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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 maneuverability, increasing the risk of a runway excursion.

Discussion of Final Airworthiness Directive

Comments

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

The FAA received additional comments from Delta Air Lines (Delta) and an anonymous commenter. The following presents those comments and the FAA's response.

Request To Exclude Newly Manufactured Parts

Delta requested that the FAA add an exception to paragraph (h) of the proposed AD to exclude from the overhaul requirement upper lock link assemblies manufactured after a specific date. Delta stated that Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025, specifies overhauling all upper lock link assemblies, including newly manufactured parts. Delta claimed that overhaul of new parts places a significant burden on operators, particularly those relying on third-

party vendors for overhaul services. Delta also expressed concern that this action implies newly manufactured parts are still being manufactured and delivered with the known defect. However, if the part defect has been addressed in production, Delta stated new parts produced after a specific date determined by the manufacturer should be exempted from the overhaul requirement.

The FAA acknowledges the request. After consultation with the parts manufacturer, the FAA has determined that upper lock link assemblies manufactured after December 31, 2001, are serviceable upper lock link assemblies and therefore should be exempt from the overhaul requirement. Accordingly, the FAA has added paragraphs (h)(2) and (3) of this AD to exclude airplanes with an upper lock link assembly manufactured after December 31, 2001, from the requirements of this AD.

Request To Expand the Definition of Serviceable Upper Lock Link Assembly

Delta requested that the FAA add an exception to paragraph (h) of the proposed AD to expand the definition of a serviceable upper lock link assembly to include parts that were manufactured after a specific date determined by the manufacturer. As discussed in the previous comment, Delta stated that the part defect may have been addressed in production, and these new parts should be included in the definition of a serviceable upper lock link assembly. Delta stated that note (a) of table 1 defines a serviceable part solely as one that has been overhauled in accordance with a certain overhaul manual.

The FAA agrees with the request for the reasons provided in the previous comment. Accordingly, the FAA has added paragraph (h)(4) to include upper lock link assemblies manufactured after December 31, 2001, in the definition of a serviceable upper lock link assembly.

Request To Allow Installation of a Non-Overhauled Part

Delta noted that table 1, condition 1 of Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025, specifies installing a serviceable upper lock link assembly (*i.e.,* one that has been overhauled in accordance with a certain overhaul manual) before further flight if any crack is found as a result of the eddy current high frequency (ETHF) inspection. Delta requested the FAA add an exception to paragraph (h) of the proposed AD to provide an option to table 1, condition 1 (in case a crack is found) that instead allows installation of an upper lock link assembly that has not been overhauled in accordance with a certain overhaul manual but has complied with the initial ETHF inspection. Delta suggested that an upper lock link assembly that has been inspected by the ETHF inspection should be considered acceptable for installation because it is being tracked to comply with the repetitive inspection interval every 4,800 flight cycles. Delta asserted that this approach would maintain an equivalent level of safety while offering operators greater flexibility.

The FAA infers that Delta is requesting that the FAA revise the AD to allow installation of an upper lock link assembly that has not been overhauled in accordance with the overhaul manual referenced in the requirements bulletin but on which the ETHF inspection has been accomplished with no crack found. The FAA agrees with this request. The FAA has determined that, in this case, the affected upper lock link assembly is being tracked and maintained in accordance with the required repetitive ETHF inspection interval, and that this approach maintains an equivalent level of safety. The FAA has not changed the AD in this regard because installation of a non-overhauled part is already acceptable under table 1, condition 2, option 1 of the requirements bulletin.

Request To Reduce the Repetitive Inspection Interval

An anonymous commenter requested that the FAA revise the proposed AD to require more frequent inspections, especially for aircraft with high cycle counts. The commenter asserted that the proposed inspection requirements do not address the serious safety risk of the nose gear-up landing incident that prompted the proposed AD.

The FAA disagrees with reducing the repetitive inspection interval. The safety concern of this AD is not related to the number of airplane cycles. The root cause of the upper lock link assembly failure was non-conforming surface roughness from tool marks. The referenced service information in this AD outlines procedures for repetitive ETHF inspections of both the top and bottom surfaces of the upper lock link assembly to detect any cracks and specifies replacement of any cracked assemblies with serviceable ones. The repetitive inspection interval of 4,800 cycles was calculated by crack growth analysis and was correlated to the striation count data in the National Transportation Safety Board (NTSB) lab report. The required inspection interval allows for two inspection opportunities between crack detectability and instability. The FAA did not change this AD in response to this comment.

