

[Federal Register: April 23, 1999 (Volume 64, Number 78)]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [64 FR 19879 No. 78 04/23/99]

Docket No. 98-NM-337-AD; Amendment 39-11132; AD 99-08-23

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-100, -200, -200C, -300, -400, and -500 Series Airplanes

Preamble Information

AGENCY: Federal Aviation Administration, DOT

ACTION: Final rule; request for comments

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to all Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. This action requires repetitive inspections to detect cracking in the web of the aft pressure bulkhead at body station 1016 at the aft fastener row attachment to the "Y" chord; and corrective actions, if necessary. This amendment is prompted by several reports of fatigue cracking found at that location on Model 737 series airplanes. The actions specified in this AD are intended to detect and correct such fatigue cracking, which could result in rapid decompression of the fuselage.

DATES: Effective May 10, 1999.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 10, 1999.

Comments for inclusion in the Rules Docket must be received on or before June 22, 1999.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 98-NM-337-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

FOR FURTHER INFORMATION CONTACT: Nenita Odesa, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2557; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: The FAA has received reports of fatigue cracking found on Boeing Model 737-200 series airplanes in the web of the aft pressure bulkhead at

body station 1016 at the aft fastener row attachment to the "Y" chord. An 11-inch crack was found on an airplane with 40,000 total flight cycles, and a 3.5-inch crack was found on an airplane with 28,000 total flight cycles. Investigation revealed 43 fasteners installed in improperly drilled holes at the web-to-"Y" chord attachment in the area of the 11-inch crack. Such fatigue cracking, if not detected and corrected, could result in rapid decompression of the fuselage.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, this AD is being issued to detect and correct fatigue cracking at certain fastener holes of the aft pressure bulkhead, which could result in rapid decompression of the fuselage. This AD requires repetitive inspections of the web of the aft pressure bulkhead at body station 1016 at the aft fastener row attachment to the "Y" chord, and corrective actions, if necessary. For compliance with this inspection requirement, operators may perform either a low frequency eddy current (LFEC) inspection from the aft side of the bulkhead or a detailed visual inspection from the forward side of the bulkhead. Corrective actions include a high frequency eddy current inspection to detect cracking of the web at the "Y" chord attachment; a detailed visual inspection of the bulkhead, if necessary; and repair in accordance with a method approved by the FAA.

Differences Between AD and Relevant Service Information

This AD refers to Boeing 737 Nondestructive Test (NDT) Manual D6-37239, Part 6, Subject 53-10-54, as the appropriate source of service information for accomplishment of the LFEC inspection. Operators should note that, unlike the procedures described in the NDT manual, which specifies that the web be inspected only from stringer 9 left to stringer 9 right, this AD expands the area to be inspected. Because of the safety implications and consequences associated with fatigue cracking and because of the unknown nature of the source of the subject cracking, the FAA has determined that an LFEC inspection, if accomplished, must be performed from stringer 15 left to stringer 15 right of the upper section of the bulkhead at body station 1016.

Interim Action

This is considered to be interim action until final action is identified, at which time the FAA may consider further rulemaking.

Determination of Rule's Effective Date

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

Comments Invited

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall

identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 98-NM-337-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

The regulations adopted herein will not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, 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. § 39.13 [Amended]
2. Section 39.13 is amended by adding the following new airworthiness directive:

AIRWORTHINESS DIRECTIVE
REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460

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

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, 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 FAR Subpart 39.3).

99-08-23 BOEING: Amendment 39-11132. Docket 98-NM-337-AD.

Applicability: All Model 737-100, -200, -200C, -300, -400, and -500 series airplanes; 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 (e) 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 detect and correct fatigue cracking at certain fastener holes of the aft pressure bulkhead, which could result in rapid decompression of the fuselage, accomplish the following:

Initial Inspection

(a) Perform either inspection specified by paragraph (a)(1) or (a)(2) of this AD at the time specified in paragraph (b) of this AD.

