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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-28940; Directorate Identifier 2007-NM-131-AD; Amendment 39-15158; AD 2007-16-19]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-200B, 747-300, and 747-400 Series Airplanes

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

ACTION: Final rule; request for comments.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 747-200B, 747-300, and 747-400 series airplanes. This AD requires doing repetitive detailed inspections for cracking of the aft tension tie channels from body station (BS) 1120 to BS 1220 and from BS 880 to BS 1100, and corrective actions if necessary. This AD results from cracks found in the aft tension tie channels at four station locations, on a Model 747-200B series airplane that had been modified to a special freighter. We are issuing this AD to detect and correct cracking of the aft tension tie channels; failure of more than one tension tie could result in rapid depressurization of the airplane.

DATES: This AD becomes effective August 28, 2007.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of August 28, 2007.

We must receive comments on this AD by October 12, 2007.

ADDRESSES: Use one of the following addresses to submit comments on this AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.
- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- 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.
- Fax: (202) 493-2251.

- Hand Delivery: Room W12-140 on the ground floor of the West Building, 1200 New Jersey Avenue, SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

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

We have received a report indicating that cracks were found in the aft tension tie channels at four station locations, on a Model 747-200B series airplane that had been modified to a special freighter. The cracks were found near the body frames at a location where the flanges of the aft tension tie channels are machined down to a flat plate in order to attach to the body frames. The largest crack was approximately 0.5 inch in length. The airplane had accumulated 4,856 flight cycles since modification to special freighter. Tension ties are considered to be structurally significant, in that they are critical to airplane structural integrity. Failure of more than one tension tie, if not corrected, could result in rapid depressurization of the airplane.

The upper deck tension ties on Model 747-300 and -400 series airplanes that have been modified to a special freighter configuration are similar to those on the affected Model 747-200B series airplanes that have been modified to a special freighter configuration. Therefore, all of these airplanes are subject to the same unsafe condition.

Relevant Service Information

We have reviewed Boeing Alert Service Bulletin 747-53A2610, dated May 10, 2007. The service bulletin describes procedures for doing repetitive detailed inspections for cracking of the aft tension tie channels from body station (BS) 1120 to BS 1220 and from BS 880 to BS 1100, and doing corrective actions as applicable. The corrective actions include repairing any crack found in a tension tie, and contacting Boeing for repair instructions if any crack is found in a bolt hole. The service bulletin specifies that, as an option to accomplishing the repetitive detailed inspections, accomplishing the repairs at all tension tie locations can be done as a preventive modification.

The service bulletin specifies accomplishing the initial inspection from BS 1120 to BS 1220 before the accumulation of 4,000 flight cycles since modification to special freighter or converted freighter, or within 1,000 flight cycles after the date on the service bulletin, whichever occurs later. The service bulletin specifies accomplishing the initial inspection from BS 880 to BS 1100 before the accumulation of 8,000 flight cycles since modification to special freighter or converted freighter, or within 1,000 flight cycles after the date on the service bulletin, whichever occurs later. The service bulletin also specifies repeating the inspections at intervals not to exceed 4,000 flight cycles. The service bulletin also specifies repairing any crack before further flight.

Accomplishing the actions specified in the service information is intended to adequately address the unsafe condition.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other airplanes of the same type design that may be registered in the U.S. at some time in the future. Therefore, we are

issuing this AD to detect and correct cracking of the aft tension tie channels; failure of more than one tension tie could result in rapid depressurization of the airplane. This AD requires accomplishing the actions specified in the service information described previously, except as discussed under "Difference Between the AD and Service Bulletin."

Difference Between the AD and Service Bulletin

The service bulletin specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- Using a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization whom we have authorized to make those findings.

Costs of Compliance

If an affected airplane is imported and placed on the U.S. Register in the future, the required inspections would take about 4 work hours per airplane, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the AD would be \$320 per airplane, per inspection cycle.

FAA's Determination of the Effective Date

No airplane affected by this AD is currently on the U.S. Register. Therefore, providing notice and opportunity for public comment is unnecessary before this AD is issued, and this AD may be made effective in less than 30 days after it is published in the Federal Register.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment; however, we invite you to submit any relevant written data, views, or arguments regarding this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2007-28940; Directorate Identifier 2007-NM-131-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of that web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78), or you may visit <http://dms.dot.gov>.

Examining the Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Operations office (telephone (800) 647-5527) is located on the ground level of the West

Building at the DOT street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after the Docket Management System receives them.

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 the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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 adding the following new airworthiness directive (AD):



2007-16-19 Boeing: Amendment 39-15158. Docket No. FAA-2007-28940; Directorate Identifier 2007-NM-131-AD.

Effective Date

(a) This AD becomes effective August 28, 2007.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Boeing Model 747-200B, 747-300, and 747-400 series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 747-53A2610, dated May 10, 2007.

Unsafe Condition

(d) This AD results from cracks found in the aft tension tie channels at four station locations, on a Model 747-200B series airplane that had been modified to a special freighter. We are issuing this AD to detect and correct cracking of the aft tension tie channels; failure of more than one tension tie could result in rapid depressurization of the airplane.

Compliance

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

Repetitive Inspections

(f) At the applicable times specified in paragraph 1.E. of Boeing Alert Service Bulletin 747-53A2610, dated May 10, 2007, except as provided by paragraph (g) of this AD: Do repetitive detailed inspections for cracking of the aft tension tie channels from body station (BS) 1120 to BS 1220 and from BS 880 to BS 1100, and do all applicable corrective actions, by accomplishing all of the applicable actions specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2610, dated May 10, 2007, except as provided by paragraph (h) of this AD.

Exception to Compliance Times

(g) Where Boeing Alert Service Bulletin 747-53A2610, dated May 10, 2007, specifies counting the compliance time from "* * * after the date on this service bulletin," this AD requires counting the compliance time from the effective date of this AD.

Exception for Bolt Hole Cracks

(h) If any crack is found in a bolt hole during any inspection required by this AD, and Boeing Alert Service Bulletin 747-53A2610, dated May 10, 2007, 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 (j) of this AD.

Optional Terminating Action

(i) Except as provided by paragraph (h) of this AD, accomplishing the applicable repairs or modifications at all tension tie locations, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2610, dated May 10, 2007, terminates the repetitive inspections required by paragraph (f) of this AD.

Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with the procedures found in 14 CFR 39.19.

(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 appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(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 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

(k) You must use Boeing Alert Service Bulletin 747-53A2610, dated May 10, 2007, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or 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 August 2, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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