



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-2408; Project Identifier AD-2024-00362-T; Amendment 39-22958; AD 2025-03-10]

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 747-400, 747-400F, 747-8F, and 747-8 series airplanes. This AD was prompted by a report that, during potable water servicing, there were multiple engine indicating and crew alerting system messages. The cause was the separation of a fitting and steel water supply tube above an electronics equipment cooling air filter, behind the forward cargo compartment left sidewall. This AD requires, depending on configuration, installing at certain locations: conduits on exposed potable water supply lines, envelope assemblies over all exposed potable water line fittings and exposed potable water supply lines, a slitted spray shield, a two-piece deflector shield around the equipment cooling system (ECS) air inlet, and/or a shroud on exposed potable water supply lines. 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 under Docket No. FAA-2024-2408; 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-2024-2408.

FOR FURTHER INFORMATION CONTACT: Courtney Tuck, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3986; email: Courtney.K.Tuck@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

747-400, 747-400F, 747-8F, and 747-8 series airplanes. The NPRM published in the *Federal Register* on November 12, 2024 (89 FR 88906). The NPRM was prompted by a report that, during potable water servicing, there were multiple engine indicating and crew alerting system messages. The cause was the separation of a fitting and steel water supply tube above an electronics equipment cooling air filter, behind the forward cargo compartment left sidewall. In the NPRM, the FAA proposed to require, depending on configuration, installing at certain locations: conduits on exposed potable water supply lines, envelope assemblies over all exposed potable water line fittings and exposed potable water supply lines, a slitted spray shield, a two-piece deflector shield around the ECS air inlet, and/or a shroud on exposed potable water supply lines. The FAA is issuing this AD to address water leaks into the main electronics center. This condition, if not addressed, could result in an adverse impact on the function of multiple electronics and line replaceable units (LRUs) in the equipment bay racks that are essential for safe flight, which can lead to the loss of continued safe flight and landing.

Discussion of Final Airworthiness Directive

Comments

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

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 747-38A2146 RB, dated August 7, 2024. This material specifies procedures for, depending on configuration, installing: conduits on exposed potable water supply lines between station (STA) 580 and STA 650, between STA 575 and STA 650, or between STA 595 and STA 650, as applicable; envelope assemblies over all exposed potable water line fittings and exposed potable water supply lines between STA 650 and STA 660, between STA 640 and STA 660, between STA 570 and STA 580, between STA 570 and STA 580 and between STA 650 and STA 660, between STA 580 and STA 600 and between STA 650 and STA 660, or between STA 580 and STA 600, as applicable; a slitted spray shield; a two-piece deflector shield around the ECS air inlet STA 610; a spray shield; and/or a shroud on exposed potable water supply line between STA 550 and STA 680.

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 178 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
Installations	Up to 22 work-hours X \$85 per hour = Up to \$1,870	Up to \$4,980	Up to \$6,850	Up to \$1,219,300

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:

2025-03-10 The Boeing Company: Amendment 39-22958; Docket No. FAA-2024-2408; Project Identifier AD-2024-00362-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 747-400, 747-400F, 747-8F, and 747-8 series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 747-38A2146 RB, dated August 7, 2024.

(d) Subject

Air Transport Association (ATA) of America Code 38, Water/waste.

(e) Unsafe Condition

This AD was prompted by a report that, during potable water servicing, there were multiple engine indicating and crew alerting system messages. The cause was the separation of a fitting and steel water supply tube above an electronics equipment cooling air filter, behind the forward cargo compartment left sidewall. The FAA is issuing this

AD to address water leaks into the main electronics center. The unsafe condition, if not addressed, could result in an adverse impact on the function of multiple electronics and line replaceable units (LRUs) in the equipment bay racks that are essential for safe flight, which can lead to the loss of continued safe flight and landing.

(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 747-38A2146 RB, dated August 7, 2024, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 747-38A2146 RB, dated August 7, 2024.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 747-38A2146, dated August 7, 2024, which is referred to in Boeing Alert Requirements Bulletin 747-38A2146 RB, dated August 7, 2024.

(h) Exception to Requirements Bulletin Specifications

Where the Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 747-38A2146 RB, dated August 7, 2024, refer to the original issue date of Requirements Bulletin 747-38A2146 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 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.

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

(3) 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 Courtney Tuck, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206-231-3986; email: Courtney.K.Tuck@faa.gov.

(2) Material identified in this AD that is not incorporated by reference is available at the address specified in paragraph (k)(3) of 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 747-38A2146 RB, dated August 7, 2024.

(ii) [Reserved]

(3) 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.

(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 7, 2025.

John P. Piccola, Jr.,
Director, Integrated Certificate Management Division,
Aircraft Certification Service.
[FR Doc. 2025-02643 Filed: 2/13/2025 8:45 am; Publication Date: 2/14/2025]