS Airplanes

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all Airbus SAS Model A350–941 and –1041 airplanes. This AD was prompted by reports of mechanical noises originating from the nose landing gear (NLG) shock absorber during ground maneuvers. This AD requires repetitive inspections (*i.e.,* steering checks) of the NLG shock absorber and applicable on-condition actions. This AD also limits the installation of affected parts under certain conditions. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective January 2, 2026.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 2, 2026.

**ADDRESSES:**

*AD Docket:* You may examine the AD docket at *regulations.gov* under Docket No. FAA–2025–0912; 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 European Union Aviation Safety Agency (EASA) material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu.* You may find this material on the EASA website at *ad.easa.europa.eu.*
- You may view this material 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–2025–0912.

**FOR FURTHER INFORMATION CONTACT:** Stefanie Roesli, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206–231–3964; email: *stefanie.n.roesli@faa.gov.*

**SUPPLEMENTARY INFORMATION:**

### Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all Airbus SAS Model A350–941 and –1041 airplanes. The NPRM was published in the **Federal Register** on May 21, 2025 (90 FR 21702). The NPRM was prompted by AD 2025–0093, dated April 24, 2025 (EASA AD 2025–0093) (also referred to as the MCAI), issued by EASA, which is the Technical Agent for the Member States of the European Union. The MCAI reports instances of mechanical noises originating from the NLG shock absorber during ground maneuvers. Further analysis traced these noises to higher than expected friction between the lower bearing carrier (LBC) and the main fitting of the sliding tube. This friction may cause deformation of the LBC's anti-rotation tabs, leading to relative movement between the LBC and the main fitting. As a result, wear on the corrosion protection coating of the main fitting may occur due to subsequent movement of the retainer ring positioned between these components, which could lead to corrosion of the NLG main fitting.

In the NPRM, the FAA proposed to require repetitive inspections (*i.e.,* steering checks) of the NLG shock absorber and applicable on-condition actions and limit the installation of affected parts under certain conditions, as specified in EASA AD 2025–0093. The FAA is issuing this AD to address higher than expected friction on the NLG shock absorber LBC, which could result in deformation of the LBC's anti-rotation tabs and consequent corrosion of the NLG main fitting. The unsafe condition, if not addressed, could lead to structural failure of the NLG, which may result in damage to the airplane and injury to occupants.

You may examine the MCAI in the AD docket at *regulations.gov* under Docket No. FAA–2025–0912.

### Discussion of Final Airworthiness Directive

### Comments

The FAA received a comment from the Air Line Pilots Association, International (ALPA) who supported the NPRM without change.

The FAA received additional comments from Delta Air Lines (Delta). The following presents those comments and the FAA's responses.

#### Request To Clarify if a Certain Service Bulletin Provides Terminating Action

Delta requested the FAA clarify whether modifications performed using Liebherr Service Bulletin 6407A–32–01, dated May 27, 2025, and any future service bulletin modifications may be used as terminating action for the requirements of the proposed AD. Delta noted that the Liebherr service bulletin provides instructions for modifying certain affected parts to not affected parts, which effectively changes a Group 1 or 3 airplane to a Group 4 airplane. Delta noted that EASA AD 2025–0093 specifies Group 4 airplanes are only subject to the parts prohibition requirement. Delta asserted that the intent of the affected part, not affected part, and group definitions is to allow retrofit of an airplane to become a Group 4 airplane once a modification is developed, such as the one in the Liebherr service bulletin. Delta also asked whether other methods, such as other Airbus service bulletins or replacement of a NLG assembly with one that does not have affected parts installed, could similarly be used to convert a Groups 1 through 3 airplane to a Group 4 airplane.

