

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2013-0863; Directorate Identifier 2013-NM-178-AD; Amendment 39-17627; AD 2013-21-03]**

**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 747-8F and 747-8 series airplanes. This AD requires a detailed inspection of the power control actuator (PCA) installation to determine if a bushing is installed, a general visual inspection between the horizontal stabilizer rear spar and the elevator front spar and between certain stabilizer stations for defects and damage, and corrective actions if necessary. This AD was prompted by a report of unusual noise coming from the left inboard elevator during a functional check of the ram air turbine system, and a determination that a bushing was not installed. We are issuing this AD to detect and correct non-installation of bushings. If the bushings are not present, the stiffness of the load path will be decreased, which will cause wear of adjacent parts and increased freeplay of the elevator surfaces. Freeplay that exceeds acceptable limits could result in divergent flutter for certain maneuvers, which could lead to loss of controllability of the airplane.

**DATES:** This AD is effective November 12, 2013.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of November 12, 2013.

We must receive comments on this AD by December 9, 2013.

**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, WA. 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:** Narinder Luthra, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6513; fax: (425) 917-6590; email: [narinder.luthra@faa.gov](mailto:narinder.luthra@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We received a report of unusual noise coming from the left inboard elevator during a functional check of the ram air turbine system. When investigating the cause of the noise, the operator found too much freeplay in the left inboard elevator, which was traced to a missing bushing in the PCA installation. Another investigation found that the left inboard PCA had been disconnected from this airplane to replace the left elevator, which had been damaged before delivery. When the PCA was reconnected, however, the bushing was not installed. The operator did inspections of the PCA installation and of the PCA attachment lug assembly, and found no other defects or damage. This condition (if the bushing is not present), if not detected and corrected, could result in decreased stiffness of the load path, which will cause wear of adjacent parts and increased freeplay of the elevator surfaces. Freeplay that exceeds acceptable limits could result in divergent flutter for certain maneuvers, which could lead to loss of controllability of the airplane.

### **Relevant Service Information**

We reviewed Boeing Alert Service Bulletin 747-27A2515, dated August 23, 2013. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2013-0863.

### **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 these same type designs.

## **AD Requirements**

This AD requires accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between the AD and the Service Information."

The FAA worked in conjunction with industry, under the Airworthiness Directives Implementation Aviation Rulemaking Committee, to enhance the AD system. One enhancement was a new process for annotating which steps in the service information are required for compliance with an AD. Differentiating these steps from other tasks in the service information is expected to improve an owner's/operator's understanding of crucial AD requirements and help provide consistent judgment in AD compliance. The actions specified in the service information described previously include steps that are labeled as "RC" (required for compliance) because these steps have a direct effect on detecting, preventing, resolving, or eliminating an identified unsafe condition.

As noted in the specified service information, steps labeled as "RC" must be done to comply with the AD. However, steps that are not labeled as "RC" are recommended. Those steps that are not labeled as "RC" may be deviated from, done as part of other actions, or done using accepted methods different from those identified in the service information without obtaining approval of an alternative method of compliance (AMOC), provided the steps labeled as "RC" can be done and the airplane can be put back in a serviceable condition. Any substitutions or changes to steps labeled as "RC" will require approval of an AMOC.

In addition, the phrase "corrective actions" is used in this AD. "Corrective actions" are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

## **Differences Between the AD and the Service Information**

Although Boeing Alert Service Bulletin 747-27A2515, dated August 23, 2013, specifies to contact the manufacturer for instructions on how to repair certain conditions, and indicates that this action is "RC," this AD requires repairing those conditions in one of the following ways:

In accordance with a method that we approve; or

Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

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

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because risk analysis indicated that urgent action is required. Any airplane that is missing a bushing in the elevator PCA installation is operating at an unacceptable level of risk. If the bushing is not present, the stiffness of the load path will be decreased, which will cause wear of adjacent parts and increased freeplay of the elevator surfaces. Freeplay that exceeds acceptable limits could result in divergent flutter for certain maneuvers, which could lead to loss of controllability of the airplane. Therefore, we find that notice and opportunity for prior public comment are impracticable 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 the docket number FAA-2013-0863 and Directorate Identifier 2013-NM-178-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 8 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

