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[Page 12068-12070]
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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2006-24369; Directorate Identifier 2006-NM-001-AD; Amendment 39-14990; AD 2007-06-09]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-600, -700, -700C, and -800 Series Airplanes

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

ACTION: Final rule.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD), which applies to certain Boeing Model 737-600, -700, -700C, and -800 series airplanes. That AD currently requires replacing the point "D" splice fitting between windows number 1 and 2 with a new splice fitting; performing an eddy current inspection for cracking of the holes in the structure common to the new splice fitting, including doing any related investigative actions; and performing corrective actions if necessary. This new AD adds repetitive inspections for cracking of the skin just below each splice fitting, and related corrective actions if necessary. This AD results from full-scale fuselage fatigue testing on the splice fitting that failed prior to the design objective on Boeing Model 737-800 series airplanes, and a report of a cracked splice fitting on an operational airplane. We are issuing this AD to prevent cracking of the existing fitting, which may result in cracking through the skin and consequent decompression of the flight deck.

DATES: This AD becomes effective April 19, 2007.

The incorporation by reference of Boeing Alert Service Bulletin 737-53A1222, Revision 3, dated January 3, 2007, as listed in the regulations, is approved by the Director of the Federal Register as of April 19, 2007.

On December 21, 2005 (70 FR 72595, December 6, 2005), the Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin 737-53A1222, Revision 2, dated October 20, 2005.

ADDRESSES: You may examine the AD docket on the Internet at <http://dms.dot.gov> or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

FOR FURTHER INFORMATION CONTACT: Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6447; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Examining the Docket

You may examine the airworthiness directive (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 street address stated in the ADDRESSES section.

Discussion

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that supersedes AD 2005-25-03, amendment 39-14396 (70 FR 72595, December 6, 2005). The existing AD applies to certain Boeing Model 737-600, -700, -700C, and -800 series airplanes. That NPRM was published in the Federal Register on April 11, 2006 (71 FR 18251). That NPRM proposed to continue to require replacing the point "D" splice fitting between windows number 1 and 2 with a new splice fitting; performing an eddy current inspection for cracking of the holes in the structure common to the new splice fitting, including doing any related investigative actions; and performing corrective actions if necessary. That NPRM also proposed to add repetitive inspections for cracking of the skin just below each splice fitting, and related corrective actions if necessary.

Explanation of Revision Service Information

The NPRM referred to Boeing Alert Service Bulletin 737-53A1222, Revision 2, as the appropriate source of service information for the inspection of paragraph (g). Boeing has since revised the service bulletin. Revision 3, dated January 3, 2007, corrects and clarifies certain information and adds fastener options, but adds no additional work for airplanes with splice fittings replaced as specified in a previous version of the service bulletin. We have revised this final rule to refer to Revision 3 of the service bulletin for the inspection in paragraph (g), and to provide credit for work done in accordance with Revision 2.

Comments

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

Support for the NPRM

One commenter, Continental Airlines, agrees with the NPRM.

Request To Provide an Alternate Method of Compliance (AMOC)

KLM Engineering and Maintenance requests that the FAA review the inspection methods for the proposed one-time inspection of certain fastener locations during the point "D" splice fitting replacement. The commenter advises that, for certain fastener locations, an eddy current open fastener hole is impractical and may not even be possible due to structure build-up. The commenter

requests that an AMOC be given specifying fluorescent penetrant inspections instead of the eddy current open fastener hole inspections. The commenter notes that use of the fluorescent penetrant inspections has been coordinated with the manufacturer.

Since we issued the NPRM, the manufacturer issued Revision 3 of Boeing Alert Service Bulletin (ASB) 737-53A1222. Revision 3, dated January 3, 2007, contains procedures for performing fluorescent penetrant inspections. This final rule incorporates the revised service bulletin; therefore, no AMOC will be necessary to do this type of inspection. We have not changed this AD regarding this issue.

Conclusion

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

Costs of Compliance

There are about 563 airplanes of the affected design in the worldwide fleet. We estimate that about 243 airplanes are on the U.S. Register, and that the average labor rate is \$80 per hour. The following table provides the estimated costs for U.S. operators to comply with this AD.

