

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 36146 7/11/2001]

[Docket No. 2000-NM-205-AD; Amendment 39-12317; AD 2000-06-13 R1]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-200, -200C, -300, and -400 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment revises an existing **airworthiness** directive (AD), applicable to certain Boeing Model 737-200, -200C, -300, and -400 series airplanes, that currently requires repetitive visual and high frequency eddy current (HFEC) inspections to detect cracking of the corners of the door frame and the cross beams of the aft cargo door, and corrective actions, if necessary. That amendment also mandates accomplishment of a modification to the aft cargo door, which would terminate the repetitive inspection requirements. This amendment revises the compliance time for the terminating modification. The actions specified by this AD are intended to prevent fatigue cracking of the corners of the doorframe and the crossbeams of the aft cargo door, which could result in rapid depressurization of the airplane.

DATES: Effective August 15, 2001.

The incorporation by reference of Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999, as listed in the **regulations**, was approved previously by the Director of the Federal Register as of May 9, 2000 (65 FR 17583, April 4, 2000).

The incorporation by reference of Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996, as listed in the **regulations**, was approved previously by the Director of the Federal Register as of December 24, 1998 (63 FR 67769, December 9, 1998).

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: James Blilie, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-2028; telephone (425) 227-2131; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation **Regulations** (14 CFR part 39) by revising AD 2000-06-13, amendment 39-11654 (65 FR 17583, April 4, 2000); which is applicable to certain Boeing Model 737-200, -200C, -300, and -400 series airplanes; was published in the Federal Register on October 5, 2000 (65 FR 59381). The action proposed to continue to require repetitive visual and high frequency eddy current (HFEC) inspections to detect cracking of the corners of the door frame and the cross beams of the aft cargo door, and

corrective actions, if necessary. The action also proposed to continue to mandate accomplishment of a modification to the aft cargo door, which would terminate the repetitive inspection requirements. However, the action proposed to revise the compliance time of the terminating action.

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.

Support for the Proposal

One commenter supports the proposed rule.

Request for Clarification of Note 4

One commenter requests clarification of Note 4 of the proposed rule. That note states, "Modification of the corners of the door frame and the cross beams of the aft cargo door accomplished prior to the effective date of this AD in accordance with Boeing Service Bulletin 737-52-1079, dated December 16, 1983; Revision 1, dated December 15, 1988; Revision 2, dated July 20, 1989; Revision 3, dated May 17, 1990; or Revision 4, dated February 21, 1991; is considered acceptable for compliance with paragraph (e) of this AD." The commenter states that certain repair angles installed per those service bulletins may have been installed with inadequate edge margin, and the commenter questions whether repair angles installed without cracks but with inadequate edge margin are acceptable for compliance with paragraph (e) of this AD. Furthermore, the commenter notes that Revision 6 of the service bulletin, dated November 18, 1999, requires that certain repair angles installed with a short edge margin be repetitively inspected, and questions whether these repetitive inspections would be required by the proposed AD.

The FAA does not concur that any change to Note 4 of this AD is necessary. To be acceptable for compliance with paragraph (e) of this AD, the modification of the corners of the door frame must have been properly installed according to the referenced service bulletins. To properly install any repair or modification, all fastener edge margins must meet normal rework requirements which are explicitly stated in the Boeing Structural Repair Manual and other service information. If the edge margins for an installation of the terminating modification are not adequate, as specified in the service bulletin, then the repetitive inspections identified in the service bulletin would be necessary for the modification to be considered to have been accomplished "in accordance with the service bulletin." No change to the final rule is necessary in this regard.

Explanation of Editorial Change

In paragraph (d) of the proposed rule, an editing error resulted in that paragraph including a compliance time of "Within 4,500 flight cycles or one year after the effective date of this AD." The paragraph should have referenced the effective date of AD 2000-06-13, which is May 9, 2000. Therefore, paragraph (d) of this final rule has been revised to correct this error and specify a compliance time of 4,500 flight cycles or 1 year after May 9, 2000.

