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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-29069; Directorate Identifier 2007-NM-176-AD; Amendment 39-15525; AD 2008-11-03]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-100, -200, and -200C Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Boeing Model 737-100, -200, and -200C series airplanes. This AD requires revising the FAA-approved maintenance inspection program to include inspections that will give no less than the required damage tolerance rating for each structural significant item (SSI), doing repetitive inspections to detect cracks of all SSIs, and repairing cracked structure. This AD results from a report of incidents involving fatigue cracking in transport category airplanes that are approaching or have exceeded their design service objective. We are issuing this AD to maintain the continued structural integrity of the entire fleet of Model 737-100, -200, and -200C series airplanes.

DATES: This AD is effective June 25, 2008.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of June 25, 2008.

The Director of the Federal Register approved the incorporation by reference of Boeing Document D6-37089, "Supplemental Structural Inspection Document for Model 737-100/200/200C Airplanes," Revision E, dated May 2007, as listed in this AD, on May 27, 2008 (73 FR 21237, April 21, 2008).

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: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6440; 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 all Boeing Model 737-100, -200, and -200C series airplanes. That NPRM was published in the Federal Register on August 31, 2007 (72 FR 50294). That NPRM proposed to require revising the FAA-approved maintenance inspection program to include inspections that will give no less than the required damage tolerance rating for each structural significant item (SSI), doing repetitive inspections to detect cracks of all SSIs, and repairing cracked structure.

Comments

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

Request To Allow Alternative Inspections for Previously Repaired/Altered Structure

Boeing requests that the NPRM be revised to include a provision for alternative inspections when a repair area prohibits operators from doing the inspections required by paragraph (i) of the NPRM. Boeing requests that the initial alternative inspection be done within 12 months after the repair is discovered during the initial inspection required by paragraph (i) of the NPRM. Boeing points out that a similar provision was provided in paragraph (e) of AD 98-11-04 R1, amendment 39-10984 (64 FR 987, January 7, 1999). Boeing states that including such a provision will assist operators.

We agree. We have added a new paragraph (j) to this AD (and reidentified subsequent paragraphs) that provides for alternative inspections to those in paragraph (i) of this AD.

Request To Clarify Certain Sections of the Preamble of the NPRM

Boeing requests that certain sections in the preamble of the NPRM be clarified for the following reasons:

1. Boeing states that Advisory Circular (AC) No. 91-56, "Supplemental Structural Inspection Program for Large Transport Category Airplanes," dated May 6, 1981, applies to airplanes certified under the fail-safe and fatigue requirements of Civil Air Regulations (CAR) 4b or part 25 of the Federal Aviation Regulations (14 CFR part 25), not damage tolerance structural requirements as stated in the Issuance of Advisory Circular (AC) section.

2. Boeing notes that the Other Relevant Rulemaking section identifies the strut as one of the affected SSIs for Model 737-100, -200, and -200C series airplanes. Boeing states that those airplanes do not have an engine strut.

3. Boeing states that Boeing Document D6-37089, "Supplemental Structural Inspection Document for Model 737-100/200/200C Airplanes," Revision E, dated May 2007 (referred to in the

NPRM as an appropriate source of service information for the required actions), does not describe procedures for repairing cracked structure, as specified in the Relevant Service Information section.

We partially agree. We agree with Boeing that the identified sections should be clarified. However, we find that no change to the final rule is necessary, since the identified sections of the NPRM do not reappear in the final rule.

Explanation of Change to Reported Incidents

We have revised the AD to specify that this AD results from a report of incidents involving fatigue cracking only.

Explanation of Change to Costs of Compliance

The requirements for the baseline structure of Model 737-100, -200, and -200C series airplanes are currently described in 14 CFR 121.1109(c)(1) and 129.109(b)(1), not in 14 CFR 121.370(a) and 129.16 as indicated in the third paragraph of the Cost of Compliance section of the NPRM. Therefore, we have revised the Costs of Compliance section of the AD accordingly.

