



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2025-0749; Project Identifier AD-2025-00179-T; Amendment 39-23189; AD 2025-23-06]

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 certain The Boeing Company Model 787-9 and 787-10 airplanes. This AD was prompted by reports of multiple supplier notices of escapement (NOEs) documenting pressure deck splice fittings that were possibly manufactured with an incorrect titanium alloy material. This AD requires an inspection of the attach fittings and upper splice fitting of the stub beam horizontal pressure deck (HPD) to determine the type of titanium alloy material and applicable on-condition actions. 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 a certain publication listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES:

AD Docket: You may examine the AD docket at [regulations.gov](https://www.regulations.gov) under Docket No. FAA-2025-0749; 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 Westminister 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-2025-0749.

FOR FURTHER INFORMATION CONTACT: Joseph Hodgin, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3962; email: joseph.j.hodgin@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 certain The Boeing Company Model 787-9 and 787-10 airplanes. The NPRM was published in the *Federal Register* on May 14, 2025 (90 FR 20411). The NPRM was prompted by reports of multiple supplier NOEs documenting pressure deck splice fittings that were possibly manufactured with an incorrect titanium alloy material. In the NPRM, the FAA proposed to require an inspection of the attach fittings and upper splice fitting of the stub beam HPD to determine the type of titanium alloy material, and applicable on-condition actions. The

FAA is issuing this AD to address pressure deck splice fittings that were possibly manufactured with an incorrect titanium alloy material, which could result in premature cracks in a pressure deck splice fitting and lead to loss of residual strength of the surrounding structure, resulting in the inability to sustain limit load.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from United Airlines, who stated that it had no objections to the proposed rule, and an anonymous commenter who supported the NPRM without change.

The FAA received additional comments from American Airlines (American) and Boeing. The following presents those comments and the FAA's response.

Request to Clarify Inspection Instructions

American requested that the FAA revise the proposed AD to state that either an X-ray fluorescent (XRF) or high frequency eddy current (HFEC) inspection method is acceptable for compliance with the proposed AD. The commenter expressed concern that paragraph (g) of the proposed AD specifies doing all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025, but the inspection instructions in the requirements bulletin do not clearly state that doing an HFEC inspection to determine the type of titanium alloy material negates the need for an XRF inspection (for example, see task 5). The commenter stated it cannot accomplish the XRF inspection because the equipment is unavailable.

The FAA disagrees with the request. Tables 1 through 5 in the Accomplishment Instructions of the requirements bulletin specify to "Do a High Frequency Eddy-Current (HFEC) inspection or handheld X-Ray Fluorescence (XRF) Spectrometer inspection of the affected Stub Beam HPD Attach fitting(s) and Upper Splice fitting to determine

titanium alloy material.” In addition, footnote 2 of the corresponding Method of Compliance task tables states: “As an option, do a High Frequency Eddy-Current (HFEC) inspection of the stub beam HPD attach fitting to determine the material in accordance with 787 NDT Manual Part 6, 51-00-13.” Footnote 2 denotes that the HFEC inspection is an alternative to the XRF inspection specified in footnote 1. Therefore, operators may accomplish either an HFEC or XFR inspection to comply with the AD requirement to determine the type of titanium alloy material. No change to the AD is necessary in this regard.

Request to Revise the Number of Affected Airplanes

Boeing requested that the FAA revise the estimated number of affected airplanes of U.S. registry from 11 to 13 in the Costs of Compliance paragraph of the proposed AD and adjust the costs accordingly. Boeing noted that Boeing Alert Requirements Bulletin B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025, includes 13 airplanes of U.S. registry. Boeing explained that the two additional airplanes are currently operated by foreign operators but remain on the U.S. registry.

The FAA agrees with the request. The FAA has revised the Costs of Compliance section of this AD accordingly.

Conclusion

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, 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 B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025. This material specifies procedures for an HFEC inspection or handheld XRF spectrometer inspection of the affected stub beam HPD attach fittings and upper splice fitting (if applicable to the group) to determine the titanium alloy material, and applicable related investigative and corrective actions. Related investigative actions include an open hole HFEC inspection for cracking of the fastener hole locations common to the interfacing structure of affected stub beam HPD attach fittings and affected upper splice fittings. Corrective actions include repairing cracks and obtaining instructions for installation of new fittings, replacing all affected stub beam HPD attach fittings with new stub beam HPD attach fittings made of Ti-6Al-4V alloy material, and replacing all affected upper splice fittings (if applicable to the group) with new upper splice fittings made of Ti-6Al-4V alloy material.

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 13 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
Inspection	Up to 12 work-hours X \$85 per hour = \$1,020	\$0	Up to \$1,020	Up to \$13,260

The FAA estimates the following costs to do any replacements 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
Open hole HFEC inspection	Up to 3 work-hours X \$85 per hour = \$255	\$0	Up to \$255
Replacement	52 work-hours X \$85 per hour = \$4,420	Up to \$17,570	Up to \$21,990

The FAA has received no definitive data on which to base the cost estimates for certain installation instructions or repairs specified in this AD.

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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:

2025-23-06 The Boeing Company: Amendment 39-23189; Docket No. FAA-2025-

0749; Project Identifier AD-2025-00179-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

None.

(c) Applicability

This AD applies to The Boeing Company Model 787-9 and 787-10 airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of multiple supplier notices of escapement documenting pressure deck splice fittings that were possibly manufactured with an incorrect titanium alloy material. The unsafe condition, if not addressed, could result in premature cracks in a pressure deck splice fitting and lead to loss of residual strength of the surrounding structure, resulting in the inability to sustain limit load.

(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 B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin B787-81205-SB530091-00, Issue 001, dated February 7, 2025, which is referred to in Boeing Alert Requirements Bulletin B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025.

(h) Exceptions to Requirements Bulletin Specifications

(1) Where the Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025, refer to the Issue 001 date of Requirements Bulletin B787-81205-SB530091 RB, this AD requires using the effective date of this AD.

(2) Where Boeing Alert Requirements Bulletin B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025, specifies contacting Boeing for repair instructions and certain installation instructions: This AD requires doing the repair or installation using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

(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 Continued Operational Safety Branch, 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) Additional Information

(1) For more information about this AD, contact Joseph Hodgkin, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3962; email: joseph.j.hodgin@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 B787-81205-SB530091-00 RB, Issue 001, dated February 7, 2025.

(ii) [Reserved]

(3) For the Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister 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 November 7, 2025.

Peter A. White,
Deputy Director, Integrated Certificate Management Division,
Aircraft Certification Service.
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