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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2010-0381; Directorate Identifier 2009-NM-146-AD; Amendment 39-16268; AD 2010-09-03]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Model 747-200B Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Model 747-200B series airplanes. This AD requires repetitive inspections for cracking of the fuselage skin lap joints at stringer 6 on the left and right sides from station (STA) 340 to STA 400, a one-time general visual inspection to determine if certain fasteners are installed and to determine if service repair manual (SRM) repairs or repair doublers are installed, and corrective actions if necessary. Doing an optional modification of the stringer 6 lap joints terminates the repetitive inspections for the modified area. This AD results from reviews done by Boeing, which show that airplanes that were modified by Boeing to the stretched upper deck (SUD) configuration require inspection for cracking of the stringer 6 lap joint upper-fastener row earlier than previously expected. We are issuing this AD to detect and correct cracking of the stringer 6 lap joints where certain external doublers were not installed, which could result in rapid decompression and loss of structural integrity of the airplane.

DATES: This AD is effective May 14, 2010.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of May 14, 2010.

We must receive comments on this AD by June 28, 2010.

ADDRESSES: You may send comments 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, 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 street address for the Docket Office (telephone 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

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

Review by Boeing has determined that airplanes that were modified by Boeing to the stretched upper deck (SUD) configuration require inspecting the stringer 6 lap joint upper fastener row for cracking at an earlier time than expected. Previously, no inspections of this area were recommended prior to accomplishment of Boeing Service Bulletin 747-53-2272, Zone 1 modification, which involves installing external doublers. If the external doublers have not been installed on the stringer 6 lap joints, cracks could develop in the lap joints. Skin cracks could join together and result in rapid decompression and loss of structural integrity of the airplane.

Relevant Service Information

We reviewed Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009. This service bulletin specifies that, for airplanes with external doublers installed in accordance with Boeing Service Bulletin 747-53-2272, no further work is necessary.

For the other affected airplanes, Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, describes procedures for repetitive external detailed and high frequency eddy current (HFEC) inspections to detect cracking of the left and right side stringer 6 lap joints, doing a one-time general visual inspection to determine whether certain fasteners exist in the upper-fastener row of the lap joints and to determine whether any service repair manual (SRM) repairs or repair doublers are installed, and corrective actions if necessary. Corrective actions include repairing any cracks that are found, and contacting Boeing for repair instructions if certain fasteners, or if any SRM repairs or repair doublers other than those installed per Boeing Service Bulletin 747-53-2272,

Zone 1 modification, are found in the inspection area.

Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, also specifies that the optional accomplishment of a modification would eliminate the need to do the repetitive inspections, repair cracks, or contact Boeing for instructions if certain fasteners are found. This modification involves removing the upper row of fasteners at the stringer 6 lap joints from STA 340 to STA 400 doing open-hole HFEC inspections to detect skin cracks; and doing corrective actions if necessary (e.g.,

trimming out any cracks found during any inspection), and installing external doublers as specified in the Zone 1 modification of Boeing Service Bulletin 747-53-2272.

The compliance time for the initial inspections is 10,000 flight cycles after the airplane was modified to the SUD configuration, or within 50 flight cycles after the date on Boeing Alert Service Bulletin 747-53A2809, whichever occurs later. The repetitive interval is 3,000 flight cycles. The compliance time for the corrective actions is before further flight.

FAA's Determination and Requirements of This AD

No Model 747-200B series airplanes affected by this AD are on the U.S. Register. We are issuing this AD because the unsafe condition described previously is likely to exist or develop on other products of the same type design that could be registered in the United States in the future. This AD requires repetitive inspections of the left and right side stringer 6 lap joints from STA 340 to STA 400.

Since no U.S. Model 747-200B series airplanes are affected by this AD, notice and opportunity for public comment before issuing this AD are unnecessary.

Differences Between the AD and the Service Information

Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this 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 the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments before it becomes effective. 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 "Docket No. FAA-2010-0381; Directorate Identifier 2009-NM-146-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.

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), 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.

You can find our regulatory evaluation and the estimated costs of compliance in the AD docket.

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 AD:



2010-09-03 The Boeing Company: Amendment 39-16268. Docket No. FAA-2010-0381; Directorate Identifier 2009-NM-146-AD.

Effective Date

(a) This airworthiness directive (AD) is effective May 14, 2010.

Affected ADs

(b) None.

Applicability

(c) This AD applies to The Boeing Company Model 747-200B series airplanes, certificated in any category, identified as Group 1, Configuration 2, in Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009.

Subject

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

Unsafe Condition

(e) This AD results from reviews done by Boeing, which show that airplanes modified to the stretched upper deck (SUD) configuration by Boeing require inspection for cracking of the upper-fastener row of the left and right side stringer 6 lap joints earlier than expected. The Federal Aviation Administration is issuing this AD to detect and correct cracking of the stringer 6 lap joints where certain external doublers were not installed, which could result in rapid decompression and loss of structural integrity 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.

Inspections

(g) Except as required by paragraphs (h) and (i) of this AD: At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, do the inspections specified in paragraphs (g)(1) and (g)(2) of this AD, and applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009. Do all applicable corrective actions before further flight. Repeat the inspections specified in paragraph (g)(1) of this AD thereafter at intervals not to exceed 3,000 flight cycles, except as provided by paragraph (j) of this AD.

(1) Inspect the left and right side stringer 6 lap joints from station (STA) 340 to STA 400. The inspections include external detailed and high frequency eddy current (HFEC) inspections for cracks in the skin in areas that have not been modified or repaired as specified in paragraph 3.B., Part 2 or Part 3, respectively, of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009.

(2) Do a one-time general visual inspection of the lap joints to determine if certain fasteners are installed and to determine if structural repair manual (SRM) repairs or repair doublers are installed.

Note 1: For airplanes on which external doublers have been installed on both side of the airplanes in accordance with Boeing Service Bulletin 747-53-2272, Zone 1 modification, no further work is necessary.

Exceptions to Service Bulletin

(h) Where Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, specifies a compliance time after the date on that service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(i) For any condition in which Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, specifies to contact Boeing for appropriate action: those actions must be approved using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

Optional Terminating Action

(j) Accomplishing the modification, including the open-hole HFEC inspections to detect skin cracks, and applicable corrective actions, specified in paragraph 3.B., Part 2, of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, terminates the repetitive inspections and repair requirements specified in paragraph (g) of this AD for the side of the airplane on which the modification is done.

Alternative Methods of Compliance (AMOCs)

(k)(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 ACO, 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) 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.

Material Incorporated by Reference

(l) You must use Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, to do the actions required by this AD, unless the AD specifies otherwise. If you accomplish the optional

terminating actions specified by this AD, you must use Boeing Alert Service Bulletin 747-53A2809, dated June 18, 2009, as applicable, to perform those actions, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this 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.

(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 April 9, 2010.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.