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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-0498; Directorate Identifier 2014-NM-152-AD; Amendment 39-18305; AD 2015-22-01]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 2007-16-08, which applied to all The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-300, 747-400, 747-400D, and 747SR series airplanes. AD 2007-16-08 required repetitive inspections for cracking of the station 800 frame assembly, and repair if necessary. This new AD continues to require repetitive inspections for cracking of the station 800 frame assembly, and repair if necessary, and expands the inspection area. This AD was prompted by reports of cracks found at the forward and aft inner chord strap and angles on the station 800 frame on the left-side and right-side main entry doors. We are issuing this AD to detect and correct fatigue cracks that could extend and fully sever the frame, which could result in development of skin cracks that could lead to rapid depressurization of the airplane.

DATES: This AD is effective December 1, 2015.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of December 1, 2015.

ADDRESSES: 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 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-2015-0498.

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-2015-0498; 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 Document 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 to supersede AD 2007-16-08, Amendment 39-15147 (72 FR 44728, August 9, 2007). AD 2007-16-08 applied to all The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-300, 747-400, 747-400D, and 747SR series airplanes. The NPRM published in the Federal Register on March 30, 2015 (80 FR 16606). The NPRM was prompted by reports of cracks found at the forward and aft inner chord strap and angles on the station 800 frame on the left-side and right-side main entry doors. The NPRM proposed to continue to require repetitive inspections for cracking of the station 800 frame assembly, and repair if necessary, and expand the inspection area. We are issuing this AD to detect and correct fatigue cracks that could extend and fully sever the frame, which could result in development of skin cracks that could lead to rapid depressurization 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 (80 FR 16606, March 30, 2015) and the FAA's response to each comment.

Support for the NPRM (80 FR 16606, March 30, 2015)

Boeing stated that it concurred with the contents of the NPRM (80 FR 16606, March 30, 2015).

Statement Regarding the NPRM (80 FR 16606, March 30, 2015)

United Airlines stated that it has reviewed the NPRM (80 FR 16606, March 30, 2015), and has no comment to submit.

Request To Clarify Inspection Requirements

UPS requested that we add an additional statement to paragraph (i) of the proposed AD ("Exception to the Service Information,") to clarify that the removal of fasteners is not required for performing the surface high-frequency eddy current (HFEC) inspections specified by paragraph (g) of the proposed AD (80 FR 16606, March 30, 2015). UPS stated that by adding the clarification that the removal of fasteners is not required, significant time and materials would be saved by operators when accomplishing this inspection and prevent unnecessary alternative method of compliance

(AMOC) requests. UPS explained that Boeing agreed in a response to a service request that fastener removal is not required for performing surface HFEC inspections.

We agree because the clarification will reduce costs while ensuring the same level of safety. We have added the following sentence to paragraph (g) of this AD: "It is not necessary to remove fasteners while performing the surface HFEC inspections."

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 change described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (80 FR 16606, March 30, 2015) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (80 FR 16606, March 30, 2015).

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 747-53A2451, Revision 2, dated June 13, 2014. The service information describes procedures for accomplishing repetitive inspections for cracking of the station 800 frame assembly, 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 the ADDRESSES section of this AD.

Costs of Compliance

We estimate that this AD affects 124 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
Repetitive inspections	Up to 53 work-hours × \$85 per hour = \$4,505 per inspection cycle	\$0	Up to \$4,505 per inspection cycle	Up to \$558,620 per inspection cycle.

We have received no definitive data that would enable us to provide cost estimates 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

We have determined that 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 removing Airworthiness Directive (AD) 2007-16-08, Amendment 39-15147 (72 FR 44728, August 9, 2007), and adding the following new AD:



2015-22-01 The Boeing Company: Amendment 39-18305; Docket No. FAA-2015-0498; Directorate Identifier 2014-NM-152-AD.

(a) Effective Date

This AD is effective December 1, 2015.

(b) Affected ADs

This AD replaces AD 2007-16-08, Amendment 39-15147 (72 FR 44728, August 9, 2007).

(c) Applicability

This AD applies to all The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-300, 747-400, 747-400D, and 747SR series airplanes, certificated in any category.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of cracks found on the station 800 frame on the left-side and right-side main entry doors (MED), at the forward and aft inner chord strap and angles, which are outside the inspection area of AD 2007-16-08, Amendment 39-15147 (72 FR 44728, August 9, 2007). We are issuing this AD to detect and correct fatigue cracks that could extend and fully sever the frame, which could result in development of skin cracks that could lead to rapid depressurization of the airplane.

(f) Compliance

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

(g) Inspections of Station 800 Frame Assembly Between Stringer 14 and Stringer 30

Except as required by paragraph (i) of this AD, at the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2451, Revision 2, dated June 13, 2014: Do a detailed inspection for cracking in the inner chord strap, angles, and exposed web adjacent to the inner chords, and do surface and open hole high-frequency eddy current (HFEC) inspections for cracking in the inner chord strap and angles of the station 800 frame assembly between stringer 14 and stringer 30, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2451, Revision 2, dated June 13, 2014. It is not necessary to remove fasteners while performing the surface HFEC inspections. Repeat the inspections at the applicable times specified in

paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2451, Revision 2, dated June 13, 2014.

(h) Repair of Cracking

If any cracking is found during any inspection required by paragraph (g) of this AD, before further flight, repair the cracking using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(i) Exception to the Service Information

(1) Where Boeing Alert Service Bulletin 747-53A2451, Revision 2, dated June 13, 2014, specifies a compliance time "after the Revision 2 date of this service bulletin," this AD requires compliance within the specified time after the effective date of this AD.

(2) The Condition column of paragraph 1.E., "Compliance," of the Boeing Alert Service Bulletin 747-53A2451, Revision 2, dated June 13, 2014, refers to total flight cycles "as of the Revision 2 date of this service bulletin." This AD, however applies to airplanes with the specified total flight cycles or total flight hours as of the effective date of this AD.

(j) Credit for Previous Actions

This paragraph provides credit for the inspections and repairs of the inner chord strap and angles of the station 800 frame assembly between stringer 14 and stringer 18 required by paragraphs (g) and (h) of this AD, if those actions were performed before the effective date of this AD using Boeing Alert Service Bulletin 747-53A2451, Revision 1, dated November 10, 2005, which was incorporated by reference in AD 2006-12-12, Amendment 39-14638 (71 FR 33595, June 12, 2006).

(k) 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 (l)(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 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) AMOCs approved for AD 2007-16-08, Amendment 39-15147 (72 FR 44728, August 9, 2007), are approved as AMOCs for the corresponding provisions of this AD.

(l) Related Information

(1) For more information about this AD, 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.

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

(m) 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 747-53A2451, Revision 2, dated June 13, 2014.

(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 view this service information at 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 October 19, 2015.

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