

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2004-19175; Directorate Identifier 2003-NM-246-AD; Amendment 39-1197;
AD 2005-15-08]

RIN 2120-AA64

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

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

ACTION: Final rule.

SUMMARY: The FAA is adopting a new airworthiness directive (AD) for certain Boeing Model 747-100B SUD, -200B, -300, -400, and -400D series airplanes. This AD requires repetitive inspections for cracking in fuselage stringers 8L, 8R, 10L, and 10R at body stations 460, 480, and 500 frame locations; and repair, if necessary. This AD is prompted by findings of cracking in fuselage stringers 8L, 8R, 10L, and 10R at body stations 460, 480, and 500 frame locations. We are issuing this AD to detect and correct fatigue cracking in certain fuselage stringers, which, if left undetected, could result in fuselage skin cracking that reduces the structural integrity of the skin panel, and consequent rapid depressurization of the airplane.

DATES: This AD becomes effective August 30, 2005.

The incorporation by reference of a certain publication listed in the AD is approved by the Director of the Federal Register as of August 30, 2005.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

Docket: The AD docket contains the proposed AD, comments, and any final disposition. You can examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Washington, DC. This docket number is FAA-2004-19175; the directorate identifier for this docket is 2003-NM-246-AD.

FOR FURTHER INFORMATION CONTACT: Nick Kusz, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6432; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with an AD for certain Boeing Model 747-100B SUD, -200B, -300, -400, and -400D series airplanes. That action, published in the Federal Register on September 28, 2004 (69 FR 57884), proposed to require repetitive inspections for cracking in fuselage stringers 8L, 8R, 10L, and 10R at body stations 460, 480, and 500 frame locations; and repair if necessary.

Comments

We provided the public the opportunity to participate in the development of this AD. We have considered the comments that have been submitted on the proposed AD.

Support for the Proposed AD

One commenter concurs with the FAA's compliance recommendations specified in the proposed AD. A second commenter, the manufacturer, requested that the compliance time be changed to match the referenced service bulletin; the commenter later submitted a comment stating that it reanalyzed the data and now concurs with the compliance time specified in the proposed AD.

Request for Clarification of the Compliance Time

One commenter states that paragraph (f) of the proposed AD specifies repeating the inspection at intervals not to exceed 3,000 flight cycles until the optional terminating action is accomplished. The commenter adds that the referenced service bulletin recommends inspections at specific thresholds that equate to a 3,000-flight-cycle interval, until the airplane accumulates 25,000 flight cycles. The commenter also notes that the referenced service bulletin recommends that airplanes having more than 25,000 total flight cycles be inspected at intervals not to exceed 2,000 flight cycles, and adds that the proposed AD does not seem to address this situation. The commenter asks that the preamble in the proposed AD clearly specify that the 3,000-flight-cycle interval cited in paragraph (f) replaces the threshold values in the referenced service bulletin.

Although we acknowledge the commenter's concern, the difference in compliance times was explained in the proposed AD. In the section titled "Differences Between the Proposed AD and Service Information" of the preamble of the proposed AD, we define the difference in compliance times, as follows: "The manufacturer reanalyzed the service problem and has advised the FAA that the reanalysis has resulted in threshold and repetitive inspection intervals different from the service bulletin. This resulted in simplified initial thresholds and an increased number of flight cycles between repetitive inspections." That section of the preamble of the proposed AD is not restated in the final rule; therefore, we made no change to the final rule in this regard.

Request for Optional Open-Hole and Surface High Frequency Eddy Current (HFEC) Inspections To Extend Repetitive Inspection Intervals

One commenter states that, subsequent to the release of the referenced service bulletin, Boeing advised the commenter of optional open-hole and surface HFEC inspections that could be performed in addition to the specified detailed inspections. The commenter adds that these optional inspections would allow extending the repetitive inspection interval to 4,000 flight cycles, until the accumulation of 25,000 total flight cycles on the airplane. The commenter asks that the FAA consult with Boeing about this alternative inspection process and, if appropriate, include that option in the final rule.

Although we acknowledge that the optional inspections may be a viable alternative to the detailed inspections, we have confirmed with the manufacturer that while an open-hole and surface HFEC inspection may be accomplished, there are no existing procedures available. Therefore, we do not agree to add the optional inspections and extend the repetitive inspection interval in this final rule. Paragraph (i) of this AD provides affected operators the opportunity to apply for an alternative method of compliance (AMOC) and to present data to justify adding the optional inspections and extending the repetitive inspection interval. In addition, if the referenced service information is revised to add the optional inspections, we may approve it as an AMOC to the final rule, if appropriate. We have made no change to the final rule in this regard.

