

Airworthiness Directive

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-74-AD; Amendment 39-12705; AD **2002-07-11**]

RIN 2120-AA64

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

PDF Copy (If Available):



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▼ Preamble Information

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 737-200 and -200C series airplanes, that requires repetitive inspections to find cracking of certain fuselage lap joint areas, and repair of any cracking found. This amendment also requires eventual modification of those areas, which constitutes terminating action for the repetitive inspections. This action is necessary to find and fix cracking of certain fuselage lap joint areas, which could result in rapid decompression of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective May 17, 2002.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 17, 2002.

ADDRESSES: The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Scott Fung, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington; telephone (425) 227-1221; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 737-200 and -200C series airplanes was published in the **Federal Register** on July 12, 2001 (66 FR 36520). That action proposed to require repetitive inspections to find cracking of certain fuselage lap joint areas, and repair of any cracking found. That action also proposed to require eventual modification of those areas, which would constitute terminating action for the repetitive inspections.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Change Paragraph (e)

One commenter, the airplane manufacturer, asks that paragraph (e) of the proposed rule be changed to instruct operators to install the lap joint repair referenced in the proposed rule per Part 1.E.3. ("Compliance") of the service bulletin. The commenter states that paragraph (e) instructs operators to install the lap joint repair on left and right stringer S-10 and S-14 lap joints per Part III ("Lap Joint Repair") of the Accomplishment Instructions of the service bulletin. The commenter notes that Part III defines the instructions for the full lap joint cutout repair for the crown area lap joints, but the modification for the local areas of the S-10 and S-14 lap joints subject to this AD is done per Boeing 737 Structural Repair Manual (SRM), Section 53-30-3, Figure 44. The instructions for doing this modification per the SRM are provided in Part 1.E.3. ("Compliance").

The FAA agrees with the commenter. The reference to Part III ("Lap Joint Repair") of the Accomplishment Instructions of the service bulletin required by paragraph (e) of the final rule is not an incorrect reference; however, that section does not specifically call out Section 53-30-3, Figure 44, of the Boeing 737 SRM. Therefore, we have changed paragraph (e) of the final rule to add doing the installation of the lap joint repair of the left and right stringer S-10 and S-14 lap joints of the fuselage per Part III ("Lap Joint

Repair") of the Accomplishment Instructions of the service bulletin, or Part 1.E.3. ("Compliance") of the service bulletin, as applicable.

Previous Revisions of Service Information

One commenter asks that Boeing Service Bulletins 737-53A1177, Revision 4, dated September 2, 1999; and Revision 5, dated February 15, 2001; be added as acceptable sources of service information for doing the terminating action specified in paragraph (e) of the proposed rule. We agree because the terminating action specified in those revisions is the same as the terminating action specified in the service information referenced in the final rule. We have added a Note 3 to this final rule (and reordered subsequent notes accordingly) to specify that accomplishment of the terminating action before the effective date of this AD according to those revisions is acceptable for compliance with paragraph (e) of this final rule.

Change Work Hours for Modification

The same commenter notes that the Differences section of the proposed rule states that the proposed modifications would require taking the airplane out of service for at least 22 days. However, in the Cost Impact section of the proposed rule, work hours necessary for the modification are estimated at 16 hours. The commenter's estimate is 14 hours for the modification, or approximately one day.

The FAA infers that the commenter is asking that the work hours for the modification, as specified in the Cost Impact section of the final rule, be changed. We do not agree with the commenter's request. We note that the commenter inadvertently transposed the work hours specified for the modifications and the inspections. The actual work hour estimate for the modifications is 75 hours, and the estimate for the inspections is 16 hours. The number of work hours necessary to accomplish the required actions, restated below, is based on the information provided by the airplane manufacturer in its service bulletin. This number represents the time necessary to perform only the actions actually required by this AD--the "direct" costs. Because costs may vary significantly from operator to operator, they are almost impossible to calculate. No change to the final rule is necessary in this regard.

Change to Final Rule

The compliance plan requirements specified in paragraph (d) of this final rule have been changed to exclude operators that have previously done the modification required by paragraph (e) of the final rule, and the requirement to provide dates and maintenance events (e.g., letter checks) has been changed to just estimated dates, for operators that have not yet done the required actions. Paragraphs (d) and (e) of the final rule have been changed accordingly.

Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 159 Model 737-200 and -200C series airplanes of the affected design in the worldwide fleet. The FAA estimates that 55 airplanes of U.S. registry (over 10 years) will be affected by this AD.

It will take approximately 16 work hours per airplane to accomplish the required inspections, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the inspections required by this AD on U.S. operators is estimated to be \$52,800, or \$960 per airplane, per inspection cycle.