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 change previously described. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 1,636 Model 737 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 707 airplanes of U.S. registry are affected by this AD. This AD adds no new requirements, but only extends a compliance time for an action already required by AD 2000-06-13. Thus, this AD adds no new additional economic burden on affected operators, other than the cost of additional repetitive inspection cycles if operators elect to accomplish the modification at a later compliance time as allowed by this AD. The current costs associated with this amendment are reiterated in their entirety (as follows) for the convenience of affected operators:

The detailed visual inspections currently required by AD 2000-06-13 take approximately 2 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of these currently required inspections on U.S. operators is estimated to be \$84,840, or \$120 per airplane, per inspection cycle.

The HFEC inspections currently required by AD 2000-06-13 take approximately 4 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of these inspections on U.S. operators is estimated to be \$169,680, or \$240 per airplane, per inspection cycle.

The modification currently required by AD 2000-06-13 takes approximately 144 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Required parts cost approximately \$4,530 per airplane. Based on these figures, the estimated cost impact of this modification on U.S. operators is estimated to be \$9,311,190, or \$13,170 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.

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 removing amendment 39-11654 (65 FR 17583, April 4, 2000), and by adding a new **airworthiness** directive (AD), amendment 39-12317, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

We post ADs on the internet at "av-info.faa.gov"

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

REVISION

2000-06-13 R1 Boeing: Amendment 39-12317. Docket 2000-NM-205-AD. Revises AD 2000-06-13, Amendment 39-11654.

Applicability: The following airplane models, certificated in any category.

Model 737-200 and -200C series airplanes, line numbers 6 through 873 inclusive; Model 737-200, -200C, -300, and -400 series airplanes; line numbers 874 through 1642 inclusive; equipped with an aft cargo door having Boeing part number (P/N) 65-47952-1 or P/N 65-47952-524; excluding:

1. Those airplanes on which that door has been modified in accordance with Boeing Service Bulletin 737-52-1079; or
2. Those airplanes on which the door assembly having P/N 65-47952-524 includes four straps (P/N's 65-47952-139, 65-47952-140, 65-47952-141, and 65-47952-142) and a thicker lower cross beam web (P/N 65-47952-157).

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise 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)(1) 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 prevent fatigue cracking of the corners of the doorframe and the cross beams of the aft cargo door, which could result in rapid depressurization of the airplane, accomplish the following:

Restatement of the Requirements of AD 2000-06-13

Inspections and Corrective Actions

(a) Within 90 days or 700 flight cycles after December 24, 1998 (the effective date of AD 98-25-06, amendment 39-10931), whichever occurs later, perform an internal detailed visual inspection to detect cracking of the corners of the door frame and the cross beams of the aft cargo door, in accordance with Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; or Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999.

(1) If no cracking is detected, accomplish the requirements of either paragraph (a)(1)(i) or (a)(1)(ii) of this AD.

(i) Repeat the internal visual inspection thereafter at intervals not to exceed 4,500 flight cycles. Or

(ii) Prior to further flight, modify the corners of the doorframe and the crossbeams of the aft cargo door in accordance with the service bulletin. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (a)(1)(i) of this AD.

(2) If any cracking is detected in the upper or lower cross beams, prior to further flight, modify the cracked beam in accordance with Part I of the Accomplishment Instructions of the service bulletin. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (a)(1)(i) of this AD for the repaired beam.

(3) If any cracking is detected in the forward or aft upper door frame, prior to further flight, repair the frame and modify the corners of the door frame of the aft cargo door, in accordance with Part I of the Accomplishment Instructions of the service bulletin, except as provided by paragraph (b) of this AD. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (a)(1)(i) of this AD for the upper doorframe.

Note 2: Cracks of the forward or aft upper door frame, regardless of length, must be repaired prior to further flight in accordance with Part I of the Accomplishment Instructions of the service bulletin.