Request To Change Costs of Compliance Section

One commenter states that the proposed AD cites 3 work hours for accomplishing the inspection, and uses this estimate to determine the cost of compliance. The commenter notes that although 3 hours to accomplish the inspection is valid, no consideration is given for access and restoration, which can require up to 61 work hours for each airplane per the referenced service information. The commenter adds that it is inappropriate and unrealistic to cite a cost of compliance that fails to account for access and restoration when such tasks do not occur frequently enough to warrant them as negligible. The commenter asks that the cost of compliance be recalculated to include the work hours for access and restoration.

We do not agree to change the work hours in this AD. This number represents the time necessary to perform only the action actually required by the AD. The action in this final rule reflects only the direct costs of the specific required action (inspection) based on the best data available from the manufacturer. The cost analysis in AD rulemaking actions typically does not include incidental costs such as the time required to gain access and close up the time necessary for planning, or time necessitated by other administrative actions. Those incidental costs, which may vary significantly among operators, are almost impossible to calculate. We have made no change to the final rule in this regard.

Conclusion

We have carefully reviewed the available data, including the comments that have been submitted, and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

This AD will affect about 243 Boeing Model 747-100B SUD, -200B, -300, -400, and -400D series airplanes worldwide. 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	Parts	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspection	3	\$65	None	\$195	69	\$13,455

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. 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 FAA amends § 39.13 by adding the following new airworthiness directive (AD):

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "www.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2005-15-08 Boeing: Amendment 39-14197. Docket No. FAA-2004-19175; Directorate Identifier 2003-NM-246-AD.

Effective Date

- (a) This AD becomes effective August 30, 2005.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to certain Boeing Model 747-100B, 3UD, -200B, -300, -400, and -400D series airplanes; certificated in any category; as listed in Boeing Alert Service Bulletin 747-53A2484, dated June 26, 2003.

Unsafe Condition

- (d) This AD was prompted by findings of cracking in fuselage stringers 8L, 8R, 10L, and 10R at body station 460, 480, and 500 frame locations. We are issuing this AD to detect and correct fatigue cracking in the specified fuselage stringers, which, if left undetected, could result in fuselage skin cracking that reduces the structural integrity of the skin panel, and consequent 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.

Inspection

- (f) Do a detailed inspection for cracking in fuselage stringers 8L, 8R, 10L, and 10R at body station 460, 480, and 500 frame locations, in accordance with Part 1 of the Accomplishment Instructions in Boeing Alert Service Bulletin 747-53A2484, dated June 26, 2003. Do the inspections at the applicable time specified in paragraph (f)(1) or (f)(2) of this AD. Repeat the inspection thereafter at intervals not to exceed 3,000 flight cycles until the requirements of paragraph (h) of this AD are accomplished.

(1) For airplanes with 19,000 total flight cycles or less as of the effective date of this AD: Prior to the accumulation of 8,000 total flight cycles or within 2,000 flight cycles after the effective date of this AD, whichever is later, not to exceed 20,000 total flight cycles.

(2) For airplanes with more than 19,000 total flight cycles as of the effective date of this AD: Within 1,000 flight cycles after the effective date of this AD.

Note 1: For the purposes of this AD, a detailed inspection is: "An intensive examination of a specific item, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at an intensity deemed appropriate. Inspection aids such as mirror, magnifying lenses, etc., may be necessary. Surface cleaning and elaborate procedures may be required."

Repair

(g) If any cracking is found during any inspection required by paragraph (f) of this AD, Before further flight, repair the affected stringer in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2484, dated June 26, 2003. Repair terminates the repetitive inspections required by paragraph (f) of this AD for only the repaired stringer/frame location.

Optional Terminating Action

(h) Installing new frame clips and new doublers, and repairing, as applicable, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2484, dated June 26, 2003, terminates the repetitive inspections required by this AD.

Alternative Methods of Compliance (AMOC)

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

Material Incorporated by Reference

(j) You must use Boeing Alert Service Bulletin 747-53A2484, dated June 26, 2003, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approves the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. To get copies of the service information, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207. To view the AD docket, go to the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., room PL-401, Nassif Building, Washington, DC. To review copies of the service information, go to the National Archives and Records Administration (NARA). For information on the availability of this material at the 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 July 13, 2005.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-14396 Filed 7-25-05; 8:45 am]

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