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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2012-1104; Directorate Identifier 2012-NM-073-AD; Amendment 39-17226; AD 2012-21-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule; request for comments.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 777-200LR and -300ER series airplanes. This AD requires reviewing the airplane's maintenance records for each rudder power control unit (PCU) to identify the condition of its related reaction link assembly, and replacing the rudder PCU and its related reaction link assembly if necessary. This AD was prompted by a report of an abnormal airframe vibration in the aft fuselage during flight. We are issuing this AD to prevent excessive freeplay in the rudder control surface, which could cause rudder vibration, and result in structural damage severe enough to prevent continued safe flight and landing.

**DATES:** This AD is effective November 14, 2012.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 14, 2012.

We must receive comments on this AD by December 14, 2012.

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may review copies of the referenced 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.

### **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 street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Kenneth Frey, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6468; fax: (425) 917-6590; email: [Kenneth.frey@faa.gov](mailto:Kenneth.frey@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Discussion**

We have received a report of an abnormal airframe vibration in the aft fuselage during flight. A subsequent inspection of the rudder PCU installations found that the bushing liners were missing from all six end cap assemblies on the three rudder PCUs. An investigation revealed that the cause of the problem was failure of the bond between the liner and the bushing substrate because of the use of liquid nitrogen during installation of the bushing into the reaction link end cap housing. This condition, if not corrected, could result in excessive freeplay in the rudder control surface, which could cause rudder vibration, and result in structural damage severe enough to prevent continued safe flight and landing.

#### **Relevant Service Information**

We reviewed Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011. The service information describes procedures, for airplanes having certain line numbers, for reviewing the airplane's maintenance records for each rudder PCU to identify the condition of its related reaction link assembly, and replacing the rudder PCU and its related reaction link assembly if necessary.

#### **FAA's Determination**

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of this same type design.

#### **AD Requirements**

This AD requires accomplishing the actions specified in the service information described previously.

## FAA's Justification and Determination of the Effective Date

No U.S. airplanes are affected by this AD. Therefore, we find that notice and opportunity for prior public comment are unnecessary and that good cause exists for making this amendment effective in less than 30 days.

## Comments Invited

This AD is a final rule that involves requirements affecting flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include docket number FAA-2012-1104 and Directorate Identifier 2012-NM-073-AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

## Costs of Compliance

We estimate that this AD affects 0 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

### Estimated Costs

Action	Labor cost	Parts cost	Cost per product
Review of the airplane's maintenance records	1 work-hour × \$85 per hour = \$85	\$0	\$85
Replacement	12 work-hours × \$85 per hour = \$1,020	5,784	6,804

## 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),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) 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.

**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 airworthiness directive (AD):



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**2012-21-10 The Boeing Company:** Amendment 39-17226; Docket No. FAA-2012-1104; Directorate Identifier 2012-NM-073-AD.

**(a) Effective Date**

This AD is effective November 14, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 777-200LR and -300ER series airplanes, certificated in any category, identified in Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 27, Flight controls.

**(e) Unsafe Condition**

This AD was prompted by a report of an abnormal airframe vibration in the aft fuselage during flight. We are issuing this AD to prevent excessive freeplay in the rudder control surface, which could cause rudder vibration, and result in structural damage severe enough to prevent continued safe flight and landing.

**(f) Compliance**

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

**(g) Review of the Maintenance Records**

Within 48 months after the effective date of this AD, review the airplane's maintenance records for each rudder power control unit (PCU) to identify the condition of its related reaction link assembly, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011.

**(h) Corrective Action**

(1) For any reaction link assembly identified during the records review required by paragraph (g) of this AD as having Condition 4, as specified in the Accomplishment Instructions of Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011: Within 48 months after the effective date of

this AD, remove the affected rudder PCU and its related reaction link assembly, and install a serviceable rudder PCU and its related reaction link assembly, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011.

(2) The replacement PCU reaction link assembly must meet Condition 1, 2, or 3 of Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011. As an alternative, the bushings in the PCU reaction link assembly may be replaced in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011.

#### **(i) Parts Installation Limitations**

As of the effective date of this AD, no person may install a rudder PCU and its related reaction link assembly identified in Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011, on any airplane, unless that rudder PCU and its related reaction link assembly meet Condition 1, 2, or 3, of Part 1 of the Accomplishment Instructions of Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011.

#### **(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in the Related Information section of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(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 the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that 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.

#### **(k) Related Information**

For more information about this AD, contact Kenneth Frey, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: (425) 917-6468; fax: (425) 917-6590; email: Kenneth.frey@faa.gov.

#### **(l) Material Incorporated by Reference**

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Alert Service Bulletin 777-27A0109, dated December 1, 2011.

(ii) Reserved.

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

(4) You may view this service information at 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.

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on October 11, 2012.

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