The FAA acknowledges that if an ''Affected part'' is replaced with a ''Not affected part,'' then the airplane would become a Group 4 airplane per the definitions in EASA AD 2025–0093 and the repetitive checks and reporting would no longer need to be accomplished for that airplane. However, the FAA has not received or reviewed Liebherr Service Bulletin 6407A–32–01 to determine if accomplishing the modification in that service bulletin is acceptable as a terminating action for the repetitive checks and reporting required by this AD. Further, the FAA has not received, reviewed, or approved any other service information that would potentially provide a terminating action. Therefore, the FAA declines to revise this AD to allow the Liebherr service bulletin as a terminating action. However, under the provisions of paragraph (i)(1) of this AD, an operator may propose terminating action as an alternative method of compliance (AMOC) for the requirements of this AD. If sufficient substantiating data is provided and an equivalent level of safety is demonstrated, the FAA may approve such AMOC requests to allow for

termination of the required actions in this AD. The FAA has not changed the AD in response to this comment.

**Request To Remove Reporting Requirement**

Delta requested the FAA add a paragraph to the proposed AD stating that the reporting requirement specified in paragraph (5) of EASA AD 2025–0093 is not adopted. Delta reasoned that reporting is not necessary since Airbus does not need to collect additional data to determine the root cause or final solution because EASA AD 2025–0093 already identifies a final solution in the ''Not affected part'' definition; and that such parts can be installed in service using Liebherr Service Bulletin 6407A–32–01, dated May 27, 2025. Delta also reasoned reporting is not necessary because there is no list of bad serial numbers, so Airbus does not need to maintain a bad parts pool. Delta concluded that, while Airbus may want operators to continue reporting to assist with tracking spare parts, the reporting requirement does not appear to contribute to an enhanced level of safety.

The FAA disagrees with removing the reporting requirement from this AD. The FAA notes that reporting is required only if there is a discrepancy as specified in paragraph (5) of EASA AD 2025–0093. Although the EASA AD identifies ''not affected'' parts, the EASA AD does not indicate that a final fix or permanent solution has been developed. Further, the FAA has received no information indicating that Airbus has established a terminating action at this time. Therefore, the FAA considers the reporting requirement necessary to continue gathering data relevant to the unsafe condition. However, the FAA has added a new paragraph (h)(4) to this AD to provide a 30-day grace period for operators who may have accomplished the steering check before the effective date of the AD.

**Request To Clarify Which Instructions Are Required for Compliance**

Delta requested the FAA clarify which portions of Airbus Alert Operators Transmission (AOT) A32P031–24, Revision 04, dated March 11, 2025, are required for compliance with the proposed AD. Delta noted the AOT indicates section 5.6, including the flowchart, is labeled as required for compliance (RC). Delta also noted EASA AD 2025–0093 specifies accomplishing a steering check of the affected part and applicable corrective actions in accordance with the instructions of the AOT. Delta interprets this to mean that only the portions of the AOT related to the steering check and corrective actions are required. Delta expressed concern with the first question in the flowchart, which asks whether the NLG secondary seal was activated before installation. Delta stated this question cannot reliably be answered because the mechanic inspecting the NLG will have no knowledge, and there might be no maintenance record, of why the seal was changed. Delta asserted that, if the flowchart is required, the AOT should include a procedure for this question to determine why the seal was changed. Delta also expressed concern with the instruction in the flowchart to replace the NLG shock absorber dynamic seals per a certain maintenance plan task within the compliance time of the AOT. Delta asserted that the AOT does not specify the compliance time for this action. Delta stated that if the flowchart is RC, then the proposed AD should be revised to include a procedure to determine why the secondary seal was activated and a compliance time for replacement of the NLG shock absorber dynamic seals.

The FAA notes that the flowchart in section 5.6 of the AOT is RC. Paragraph (g) of this AD mandates compliance with all required actions and compliance times specified in, and in accordance with, the EASA AD, which in turn references the AOT. Therefore, all sections of the AOT that are labeled as RC, including the flowchart in section 5.6, are required for compliance with this AD.

The FAA acknowledges the commenter's concern about assessing the cause of secondary seal activation but disagrees with revising this AD to add a procedure to address it. The FAA considers it reasonable to expect operators to determine, through maintenance record review, whether the activation was due to primary seal leakage or another reason. The FAA notes that operators are required to maintain adequate records (per 14 CFR 91.417) to make such determinations and apply the flowchart accordingly.

