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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2009-0212; Directorate Identifier 2008-NM-122-AD; Amendment 39-16019; AD 2009-19-02]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-600, -700, -700C, -800, -900 and -900ER Series Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Boeing Model 737-600, -700, -700C, -800, -900 and -900ER series airplanes. This AD requires repetitive testing of the rudder pedal forces or repetitive detailed inspections of the inner spring of the rudder feel and centering unit, and corrective actions if necessary. This AD also requires replacement of the spring assembly in the rudder feel and centering unit, which terminates the repetitive tests or inspections. This AD results from reports of low rudder pedal forces that were caused by a broken inner spring in the rudder feel and centering unit; a broken inner spring in conjunction with a broken outer spring would significantly reduce rudder pedal forces. We are issuing this AD to prevent reduced rudder pedal forces, which could result in increased potential for pilot-induced oscillations and reduce the ability of the flightcrew to maintain the safe flight and landing of the airplane.

DATES: This AD is effective October 14, 2009.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of October 14, 2009.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

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: Kelly McGuckin, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6490; 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 737-600, -700, -700C, -800, -900 and -900ER series airplanes. That NPRM was published in the Federal Register on March 10, 2009 (74 FR 10197). That NPRM proposed to require repetitive testing of the rudder pedal forces or repetitive detailed inspections of the inner spring of the rudder feel and centering unit, and corrective actions if necessary. That NPRM also proposed to require replacement of the spring assembly in the rudder feel and centering unit, which terminates the repetitive tests or inspections.

Comments

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

Request To Reduce Applicability and Delete Parts Installation Paragraph

Boeing asks that we reduce the applicability in paragraph (c) of the NPRM to specify only those airplanes listed in Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008. Boeing states that the "open applicability," as proposed, would apply to delivery of new airplanes. Boeing adds that this will cause an increased cost and paperwork burden by requiring that the AD be listed in the airplane AD status letter and distributed to each customer with the production change incorporated that addresses the unsafe condition. Boeing notes that there was no production change incorporated for Model 737-900ER airplanes; all Model 737-900ER airplanes were delivered with the correct inner spring of the rudder feel and centering unit. Therefore, Model 737-900ER airplanes should be removed from the applicability section.

Boeing also asks that we delete the requirements in paragraph (i) of this AD under "Parts Installation." Boeing states that all affected airplanes with a discrepant inner spring installed are identified in Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008. Boeing adds that the work instructions contained in the referenced service bulletin describe procedures to modify the rudder feel and centering unit with appropriate part marking. The referenced service bulletin does not give work instructions to remove and replace the rudder feel and centering units; therefore, no unmodified units will be available for parts installation.

We acknowledge that the airplane effectivity identified in Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008, does not include all Model 737-600, -700, -700C, -800, -900 and 737-900ER airplanes. However, as we explained in the NPRM, this AD does include all Model 737-600, -700, -700C, -800, -900 and -900ER series airplanes. We do not agree to reduce the applicability in this AD, or delete the requirements in paragraph (i) of this AD. We determined that rudder feel and centering units with discrepant springs can be physically installed on any airplane identified in paragraph (c) of this AD. Including all 737 airplane models identified in paragraph (c) of this AD, in

addition to the requirements of paragraph (i) of this AD, prohibits future installation of discrepant springs on any affected airplanes. We have not changed the AD in this regard.

Request To Allow Alternative Procedures

Continental Airlines (CAL) asks that we allow each of the following as alternative procedures for replacing a spring assembly (inner and outer spring) in the rudder feel and centering unit having part number (P/N) 69-57900-6, as follows:

- Replace only a suspect part having P/N 69-57907-3 per Chapter 27-21-85 of the component maintenance manual (CMM).
- Replace the entire rudder feel and centering unit having P/N 65C25410-7 per Chapter 27-21-82 of the airplane maintenance manual (AMM), either with one having a part number and serial number combination that is not listed in the Effectivity of Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008, or with one that has been modified by replacing the inner spring per Chapter 27-21-85 of the CMM.

