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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 99-NM-310-AD; Amendment 39-12409; AD 2001-17-18]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD); applicable to certain Boeing Model 737-100, -200, and -200C series airplanes; that requires repetitive inspections of certain floor beams and transverse beams, and corrective actions, if necessary. For certain airplanes, this AD also provides optional terminating action for the repetitive inspections. The actions specified by this AD are intended to detect and correct cracking at the aileron control quadrant cutouts and in the cabin floor beams and pressure web transverse beams above the main wheel well, which could result in rapid loss of cabin pressure and reduced structural integrity of the airframe.

DATES: Effective October 1, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of October 1, 2001.

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 98055-4056; 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 737-100, -200, and -200C series airplanes was published in the Federal Register on March 9, 2001 (66 FR 14096). That action proposed to require inspection of certain floor beams and transverse beams, and corrective actions, if necessary.

Recommendation of 737 Aging Fleet Structures Working Group

The 737 Aging Fleet Structures Working Group has recommended accomplishment of Boeing Service Bulletin 737-57-1139, Revision 4, dated April 16, 1992, which this AD identifies as the appropriate source of service information for the actions required by this AD. This AD is in consonance with the group's recommendation.

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.

Applicability of AD

Several commenters request that the FAA revise the applicability statement of the proposed AD for clarification. The commenters point out that not all Boeing Model 737-100, -200, and -200C series airplanes with line numbers 1 through 1585 inclusive are included in the effectivity listing of Boeing Service Bulletin 737-57-1139, Revision 4, dated April 16, 1992 (which the proposed rule lists as the appropriate source of service information for the proposed actions). One of the commenters specifically states that not all Model 737-200C series airplanes are included in the effectivity listing. The commenters suggest that the FAA revise the applicability statement to include only those Model 737-100, -200, and -200C series airplanes listed in the service bulletin.

The FAA concurs with the commenters' request. Certain Model 737-200 and -200C series airplanes have different structure in the area subject to this AD. Thus, these airplanes are not subject to the unsafe condition addressed by this AD. We have revised the applicability statement of this final rule accordingly.

Initial Inspection Thresholds and Repetitive Intervals: Paragraph (a)

Two commenters request that the FAA extend the compliance time for the initial inspection in paragraph (a) of the proposed AD and the interval for the repetitive inspections in paragraph (a)(1) of the proposed AD. One commenter, an operator, requests that the grace period and repetitive interval be extended from 3,000 to 4,000 flight cycles. This commenter's rationale is that such an increase would allow it to accomplish the requirements of paragraph (a) of the proposed AD during a "C" check. Another commenter requests that the repetitive interval in paragraph (a)(1) be increased to 6,000 flight cycles. This commenter states that an investigation by the airplane manufacturer shows that a repetitive interval of 6,000 flight cycles would adequately ensure the safety of the affected airplanes. The commenter also notes that this change will be incorporated into a future revision of Boeing Service Bulletin 737-57-1139.

The FAA concurs with the commenters' requests to extend the compliance time for the initial inspection in paragraph (a) of this AD and the repetitive interval for the inspections in paragraph (a)(1) of this AD. Based upon our review of the airplane manufacturer's investigation, we have determined that a grace period and repetitive interval of 6,000 flight cycles is adequate to ensure safety. This determination is based in part on the airplane manufacturer's recommendation to which the second commenter refers.

In addition, the FAA finds it appropriate to add a new option for a grace period for the initial inspection required by paragraph (a) of this AD. The compliance time for paragraph (a) is now 12,000 total flight cycles, 6,000 flight cycles after the effective date of this AD, or 15 months after the effective date of this AD, whichever occurs latest. The FAA finds that this new option is consistent with other inspections of aging airplane structure mandated previously and will allow operators of affected airplanes more flexibility in planning compliance.

Paragraphs (a) and (a)(1) of this AD have been revised accordingly.

Initial Inspection Thresholds and Repetitive Intervals: Paragraph (b)

One commenter requests that the FAA extend the compliance time for certain initial and repetitive inspections. Though the commenter does not specify which paragraph its comments apply to, the FAA infers, based on the context, that the commenter is requesting changes to paragraph (b). The commenter requests that the FAA extend the grace period for the initial inspection in paragraph (b) and the interval for the repetitive inspections in paragraph (b)(1) from 6,000 to 9,000 flight cycles. The commenter's rationale is that such increases will facilitate accomplishing the inspections at a regularly scheduled maintenance visit. The commenter states that the proposed compliance time would potentially adversely affect its operations and could damage its level of service to its customers. The commenter justifies its request based on the fact that, in inspections of its fleet, it has found only one airplane with cracks in the areas subject to this AD.