Regarding the compliance time in the flowchart related to replacement of the NLG shock absorber dynamic seals, the compliance times specified in this AD take precedence. Specifically, the dynamic seal replacement must be completed within the compliance time established for the initial steering check. The FAA has not changed the AD in this regard.

**Conclusion**

These products have been approved by the civil aviation authority of another country and are approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, that authority has notified the FAA of the unsafe condition described in the MCAI referenced above. The FAA reviewed the relevant data, considered any 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 these products. Except for minor editorial changes, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

**Material Incorporated by Reference Under 1 CFR Part 51**

The FAA reviewed EASA AD 2025–0093, which specifies procedures for repetitive inspections (*i.e.,* steering checks) for relative movement between the LBC and the main fitting and applicable on-condition actions. The on-condition actions include activating the secondary seal, inspecting and applying torque to the nose landing gear seal changeover valve, inspecting the ring groove for corrosion, and repairing any corrosion. EASA AD 2025–0093 also specifies reporting the results of each check where a discrepancy was identified to the manufacturer and limits the installation of affected parts, for airplanes with an affected part installed, unless the steering check has been completed. For airplanes that do not have an affected part installed, EASA AD 2025–0093 prohibits installing an affected part.

This material 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.

**Interim Action**

The FAA considers this AD an interim action. If final action is later identified, the FAA might consider further rulemaking then.

**Costs of Compliance**

The FAA estimates that this AD affects 33 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 |
|---|---|---|---|---|
| Inspection | Up to 4 work-hours × $85 per hour = $340 per inspection cycle. | $0 | Up to $340 per inspection cycle. | Up to $11,220 per inspection cycle. |

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

ESTIMATED COSTS OF ON-CONDITION ACTIONS

| Action | Labor cost | Parts cost | Cost per product |
|---|---|---|---|
| Corrective actions | Up to 11 work-hours × $85 per hour = $935 | Up to $2,000 | Up to $2,935. |
| Reporting | 1 work-hour × $85 per hour = $85 | $0 | $85. |

**Paperwork Reduction Act**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120–0056. Public reporting for this collection of information is estimated to take approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177–1524.

**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**

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 adding the following new airworthiness directive:

**2025–22–01 Airbus SAS:** Amendment 39–23178; Docket No. FAA–2025–0912; Project Identifier MCAI–2024–00571–T.

**(a) Effective Date**

This airworthiness directive (AD) is effective January 2, 2026.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to all Airbus SAS Model A350–941 and –1041 airplanes, certificated in any category.

**(d) Subject**

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

**(e) Unsafe Condition**

This AD was prompted by reports of higher than expected friction on the nose landing gear (NLG) shock absorber lower bearing carrier (LBC), which could result in deformation of the LBC's anti-rotation tabs and consequent corrosion of the NLG main fitting. The unsafe condition, if not addressed, could lead to structural failure of the NLG, which could result in damage to the airplane and injury to occupants.

**(f) Compliance**

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

**(g) Requirements**

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2025–0093, dated April 24, 2025 (EASA AD 2025–0093).

**(h) Exceptions to EASA AD 2025–0093**

(1) Where EASA AD 2025–0093 refers to its effective date, this AD requires using the effective date of this AD.

(2) Where EASA AD 2025–0093 refers to October 4, 2024 (the effective date of EASA AD 2024–0188), this AD requires using the effective date of this AD.

(3) Where paragraph (2) of EASA AD 2025–0093 specifies ''within the compliance time(s) specified therein'', this AD requires

replacing that text with ''before further flight''.

(4) Paragraph (5) of EASA AD 2025–0093 specifies to report inspection results to Airbus within a certain compliance time. For this AD, report inspection results at the applicable time specified in paragraph (4)(i) or (ii) of this AD.

