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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0871; Directorate Identifier 2013-NM-187-AD; Amendment 39-17658; AD 2013-23-03]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain 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, and 747SR series airplanes. This AD requires inspecting to determine the part number of the inboard actuator attach fittings of the outboard flap. For affected attach fittings, this AD requires doing a detailed inspection of the attach fittings for a cylindrical defect and replacing if necessary. As an option to the detailed inspection, this AD allows replacement of affected attach fittings. This AD was prompted by a report of the fracture of an inboard actuator attach fitting of the outboard flap. An inspection of the attach fitting revealed that it was incorrectly machined with a cylindrical profile instead of a conical profile, resulting in reduced wall thickness. We are issuing this AD to detect and correct defective inboard actuator attach fittings which, combined with loss of the outboard actuator load path, could result in uncontrolled retraction of the outboard flap, damage to flight control systems, and consequent reduced controllability of the airplane.

DATES: This AD is effective November 29, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 29, 2013.

We must receive comments on this AD by December 30, 2013.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For 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>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; 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 street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: nathan.p.weigand@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We received a report a report of the fracture of a No. 7 inboard actuator attach fitting of the outboard flap. It was determined that the fracture occurred in the internal conical machined area. Investigation revealed that a portion of the interior surface was machined with a cylindrical profile instead of a conical profile. This resulted in reduced wall thickness and subsequent fracture; the thickness of the fitting was approximately half the designed wall thickness. We also received reports of other attach fittings with a cylindrical defect with reduced wall thickness. This condition combined with loss of the outboard actuator load path, if not corrected, could result in uncontrolled retraction of the outboard flap and subsequent damage to flight control systems at the rear spar, and consequent reduced controllability of the airplane.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 747-57A2343, dated September 12, 2013. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov>.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

AD Requirements

This AD requires inspecting to determine the part number of the inboard actuator attach fittings of the outboard flap. For affected attach fittings, this AD requires doing a detailed inspection of the attach fittings for a cylindrical defect and replacing if necessary. As an option to the detailed inspection, this AD allows replacement of the affected attach fittings.

The FAA worked in conjunction with industry, under the Airworthiness Directives Implementation Aviation Rulemaking Committee, to enhance the AD system. One enhancement was a new process for annotating which steps in the service information are required for compliance with an AD. Differentiating these steps from other tasks in the service information is expected to improve an owner's/operator's understanding of crucial AD requirements and help provide consistent judgment in AD compliance. The actions specified in the service information described previously include steps that are labeled as RC (required for compliance) because these steps have a direct effect on detecting, preventing, resolving, or eliminating an identified unsafe condition.

As noted in the specified service information, steps labeled as RC must be done to comply with the AD. However, steps that are not labeled as RC are recommended. Those steps that are not labeled as RC may be deviated from, done as part of other actions, or done using accepted methods different from those identified in the service information without obtaining approval of an alternative method of compliance (AMOC), provided the steps labeled as RC can be done and the airplane can be put back in a serviceable condition. Any substitutions or changes to steps labeled as RC will require approval of an AMOC.

Interim Action

We consider this AD interim action. The manufacturer is currently developing a modification that will address the unsafe condition identified in this AD. Once this modification is developed, approved, and available, we might consider additional rulemaking.

We are also considering further rulemaking to require a minimum thickness inspection of inboard actuator attach fittings that are conically machined. However, the planned compliance time for the minimum thickness inspection would allow enough time to provide notice and opportunity for prior public comment on the merits of that inspection. This AD only addresses the unsafe condition associated with inboard actuator attach fittings of the outboard flap that have a cylindrical defect.

FAA's Justification and Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because defective actuator attach fittings, combined with loss of the outboard actuator load path, could result in uncontrolled retraction of the outboard flap, damage to flight control systems, and consequent reduced controllability of the airplane. Therefore, we find that notice and opportunity for prior public comment are impracticable and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include the docket number FAA-2013-0871 and Directorate Identifier 2013-NM-187-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Costs of Compliance

We estimate that this AD affects 184 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
Inspection for part number	7 work-hour × \$85 per hour = \$595	\$0	\$595	\$109,480

We have received no definitive data that would enable us to provide a cost estimate for the on-condition actions 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.

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):



2013-23-03 The Boeing Company: Amendment 39-17658; Docket No. FAA-2013-0871; Directorate Identifier 2013-NM-187-AD.

(a) Effective Date

This AD is effective November 29, 2013.

(b) Affected ADs

None.

(c) Applicability

This AD applies to 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, and 747SR series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-57A2343, dated September 12, 2013.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by a report of the fracture of an inboard actuator attach fitting of the outboard flap. An inspection of the attach fitting revealed that it was incorrectly machined with a cylindrical profile instead of a conical profile, resulting in reduced wall thickness. We are issuing this AD to detect and correct defective inboard actuator attach fittings which, combined with loss of the outboard actuator load path, could result in uncontrolled retraction of the outboard flap, damage to flight control systems, and consequent reduced controllability of the airplane.

(f) Compliance

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

(g) Part Number Inspection

Within 90 days after the effective date of this AD: Inspect to determine the part number of the inboard actuator attach fittings of the outboard flaps, in accordance with Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2343, dated September 12, 2013.

(h) Actions for Certain Attach Fittings

If, during the inspection required by paragraph (g) of this AD, any inboard actuator attach fitting having part number (P/N) 65B08564-7 is found, before further flight, do the actions specified in paragraph (h)(1) or (h)(2) of this AD.

(1) Do a detailed inspection of the inboard actuator attach fitting for a cylindrical defect, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2343, dated September 12, 2013. If any cylindrical defect is found, before further flight, do the actions specified in paragraph (h)(1)(i) or (h)(1)(ii) of this AD.

(i) Do a minimum thickness inspection of the inboard actuator attach fitting to determine minimum wall thickness of the actuator fitting assembly, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2343, dated September 12, 2013. If the minimum thickness of the wall is less than 0.130 inch: Before further flight, replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747 57A2343, dated September 12, 2013.

(ii) Replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2343, dated September 12, 2013.

(2) Replace the inboard actuator attach fitting of the outboard flap, in accordance with Part 4 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-57A2343, dated September 12, 2013.

(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) 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 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. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) If the service information contains steps that are labeled as RC (Required for Compliance), those steps must be done to comply with this AD; any steps that are not labeled as RC are recommended. Those steps that are not labeled as RC may be deviated from, done as part of other actions, or done using accepted methods different from those identified in the specified service information without obtaining approval of an AMOC, provided the steps labeled as RC can be done and the airplane can be put back in a serviceable condition. Any substitutions or changes to steps labeled as RC require approval of an AMOC.

(j) Related Information

For more information about this AD, contact Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: nathan.p.weigand@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 Service Bulletin 747-57A2343, dated September 12, 2013.

(ii) Reserved.

(3) For 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 review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. 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 October 31, 2013.

Jeffrey E. Duven,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.