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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-5041; Directorate Identifier 2015-NM-102-AD; Amendment 39-18719; AD 2016-24-02]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 747-8 and 747-8F series airplanes. This AD was prompted by a report that static strength analysis has shown that the aluminum transmission aft bearing plate assemblies have inadequate structural strength for one or more of the required load cases. This AD requires removing aluminum transmission aft bearing plate assemblies from the flap track and installing titanium transmission aft bearing plate assemblies to the flap track. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective December 30, 2016.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 30, 2016.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet https://www.myboeingfleet.com. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2016-5041.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2016-5041; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD,

the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Bill Ashforth, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6432; fax: 425-917-6590; email: bill.ashforth@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We 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 747-8 and 747-8F series airplanes. The NPRM published in the Federal Register on April 5, 2016 (81 FR 19514) ("the NPRM"). The NPRM was prompted by a report that static strength analysis has shown that the aluminum transmission aft bearing plate assemblies have inadequate structural strength for one or more of the required load cases, including cases for drive system jam, flap skew, and structural damage tolerance. Inadequate structural strength can result in damage to the transmission aft bearing plate assemblies. The NPRM proposed to require removing aluminum transmission aft bearing plate assemblies from the flap track and installing titanium transmission aft bearing plate assemblies to the flap track. We are issuing this AD to prevent inadequate structural strength of transmission aft bearing plate assemblies. This condition could result in damaged transmission aft bearing plate assemblies, which could result in incorrect operation and departure of the flap from the airplane and consequent loss of controllability of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Use the Latest Service Information

Boeing requested that we revise the NPRM to refer to Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016. Boeing stated that Boeing Alert Service Bulletin 747-57A2348, dated June 12, 2015, erroneously included three airplanes, line numbers 1435, 1506, and 1509, which were delivered with the terminating action already incorporated. Boeing stated that the airplane effectivity in paragraph 1.A.1. of Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016, is listed correctly; however, airplane line numbers 1435, 1506, and 1509 were still erroneously included in the table that lists the airplane groups by line numbers. Boeing noted that Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016, also contains corrections to the access requirements, part quantities, and part numbers.

We agree with the commenter's request for the reasons provided. We have updated this final rule accordingly. Since the table in paragraph 1.A.1. of Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016, is not accurate, we have also revised paragraph (c) of this AD to state that the AD is applicable to Model 747-8 and 747-8F series airplanes, except for line numbers 1435, 1506, and 1509, which were delivered with the terminating action already incorporated. We have also added a new paragraph (h) to this AD, which provides credit for actions completed before the effective date of this AD using Boeing Alert Service Bulletin 747-57A2348, dated June 12, 2015. We have redesignated subsequent paragraphs accordingly.

Request To Revise the Costs of Compliance

Boeing requested that we update the Costs of Compliance section of the NPRM with the latest information in Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016. Boeing stated that the work hours and parts costs have been updated with the new service information.

We agree with the commenter's request for the reason provided. We have updated this final rule accordingly.

Request for Credit for Previous Actions

Boeing requested that we add a statement to the NPRM to indicate that no further work is required on airplanes that have completed the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2348, dated June 12, 2015. Boeing stated that Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016, has no effect on airplanes that have incorporated Boeing Alert Service Bulletin 747-57A2348, dated June 12, 2015.

We agree with the commenter's request for the reason provided. As stated previously, we have revised this AD to provide credit for actions completed before the effective date of this AD using Boeing Alert Service Bulletin 747-57A2348, dated June 12, 2015.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

Related Service Information Under 1 CFR Part 51

We reviewed Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016. The service information describes procedures for removing the aluminum transmission aft bearing plate assembly from the flap track and installing a new titanium transmission aft bearing plate assembly to the flap track. 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 the ADDRESSES section.

Costs of Compliance

We estimate that this AD affects 11 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement	136 work-hours × $85 per hour = $11,560	$43,787	$55,347	$608,817

According to the manufacturer, all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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.

We are 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) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) 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.

Adoption of 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 (AD):

2016-24-02 The Boeing Company: Amendment 39-18719; Docket No. FAA-2016-5041; Directorate Identifier 2015-NM-102-AD.

(a) Effective Date

This AD is effective December 30, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 747-8 and 747-8F series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016; except for line numbers 1435, 1506, and 1509, which were delivered with the terminating action already incorporated and are not affected by this AD.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by a report that static strength analysis has shown that the aluminum transmission aft bearing plate assemblies have inadequate structural strength for one or more of the required load cases, including cases for drive system jam, flap skew, and structural damage tolerance. Inadequate structural strength can result in damage to the transmission aft bearing plate assemblies. We are issuing this AD to prevent inadequate structural strength of transmission aft bearing plate assemblies. This condition could result in damaged transmission aft bearing plate assemblies, which could result in incorrect operation and departure of the flap from the airplane and consequent loss of controllability of the airplane.

(f) Compliance

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

(g) Replacement

Within 48 months after the effective date of this AD: Remove aluminum transmission aft bearing plate assemblies from the flap track and install new titanium transmission aft bearing plate assemblies to the flap track, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016.

(h) Credit for Previous Actions

This paragraph provides credit for the actions specified in paragraph (g) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 747-57A2348, dated June 12, 2015.

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), 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 local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (j)(1) 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 local flight standards district office/certificate holding district 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 Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, 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.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (i)(4)(i) and (i)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled "RC Exempt," then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(j) Related Information

(1) For more information about this AD, contact Bill Ashforth, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6432; fax: 425-917-6590; email: bill.ashforth@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (k)(3) and (k)(4) of this AD.

(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 Service Bulletin 747-57A2348, Revision 1, dated February 26, 2016.

(ii) Reserved.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet https://www.myboeingfleet.com.

(4) You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(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, call 202-741-6030, or go to: http://www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued in Renton, Washington, on November 10, 2016.

Michael Kaszycki,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.