It will take approximately 75 work hours per airplane to accomplish the required modifications, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$1,500 per airplane. Based on these figures, the cost impact of the modifications required by this AD on U.S. operators is estimated to be \$330,000, or \$6,000 per airplane.

The compliance plan that is required by this AD action will take approximately 24 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the compliance plan on U.S. operators is estimated to be \$79,200, or \$1,440 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption **ADDRESSES**.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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.

Sec. 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

▼ Regulatory Information

2002-07-11 Boeing: Amendment 39-12705. Docket 2000-NM-74-AD.

Applicability: Model 737-200 and -200C airplanes having line numbers 1 through 291 inclusive, certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To find and fix cracking of certain fuselage lap joint areas, which could result in rapid decompression of the airplane, accomplish the following:

Repetitive Low Frequency Eddy Current (LFEC) Inspections

(a) Do an LFEC inspection to find cracking of the left and right stringers S-10 and S-14 lap joints of the fuselage, located between body station (BS) 727 and BS 747, per Figures 7 and 8 of the Accomplishment Instructions of Boeing Service Bulletin 737-53A1177, Revision 6, dated May 31, 2001; at the time specified in paragraph (a)(1) or (a)(2) of this AD, as applicable. Repeat the inspection after that at intervals not to exceed 1,200 flight cycles until accomplishment of the lap joint modification (repair) required by paragraph (e) of this AD.

(1) For airplanes that have accumulated 70,000 or more total flight cycles as of the effective date of this AD: At the later of the times specified in paragraphs (a)(1)(i) and (a)(1)(ii) of this AD.

(i) Before the accumulation of 71,200 total flight cycles.

(ii) Within 300 flight cycles after the effective date of this AD.

(2) For airplanes that have accumulated 45,000 or more total flight cycles, but less than 70,000 total flight cycles as of the effective date of this AD: At the later of the times specified in paragraphs (a)(2)(i) and (a)(2)(ii) of this AD.

(i) Before the accumulation of 50,000 total flight cycles.

(ii) Within 1,200 flight cycles after the effective date of this AD.

Crack Repair

(b) Except as provided by paragraph (c) of this AD: If any cracking is found during any inspection required by this AD, before further flight, repair per Part II ("Crack Repair") of the Accomplishment Instructions of Boeing Service Bulletin 737-53A1177, Revision 6, dated May 31, 2001.

(c) If any cracking is found during any inspection required by this AD, and Boeing Service Bulletin 737-53A1177, Revision 6, dated May 31, 2001, specifies to contact Boeing for repair instructions: Repair before further flight, per a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or per data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the approval letter must specifically reference this AD.

Compliance Plan

(d) For airplanes on which the modification required by paragraph (e) of this AD has not been done as of the effective date of this AD: Within 3 months after the effective date of this AD, submit a plan to the FAA identifying a schedule for compliance with paragraph (e) of this AD. This schedule must include, for each of the operator's affected airplanes, the estimated dates when the required actions will be accomplished. For the purposes of this paragraph, "FAA" means the Principal Maintenance Inspector (PMI) for operators that are assigned a PMI, or the cognizant Flight Standards District Office for other operators. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 *et seq.*) and have been assigned OMB Control Number 2120-0056.

Note 2: Operators are not required to submit revisions to the compliance plan required by paragraph (d) of this AD to the FAA.

Lap Joint Modification (Repair)

(e) Except as provided by paragraph (d) of this AD, before the accumulation of 50,000 total flight cycles or within 5,000 flight cycles after the effective date of this AD, whichever comes later: Install the lap joint repair of the left and right stringer S-10 and S-14 lap joints of the fuselage, between body station (BS) 727 and BS 747, per Part III ("Lap Joint Repair") of the Accomplishment Instructions, or Part 1.E.3. "Compliance," of Boeing Service Bulletin 737-53A1177, Revision 6, dated May 31, 2001, as applicable. Installation of this repair ends the repetitive inspections of the repaired areas required by paragraph (a) of this AD.

Note 3: Installation of the lap joint repair before the effective date of this AD per Boeing Service Bulletin 737-53A1177, Revision 4, dated September 2, 1999; or Revision 5, dated February 15, 2001; is acceptable for compliance with paragraph (e) of this AD.

Alternative Methods of Compliance

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(g) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of

the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

Incorporation by Reference

(h) Except as provided by paragraphs (c) and (d) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 737-53A1177, Revision 6, dated May 31, 2001. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(i) This amendment becomes effective on May 17, 2002.

▼ Footer Information

Issued in Renton, Washington, on April 2, 2002.
Ali Bahrami,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.
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▼ Comments