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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-29062; Directorate Identifier 2007-NM-020-AD; Amendment 39-15462; AD 2008-08-10]

RIN 2120-AA64

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

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. For certain airplanes, this AD requires replacing the outboard stabilizing fitting and certain adjacent components of the main landing gear (MLG) support beam. This AD also requires repetitive inspections for discrepancies of the outboard stabilizing fitting, walking beam hanger, and rear spar attachment, and corrective actions if necessary. For certain airplanes, this AD provides an alternative one-time inspection of the outboard stabilizing fitting for discrepancies, and corrective actions if necessary, which would extend the compliance time for the replacement of the outboard stabilizing fitting. For certain other airplanes, this AD also requires performing a torque check of the aft pin of the outboard stabilizing fitting, and corrective actions if necessary. This AD results from reports of findings of fatigue cracking of the outboard stabilizing fitting and stress corrosion cracking of the bolts attaching the fitting to the wing rear spar. We are issuing this AD to detect and correct that cracking, which could result in disconnection of the MLG actuator from the rear spar and support beam, consequent damage to the hydraulic system, and possible loss of the "A" and "B" hydraulic systems and damage or jamming of the flight control cables. Damage or jamming of the flight control cables could result in loss of control of the airplane.

DATES: This AD is effective May 19, 2008.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of May 19, 2008.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207.

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: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6440; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to all Boeing Model 737-100, -200, -200C, -300, -400, and -500 series airplanes. That NPRM was published in the Federal Register on August 31, 2007 (72 FR 50278). For certain airplanes, that NPRM proposed to require replacing the outboard stabilizing fitting and certain adjacent components of the main landing gear (MLG) support beam. That NPRM also proposed to require repetitive inspections for discrepancies of the outboard stabilizing fitting, walking beam hanger, and rear spar attachment, and corrective actions if necessary. For certain airplanes, that NPRM proposed to provide an alternative one-time inspection of the outboard stabilizing fitting for discrepancies and corrective actions if necessary, which would extend the compliance time for the replacement of the outboard stabilizing fitting. For certain other airplanes, that NPRM proposed to require performing a torque check of the aft pin of the outboard stabilizing fitting, and corrective actions if necessary.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comments received from the commenters.

Request To Change the Description of the Unsafe Condition

Boeing asks that we change the description of the unsafe condition specified in the Summary and Discussion sections and in paragraph (d) of the AD. Boeing states that, Model 737-100, -200, -300, -400, and -500 airplanes are equipped with "A" and "B" hydraulic systems, and an additional standby hydraulic system. Boeing notes that fracture or disconnect of any of the structural parts specified in Boeing Alert Service Bulletin 737-57A1266, Revision 1, dated January 3, 2007 (referenced in the NPRM as the source of service information for accomplishing the actions), could result in damage to the "A" and "B" hydraulic system tubes and damage or jamming of the flight control cables. Boeing adds that the standby hydraulic system is protected from any damage from a fracture or disconnect of any of the structural parts because it is not in the affected area. Additionally, Boeing states that if the "A" and "B" hydraulic systems fail, the standby system and manual reversion enable control of the airplane. Therefore, Boeing asks that the description of the unsafe condition be changed as follows: We are issuing this AD to detect and correct that cracking, which could result in disconnection of the MLG actuator from the rear spar and support beam, and consequent damage to the hydraulic system, and possible loss of the "A" and "B" hydraulic systems and damage or jamming of the flight control

cables. Damage or jamming of the flight control cables could lead to a possible loss of control of the airplane.

We agree with Boeing and have changed the description of the unsafe condition in the referenced sections as follows: "We are issuing this AD to detect and correct that cracking, which could result in disconnection of the MLG actuator from the rear spar and support beam, consequent damage to the hydraulic system, and possible loss of the "A" and "B" hydraulic systems and damage or jamming of the flight control cables. Damage or jamming of the flight control cables could result in loss of control of the airplane." However, the Discussion section is not restated in the final rule; therefore, we have made no change to the AD in this regard.

Request To Clarify Certain Language

Boeing asks that the term "titanium pin," as specified in the Relevant Service Information section, be changed to "new pin." Boeing states that the new forward fuse pin is made from 15-5PH CRES stainless steel. Boeing also asks that the word "components," also specified in the Relevant Service Information section, be changed to "fuse pin" to avoid ambiguity or possible confusion.

We agree with Boeing that its suggested changes clarify the language; however, the Relevant Service Information section is not restated in the final rule. In addition, it is not necessary to further change the body of the AD because we already required "new components" for replacement parts. Therefore, we have made no change to the AD in this regard.

