



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2016-3986; Directorate Identifier 2015-NM-147-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

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

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 747-400, 747-400D, and 747-400F series airplanes. This proposed AD was prompted by a determination that a certain fastener type in the fuel tank walls has insufficient bond to the structure, and an electrical wiring short could cause arcing to occur at the ends of fasteners in the fuel tanks. This proposed AD would require the installation of new clamps and polytetrafluoroethylene (TFE) sleeves on the wire bundles of the front spars and rear spars of the wings. This proposed AD would also require inspecting the existing TFE sleeves under the wire bundle clamps for correct installation, and replacement if necessary. We are proposing this AD to prevent potential ignition sources in the fuel tank in the event of a lightning strike or high-powered short circuit, and consequent fire or explosion.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**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: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, 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 view this 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. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-3986.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-3986; 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 proposed 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:** Tung Tran, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6505; fax: 425-917-6590; email: [Tung.Tran@faa.gov](mailto:Tung.Tran@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2016-3986; Directorate Identifier 2015-NM-147-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed 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 proposed AD.

### **Discussion**

The manufacturer has determined that a certain fastener type in the fuel tank walls has insufficient bond to the structure, and an electrical wiring short could cause arcing to occur at the ends of fasteners in the fuel tanks. Potential ignition sources in the fuel tank in the event of a lightning strike or high-powered short circuit, if not corrected, could result in a fire or explosion.

### **Related Rulemaking**

On September 17, 2007, we issued AD 2007-20-01, Amendment 39-15211 (72 FR 54533, September 26, 2007), applicable to certain The Boeing Company Model 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, and 747SP series airplanes. That AD requires reconfiguring the clamps of certain wire bundles and applying insulating sealant to certain fasteners inside the fuel tanks using Boeing Special Attention Service Bulletin 747-57-2327, Revision 1, dated

July 10, 2006, on airplane line numbers 696 through 1363. Airplane line numbers 1364 through 1419 were changed during production. The actions required by AD 2007-20-01 are intended to prevent arcing inside the fuel tanks in the event of a lightning strike or high-powered short circuit, which could result in a fuel tank explosion or fire.

Since we issued AD 2007-20-01, Amendment 39-15211 (72 FR 54533, September 26, 2007), the FAA has determined that for certain The Boeing Company Model 747-400, 747-400D, and 747-400F series airplanes, a certain fastener type in the fuel tank walls has insufficient bond to the structure and that an electrical wiring short could cause arcing to occur at the ends of fasteners in the fuel tanks. We determined that certain clamp locations need to be changed to prevent possible ignition sources in the fuel tanks. These clamps were not installed at these locations during production and were not identified in Boeing Special Attention Service Bulletin 747-57-2327, Revision 1, dated July 10, 2006. Therefore, it is necessary to install new clamps and TFE sleeves at these additional locations on the wire bundles of the front spars and rear spars of the left and right wings.

#### **Related Service Information Under 1 CFR part 51**

We reviewed Boeing Special Attention Service Bulletin 747-28-2324, Revision 1, dated July 27, 2015. The service information describes procedures for installing new clamps and TFE sleeves on the wire bundles of the front spars and rear spars of the wings. The service information also describes procedures for inspecting TFE sleeves under the wire bundle clamps that were installed using the procedures specified in Boeing Special Attention Service Bulletin 747-28-2324, dated November 4, 2014, for correct installation, and replacing them if necessary. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **FAA’s Determination**

We are proposing 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 the same type design.

### **Proposed AD Requirements**

This proposed AD would require accomplishing the actions specified in the service information described previously.

### **Costs of Compliance**

We estimate that this proposed AD affects 135 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed 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>
Installation of wire bundle clamps	Up to 7 work-hours X \$85 per hour = \$595	\$138	Up to \$733	Up to \$98,955
Inspection	Up to 5 work-hours X \$85 per hour = \$425	\$0	Up to \$425	Up to \$57,375

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

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed 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 this proposed regulation:

- (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.

### **The Proposed 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):

**The Boeing Company:** Docket No. FAA-2016-3986; Directorate Identifier 2015-NM-147-AD.

**(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 747-400, 747-400D, and 747-400F series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 747-28-2324, Revision 1, dated July 27, 2015.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Unsafe Condition**

This AD was prompted by a determination that a certain fastener type in the fuel tank walls has insufficient bond to the structure, and an electrical wiring short could cause arcing to occur at the ends of fasteners in the fuel tanks. We are issuing this AD to prevent potential ignition sources in the fuel tank in the event of a lightning strike or high-powered short circuit, and consequent fire or explosion.

**(f) Compliance**

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

**(g) Installation/Inspection**

Within 60 months after the effective date of this AD, do the actions specified in paragraph (g)(1) or (g)(2) of this AD, as applicable.

(1) For airplanes on which the modification specified in Boeing Special Attention Service Bulletin 747-28-2324, dated November 3, 2014, has not been done as of the effective date of this AD: Install new clamps and polytetrafluoroethylene (TFE) sleeves on the wire bundles of the front spars and rear spars of the wings, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-28-2324, Revision 1, dated July 27, 2015.

(2) For airplanes on which the modification specified in Boeing Special Attention Service Bulletin 747-28-2324, dated November 3, 2014, has been done as of the effective date of this AD: Do a detailed inspection of the TFE sleeves under the wire bundle clamps for correct installation, and replace the sleeves if not correctly installed, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-28-2324, Revision 1, dated July 27, 2015.

**(h) 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 (i)(1) 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, alteration, or modification 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 method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

**(i) Related Information**

(1) For more information about this AD, contact Tung Tran, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6505; fax: 425-917-6590; email: Tung.Tran@faa.gov.

(2) 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 view this 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.

Issued in Renton, Washington, on February 19, 2016.

Dorr M. Anderson,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2016-04292 Filed: 2/29/2016 8:45 am; Publication Date: 3/1/2016]