#### **Estimated Costs**

| <b>Action</b> | <b>Labor cost</b>                    | <b>Parts cost</b> | <b>Cost per product</b> | <b>Cost on U.S. operators</b> |
|---------------|--------------------------------------|-------------------|-------------------------|-------------------------------|
| Inspection    | 5 work-hours × \$85 per hour = \$425 | N/A               | \$425                   | \$3,400                       |

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

### **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 would not have federalism implications under Executive Order 13132. This AD would 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 the 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 proposes to amend 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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**2013-21-03 the Boeing Company:** Amendment 39-17627; Docket No. FAA-2013-0863; Directorate Identifier 2013-NM-178-AD.

**(a) Effective Date**

This AD is effective November 12, 2013.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to the Boeing Company Model 747-8F and 747-8 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-27A2515, dated August 23, 2013.

**(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 unusual noise coming from the left inboard elevator during a functional check of the ram air turbine system, and a determination that a bushing was not installed. We are issuing this AD to detect and correct non-installation of bushings. If the bushings are not present, the stiffness of the load path will be decreased, which will cause wear of adjacent parts and increased freeplay of the elevator surfaces. Freeplay that exceeds acceptable limits could result in divergent flutter for certain maneuvers, which could lead to loss of controllability of the airplane.

**(f) Compliance**

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

**(g) Inspections and Corrective Actions**

Except as required by paragraph (h)(1) of this AD, at the time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-27A2515, dated August 23, 2013: Do a detailed inspection of the inboard elevator left and right power control actuator (PCA) installations to determine if a bushing is installed; and do a general visual inspection between the left and right horizontal stabilizer rear spar and the elevator front spar, and between stabilizer station (STAB) (STA) 235 and 260 for defects and damage, and do all applicable corrective actions that are labeled as "RC" (Required for Compliance), in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-27A2515, dated August 23, 2013, except as required by paragraph (h)(2) of this AD. Doing the steps specified in Parts 1 and 2 of the Accomplishment Instructions of Boeing

Alert Service Bulletin 747-27A2515, dated August 23, 2013, are required for compliance. Do all applicable corrective actions that are labeled as "RC" before further flight.

#### **(h) Exceptions to Service Information Specifications**

(1) Where Boeing Alert Service Bulletin 747-27A2515, dated August 23, 2013, specifies a compliance time "after the original issue date of this service bulletin," this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Although Boeing Alert Service Bulletin 747-27A2515, dated August 23, 2013, specifies to contact Boeing for repair instructions, and indicates that action is "RC" (Required for Compliance), this AD requires repairing before further flight using a method approved in accordance with the procedures specified in paragraph (i) of this AD.

#### **(i) 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 paragraph (j) 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.

(4) Except as required by paragraph (h)(2) of this AD: If the service information contains steps that are labeled as "RC" (Required for Compliance), those steps must be done to comply with this AD; any steps that are not labeled as "RC" are recommended. Those steps that are not labeled as "RC" may be deviated from, done as part of other actions, or done using accepted methods different from those identified in the specified service information without obtaining approval of an AMOC, provided the steps labeled as "RC" can be done and the airplane can be put back in a serviceable condition. Any substitutions or changes to steps labeled as "RC" require approval of an AMOC.

#### **(j) Related Information**

For more information about this AD, contact Narinder Luthra, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: (425) 917-6513; fax: (425) 917-6590; email: narinder.luthra@faa.gov.

#### **(k) 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 747-27A2515, dated August 23, 2013.

(ii) Reserved.

(3) For Boeing 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, WA. 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 September 30, 2013.

Jeffrey E. Duven,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.