Action	Estimated Costs			
	Work hours	Parts	Cost per airplane	Fleet cost
Replacing splice fittings with new fittings (required by AD 2005-25-03)	36	\$15,445	\$18,325	\$4,452,975
External detailed inspection (new action)	1	\$0	\$80	¹ \$19,440, per inspection cycle

¹Per 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

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 removing amendment 39-14396 (70 FR 72595, December 6, 2005) and by adding the following new airworthiness directive (AD):



2007-06-09 Boeing: Amendment 39-14990. Docket No. FAA-2006-24369; Directorate Identifier 2006-NM-001-AD.

Effective Date

- (a) This AD becomes effective April 19, 2007.

Affected ADs

- (b) This AD supersedes AD 2005-25-03.

Applicability

(c) This AD applies to Boeing Model 737-600, -700, -700C, and -800 series airplanes, certificated in any category; as identified in Boeing Alert Service Bulletin (ASB) 737-53A1222, Revision 3, dated January 3, 2007.

Unsafe Condition

(d) This AD results from full-scale fuselage fatigue testing on a splice fitting that failed prior to the design objective on Boeing Model 737-800 series airplanes, and a report of a cracked splice fitting on an operational airplane. We are issuing this AD to prevent cracking of the existing fitting, which may result in cracking through the skin and consequent decompression of the flight deck.

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.

Restatement of Certain Requirements of AD 2005-25-03

Replacing the Splice Fittings

(f) Replace the splice fittings with new splice fittings in accordance with the Accomplishment Instructions of Boeing ASB 737-53A1222, Revision 2, dated October 20, 2005, or Revision 3, dated January 3, 2007, at the times specified in paragraph (f)(1) or (f)(2) of this AD, as applicable. Before further flight, do any related investigative actions by accomplishing all the applicable actions specified in the Accomplishment Instructions.

(1) For airplanes that have accumulated fewer than 13,500 total flight cycles as December 21, 2005 (the effective date of AD 2005-25-03): Replace prior to the accumulation of 13,500 total flight cycles, or within 1,000 flight cycles after December 21, 2005, whichever occurs later.

(2) For airplanes that have accumulated 13,500 or more total flight cycles as of December 21, 2005: Replace at the later of the times specified in paragraphs (f)(2)(i) and (f)(2)(ii) of this AD.

(i) Prior to the accumulation of 18,000 total flight cycles, or within 1,000 flight cycles after December 21, 2005, whichever occurs first.

(ii) Within 90 days after December 21, 2005.

New Requirements of This AD

Repetitive Inspections

(g) Within 24,000 flight cycles after accomplishing the actions specified in paragraph (f) of this AD, perform an external detailed inspection of the skin just below each splice fitting, in accordance with the Accomplishment Instructions of Boeing ASB 737-53A1222, Revision 3, dated January 3, 2007. Thereafter, repeat the external detailed inspections at intervals not to exceed 24,000 flight cycles.

Corrective Actions

(h) If any cracking is found during any inspection required by this AD, prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, or with a method approved in accordance with the procedures specified in paragraph (j) of this AD.

Acceptable Method of Compliance

(i) Replacing the splice fitting and any related investigative actions before December 21, 2005 (the effective date of AD 2005-25-03), in accordance with Boeing Service Bulletin 737-53-1222, dated June 6, 2002; or Boeing ASB 737-53A1222, Revision 1, dated January 30, 2003, is acceptable for compliance with the requirements of paragraph (f) of this AD. An inspection done before the effective date of this AD in accordance with Boeing ASB 737-53A1222, Revision 2, dated October 20, 2005, is acceptable for compliance with the requirements of paragraph (g) of this AD.

Alternative Methods of Compliance (AMOCs)

(j)(1) The Manager, Seattle 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) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

(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.

(4) AMOCs approved previously in accordance with AD 2005-25-03, amendment 39-14396, are approved as AMOCs for the corresponding provisions of paragraphs (f) and (h) of this AD.

Material Incorporated by Reference

(k) You must use Boeing Alert Service Bulletin 737-53A1222, Revision 2, dated October 20, 2005; or Boeing Alert Service Bulletin 737-53A1222, Revision 3, dated January 3, 2007; to perform the actions that are required by this AD, unless the AD specifies otherwise.

(1) The incorporation by reference of Boeing Alert Service Bulletin 737-53A1222, Revision 3, dated January 3, 2007, is approved by the Director of the Federal Register in accordance with 5 U.S.C.

552(a) and 1 CFR part 51.

(2) On December 21, 2005 (70 FR 72595, December 6, 2005), the Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin 737-53A1222, Revision 2, dated October 20, 2005.

(3) 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, S.W., 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 March 7, 2007.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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