Explanation of Editorial Changes

We have revised the title of Boeing Document D6-37089-1 from "Appendix A Model 737-100/200/200C Airplanes" to "Supplemental Structural Inspection Document Appendix A Model 737-100/200/200C Airplanes" in this AD. In addition, we have revised "Appendix" to "Appendix A" in paragraphs (g) and (h) of this AD.

Conclusion

We reviewed the relevant data, considered the comment 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

There are about 676 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	Cost	Number of U.S.-registered airplanes	Fleet cost
Revision of maintenance inspection program	200 per operator (23 U.S. operators)	\$80	\$16,000 per operator	118	\$368,000
Inspections	150 per airplane	\$80	\$12,000, per airplane, per inspection cycle	118	\$1,416,000 per inspection cycle

The number of work hours, as indicated above, is presented as if the accomplishment of the actions in this AD is to be conducted as "stand alone" actions. However, in actual practice, these actions for the most part will be done coincidentally or in combination with normally scheduled airplane inspections and other maintenance program tasks. Therefore, the actual number of necessary additional work hours will be minimal in many instances. Additionally, any costs associated with special airplane scheduling will be minimal.

Further, compliance with this AD would be a means of compliance with the aging airplane safety final rule (AASFR) for the baseline structure of Model 737-100, -200, and -200C series airplanes. The AASFR requires certain operators to incorporate damage tolerance inspections into their maintenance inspection programs. These requirements are described in 14 CFR 121.1109(c)(1) and 129.109(b)(1). Accomplishment of the actions required by this AD will meet the requirements of these CFR sections for the baseline structure. The costs for accomplishing the inspection portion of this AD were accounted for in the regulatory evaluation of the AASFR.

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:



2008-11-03 Boeing: Amendment 39-15525. Docket No. FAA-2007-29069; Directorate Identifier 2007-NM-176-AD.

Effective Date

(a) This airworthiness directive (AD) is effective June 25, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all Boeing Model 737-100, -200, and -200C series airplanes, certificated in any category.

Unsafe Condition

(d) This AD results from a report of incidents involving fatigue cracking in transport category airplanes that are approaching or have exceeded their design service objective. We are issuing this AD to maintain the continued structural integrity of the entire fleet of Model 737-100, -200, and -200C series airplanes.

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 Information

(f) The term "Revision E," as used in this AD, means Boeing Document D6-37089, "Supplemental Structural Inspection Document for Model 737-100/200/200C Airplanes," Revision E, dated May 2007.

(g) The term "Appendix A," as used in this AD, means Boeing Document D6-37089-1 "Supplemental Structural Inspection Document Appendix A Model 737-100/200/200C Airplanes," Original Release, dated May 2007, of Revision E.

Revision of the FAA-Approved Maintenance Inspection Program

(h) Before the accumulation of 66,000 total flight cycles, or within 12 months after the effective date of this AD, whichever occurs later, incorporate a revision into the FAA-approved maintenance inspection program that provides no less than the required damage tolerance rating (DTR) for each structural significant item (SSI) listed in Section 3.0, "Flap and Support Structure (Flap Structure) SSI Information," of Appendix A. (The required DTR value for each SSI is listed in Appendix A.) The

revision to the maintenance inspection program must include and must be implemented in accordance with the procedures in Section 3.0 of Appendix A, and in accordance with the procedures in Section 5.0, "Damage Tolerance Rating (DTR) System Application," and Section 6.0, "SSI Discrepancy Reporting" of Revision E. Under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 et seq.), the Office of Management and Budget (OMB) has approved the information collection requirements contained in this AD and has assigned OMB Control Number 2120-0056.

Initial and Repetitive Inspections

(i) Except as provided by paragraph (j) of this AD: Before the accumulation of 66,000 total flight cycles, or within 4,000 flight cycles measured from 12 months after the effective date of this AD, whichever occurs later, do the applicable initial inspections to detect cracks of all SSIs, in accordance with Appendix A. Repeat the applicable inspections thereafter at the intervals necessary to obtain the required DTR specified in Appendix A.