The FAA does not concur with the commenter's request. The FAA finds that there is insufficient data to justify revising the compliance time and repetitive interval in paragraph (b) from 6,000 to 9,000 flight cycles as the commenter requests. The commenter's crack findings (or lack thereof) in its own fleet cannot be generalized to all affected airplanes. No change to the AD is necessary in this regard.

However, as previously explained relative to paragraph (a) of this AD, the FAA finds it appropriate to add a new compliance time alternative of 15 months after the effective date of this AD for the initial inspection required by paragraph (b) of this AD. For certain operators, this may extend the compliance time for the initial inspection required by paragraph (b) of this AD. The FAA has revised paragraph (b) of this AD accordingly.

Approve Existing Repairs as Terminating Action

One commenter requests that the FAA allow existing repairs as terminating action for both the initial and repetitive inspections as well as the repairs specified in the proposed rule. The commenter states that identifying previous repairs as terminating action for actions in the proposed rule would ease the burden of gaining reapproval for existing approved repairs.

The FAA partially concurs with the commenter's request. The FAA finds that previously approved repairs (as well as repairs according to the procedures in the service bulletin) may be considered acceptable and eliminate the need for repetitive inspections of the repaired area according to this AD. Operators should note that this applies only to inspections of repaired structure: Any unrepaired areas continue to be subject to the inspection and repair requirements of this AD. Accordingly, the FAA has revised paragraph (c)(1) of this AD to state, "For airplanes in Groups 1, 2, and 5; as listed in the service bulletin: Modification of the LBL and RBL 24.8 floor beams in the area of the aileron control quadrant cutout in accordance with Part I of the Accomplishment Instructions of the service bulletin constitutes terminating action for the initial and repetitive inspection requirements of paragraph (a) of this AD." Also, the FAA has added a new paragraph (d)(2) which states, "Repairs approved previously as alternative methods of compliance in accordance with AD 90-06-02, amendment 39-6489, and AD 93-17-08, amendment 39-8679, are approved as alternative methods of compliance with this AD for the AREA OF REPAIR ONLY."

Modifications Required By Previous AD

One commenter notes that the modifications in Boeing Service Bulletin 737-57-1139, Revision 4, are already required by AD 90-06-02, amendment 39-6489 (55 FR 8372, March 7, 1990). The commenter requests additional recent documentation to substantiate the need for the proposed inspections.

The FAA infers that the commenter is requesting that the FAA withdraw the proposed rule. The FAA does not concur with the commenter's request. The modifications in the referenced service bulletin are already required as part of AD 90-06-02, but that AD requires these modifications at 75,000 flight cycles. Cracking has been found on in-service airplanes much earlier than this threshold. Therefore, the FAA considers it necessary to mandate the inspections in this AD, in addition to the modifications required by AD 90-06-02, to ensure the continued safety of the airplane fleet. No change to the AD is necessary in this regard.

New Service Information

The airplane manufacturer requests that the FAA revise the proposed rule to refer to a new revision of the referenced service bulletin. The commenter states that it will issue Revision 5 of the service bulletin at an unspecified later date. The commenter notes that this new revision will revise a certain compliance time and repetitive interval.

The FAA does not concur with the commenter's request. The FAA cannot approve a document that we have not reviewed. Once the airplane manufacturer issues a new revision of the service bulletin, the FAA will review the service bulletin and approve it, if appropriate. At that point, the FAA will consider allowing Revision 5 of the service bulletin to be used as an alternative method of compliance for the actions required by this AD. With regard to the extended compliance time and repetitive interval, as explained previously, the FAA has extended the grace period for the requirements of paragraph (a) and the repetitive interval for the requirements of paragraph (a)(1) from 3,000 to 6,000 flight cycles, which corresponds to the times that the airplane manufacturer will identify in Revision 5 of the service bulletin. No further change to this AD is necessary.

Statement of Unsafe Condition

One commenter asks the FAA to revise the statement of unsafe condition to remove the statement that cracking at the aileron control quadrant cutouts and in the cabin floor beams and pressure web transverse beams above the main wheel well could result in rapid loss of cabin pressure and reduced structural integrity of the airframe. The commenter states that the redundancy in the floor beam structure over the wing center section significantly reduces the potential for rapid decompression due to fatigue cracking at a certain location of one floor beam.

The FAA does not concur with the commenter's request. Because the commenter provides no technical data to justify its request, the FAA cannot validate the commenter's claim. No change to the AD is necessary in this regard.

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 971 Model 737-100, -200, and -200C series airplanes of the affected design in the worldwide fleet. The FAA estimates that 333 airplanes of U.S. registry will be affected by this AD, and that it will take approximately 10 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 these inspections on U.S. operators is estimated to be \$199,800, or \$600 per airplane, per inspection cycle.

The cost impact figure discussed above is 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:

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).