Request To Require Immediate Replacement of the Affected Parts

An anonymous commenter requested that the FAA revise the proposed AD to require immediate replacement of all upper lock link assemblies manufactured during the same production period as the failed part identified in the related NTSB report, rather than waiting for cracks to become visible during routine inspections.

The FAA disagrees with the request. As discussed in its response to the previous comment, the FAA has determined that accomplishing the repetitive inspections within the required inspection interval provides an acceptable level of safety. Replacement of the upper lock link assemblies with a serviceable upper lock link assembly terminates the repetitive inspections. The FAA notes that a serviceable upper lock link assembly is defined in Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025, except as specified in paragraph (h)(4) of this AD. The FAA has not changed the AD in this regard.

Conclusion

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 these products. 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.

Material Incorporated by Reference Under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025. This material specifies procedures for repetitive ETHF inspections of the top and bottom surfaces of the upper lock link assembly for any crack, and replacement of any cracked upper lock link assembly with a serviceable upper lock link assembly. This material also specifies that replacement of the upper lock link assembly terminates the repetitive inspections.

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.

Costs of Compliance

The FAA estimates that this AD affects 117 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
ETHF inspection	5 work-hours × $85 per hour = $425 per inspection cycle	$0	$425 per inspection cycle	$49,725 per inspection cycle.

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

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Replacement	9 work-hours × $85 per hour = $765	$17,819	$18,584

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:

2025-21-05 The Boeing Company: Amendment 39-23177; Docket No. FAA-2025-0739; Project Identifier AD-2025-00196-T.

(a) Effective Date

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

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 717-200 airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by a report of a Boeing Model 717-200 operator that experienced a nose landing gear-up landing caused by the failure of the upper lock link assembly. 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 maneuverability, increasing the risk of a runway excursion.

(f) Compliance

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

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the "Compliance" paragraph of Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 717-32A0043, dated February 12, 2025, which is referred to in Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025.

(h) Exceptions to Requirements Bulletin Specifications

(1) Where the Condition and Compliance Time columns of the tables in the "Compliance" paragraph of Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025, refer to the original issue date of Requirements Bulletin 717-32A0043 RB, this AD requires using the effective date of this AD.

(2) Where the Condition column of table 1 in the "Compliance" and "Accomplishment Instructions" paragraphs of Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025, specifies all airplanes with an Upper Lock Link assembly that has not been overhauled, as of the Original Issue date of Requirements Bulletin 717-32A0043 RB, in accordance with OHM 32-21-2, Revision No. 63 dated July 01, 2024, or later Boeing approved revisions published on New Maintenance Performance Toolbox (nMPT), that condition does not apply to an Upper Lock Link assembly that was manufactured after December 31, 2001.

(3) Where the Condition column of table 1 in the "Compliance" and "Accomplishment Instructions" paragraphs of Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025, specifies "All airplanes with an Upper Lock Link assembly that has been overhauled", this AD requires replacing that text with "All airplanes with an Upper Lock Link assembly that was manufactured after December 31, 2001, or has been overhauled".

(4) Where note (a) of table 1 in the "Compliance" and "Accomplishment Instructions" paragraphs of Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025, defines a serviceable Upper Lock Link assembly as "one that has been overhauled", this AD requires replacing that text with "one that was manufactured after December 31, 2001, or that has been overhauled".

(i) Alternative Methods of Compliance (AMOCs)

(1) 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 certification office, send it to the attention of the person identified in paragraph (j)(1) of this AD. Information may be emailed 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) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, AIR-520, Continued Operational Safety Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(j) Related Information

(1) For more information about this AD, contact Wayne Ha, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 562-627-5238; email: *wayne.ha@faa.gov*.

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (k)(3) this AD.

(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 the AD specifies otherwise.

(i) Boeing Alert Requirements Bulletin 717-32A0043 RB, dated February 12, 2025.

(ii) [Reserved]

(3) 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*.

(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 17, 2025.

Lona C. Saccomando,

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

[FR Doc. 2025-21478 Filed 11-26-25; 8:45 am]

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