(j) For any SSI that has been repaired or altered before the effective date of this AD such that the repair or design change affects your ability to accomplish the actions required by paragraph (i) of this AD: Before further flight, you must request FAA approval of an alternative method of compliance (AMOC) in accordance with section 39.17 of the Federal Aviation Regulations (14 CFR 39.17), or do the actions specified in paragraphs (j)(1) and (j)(2) of this AD as an approved means of compliance with the requirements of paragraph (i) of this AD.

(1) At the initial compliance time specified in paragraph (i) of the AD, identify each repair or design change to that SSI.

(2) Within 12 months after the identification of a repair or design change required by paragraph (j)(1) of this AD, assess the damage tolerance characteristics of each SSI affected by each repair or design change to determine the effectiveness of the applicable Supplemental Structural Inspection Document (SSID) inspection for that SSI and if not effective, incorporate a revision into the FAA-approved maintenance inspection program to include a damage-tolerance-based alternative inspection program for each affected SSI. Thereafter, inspect the affected structure in accordance with the alternative inspection program. The inspection method and compliance times (i.e., threshold and repeat intervals) of the alternative inspection program must be approved in accordance with the procedures specified in paragraph (m) of this AD.

Repair

(k) If any cracked structure is found during any inspection required by paragraph (i) or (j) of this AD, before further flight, repair the cracked structure using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

Inspection Program for Transferred Airplanes

(l) Before any airplane that is subject to this AD and that has exceeded the applicable compliance times specified in paragraph (i) of this AD can be added to an air carrier's operations specifications, a program for the accomplishment of the inspections required by this AD must be established in accordance with paragraph (l)(1) or (l)(2) of this AD, as applicable.

(1) For airplanes that have been inspected in accordance with this AD: The inspection of each SSI must be done by the new operator in accordance with the previous operator's schedule and inspection method, or the new operator's schedule and inspection method, at whichever time would result in the earlier accomplishment for that SSI inspection. The compliance time for accomplishment of this inspection must be measured from the last inspection accomplished by the previous operator. After each inspection has been done once, each subsequent inspection must be performed in accordance with the new operator's schedule and inspection method.

(2) For airplanes that have not been inspected in accordance with this AD: The inspection of each SSI required by this AD must be done either before adding the airplane to the air carrier's operations specification, or in accordance with a schedule and an inspection method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA. After each inspection has been done once, each subsequent inspection must be done in accordance with the new operator's schedule.

AMOCs

(m)(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) 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 approval must specifically refer to this AD.

Material Incorporated by Reference

(n) You must use Boeing Document D6-37089, "Supplemental Structural Inspection Document for Model 737-100/200/200C Airplanes," Revision E, dated May 2007; and Boeing Document D6-37089-1 "Supplemental Structural Inspection Document Appendix A Model 737-100/200/200C Airplanes," Original Release, dated May 2007; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

(1) Boeing Document D6-37089-1 contains these errors: Pages REF 1 and REF 2 of the Reference Section and pages L-19.1 and L-19.2 of Section 4.0, as specified in the List of Effective Pages, do not exist.

(2) The Director of the Federal Register approved the incorporation by reference of Boeing Document D6-37089-1 "Supplemental Structural Inspection Document Appendix A Model 737-100/200/200C Airplanes," Original Release, dated May 2007, under 5 U.S.C. 552(a) and 1 CFR part 51.

(3) The Director of the Federal Register approved the incorporation by reference of Boeing Document D6-37089, "Supplemental Structural Inspection Document for Model 737-100/200/200C Airplanes," Revision E, dated May 2007, on May 27, 2008 (73 FR 21237, April 21, 2008).

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

(5) You may review copies of the service information that is incorporated by reference 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/code_of_federal_regulations/ibr_locations.html.

Issued in Renton, Washington, on May 7, 2008.

Michael J. Kaszycki,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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