Request To Extend Compliance Time

Air Transport Association (ATA), on behalf of one of its members, United Airlines (UAL), asks that the compliance period for paragraphs (g) and (h) of the AD be changed from 36 to 48 months to align with UAL's Model 737 heavy maintenance visit. The commenters' state that the work defined in the NPRM will require jacking and defueling of the aircraft, and extensive disassembly of the landing gear. The commenters add that these activities are conducive to depot-level maintenance only; the UAL heavy maintenance visit is done on a 48-month cycle.

We do not agree with the requests to revise the compliance time from 36 to 48 months. In Boeing Alert Service Bulletin 737-57A1266, Revision 1, dated January 3, 2007, the manufacturer recommended that the actions be done within 36 months after the release of the service bulletin. In developing an appropriate compliance time for this AD, we considered the serious nature of the unsafe condition as well as the recommendations of the manufacturer, the availability of any necessary repair parts, and the practical aspect of accomplishing the required inspection within an interval of time that corresponds to the normal maintenance schedules of most affected operators. In light of these factors, we have determined that the 36-month compliance time, as proposed, is appropriate. We do not find it necessary to change the AD in this regard. However, under the provisions of paragraph (p) of the AD, we will consider approving requests for adjustments to the compliance time if data are submitted to substantiate that such an adjustment would provide an acceptable level of safety.

Clarification of Paragraph Reference

We have changed the paragraph reference in paragraph (n) of the NPRM for clarification. Paragraph (n) specifies that accomplishment of the replacement of the tube assembly before the effective date of this AD is acceptable for compliance with the replacement specified in paragraph (l) of the NPRM; however, the correct reference is paragraph (m) of 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

There are about 3,130 airplanes of the affected design in the worldwide fleet. This AD affects about 1,380 airplanes of U.S. registry.

For all airplanes: The replacement takes between 20 and 24 work hours per airplane to do, depending on the airplane's configuration, at an average labor rate of \$80 per work hour. Required parts will cost between \$3,658 and \$4,272 per airplane, depending on the airplane's configuration. Based on these figures, the estimated cost of the replacement is estimated to be up to between \$7,256,040 and \$8,544,960, or between \$5,258 and \$6,192 per airplane, depending on the airplane's configuration.

For Groups 1 through 8 airplanes: The alternative inspection, if done, takes about 12 work hours per airplane to do, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the alternative inspection is estimated to be up to \$1,324,800, or \$960 per airplane.

For Group 9 airplanes: The general visual inspection takes about 2 work hours per airplane to do, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the general visual inspection is estimated to be up to \$220,800, or \$160 per airplane.

For Groups 1 through 5 airplanes that had steel pins replaced per the original issue of the service bulletin: The torque check takes about 7 work hours per airplane to do, at an average labor rate of \$80 per work hour. Based on these figures, the estimated cost of the torque check is estimated to be up to \$772,800, or \$560 per airplane.

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

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.

You can find our regulatory evaluation and the estimated costs of compliance in the AD Docket.

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 FAA amends § 39.13 by adding the following new AD:



2008-08-10 Boeing: Amendment 39-15462. Docket No. FAA-2007-29062; Directorate Identifier 2007-NM-020-AD.

Effective Date

(a) This airworthiness directive (AD) is effective May 19, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category.

Unsafe Condition

(d) This AD results from reports of findings of fatigue cracking of the outboard stabilizing fitting and stress corrosion cracking of the bolts attaching the fitting to the wing rear spar. We are issuing this AD to detect and correct that cracking, which could result in disconnection of the MLG actuator from the rear spar and support beam, consequent damage to the hydraulic system, and possible loss of the "A" and "B" hydraulic systems and damage or jamming of the flight control cables. Damage or jamming of the flight control cables could result in loss of control 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.

Service Bulletin Reference

(f) The term "alert service bulletin" as used in this AD, means the Accomplishment Instructions of Boeing Alert Service Bulletin 737-57A1266, Revision 1, dated January 3, 2007.

Replacement/Repetitive Inspections

(g) For airplanes identified as Groups 1 through 8, as specified in the alert service bulletin, except as provided by paragraphs (h) and (k) of this AD: Within 36 months after the effective date of this AD, replace the outboard stabilizing fitting, H-11 bolts, forward pin, and aft pin, as applicable, with new components by doing all the applicable actions in accordance with Part II of the alert service bulletin, except as provided by paragraph (j) of this AD. Within 120 months after accomplishing the replacement, do a general visual inspection for discrepancies of the outboard stabilizing fitting, walking beam hanger, and rear spar attachment fitting, and do all applicable corrective actions, by doing all the actions, except as provided by paragraph (j) of this AD, in

accordance with Part V of the alert service bulletin. Do all corrective actions before further flight. Repeat the inspection at intervals not to exceed 120 months.

