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[Page 21249-21251]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2008-1239; Directorate Identifier 2008-NM-131-AD; Amendment 39-15894; AD 2009-09-08]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747 Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Boeing Model 747 airplanes. This AD requires repetitive external surface high frequency eddy current inspections to detect cracks in the radius detail of the upper lobe doubler on both sides of the airplane, and applicable corrective action. This AD results from reports of cracks in the radius detail of the upper lobe doublers. We are issuing this AD to detect and correct cracks in the upper lobe doublers. Such cracks could result in significant degradation of the fuselage structure and reduce its ability to carry flight loads from the vertical stabilizer, which could adversely affect the controllability of the airplane.

DATES: This AD is effective June 11, 2009.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of June 11, 2009.

ADDRESSES: 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 address for the Docket Office (telephone 800-647-5527) is the Document

Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

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 issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to certain Boeing Model 747 airplanes. That NPRM was published in the Federal Register on November 26, 2008 (73 FR 71963). That NPRM proposed to require repetitive external surface high frequency eddy current (HFEC) inspections to detect cracks in the radius detail of the upper lobe doubler on both sides of the airplane, and applicable corrective action.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comments received from the two commenters.

Support for Proposed AD

Boeing concurs with the contents of the proposed AD. Northwest Airlines (NWA) has no technical objection to the initial and repetitive HFEC inspections and corrective actions specified in the proposed AD.

Request To Include Service Bulletin Information Notice

NWA requests that the information in Boeing Service Bulletin Information Notice (IN) 747-53A2651 IN 01, dated November 6, 2008, be acknowledged and accounted for in the final rule.

We partially agree. Changes to Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, are discussed below, along with our response to the commenter about these changes.

- The IN notes that in Figures 1 and 2, footnote (b), of Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, the existing probe part number "MMP950-50" should be "MMP905-50." The existing part number of the probe (for the HFEC inspection) in the service bulletin has a typographical error. The part number is provided in Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, only as an example of an acceptable probe, and is not mandated by this AD. Therefore, we have not changed this AD regarding this issue.
- The IN also notes that in Figures 1 and 2, footnote (b), of Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, additional examples of the small diameter probe part numbers "MMP901-50" and "MMP-60" should be added, and that Boeing wants to provide the operators with more examples of acceptable probes. As use of a specific small diameter probe is not mandated, this AD has not been changed regarding this issue.
- The IN also notes that in Paragraph 3.B., Work Instructions, PART 3, Step 1, of Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, the existing text "from STA 2520 to STA 2521" should be "from STA 2491 to STA 2521." The existing text is a typographical error in "Part 3– Restoration" of the Work Instructions of Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, and it is related to the location of a sealant application. The service bulletin does define the inspection area as "between STA 2491 and STA 2521" in the Action paragraph and the service

bulletin shows the same area to be inspected in the figures. It is Boeing's intent in the service bulletin to apply sealant to the inspected area. We have clarified this issue by adding a new paragraph (g) to this final rule and re-identified subsequent paragraphs accordingly.

Request To Change Work Hours

NWA requests that we change the work-hour estimate provided in the proposed AD to include the time to remove and restore the sealant—for a total of 25 work hours.

We disagree. The cost information describes only the direct costs of the specific actions required by this AD. Based on the best data available, the manufacturer provided the number of work hours necessary to do the required actions. This number represents the time necessary to perform only the actions actually required by this AD. Removing the sealant is addressed in paragraph 3.B. "Part 1—Access," of Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, and restoration of the sealant is addressed in paragraph 3.B. "Part 3—Restoration," in the Work Instructions of the service bulletin. We recognize that, in doing the actions required by an AD, operators might incur incidental costs in addition to the direct costs. The cost analysis in AD rulemaking actions, however, typically does not include incidental costs such as the time required to gain access and close up. Those incidental costs, which might vary significantly among operators, are almost impossible to calculate. This AD has not been changed regarding this issue.

Explanation of Change to Paragraph (f) of This AD

We have revised paragraph (f) of this AD to clarify that there is an initial inspection that must be done for all airplanes and that the repetitive inspections must be done for airplanes on which no cracking is found.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

We estimate that this AD will affect 164 airplanes of U.S. registry. We also estimate that it will take 9 work-hours per product to comply with this AD. The average labor rate is \$80 per work-hour. Based on these figures, we estimate the cost of this AD to the U.S. operators to be \$118,080, or \$720 per product, per inspection cycle.

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:



2009-09-08 Boeing: Amendment 39-15894. Docket No. FAA-2008-1239; Directorate Identifier 2008-NM-131-AD.

Effective Date

(a) This airworthiness directive (AD) is effective June 11, 2009.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008.

Unsafe Condition

(d) This AD results from reports of cracks in the radius detail of the upper lobe doublers. We are issuing this AD to detect and correct cracks in the upper lobe doublers. Such cracks could result in significant degradation of the fuselage structure and reduce its ability to carry flight loads from the vertical stabilizer, which could adversely affect the controllability of the airplane.

Compliance

(e) Comply with this AD within the compliance times specified, unless already done.

Inspection(s) and Corrective Action

(f) At the applicable times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, except as required by paragraph (i) of this AD, do an external surface high frequency eddy current inspection to detect cracks in the radius detail of the upper lobe doubler on both sides of the airplane, and the applicable corrective action, by accomplishing all the applicable actions specified in the Accomplishment Instructions of the service bulletin, except as required by paragraphs (g) and (h) of this AD. The applicable corrective action must be done before further flight. As applicable, repeat the inspection thereafter at the applicable times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008.

(g) Where Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, paragraph 3.B., Work Instructions, PART 3, Step 1, specifies a sealant application "from STA 2520 to STA 2521," this AD requires a sealant application "from STA 2491 to STA 2521" on both sides of the airplane.

(h) Where Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, specifies to contact Boeing for repair instructions instead of repairing or replacing any cracked upper lobe doubler in accordance with the service bulletin, this AD requires, before further flight, repairing any cracked upper lobe doubler using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Where Boeing Alert Service Bulletin 747-53A2651, dated June 12, 2008, specifies a compliance time after the date on the service bulletin, this AD requires compliance within the specified compliance time after the effective date 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 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.

(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 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 747-53A2651, dated June 12, 2008, to do the actions required by this AD, 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 or 425-227-1152.

(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 22, 2009.
Stephen P. Boyd,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.