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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-29255; Directorate Identifier 2007-NM-085-AD; Amendment 39-15821; AD 2009-04-15]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-100, -200, -200C, -300, -400, and -500 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 737-100, -200, -200C, -300, -400, and -500 series airplanes. This AD requires repetitive internal eddy current and detailed inspections to detect cracked stringer tie clips; measuring the fastener spacing and the edge margin if applicable, and doing applicable corrective and related investigative actions. As a temporary alternative to doing the actions described previously, this AD requires repetitive external general visual inspections of the skin and lap joints and repetitive external eddy current sliding probe inspections, as applicable, of the lap joints for cracks and evidence of overload resulting from cracked stringer tie clips, and applicable corrective actions if necessary. This AD results from a report of several cracked stringer tie clips. We are issuing this AD to detect and correct multiple adjacent cracked stringer tie clips and damaged skin and frames, which could lead to the skin and frame structure developing cracks and consequent decompression of the airplane.

DATES: This AD becomes effective April 2, 2009.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of April 2, 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: 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:

Discussion

The FAA issued a supplemental notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to certain Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. That supplemental NPRM was published in the Federal Register on August 29, 2008 (73 FR 50899). That supplemental NPRM proposed to require repetitive internal eddy current and detailed inspections to detect cracked stringer tie clips; measuring the fastener spacing and the edge margin if applicable, and doing applicable corrective and related investigative actions. That supplemental NPRM also proposed to require repetitive external eddy current sliding probe inspections of the lap joints for cracks and evidence of overload resulting from cracked stringer tie clips, and applicable corrective actions if necessary.

Comments

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

Request To Clarify Effectivity

Boeing asks that the affected airplanes specified in Note 3 of the supplemental NPRM be clarified. Boeing states that the original issue of Boeing Service Bulletin 737-53-1085, Revision 1, dated May 10, 1990 (referred to in Note 3), contains an error in the affected airplanes shown in the summary section. Boeing notes that the error shows line numbers 1 through 1000. Boeing also states that in the planning information section of that service bulletin, it shows line number 1000/part number 136 is not included in the Group 2 airplanes (all affected Model 737-200 airplanes). In addition, Boeing Service Bulletin 737-53-1085, Revision 1, dated May 10, 1990, includes a change to the production line for line numbers 1000 and on. Boeing asks that Note 3 of the supplemental NPRM be changed to replace line number 1000 with line number 999, and to replace line number 1001 with line number 1000. We agree for the reasons provided and have changed Note 3 for clarification.

Request To Clarify Paragraph (g)

Boeing asks that we clarify the first sentence in paragraph (g) of the supplemental NPRM (paragraph (f) of the final rule) by adding "as applicable" after the inspection method. We agree because the inspection method depends on the type of stringer clip. We have changed paragraph (f) of the AD accordingly.

Request To Clarify Paragraph (h)

Boeing asks that we clarify the first sentence in paragraph (h) of the supplemental NPRM (paragraph (g) of the final rule) by adding "as applicable" to that sentence. We agree because the inspection types are appropriate only for certain airplanes. We have changed paragraph (g) of the AD accordingly.

Request To Move Note 2

Boeing asks that we move Note 2 of the supplemental NPRM from its current position below paragraph (h) of the supplemental NPRM (paragraph (g) of the final rule) to the position below paragraph (g) (paragraph (f) of the final rule) and Note 1 of the supplemental NPRM. Boeing states that Note 2 pertains to the optional/economic inspections, which are relative to those inspections specified in paragraph (g), not paragraph (h). Boeing notes that Note 2 provides supplemental information about paragraph (g). Boeing adds that Note 2 should be moved to correspond with Inspection A, which is specified in paragraph (g). We agree for the reasons provided and we have moved Note 2 to the position below Note 1.

Change to Final Rule

We have removed the "Service Bulletin Reference" paragraph from this AD, and re-identified subsequent paragraphs accordingly. (That paragraph was identified as paragraph (f) in the supplemental NPRM.) Instead, we have spelled out the service bulletin citations throughout this AD.

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 affects 787 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this AD.

| Estimated Costs | | | | | |
|--|-------------------------------|------------------------------------|---|--|---|
| Action | Work hours¹ | Average labor rate per hour | Cost per airplane¹ | Number of U.S.-registered airplanes | Fleet cost¹ |
| Inspection A | Between 40 and 103 | \$80 | Between \$3,200 and \$8,240, per inspection cycle | 787 | Between \$2,518,400 and \$6,484,880, per inspection cycle |
| Inspection B (temporary alternative to Inspection A) | Between 2 and 109 | \$80 | Between \$160 and \$8,720 | 787 | Between \$125,920 and \$6,862,640, per inspection cycle |

¹ Depending on the airplane configuration.

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):



2009-04-15 Boeing: Amendment 39-15821. Docket No. FAA-2007-29255; Directorate Identifier 2007-NM-085-AD.

Effective Date

(a) This AD becomes effective April 2, 2009.

Affected ADs

(b) AD 93-08-04, amendment 39-8551.