(4) If any cracking is detected in the forward or aft lower door frame, prior to further flight, replace the damaged frame with a new frame, and modify the corners of the door frame of the aft cargo door, in accordance with Part I of the Accomplishment Instructions of the service bulletin. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (a)(1)(i) of this AD for the lower doorframe.

(b) Where Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; or Boeing Alert Service Bulletin, 737-52A1079, Revision 6, dated November 18, 1999; specifies that certain repairs are to be accomplished in accordance with instructions received from Boeing, this AD requires that, prior to further flight, such repairs be accomplished in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA.

Inspections and Corrective Actions

(c) If any cracking of the outer chord of the upper or lower cross beams of the aft cargo door is detected as a result of any inspection required by paragraph (a) of this AD, prior to further flight, repair in accordance with a method approved by the Manager, Seattle ACO; Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the Manager's approval letter must specifically reference this AD.

(d) Within 4,500 flight cycles or 1 year after May 9, 2000 (the effective date of AD 2000-06-13, amendment 39-11654), whichever occurs later: Perform a high frequency eddy current inspection (HFEC) to detect cracking of the four corners of the door frame of the aft cargo door, in accordance with the procedures specified in Boeing 737 Nondestructive Test Manual, Part 6, Chapter 51-00-00 (Figure 4 or Figure 23); or Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999.

(1) If no cracking of the corners of the doorframe of the aft cargo door is detected, repeat the HFEC inspections thereafter at intervals not to exceed 4,500 flight cycles until accomplishment of the modification specified in paragraph (e) of this AD.

(2) If any cracking of the corners of the door frame of the aft cargo door is detected, prior to further flight, replace the damaged frame with a new frame, and modify the four corners of the door frame, in accordance with Parts II and III of the Accomplishment Instructions of Boeing Service

Bulletin 737-52-1079, Revision 5, dated May 16, 1996; or Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999. Accomplishment of such modification constitutes terminating action for the repetitive inspection requirements of paragraph (d)(1) of this AD for that doorframe.

Requirement Revised by This AD Terminating Action

(e) Within 4 years or 12,000 flight cycles after the effective date of this AD, whichever occurs later: Modify the four corners of the door frame and the cross beams of the aft cargo door, in accordance with Part II of the Accomplishment Instructions of Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; or Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999. Accomplishment of that modification constitutes terminating action for the repetitive inspection requirements of this AD.

Note 3: Accomplishment of the modification required by paragraph (a) of AD 90-06-02, amendment 39-6489, is considered acceptable for compliance with paragraph (e) of this AD.

Note 4: Modification of the corners of the door frame and the cross beams of the aft cargo door accomplished prior to the effective date of this AD in accordance with Boeing Service Bulletin 737-52-1079, dated December 16, 1983; Revision 1, dated December 15, 1988; Revision 2, dated July 20, 1989; Revision 3, dated May 17, 1990; or Revision 4, dated February 21, 1991; is considered acceptable for compliance with paragraph (e) of this AD.

Alternative Methods of Compliance

(f) (1) 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.

(2) Alternative methods of compliance, approved previously in accordance with AD 98-25-06, amendment 39-10931, are approved as alternative methods of compliance with this AD.

Note 5: 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 Secs. 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 in paragraphs (b), (c), and (d) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996; or Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999.

(1) The incorporation by reference of Boeing Alert Service Bulletin 737-52A1079, Revision 6, dated November 18, 1999, was approved previously by the Director of the Federal Register as of May 9, 2000 (65 FR 17583, April 4, 2000).

(2) The incorporation by reference of Boeing Service Bulletin 737-52-1079, Revision 5, dated May 16, 1996, was approved previously by the Director of the Federal Register as of December 24, 1998 (63 FR 67769, December 9, 1998).

(3) 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 August 15, 2001.

Issued in Renton, Washington, on July 2, 2001.

Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.

BILLING CODE [4910-13-P]

SUPERSEDED