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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0682; Directorate Identifier 2008-NM-200-AD; Amendment 39-16131; AD 2009-25-11]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-300, 747-400, 747SR, and 747SP Series Airplanes

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD), which applies to certain Boeing Model 747 airplanes. The existing AD currently requires repetitive inspections for cracking, and repair as necessary, of lower lobe body frames (sections 42 and 46) of the fuselage. The existing AD also provides for optional modification of the frames, which terminates the repetitive inspections. This new AD requires additional repetitive inspections for cracking of certain fuselage frames, and corrective actions if necessary. This AD results from a new report of a crack found in a body frame with a tapered side guide bracket at fuselage station 1800, located on the left side between stringers 39 and 40; the frame was severed. We are issuing this AD to detect and correct the loss of structural integrity of the fuselage, which could result in rapid depressurization of the airplane.

DATES: This AD becomes effective January 14, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of January 14, 2010.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail me.boecom@boeing.com; Internet https://www.myboeingfleet.com.

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 address for the Docket Office (telephone 800-647-5527) is the 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: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6437; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 86-18-01, amendment 39-5390 (51 FR 28691, August 11, 1986). The existing AD applies to certain Boeing Model 747 airplanes. That NPRM was published in the Federal Register on August 5, 2009 (74 FR 38995). That NPRM proposed to continue to require repetitive inspections for cracking, and repair as necessary, of lower lobe body frames (sections 42 and 46) of the fuselage. That NPRM also provides for optional modification of the frames, which terminates the repetitive inspections. That NPRM also proposed to require additional repetitive inspections for cracking of certain fuselage frames, and corrective actions if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comment that has been received on the NPRM. Boeing concurs with the content of the NPRM.

Explanation of Change to Final Rule

AD 86-18-01 does not provide a compliance time for doing the corrective actions required by paragraphs (g) and (h) of this AD. However, we have determined that it is implicit in the existing AD that the corrective actions be done before further flight. Sections 91.7 and 121.153 of the Federal Aviation Regulations (14 CFR 91.7 and 14 CFR 121.153) already require that aircraft be in an airworthy condition before they can be operated. We have changed paragraphs (g) and (h) of this AD to include those compliance times.

Conclusion

We reviewed the relevant data, including the comment that has been received, and determined that air safety and the public interest require adopting the AD with the change described previously. We also determined that this change will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

There are about 237 airplanes of the affected design in the worldwide fleet. The following table provides the estimated costs for U.S. operators to comply with this AD.

Estimated Costs

Action	Work hours	Average labor rate per hour	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspections (required by AD 86-18-01)	370	$80	$29,600, per inspection cycle	112	$3,315,200, per inspection cycle
Additional inspections (new action)	6	$80	$480, per inspection cycle	87	$41,760, per inspection cycle

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); 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

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 Federal Aviation Administration (FAA) amends § 39.13 by removing amendment 39-5390 (51 FR 28691, August 11, 1986) and by adding the following new airworthiness directive (AD):

2009-25-11 Boeing: Amendment 39-16131. Docket No. FAA-2009-0682; Directorate Identifier 2008-NM-200-AD.

Effective Date

(a) This AD becomes effective January 14, 2010.

Affected ADs

(b) This AD supersedes AD 86-18-01, Amendment 39-5390.

Applicability

(c) This AD applies to Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-300, 747-400, 747SR, and 747SP series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-53A2749, dated September 25, 2008.

Subject

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

Unsafe Condition

(e) This AD results from a report of a crack found in a body frame with a tapered side guide bracket at fuselage station 1800, located on the left side between stringers 39 and 40; the frame was severed. The Federal Aviation Administration is issuing this AD to detect and correct the loss of structural integrity of the fuselage, which could result in rapid depressurization of the airplane.

Compliance

(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Restatement of Requirements of AD 86-18-01, With Revised Service Information

Repetitive Inspections

(g) For airplanes listed in Boeing Alert Service Bulletin 747-53A2237, Revision 1, dated March 28, 1986: Perform a detailed visual inspection for frame cracking from fuselage section 540 to 760, and 1820 to 1900, stringers 35 left to 42 left, in accordance with Section III of Boeing Alert Service Bulletin 747-53A2237, Revision 1, dated March 28, 1986. Do the inspection at the time specified in paragraph (g)(1), (g)(2), or (g)(3) of this AD, as applicable. If any crack is found, before further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, or using a method approved in accordance with the procedures specified in paragraph (p) of this AD. Repeat the inspection at intervals not to exceed 3,000 landings until the terminating action specified in paragraph (g)(4) or (k) of this AD is performed.

(1) Within 300 landings for airplanes that have accumulated more than 12,000 landings on September 17, 1986 (the effective date of AD 86-18-01, amendment 39-5390).

(2) Within 800 landings for airplanes that have accumulated 10,000 to 12,000 landings on September 17, 1986.

(3) Within 800 landings or prior to the accumulation of 10,000 landings, whichever occurs later, for airplanes that have accumulated less than 10,000 landings on September 17, 1986.

(4) Modification of the frames before the effective date of this AD in accordance with Boeing Alert Service Bulletin 747-53A2237, Revision 1, dated March 28, 1986, constitutes terminating action for the repetitive inspections required by paragraph (g) of this AD.