(1) Perform a low frequency eddy current inspection from the aft side of the aft pressure bulkhead to detect discrepancies (including cracking, misdrilled fastener holes, and corrosion) of the web of the upper section of the aft pressure bulkhead at body station 1016 at the aft fastener row attachment to the "Y" chord, from stringer 15 left to stringer 15 right, in accordance with Boeing 737 Nondestructive Test Manual D6-37239, Part 6, Section 53-10-54, dated December 5, 1998.

(2) Perform a detailed visual inspection of the aft fastener row attachment to the "Y" chord from the forward side of the aft pressure bulkhead to detect discrepancies (including cracking, misdrilled fastener holes, and corrosion) of the entire web of the aft pressure bulkhead at body station 1016.

(b) Perform the inspection required by paragraph (a) of this AD at the time specified by paragraph (b)(1), (b)(2), or (b)(3) of this AD, as applicable.

(1) For airplanes that have accumulated 40,000 or more total flight cycles as of the effective date of this AD: Inspect within 375 flight cycles or 60 days after the effective date of this AD, whichever occurs later.

(2) For airplanes that have accumulated 25,000 or more total flight cycles and fewer than 40,000 total flight cycles as of the effective date of this AD: Inspect within 750 flight cycles or 90 days after the effective date of this AD, whichever occurs later.

(3) For airplanes that have accumulated fewer than 25,000 total flight cycles as of the effective date of this AD: Inspect prior to the accumulation of 25,750 total flight cycles.

Repetitive Inspections

(c) Within 1,200 flight cycles after performing the initial inspection required by paragraph (a) of this AD, and thereafter at intervals not to exceed 1,200 flight cycles: Perform either inspection specified by paragraph (a)(1) or (a)(2) of this AD.

Corrective Actions

(d) If any discrepancy is detected during any inspection required by this AD: Prior to further flight, accomplish the actions specified by paragraphs (d)(1) and (d)(3), and paragraph (d)(2) if applicable, of this AD.

(1) Perform a high frequency eddy current inspection from the forward side of the bulkhead to detect cracking of the web at the "Y" chord attachment, around the entire periphery of the "Y" chord, in accordance with Boeing 737 Nondestructive Test Manual D6-37239, Part 6, Section 51-00-00, Figure 23, dated November 5, 1997.

(2) If the most recent inspection performed in accordance with paragraph (a) of this AD was not a detailed visual inspection: Accomplish the actions specified by paragraph (a)(2) of this AD. If the inspection was a detailed visual inspection, it is not necessary to repeat that inspection prior to further flight.

(3) Repair any discrepancy such as cracking or corrosion or misdrilled fastener holes in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; 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 Manager, Seattle ACO, to make such findings.

Alternative Methods of Compliance

(e) 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 2: 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

(f) 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

(g) The eddy current inspections shall be done in accordance with Boeing 737 Nondestructive Test Manual D6-37239, Part 6, Subject 53-10-54, dated December 5, 1998; or Boeing 737 Nondestructive Test Manual D6-37239, Part 6, Section 51-00-00, Figure 23, dated November 5, 1995; as applicable. These references contain the specified list of effective pages:

BOEING 737 NONDESTRUCTIVE TEST MANUAL D6-37239, PART 6

DECEMBER 5, 1998

LIST OF EFFECTIVE PAGES:

Page Number	Revision Level Shown on Page	Date Shown on Page
Title Page	Not Shown	February 5, 1995
List of Effective Pages Pages 1, 6-12	Not Shown	December 5, 1998
List of Effective Pages Page 2	Not Shown	August 5, 1998
List of Effective Pages Pages 2A, 3	Not Shown	November 5, 1997
List of Effective Pages Page 4	Not Shown	November 5, 1995
List of Effective Pages Page 5	Not Shown	May 5, 1997

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.

(h) This amendment becomes effective on May 10, 1999.