Alternative Inspection

(h) For airplanes identified as Groups 1 through 8, as specified in the alert service bulletin, on which the existing H-11 bolts were replaced before the effective date of this AD with Inconel 718 bolts, in lieu of doing the actions required by paragraph (g) of this AD: Within 4,500 flight cycles or 36 months after the effective date of this AD, whichever is later, do a magnetic test of the attach bolts in accordance with the alert service bulletin. If any bolt is magnetic, discontinue the alternative inspection specified in the alert service bulletin and accomplish the actions required by paragraph (g) before further flight. If none of the bolts are magnetic, do all the applicable actions in accordance with Part I of the alert service bulletin before further flight.

(1) If any crack is found: Stop the inspection and before further flight do the actions required by paragraph (g) of this AD. Repetitive inspections must be done after replacing the fitting at the interval specified in paragraph (g) of this AD.

(2) If no crack is found: Before further flight, replace the forward pin and aft pin, as applicable, in accordance with the alert service bulletin, and within 60 months after the effective date of this AD, do the remaining replacement required by paragraph (g) of this AD. Repetitive inspections must be done after replacing the fitting at the interval specified in paragraph (g) of this AD.

(3) If damage other than cracking is found, or if the fitting lug hole is beyond hole size limits, before further flight, repair using a method approved in accordance with the procedures specified in paragraph (p) of this AD.

General Visual Inspection

(i) For airplanes identified as Group 9, as specified in the alert service bulletin: Within 36 months or 4,500 flight cycles after the effective date of this AD, whichever occurs later, do a general visual inspection of the outboard stabilizing fitting and fasteners for discrepancies, and do all applicable corrective actions in accordance with Part IV of the alert service bulletin, except as provided by paragraphs (j) and (k) of this AD. Within 120 months after the inspection specified in Part IV has been done, do a general visual inspection for discrepancies of the outboard stabilizing fitting, walking beam hanger and rear spar attachment fitting in accordance with Part V of the alert service bulletin, and do all applicable corrective actions in accordance with Part V of the alert service bulletin, except as provided by paragraphs (j) and (k). Do all applicable corrective actions before further flight. Repeat the Part V inspection at intervals not to exceed 120 months.

Exceptions To Alert Service Bulletin Specifications

(j) During any inspection required by this AD, if any corrosion damage is found that cannot be removed, or if any damage is found that is outside the limits specified in the alert service bulletin, or if any discrepancy is found and the alert service bulletin specifies contacting the manufacturer for disposition of certain repair conditions: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (p) of this AD.

(k) Certain sections in Parts I, II, and V of the alert service bulletin specify "For 737-100 and -200 airplanes" and "For 737-300 and -500 airplanes." However, those sections are applicable to Model 737-100, -200, and -200C airplanes, and Model 737-300, -400, and -500 airplanes, respectively.

Torque Check

(l) For airplanes identified as Groups 1 through 5, as specified in the alert service bulletin, on which the aft pin of the aft outboard stabilizing fitting was replaced before the effective date of this AD, in accordance with Boeing Alert Service Bulletin 737-57A1266, dated May 8, 2003: Within 36 months after the effective date of this AD, do a torque check to determine whether the aft pin is correctly installed. Do all applicable corrective actions before further flight. Do the actions in accordance with Part III of the alert service bulletin.

Concurrent Requirements

(m) For airplanes identified as Groups 1 and 3, as specified in the alert service bulletin: Prior to or concurrently with accomplishment of paragraph (g) of this AD, do the replacement of the existing tube assembly of the outboard stabilizing fitting as specified in Part IV of Boeing Service Bulletin 737-57-1052, Revision 4, dated October 24, 1980.

Credit for Previously Accomplished Actions

(n) Replacement of the tube assembly before the effective date of this AD in accordance with Boeing Service Bulletin 737-57-1073, Revision 4, dated April 12, 1985, is acceptable for compliance with the replacement specified in paragraph (m) of this AD.

(o) For Groups 1 through 4, as specified in the alert service bulletin: Replacement of the H-11 bolts for the inboard stabilizing fitting before the effective date of this AD, in accordance with Boeing Service Bulletin 737-57-1231, dated December 1, 1994, is acceptable for compliance with the replacement of the H-11 bolts specified in paragraph (g) of this AD.

Alternative Methods of Compliance (AMOCs)

(p)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested in accordance with 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 and the approval must specifically refer to this AD.

Material Incorporated by Reference

(q) You must use Boeing Alert Service Bulletin 737-57A1266, Revision 1, dated January 3, 2007; and Boeing Service Bulletin 737-57-1052, Revision 4, dated October 24, 1980; as applicable; to do the actions required by this AD, unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

(3) You may review copies of the service information incorporated by reference at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or 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 March 24, 2008.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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