

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20690; Directorate Identifier 2003-NM-230-AD; Amendment 39-14195; AD 2005-15-06]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-200C and 747-200F 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 747-200C and 747-200F series airplanes. This AD requires one-time inspections for cracks and material loss in the fuselage skin above the stringer (STR) 23 lap splice, between Body Station (BS) 282 and BS 298, and repair if necessary. This AD is prompted by a report of a crack above the STR 23 lap splice on one airplane. We are issuing this AD to detect and correct cracks or material loss in the fuselage skin, and consequent reduced structural integrity of the skin panel, which could result in rapid depressurization of the airplane.

DATES: This AD becomes effective August 26, 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 26, 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-2005-20690; the directorate identifier for this docket is 2003-NM-230-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 747-200C and 747-200F series airplanes. That action, published in the Federal Register on March 23, 2005 (70 FR 14587), proposed to require one-time inspections for cracks and material loss in the fuselage skin above the stringer (STR) 23 lap splice, between Body Station (BS) 282 and BS 298, and repair 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 submitted on the proposed AD.

Request To Re-Evaluate Need for the Proposed Rule

One commenter, an airplane operator, notes that it has previously inspected the fuselage skin thickness at the affected area on two of its ten production freighter airplanes. The inspections, which the commenter points out were conducted at the manufacturer's recommendation, showed skin thickness of 0.060 inch or greater on both airplanes. The commenter asserts that our justification for adopting the proposed AD should cite the results of its inspections and any similar inspections conducted at the manufacturer's request by other operators; and notes that Boeing Special Attention Service Bulletin 747-53-2493, dated July 3, 2003, cites only one instance of the problem that is prompting the proposed AD. The commenter acknowledges the significance of fuselage skin cracking, and recognizes the fact that the maintenance program for the affected Model 747-200C and 747-200F series airplanes includes external visual inspections of the affected area at regular intervals. However, the commenter questions our justification for adopting the proposed AD.

We infer that the commenter is questioning whether the proposed AD addresses a safety issue and, if not, we further infer that the commenter requests that we withdraw the proposed AD. We disagree. Although the commenter had no findings of cracking or blended skin on two of its airplanes, other respondents to the manufacturer's survey did report airplanes with skin thickness that was below the minimum. In addition, there are many airplanes affected by this proposed AD that have not yet been inspected.

However, we do agree that we should clarify the unsafe condition. Investigation of the crack report that prompted this proposed AD showed that the skin at the crack location was not the correct thickness. Boeing audited its manufacturing processes and discovered that assembly techniques of the skin panels during final assembly at the factory were the likely cause of the thin skin at the affected sections. It is very likely that the same condition may exist on other airplanes that were manufactured using the same techniques. Furthermore, the finding that precipitated this proposed AD was a three-inch crack in the upper row of the lap splice just above the upper row. Cracking in this area is critical due to its proximity to the upper row and possible interaction of cracks between the blended area and the upper row. Therefore, the crack finding, coupled with the likelihood that the thin skin condition exists on other airplanes, provides sufficient justification for adopting the proposed AD to detect and correct cracks or material loss in the fuselage skin.

We have not changed the final rule in this regard.

Conclusion

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

Costs of Compliance

There are about 77 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	Parts	Cost per airplane	Number of U.S.-registered airplanes	Fleet cost
Inspections	6	\$65	None	\$390	20	\$7,800

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).

2005-15-06 Boeing: Amendment 39-14195. Docket No. FAA-2005-20690; Directorate Identifier 2003-NM-230-AD.

Effective Date

- (a) This AD becomes effective August 26, 2005.

Affected ADs

- (b) None.

Applicability

- (c) This AD applies to Boeing Model 747-200C and 747-200F series airplanes, equipped with a nose cargo door, certificated in any category; as identified in paragraph 1.A.1 of Boeing Special Attention Service Bulletin 747-53-2493, dated July 3, 2003.

Unsafe Condition

- (d) This AD was prompted by a report of a crack above the stringer (STR) 23 lap splice on a Model 747-200F series airplane. We are issuing this AD to detect and correct cracks or material loss in the fuselage skin, and consequent reduced structural integrity of the skin panel, which 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.

Inspections and Repair

- (f) Before the accumulation of 15,000 total flight cycles, or within 1,200 flight cycles after the effective date of this AD, whichever occurs later: Do a detailed inspection for cracking, and a low frequency eddy current inspection for material loss, in the fuselage skin. Repair any crack or material loss prior to further flight. Do all actions in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-53-2493, dated July 3, 2003.

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."

Alternative Methods of Compliance (AMOCs)

(g)(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) 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 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

(h) You must use Boeing Special Attention Service Bulletin 747-53-2493, dated July 3, 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 11, 2005.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 05-14174 Filed 7-21-05; 8:45 am]

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