[Federal Register: June 22, 2005 (Volume 70, Number 119)]
[Rules and Regulations]
[Page 35989-35991]
From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr22jn05-3]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2004-19678; Directorate Identifier 2004-NM-62-AD; Amendment 39-14141; AD 2005-13-05]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-400F 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 747-400F series airplanes. This AD requires initial detailed and open-hole high frequency eddy current inspections for cracking of the web, upper chord, and upper chord strap of the upper deck floor beams, and repair of any cracking. This AD also requires a preventive modification of the upper deck floor beams, and repetitive inspections for cracking after accomplishing the modification. This AD is prompted by reports of fatigue cracking found on the upper deck floor beam to frame attachment points. We are issuing this AD to prevent fatigue cracks in the upper chord, upper chord strap, and the web of the upper deck floor beams and resultant failure of the floor beams. Failure of a floor beam could result in damage to critical flight control cables and wire bundles that pass through the floor beam, and consequent loss of controllability of the airplane. Failure of the floor beam also could result in the failure of the adjacent fuselage frames and skin, and consequent rapid decompression of the airplane.

DATES: This AD becomes effective July 27, 2005.

The incorporation by reference of a certain publication listed in the AD is approved by the Director of the Federal Register as of July 27, 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-2004-19678; the directorate identifier for this docket is 2004-NM-62-AD.

FOR FURTHER INFORMATION CONTACT: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6437; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION: The FAA proposed to amend 14 CFR part 39 with an AD for certain Boeing Model 747-400F series airplanes. That action, published in the Federal Register on November 24, 2004 (69 FR 68277), proposed to require initial detailed and open-hole high frequency eddy current inspections for cracking of the web, upper chord, and upper chord strap of the upper deck floor beams, and repair of any cracking. That action also proposed to require a preventive modification of the upper deck floor beams, and repetitive inspections for cracking after accomplishing the modification.

Comments

We provided the public the opportunity to participate in the development of this AD. No comments have been submitted on the proposed AD or on the determination of the cost to the public.

Conclusion

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

Costs of Compliance

This AD affects about 53 airplanes worldwide and 13 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this AD, depending on the airplane configuration:

ESTIMATED COSTS

Action	Work hours	Average labor rate per hour	Parts	Cost per airplane	Number of affected U.S.-registered airplanes	Fleet cost
Pre-modification inspections	11	$65	$0	$715	13	$9,295
Modification/ Inspections done during modification	498 or 524	65	$13,554 or $14,874	$45,924 or $48,934.	13	$597,012 or $636,142
Post-modification inspections	66	65	$0	$4,290, per inspection cycle.	13	$55,770

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).

2005-13-05 Boeing: Amendment 39-14141. Docket No. FAA-2004-19678; Directorate Identifier 2004-NM-62-AD.

Effective Date

(a) This AD becomes effective July 27, 2005.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Model 747-400F series airplanes, certificated in any category, as listed in Boeing Alert Service Bulletin 747-53A2443, dated May 9, 2002.

Unsafe Condition

(d) This AD was prompted by reports of fatigue cracking found on the upper deck floor beam to frame attachment points. We are issuing this AD to prevent fatigue cracks in the upper chord, upper chord strap, and web of the upper deck floor beams and the resultant failure of the floor beams. Failure of a floor beam could result in damage to critical flight control cables and wire bundles that pass through the floor beam, and consequent loss of controllability of the airplane. Failure of the floor beam also could result in the failure of the adjacent fuselage frames and skin, and consequent rapid decompression 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.

Service Bulletin Reference

(f) For the purposes of this AD, the term "service bulletin" means the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2443, dated May 9, 2002.

Inspections/Repair/Modification

(g) Before the accumulation of 15,000 total flight cycles, or within 1,000 flight cycles after the effective date of this AD, whichever is later: Accomplish detailed and open-hole high frequency eddy current (HFEC) inspections for cracking of the web, upper chord, and upper chord strap of the upper deck floor beams, by doing all the applicable actions in accordance with Part 3.B.1. of the service bulletin.

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."

(h) If any crack is found during any inspection required by paragraph (g) of this AD: Before further flight, accomplish the actions required by paragraph (h)(1) and (h)(2) of this AD.

(1) Repair in accordance with the service bulletin; except where the service bulletin specifies to contact Boeing for appropriate action, before further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or according to data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

(2) Accomplish the inspections and preventive modification of the floor beams by doing all the actions in accordance with Part 3.B.2. or Part 3.B.3. of the service bulletin, as applicable. If any crack is found during any inspection, before further flight, repair as required by paragraph (h)(1) of this AD.

(i) If no crack is found during any inspection required by paragraph (g) of this AD: Accomplish the actions required by either paragraph (i)(1) or (i)(2) of this AD, at the time specified.

(1) Before further flight: Accomplish the inspections and preventive modification of the floor beam by doing all the actions in accordance with Part 3.B.2 or Part 3.B.3. of the service bulletin, as applicable. If the preventive modification is performed concurrently with the inspections required by paragraph (g) of this AD, the upper chord straps must be removed when performing the open-hole HFEC inspection. If any crack is found during any inspection, before further flight, repair as required by paragraph (h)(1) of this AD.

(2) Before the accumulation of 20,000 total flight cycles, or within 1,000 flight cycles after the effective date of this AD, whichever is later: Accomplish the inspections and preventive modification of the upper deck floor beams, by doing all the actions in accordance with Part 3.B.2. or 3.B.3. of the service bulletin, as applicable. If any crack is found during any inspection, before further flight, repair as required by paragraph (h)(1) of this AD.

Post-Modification Inspections

(j) Within 15,000 flight cycles after accomplishing the applicable preventive modification required by paragraph (h)(2), (i)(1), or (i)(2) of this AD: Accomplish the inspections required by either paragraph (j)(1) or (j)(2) of this AD; if any crack is found during any inspection, before further flight, repair as required by paragraph (h)(1) of this AD.

(1) Accomplish detailed and surface HFEC inspections for cracking of the web, upper chord, and upper chord strap of the upper deck floor beams, by doing all the applicable actions in accordance with Part 3.B.4. of the service bulletin. If no crack is found, repeat the inspections at intervals not to exceed 1,000 flight cycles.

(2) Accomplish detailed and open-hole HFEC inspections for cracking of the web, upper chord, and strap of the upper deck floor beams, by doing all the applicable actions in accordance with Part 3.B.5. of the service bulletin. If no crack is found, repeat the inspections at intervals not to exceed 5,000 flight cycles.

Note 2: There is no terminating action currently available for the repetitive inspections required by this AD.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Seattle ACO, 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 a Boeing Company DER who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the approval must specifically refer to this AD.

Material Incorporated by Reference

(l) You must use Boeing Alert Service Bulletin 747-53A2443, dated May 9, 2002, 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 June 10, 2005.
Michael Kaszycki,
Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. 05-12002 Filed 6-21-05; 8:45 am]
BILLING CODE 4910-13-P