CAL states that five of its airplanes were modified by replacing the rudder feel and centering units, and in each case the inner spring had not failed and did not subject the outer spring to abnormal stresses, so the outer spring was not replaced. CAL adds that replacing the inner spring per the CMM corrects the unsafe condition and provides an acceptable level of safety.

We disagree with the commenter's request. According to Boeing, replacement of either the feel and centering unit or the inner spring involves a more complex process than replacing the spring assembly, as required by this AD. In addition, there are currently no special instructions for part-marking a modified spring assembly after removing a suspect inner spring. While the commenter's proposed alternative procedures may be acceptable, more information is required. The commenter may submit a request for approval of an alternative method of compliance (AMOC) in accordance with the provisions of paragraph (k) of this AD. The request should address part marking and configuration control of the suspect inner springs, the modified spring assembly, and the feel and centering unit assembly. For these reasons, and because we have confirmed that adequate spring assembly spares should be available, we have not changed the AD in this regard.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

We estimate that this AD affects 70 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this AD.

Table – Estimated costs

Action	Work hours	Average labor rate per hour	Parts	Cost per product	Number of U.S.-registered airplanes	Fleet cost
Test or Inspection	1	\$80	\$0	\$80, per test or inspection cycle	70	\$5,600
Replacement	3	\$80	\$3,138	\$3,378	70	\$236,460

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:



2009-19-02 Boeing: Amendment 39-16019. Docket No. FAA-2009-0212; Directorate Identifier 2008-NM-122-AD.

Effective Date

(a) This airworthiness directive (AD) is effective October 14, 2009.

Affected ADs

(b) None.

Applicability

(c) This AD applies to all Boeing Model 737-600, -700, -700C, -800, -900 and -900ER series airplanes, certificated in any category.

Subject

(d) Air Transport Association (ATA) of America Code 27: Flight controls.

Unsafe Condition

(e) This AD results from reports of low rudder pedal forces that were caused by a broken inner spring in the rudder feel and centering unit; a broken inner spring in conjunction with a broken outer spring would significantly reduce rudder pedal forces. We are issuing this AD to prevent reduced rudder pedal forces, which could result in increased potential for pilot-induced oscillations and reduce the ability of the flightcrew to maintain the safe flight and landing of the airplane.

Compliance

(f) Comply with this AD within the compliance times specified, unless already done.

Test/Inspection

(g) For Model 737-600, -700, -700C, -800, and -900 series airplanes identified in Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008: Within 30 days after the effective date of this AD, perform a test of the rudder pedal forces or a detailed inspection of the inner spring of the rudder feel and centering unit, by doing all the applicable actions, including all applicable corrective actions before further flight, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008. Repeat the test or inspection thereafter at intervals not to exceed 120 days.

Terminating Action

(h) For Model 737-600, -700, -700C, -800, and -900 series airplanes identified in Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008: Within 36 months after the effective date of this

AD, replace the spring assembly in the rudder feel and centering unit in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008. Accomplishing the replacement ends the repetitive tests or inspections required by paragraph (g) of this AD.

Parts Installation

(i) For all airplanes: As of the effective date of this AD, no person may install, on any airplane, a rudder feel and centering unit having part number (P/N) 65C25410-7, serial numbers 3609 through 3820 inclusive, unless it has been modified according to paragraph (h) of this AD.

No Reporting Required

(j) Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008, specifies sending a data reporting sheet to Boeing; however, this AD does not require that action.

Alternative Methods of Compliance (AMOCs)

(k)(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, ATTN: Kelly McGuckin, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6490; fax (425) 917-6590; has the authority to approve AMOCs for this AD, if requested using 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 principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, in the FAA Flight Standards District Office (FSDO), or lacking a principal inspector, your local FSDO. The AMOC approval letter must specifically reference this AD.

Material Incorporated by Reference

(l) You must use Boeing Alert Service Bulletin 737-27A1287, dated April 16, 2008, 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, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

(3) You may review copies of the service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221 or 425-227-1152.

(4) You may also review copies of the service information that is incorporated by reference 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 August 31, 2009.

Ali Bahrami,
Manager, Transport Airplane Directorate,
Aircraft Certification Service.