



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2025-0924; Project Identifier AD-2025-00294-T;

Amendment 39-23274; AD 2026-05-01]

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 787-8, 787-9, and 787-10 airplanes. This AD was prompted by a report of multiple instances of loss of transponder for airplanes entering airspace in the presence of continuous wave (CW) interference where the transponder did not meet the minimum operational performance standards (MOPS) requirement for transponder response. This AD requires replacing the left and right integrated surveillance system processor unit (ISSPU) hardware. 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-2025-0924; 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 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-2025-0924.

FOR FURTHER INFORMATION CONTACT: Michael Closson, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3973; email: Michael.P.Closson@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 787-8, 787-9, and 787-10 airplanes. The NPRM was published in the *Federal Register* on June 13, 2025 (90 FR 25000). The NPRM was prompted by a report of multiple instances of loss of transponder for airplanes entering airspace in the presence of CW interference. The transponder did not meet the MOPS requirement of transponder response in the presence of CW interference in that the transponder did not correctly reply to at least 90 percent of the interrogations. In the NPRM, the FAA proposed to require replacing the

left and right ISSPU hardware. The FAA is issuing this AD to address loss of transponder when in the presence of CW interference.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from the Air Line Pilots Association, International (ALPA), Boeing, and an individual; they supported the NPRM without requesting a change to the rule.

The FAA received additional comments from ALPA, American Airlines (American), Kenya Airways, KLM Royal Dutch Airlines (KLM), United Airlines (United), and an anonymous commenter. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request to Delay of Issuance of the AD

Kenya Airways requested that the FAA postpone issuance of the final rule mandating installation of ISSPU hardware part number (P/N) 822-2120-113 until the underlying issues have been fully understood and appropriately addressed. The commenter stated Boeing, in collaboration with Collins Aerospace, is actively investigating this issue, but the root cause has not yet been identified, and the resolution is pending.

The FAA disagrees with delaying issuance of this AD because the FAA has determined that the affected parts must be replaced to address the unsafe condition. The FAA will continue to monitor the situation, and if additional data is presented, the FAA may consider further rulemaking. The FAA has not changed this AD in regard to this comment.

Request to Consider Parts Availability

KLM and United expressed concerns regarding the availability of ISSPU P/N 822-2120-113. KLM stated it requested the parts from Collins Aerospace, but they

currently only offer parts in the event an airplane is subject to an unscheduled removal from service; however, parts would be available for modification at their facility starting August 2025. Likewise, United Airlines stated the parts were unavailable when Issue 001 of the Boeing Requirements Bulletin was published on February 11, 2025. United asked if the FAA and Boeing have coordinated with Collins Aerospace to assess their supply chain capacity, ensuring a feasible compliance timeline for all operators.

The FAA has coordinated with Collins Aerospace and Boeing, and Collins Aerospace confirmed it will increase parts availability to allow operators to meet the compliance time of this AD. Additionally, under the provisions of paragraph (i) of this AD, the FAA will consider requests for approval of an extension of the compliance time if sufficient data is submitted to substantiate that the new compliance time would provide an acceptable level of safety. The FAA has not changed this AD in regard to this comment.

Request to Shorten Compliance Time

An anonymous commenter requested that the FAA reduce the proposed compliance time from 48 months to 12 months because CW interference is expected to increase annually with the expansion of 5G networks.

The FAA disagrees with the request. The issues surrounding the 5G network and radio altimeters are not related to the unsafe condition of this AD. The ISSPU hardware operates on a different bandwidth than the 5G network. The FAA has not changed this AD in regard to this comment.

Request to Clarify Software Requirements

American stated Boeing Alert Service Bulletin B787-81205-SB340065-00, Issue 001, dated February 11, 2025, includes a procedure to update software P/N COL49-0010-0091 that is not a required for compliance (RC) step. American requested the FAA clarify that the intent of the proposed AD is to replace the ISSPU hardware and not to

update the software, and that therefore operators may install later approved versions of the software without obtaining an alternative method of compliance (AMOC).

The FAA confirms that later approved versions of the software may be installed without obtaining an AMOC because the software installation is not included as an RC step in Boeing Alert Requirements Bulletin B787-81205-SB340065-00 RB, Issue 001, dated February 11, 2025. No change to this AD is necessary in regard to this comment.

Request for Additional Guidance

ALPA requested that the FAA consider providing additional guidance or alerts to flightcrews regarding transponder failure modes related to CW interference. ALPA stated that the FAA should continually provide flightcrews with updated information on the scope of this issue and procedures where applicable. ALPA also encouraged the FAA to closely coordinate with Boeing and operators to ensure that replacement components meet the latest MOPS and are vetted by the appropriate authorities.

The FAA does not agree with providing additional guidance or alerts, at this time, regarding the unsafe condition of this AD. Boeing has already addressed the details of the unsafe condition with operators and flightcrews through its usual communication methods. The FAA will continue to work with Boeing to monitor the situation and provide additional information or guidance as needed. The FAA has ensured that the new ISSPU hardware (i.e., replacement components) required by this AD meets the latest MOPS. The FAA has not changed this AD in regard to this comment.

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, 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-SB340065-00 RB, Issue 001, dated February 11, 2025. This material specifies procedures for replacing the left and right ISSPU hardware P/Ns 822-2120-101 and 822-2120-102 with P/N 822-2120-113, performing an installation test, and repeating the test until it is successful.

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 150 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
Replace left and right ISSPU and ensure a successful installation test	4 work-hours X \$85 per hour = \$340	\$52,661	\$53,001	\$7,950,150

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:

2026-05-01 The Boeing Company: Amendment 39-23274; Docket No. FAA-2025-0924; Project Identifier AD-2025-00294-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 787-8, 787-9, and 787-10 airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin B787-81205-SB340065-00 RB, Issue 001, dated February 11, 2025.

(d) Subject

Air Transport Association (ATA) of America Code 34, Navigation.

(e) Unsafe Condition

This AD was prompted by multiple instances of loss of transponder for airplanes entering airspace in the presence of continuous wave (CW) interference where the transponder did not meet the minimum operational performance standards requirement for transponder response. The FAA is issuing this AD to address loss of transponder when in the presence of CW interference. The unsafe condition, if not addressed, could result in an un-annunciated loss of Mode S transponder function and subsequent un-annunciated loss of traffic collision avoidance system advisory messages, which could lead to loss of separation from other airplanes and a mid-air collision.

(f) Compliance

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

(g) Required Actions

Except as specified in paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin B787-81205-SB340065-00 RB, Issue 001, dated February 11, 2025, do all applicable actions identified

in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin B787-81205-SB340065-00 RB, Issue 001, dated February 11, 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-SB340065-00, Issue 001, dated February 11, 2025, which is referred to in Boeing Alert Requirements Bulletin B787-81205-SB340065-00 RB, Issue 001, dated February 11, 2025.

(h) Exception to Requirements Bulletin Specifications

Where the “Boeing Recommended Compliance Time (Whichever Occurs Later)” column in the table under the “Compliance” paragraph of Boeing Alert Requirements Bulletin B787-81205-SB340065-00 RB, Issue 001, dated February 11, 2025, refers to the Issue 001 date of Requirements Bulletin B787-81205-SB340065-00 RB, this AD requires using the effective date 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 Michael Closson, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3973; email: Michael.P.Closson@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-SB340065-00 RB, Issue 001, dated February 11, 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 February 24, 2026.

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