(i) If the steering check was done on or after the effective date of this AD: Submit the report within 30 days after the steering check.

(ii) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(5) This AD does not adopt the ''Remarks'' section of EASA AD 2025–0093.

**(i) Additional AD Provisions**

The following provisions also apply to this AD:

(1) *Alternative Methods of Compliance (AMOCs):* The Manager, AIR–520, Continued Operational Safety 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 Continued Operational Safety Branch, send it to the attention of the person identified in paragraph (j) of this AD and email to: *AMOC@faa.gov*. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the responsible Flight Standards Office.

(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, Continued Operational Safety Branch, FAA; or EASA; or Airbus SAS's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

(3) *Required for Compliance (RC):* Except as required by paragraph (i)(2) of this AD, if any material referenced in EASA AD 2025–0093 contains paragraphs that are labeled as RC, the instructions in RC paragraphs, including subparagraphs under an RC paragraph, must be done to comply with this AD; any paragraphs, including subparagraphs under those paragraphs, that are not identified as RC are recommended. The instructions in paragraphs, including subparagraphs under those paragraphs, 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 instructions identified as RC can be done and the airplane can be put back in an airworthy condition. Any substitutions or changes to instructions identified as RC require approval of an AMOC.

**(j) Additional Information**

For more information about this AD, contact Stefanie Roesli, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206–231–3964; email: *stefanie.n.roesli@faa.gov.*

**(k) Material Incorporated by Reference**

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

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

(i) European Union Aviation Safety Agency (EASA) AD 2025–0093, dated April 24, 2025.

(ii) [Reserved]

(3) For EASA material identified in this AD, contact EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email *ADs@easa.europa.eu;* website *easa.europa.eu.* You may find this material on the EASA website at *ad.easa.europa.eu.*

(4) You may view this material 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.

(5) 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 October 27, 2025.

**Lona C. Saccomando,**

*Acting Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.*

[FR Doc. 2025–21479 Filed 11–26–25; 8:45 am]

**BILLING CODE 4910–13–P**

## DEPARTMENT OF TRANSPORTATION

## Federal Aviation Administration

## 14 CFR Part 39

**[Docket No. FAA–2025–0739; Project Identifier AD–2025–00196–T; Amendment 39–23177; AD 2025–21–05]**

**RIN 2120–AA64**

## Airworthiness Directives; The Boeing Company Airplanes

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

**ACTION:** Final rule.

**SUMMARY:** The FAA is adopting a new airworthiness directive (AD) for all The Boeing Company Model 717–200 airplanes. This AD was prompted by a report of a nose landing gear-up landing caused by the failure of the upper lock link assembly. This AD requires repetitive inspections for cracking of the upper lock link assembly and applicable on-condition actions. The FAA is issuing this AD to address the unsafe condition on these products.

**DATES:** This AD is effective January 2, 2026.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 2, 2026.

**ADDRESSES:**

*AD Docket:* You may examine the AD docket at *regulations.gov* under Docket No. FAA–2025–0739; 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, 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 the Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; website *myboeingfleet.com*.
- You may view this material 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–2025–0739.

**FOR FURTHER INFORMATION CONTACT:** Wayne Ha, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 562–627–5238; email: *wayne.ha@faa.gov.*

**SUPPLEMENTARY INFORMATION:**

### Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to all The Boeing Company Model 717–200 airplanes. The NPRM was published in the **Federal Register** on April 29, 2025 (90 FR 17746). The NPRM was prompted by a report of a nose landing gear-up landing caused by the failure of the upper lock link assembly. In the NPRM, the FAA proposed to require repetitive inspections for cracking of the upper lock link assembly and applicable on-condition actions. The FAA is issuing this AD to address a failure of the upper lock link assembly caused by non-conforming surface roughness, due to tool marks on the surface. The unsafe condition, if not addressed, could result in a failure of the nose landing gear (NLG) to fully extend during landing or cause the nose gear to remain retracted while the main gear deploys. Additionally, it could restrict ground