(h) For airplanes listed in Boeing Alert Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986: Perform a visual inspection of cargo side guide support brackets from fuselage station 1500 to 1800, right and left hand side, for a proper machined taper in accordance with Section III of Boeing Alert Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986. Do the inspection at the time specified in paragraph (h)(1), (h)(2), or (h)(3) of this AD, as applicable. If any cargo side guide support bracket is improperly tapered, before further flight, perform a detailed visual inspection of the frame area adjacent to the untapered bracket for cracking in accordance with Boeing Alert Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986. If any crack is found, before further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, or using a method approved in accordance with the procedures specified in paragraph (p) of this AD. Repeat the detailed visual inspection at intervals not to exceed 3,000 landings until the terminating action specified in paragraph (h)(4) of this AD is performed. Accomplishment of the inspections required by paragraph (k) of this AD terminates the inspections required by this paragraph.

(1) Within 300 landings for airplanes that have accumulated more than 12,000 landings on September 17, 1986 (the effective date of AD 86-18-01, amendment 39-5390).

(2) Within 800 landings for airplanes that have accumulated 10,000 to 12,000 landings on September 17, 1986.

(3) Within 800 landings or prior to the accumulation of 10,000 landings, whichever occurs later, for airplanes that have accumulated less than 10,000 landings on September 17, 1986.

(4) Installation of a tapered strap adjacent to the affected brackets before the effective date of this AD in accordance with Boeing Alert Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986, constitutes terminating action for the repetitive inspections required by paragraph (h) of this AD.

(i) For Boeing Model 747SR airplanes only, based on continued mixed operation of cabin pressure differentials, the initial inspection thresholds and reinspection intervals specified in AD 86-18-01 may be multiplied by a 1.2 adjustment factor. This provision is not applicable to paragraphs (k), (m), and (n) of this AD.

(j) For the purposes of complying with AD 86-18-01, the number of landings may be determined to equal the number of pressurization cycles where the cabin pressure differential was greater than 2.0 pounds per square inch. This provision is not applicable to paragraphs (k), (m), and (n) of this AD.

New Requirements of This AD

Repetitive Inspections

(k) For airplanes identified in Boeing Alert Service Bulletin 747-53A2749, dated September 25, 2008, that have accumulated 22,000 or fewer total flight cycles as of the effective date of this AD: Do initial and repetitive detailed inspections for frame cracking from fuselage body stations 1500 to 1800, stringers 39 to 40, by doing all the actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2749, dated September 25, 2008, except as required by paragraph (l) of this AD. Do the inspections and corrective actions at the times specified in paragraph

1.E. of Boeing Alert Service Bulletin 747-53A2749, dated September 25, 2008, except as required by paragraphs (m) and (n) of this AD. Accomplishment of the inspections required by this paragraph terminates the inspections required by paragraph (h) of this AD.

Exceptions to Service Bulletin Procedures

(l) If any crack is found during any inspection required by this AD, and Boeing Alert Service Bulletin 747-53A2749, dated September 25, 2008, specifies to contact Boeing for appropriate action: Before further flight, repair the crack using a method approved in accordance with the procedures specified in paragraph (p) of this AD.

(m) Where Boeing Alert Service Bulletin 747-53A2749, dated September 25, 2008, specifies a compliance time after the date of the service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(n) Where Boeing Alert Service Bulletin 747-53A2749, dated September 25, 2008, specifies a compliance time related to accomplishing an action ‘‘as given in Boeing Service Bulletin 747-53A2259," this AD requires compliance within the specified compliance time after the applicable compliance time required by paragraph (h) of this AD.

Terminating Action

(o) Accomplishing the repetitive frame inspections required by AD 2006-05-02, amendment 39-14499; or AD 2005-20-30, amendment 39-14327; terminates the inspections required by paragraphs (g), (h), and (k) of this AD.

Alternative Methods of Compliance (AMOCs)

(p)(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. Send information to ATTN: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6437; fax (425) 917-6590; or, e-mail information to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

(3) AMOCs approved previously in accordance with paragraph (A) of AD 86-18-01, are approved as alternative methods of compliance with the corresponding requirements of paragraph (g) of this AD.

(4) AMOCs approved previously in accordance with paragraph (B) of AD 86-18-01, are approved as alternative methods of compliance with the corresponding requirements of paragraph (h) of this AD.

(5) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD, if it is approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who 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.

Material Incorporated by Reference

(q) You must use the service information contained in Table 1 of this AD, as applicable, to do the actions required by this AD, unless the AD specifies otherwise.

Table 1–Material Incorporated by Reference

Document	Revision	Date
Boeing Alert Service Bulletin 747-53A2237	1	March 28, 1986
Boeing Alert Service Bulletin 747-53A2259	1	April 18, 1986
Boeing Alert Service Bulletin 747-53A2749	Original	September 25, 2008

Boeing Alert Service Bulletin 747-53A2259, Revision 1, dated April 18, 1986, contains the following effective pages:

Page Nos.	Revision level shown on page	Date shown on page
2, 3, 5, 6, 9-11, 15, 16, 18-24	Original	March 28, 1986.
1, 4, 7, 8, 12-14, 17, 25, 26	Revision 1	April 18, 1986.

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

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

(3) You may review copies of the 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 or 425-227-1152.

(4) You may also review copies of the 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/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on December 1, 2009.

Michael J. Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. E9-29222 Filed 12-9-09; 8:45 am]