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[Page 58495-58497]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-28811; Directorate Identifier 2006-NM-246-AD; Amendment 39-15233; AD 2007-21-15]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 707 Airplanes and Model 720 and 720B 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 all Boeing Model 707 airplanes and Model 720 and 720B series airplanes. This AD requires identifying the material used in the elevator hinge support fittings of the horizontal stabilizer trailing edge, doing repetitive detailed inspections for cracking of the fittings and corrective actions if necessary, and doing an eventual terminating action. This AD results from a report that stress corrosion cracking of the elevator hinge support fittings has been discovered on several Model 707 airplanes. We are issuing this AD to prevent cracking of the elevator hinge support fittings, which could reduce the elevator support stiffness and lead to in-flight airframe vibration, consequent damage to the elevator and horizontal stabilizer, and reduced controllability of the airplane.

DATES: This AD becomes effective November 20, 2007.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 20, 2007.

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

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: Duong Tran, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6452; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to all Boeing Model 707 airplanes and Model 720 and 720B series airplanes. That NPRM was published in the Federal Register on July 30, 2007 (72 FR 41462). That NPRM proposed to require identifying the material used in the elevator hinge support fittings of the horizontal stabilizer trailing edge, doing repetitive detailed inspections for cracking of the fittings and corrective actions if necessary, and doing an eventual terminating action.

Comments

We provided the public the opportunity to participate in the development of this AD. We received no comments on the NPRM or on the determination of the cost to the public.

Clarification of Costs of Compliance

In the NPRM, the estimated cost per airplane for the proposed detailed inspections was correct, but the fleet cost was erroneously calculated to be \$47,840 per inspection cycle. We have corrected that amount to \$99,840 per inspections cycle.

Conclusion

We have carefully reviewed the available data and determined that air safety and the public interest require adopting the AD with the change described previously. We have determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Costs of Compliance

There are about 185 airplanes of the affected design in the worldwide fleet. This AD affects about 52 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this AD, at an average labor rate of \$80 per work hour.

Estimated Costs				
Action	Work Hours	Parts	Cost per Airplane	Fleet Cost
Material verification	1	No parts needed	\$80	\$4,160
Detailed inspections	24, per inspection cycle	No parts needed	\$1,920	\$99,840, per inspection cycle

Modification (fabrication and installation of nutplates)	6	Operator supplied	\$480	\$24,960
Terminating action	132	\$53,078 ¹ or \$87,750 ²	\$63,638 ¹ or \$98,310 ²	Up to \$5,112,120

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 and placed it in the AD docket. 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 Federal Aviation Administration (FAA) amends § 39.13 by adding the following new airworthiness directive (AD):



2007-21-15 Boeing: Amendment 39-15233. Docket No. FAA-2007-28811; Directorate Identifier 2006-NM-246-AD.

Effective Date

(a) This AD becomes effective November 20, 2007.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all Model 707-100 long body, -200, -100B long body, and -100B short body series airplanes; Model 707-300, -300B, -300C, and -400 series airplanes; and Model 720 and 720B series airplanes; certificated in any category.

Unsafe Condition

(d) This AD results from a report that stress corrosion cracking of the elevator hinge support fittings of the horizontal stabilizer trailing edge has been discovered on several Model 707 airplanes. We are issuing this AD to prevent cracking of the elevator hinge support fittings, which could reduce the elevator support stiffness and lead to in-flight airframe vibration, consequent damage to the elevator and horizontal stabilizer, and reduced controllability 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) The term "service bulletin," as used in this AD, means the Accomplishment Instructions of Boeing 707 Alert Service Bulletin A3518, dated October 9, 2006.

Material Identification

(g) Within 180 days after the effective date of this AD or before further flight after any horizontal stabilizer is replaced: Verify the type of material used in the elevator hinge support fittings of the horizontal stabilizer trailing edge, in accordance with Part 1 of the Accomplishment Instructions of the service bulletin, then do the requirements of paragraph (g)(1) or (g)(2) of this AD, as applicable. Repeat the verification before further flight after the replacement of any hinge support fitting.

(1) For any hinge support fitting made of 7075-T7351 material: No further action is required by paragraph (h) or (i) of this AD.

(2) For any hinge support fitting made of 7079-T6 or 7075-T6 material: Do the actions required by paragraph (h) of this AD.

Repetitive Inspections, One-time Modification, and Corrective Actions

(h) Before further flight after doing paragraph (g) of this AD, do a detailed inspection for cracking of the hinge support fittings and modify certain segments of the rib webs, in accordance with Part 2 of the Accomplishment Instructions of the service bulletin. For any hinge support fitting found to be cracked or damaged, before further flight, do the actions required by paragraph (h)(1) or (h)(2) of this AD; in accordance with Part 3 of the Accomplishment Instructions of the service bulletin. Do all actions in accordance with the Accomplishment Instructions of the service bulletin; except where the service bulletin specifies to contact the manufacturer for repair procedures, this AD requires repair using a method approved in accordance with the procedures specified in paragraph (k) of this AD.

(1) Replace the fitting with a serviceable fitting made of 7079-T6 or 7075-T6 material. Repeat the detailed inspection thereafter at intervals not to exceed 180 days, until the terminating action required by paragraph (i) of this AD has been done.

(2) Replace the fitting with a new, improved fitting made of 7075-T7351 material.

Terminating Action

(i) For all airplanes: Within 48 months after the effective date of this AD, replace all hinge support fittings made of 7079-T6 or 7075-T6 material with new, improved fittings made of 7075-T7351 material, in accordance with Part 4 of the Accomplishment Instructions of the service bulletin. Doing this action terminates all requirements of paragraphs (g) and (h) of this AD.

Parts Installation

(j) As of the effective date of this AD, no person may install, on any airplane, a new or serviceable hinge support fitting made of 7079-T6 or 7075-T6 material, unless the requirements of paragraph (h)(1) of this AD are accomplished.

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 in accordance with the procedures found in 14 CFR 39.19.

(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 appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(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

(l) You must use Boeing 707 Alert Service Bulletin A3518, dated October 9, 2006, to perform the actions that are required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference of this document in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle,

Washington 98124-2207, for a copy of this service information. You may review copies at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington; or 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on October 5, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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