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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2022-1059; Project Identifier AD-2022-00204-T; Amendment 39-22239; AD 2022-23-12]

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 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes. This AD was prompted by reports that high temperature composite trim air diffuser ducts (TADD) showed composite degradation and signs of hot air leakage. This AD requires a one-time low frequency eddy current (LFEC) inspection of certain center tank upper skin panels on the right and left side for any structural damage due to heat exposure, and repair if necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective January 4, 2023.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 4, 2023.

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA-2022-1059; 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 service information identified in this final rule, 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; internet *myboeingfleet.com*.

• You may view this service information 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-2022-1059.

FOR FURTHER INFORMATION CONTACT:

Nicole Tsang, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3959; email: *nicole.s.tsang@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 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes. The NPRM published in the **Federal Register** on September 8, 2022 (87 FR 54927). The NPRM was prompted by reports that high temperature composite TADD showed composite degradation and signs of hot air leakage. In the NPRM, the FAA proposed to require a one-time LFEC inspection of certain center tank upper skin panels on the right and left side for any structural damage due to heat exposure, and repair if necessary. The FAA is issuing this AD to address possible sustained hot air leakage from damaged TADDs, which could result in undetected damage to adjacent airframe structure. This condition, if not addressed, could lead to heat damage to the wing center section and adjacent structure and adversely affect the structural integrity of the airplane, resulting in the inability of the structure to carry limit load and the possible loss of continued safe flight and landing.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from The 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.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 747-57A2370 RB, dated March 2, 2022. This service information specifies procedures for a one-time LFEC inspection for any structural damage due to heat exposure of the center tank upper skin panels on the right and left side between station (STA) 1100-1120, 1140-1160, and 1180-1200 bays outboard of left buttock line (LBL) 98 and right buttock line (RBL) 98 seat tracks, and repair. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in **ADDRESSES** .

Costs of Compliance

The FAA estimates that this AD affects 104 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
LFEC inspection	101 work-hours × $85 per hour = $8,585	$0	$8,585	$892,840

The FAA has received no definitive data on which to base the cost estimates for the on-condition repairs specified in this AD.

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:

2022-23-12 The Boeing Company: Amendment 39-22239; Docket No. FAA-2022-1059; Project Identifier AD-2022-00204-T.

(a) Effective Date

This airworthiness directive (AD) is effective January 4, 2023.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes,

certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by reports that high temperature composite trim air diffuser ducts (TADD) showed composite degradation and signs of hot air leakage. The FAA is issuing this AD to address sustained hot air leakage from damaged TADDs that could result in undetected damage to adjacent airframe structure. This condition, if not addressed, could lead to heat damage to the wing center section and adjacent structure and adversely affect the structural integrity of the airplane, resulting in the inability of the structure to carry limit load and the possible 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 747-57A2370 RB, dated March 2, 2022, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 747-57A2370 RB, dated March 2, 2022.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 747-57A2370, dated March 2, 2022, which is referred to in Boeing Alert Requirements Bulletin 747-57A2370 RB, dated March 2, 2022.

(h) Exceptions To Service Information Specifications

(1) Where the Compliance Time column of the table in the "Compliance" paragraph of Boeing Alert Requirements Bulletin 747-57A2370 RB, dated March 2, 2022, uses the phrase "the original issue date of Requirements Bulletin 747-57A2370 RB," this AD requires using "the effective date of this AD."

(2) Where Boeing Alert Requirements Bulletin 747-57A2370 RB, dated March 2, 2022, specifies contacting Boeing for repair instructions: This AD requires doing the repair before further flight 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, Seattle ACO 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) of this AD. Information may be emailed to: *9-ANM-Seattle-ACO-AMOC-Requests@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, Seattle ACO 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

For more information about this AD, contact Nicole Tsang, Aerospace Engineer, Cabin Safety and Environmental Systems, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206-231-3959; email: *nicole.s.tsang@faa.gov*.

(k) Material Incorporated by Reference

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

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

(i) Boeing Alert Requirements Bulletin 747-57A2370 RB, dated March 2, 2022.

(ii) [Reserved]

(3) For service information 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; internet *myboeingfleet.com*.

(4) You may view this service information 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 service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, *fr.inspection@nara.gov*, or go to: *www.archives.gov/federal-register/cfr/ibr-locations.html*.

Issued on November 3, 2022.

Christina Underwood,

Acting Director, Compliance & Airworthiness Division, Aircraft Certification Service.

[FR Doc. 2022-26082 Filed 11-29-22; 8:45 am]

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