2001-17-18 Boeing: Amendment 39-12409. Docket 99-NM-310-AD.

Applicability: Model 737-100, -200, and ``200C series airplanes; as listed in Boeing Service Bulletin 737-57-1139, Revision 4, dated April 16, 1992; 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 (d)(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 detect and correct cracks in the floor beams at the aileron control quadrant cutout and in the floor beams and pressure web transverse beams above the main wheel well, which could result in rapid loss of cabin pressure and reduced structural integrity of the airplane, accomplish the following:

Initial Inspection and Follow-On Actions: Groups 1, 2, and 5

(a) For airplanes in Groups 1, 2, and 5; as listed in Boeing Service Bulletin 737-57-1139, Revision 4, dated April 16, 1992: Prior to the accumulation of 12,000 total flight cycles, within 6,000 flight cycles after the effective date of this AD, or within 15 months after the effective date of this AD, whichever occurs latest, perform a detailed visual inspection to detect cracking of the left and right buttock line (LBL and RBL) 24.8 floor beams in the area of the aileron control quadrant cutout, in accordance with Part II of the Accomplishment Instructions of the service bulletin.

Note 2: For the purposes of this AD, a detailed visual inspection is defined as: ``An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriated by the inspector. Inspection aids such as mirror, magnifying lenses, etc. may be used. Surface cleaning and elaborate access procedures may be required

(1) If no cracking is detected, repeat the inspection thereafter at intervals not to exceed 6,000 flight cycles, until the modification in paragraph (c)(1) of this AD is done.

(2) If cracking is detected that is within the limits specified in Part II, Paragraphs C.1. and C.2., of the Accomplishment Instructions of the service bulletin, prior to further flight, repair the crack per the service bulletin, and accomplish the modification specified in paragraph (c)(1) of this AD.

(3) If cracking is detected that is outside the limits identified in Part II, Paragraphs C.1. and C.2., of the Accomplishment Instructions of the service bulletin, prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or in accordance with a method approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For the repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the approval letter must specifically reference this AD.

Initial Inspection and Follow-On Actions: Groups 1, 2, 3, and 4

(b) For airplanes in Groups 1, 2, 3, and 4; as listed in Boeing Service Bulletin 737-57-1139, Revision 4, dated April 16, 1992: Prior to the accumulation of 20,000 total flight cycles, within 6,000 flight cycles after the effective date of this AD, or within 15 months after the effective date of this AD, whichever occurs latest, perform a detailed visual inspection to detect cracking of the transverse beams and floor beams at the beam intersections in accordance with Part II of the Accomplishment Instructions of the service bulletin.

(1) If no cracking is detected, repeat the inspection thereafter at intervals not to exceed 6,000 flight cycles, until the modification in paragraph (c)(2) of this AD is done.

(2) If any cracking is detected, prior to further flight, repair in accordance with a method approved by the Manager, Seattle ACO, or in accordance with a method approved by a Boeing Company DER who has been authorized by the Manager, Seattle ACO, to make such findings. For the repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the approval letter must specifically reference this AD.

Modifications (Terminating Action)

(c) The following modifications in accordance with Boeing Service Bulletin 737-57-1139, Revision 4, dated April 16, 1992, constitute terminating action for certain requirements of this AD.

(1) For airplanes in Groups 1, 2, and 5; as listed in the service bulletin: Modification of the LBL and RBL 24.8 floor beams in the area of the aileron control quadrant cutout in accordance with Part I of the Accomplishment Instructions of the service bulletin constitutes terminating action for the initial and repetitive inspection requirements of paragraph (a) of this AD.

(2) For airplanes in Groups 1, 2, 3, and 4; as listed in the service bulletin: Modification of the transverse beams and floor beams at the beam intersections in accordance with Part III or Part I, as applicable, of the Accomplishment Instructions of the service bulletin constitutes terminating action for the repetitive inspections required by paragraph (b) of this AD.

Note 3: The modifications specified in Boeing Service Bulletin 737-57-1139, Revision 4, dated April 16, 1992, are required by AD 90-06-02, amendment 39-6489, and AD 93-17-08, amendment 39-8679.

Alternative Methods of Compliance

(d) (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) Repairs approved previously as alternative methods of compliance in accordance with AD 90-06-02, amendment 39-6489, and AD 93-17-08, amendment 39-8679, are approved as alternative methods of compliance with this AD for the AREA OF REPAIR ONLY.

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

(e) 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

(f) Except as provided in paragraphs (a)(3) and (b)(2) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 737-57-1139, Revision 4, dated April 16, 1992. 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

(g) This amendment becomes effective on October 1, 2001.

Issued in Renton, Washington, on August 17, 2001.

Vi L. Lipski,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01-21393 Filed 8-24-01; 8:45 am]

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