Applicability

(c) This AD applies to Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category; as identified in Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006.

Unsafe Condition

(d) This AD results from a report of several cracked stringer tie clips. We are issuing this AD to detect and correct multiple adjacent cracked stringer tie clips and damaged skin and frames, which could lead to the skin and frame structure developing cracks and consequent 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.

Inspection A: Required Internal Inspections, Applicable Corrective and Related Investigative Actions, and Measurement

(f) Do repetitive internal eddy current and detailed inspections, as applicable, to detect cracked stringer tie clips; measure the fastener spacing and the edge margin if applicable; and do applicable corrective and related investigative actions. Do all applicable actions at the applicable compliance times and repeat intervals identified in Tables 2 through 8 inclusive of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006 ("the service bulletin"); except as provided by paragraphs (h) through (k) of this AD. Do all applicable actions in accordance with the Accomplishment Instructions of the service bulletin, except as provided by paragraph (l) of this AD.

Note 1: Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006, refers to Boeing Service Bulletin 737-53A1177, Revision 6, dated May 31, 2001, as an additional source of service information for doing an internal eddy current inspection of the lap joint for certain airplane configurations.

Note 2: The eddy current inspections along the stringer tie clip radius to detect damage and replacement, as applicable, specified in paragraph 3.B.5. of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006, are not required by this AD. The actions are optional and can be done in addition to and at the same time as the actions required by paragraph (f) of this AD.

Inspection B: Temporary Alternative External Inspections and Corrective Actions

(g) As a temporary alternative to doing the actions required by paragraph (f) of this AD, do repetitive external general visual inspections of the skin and lap joints and repetitive external eddy current sliding probe inspections, as applicable, of the lap joints for cracks and evidence of overload resulting from cracked stringer tie clips, and applicable corrective actions if necessary. Do all applicable actions at the applicable compliance times and repeat intervals identified in Tables 9 through 12 inclusive of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006 ("the service bulletin"), but not to exceed the flight cycles in the "Inspection Period Allowed" column of the tables; except as provided by paragraphs (h) and (k) of this AD. Do all applicable actions in accordance with the Accomplishment Instructions of the service bulletin, except as provided by paragraph (l) of this AD.

Note 3: Inspection B may be used on affected airplanes having line numbers 1 through 999 inclusive on which the terminating action (i.e., replacement of stringer tie clips) specified in Boeing Service Bulletin 737-53-1085, Revision 1, dated May 10, 1990, has been done; and on affected airplanes having line numbers 1000 and subsequent. Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006, contains a similar note.

Exceptions to Service Information

(h) Where Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006 ("the service bulletin"), specifies a compliance time after the date of the service bulletin, this AD requires compliance within the specified compliance time after the effective date of this AD.

(i) For Model 737-100, -200, and -200C series airplanes, on which Boeing Service Bulletin 737-53-1085, Revision 1, dated May 10, 1990, has not been done in accordance with AD 93-08-04: As of the effective date of this AD, do the applicable inspections from station (STA) 559 to STA 887 in accordance with paragraph (f) of this AD, at the applicable compliance times specified in paragraph (b) of AD 93-08-04.

(j) In the first row of Tables 5 and 6 of paragraph 1.E., "Compliance," of Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006 ("the service bulletin"), where the service bulletin specifies a compliance time of before 25,000 total airplane flight cycles, this AD requires a compliance time of before the accumulation of 25,000 total flight cycles, or within 2 years after the effective date of this AD, whichever occurs later.

(k) Where Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006, specifies no starting point (e.g., "after the date on the service bulletin") for a grace period, this AD requires compliance within the specified grace period after the effective date of this AD.

(l) Where Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 2006, specifies to contact Boeing for appropriate action: Before further flight, repair the discrepancy using a method approved in accordance with the procedures specified in paragraph (n) of this AD.

Certain Actions End Certain Requirements of AD 93-08-04

(m) Accomplishment of the internal eddy current and detailed inspections for STA 559 to STA 887 in accordance with paragraph (f) of this AD constitutes compliance with the inspections required by paragraph (a) of AD 93-08-04, as it pertains to Boeing Service Bulletin 737-53-1085, Revision 1, dated May 10, 1990. Accomplishment of the internal eddy current and detailed inspections does not terminate the remaining requirements of AD 93-08-04, as it applies to other service bulletins. Operators are required to continue to inspect and/or modify per the other service bulletins listed in that AD.

Alternative Methods of Compliance (AMOCs)

(n)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, ATTN: Wayne Lockett, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6447; fax (425) 917-6590; has the authority to approve AMOCs for this AD, if requested using 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.

Material Incorporated by Reference

(o) You must use Boeing Special Attention Service Bulletin 737-53-1268, dated August 25, 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.

(1) 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>.

(2) 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. For information on the availability of this material at the FAA, call 425-227-1221 or 425-227-1152.

(3) You may also review copies of the service information 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 January 30, 2009.
Stephen P. Boyd,
Assistant Manager, Transport Airplane Directorate,
Aircraft Certification Service.