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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2011-0566; Directorate Identifier 2010-NM-271-AD; Amendment 39-16975; AD 2012-05-03]**

**RIN 2120-AA64**

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

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

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes. This AD was prompted by a design review following a ground fire incident and reports of flammable fluid leaks from the wing leading edge area onto the engine exhaust area. This AD requires modifying the fluid drain path in the leading edge area of the wing. We are issuing this AD to prevent flammable fluid from leaking onto the engine exhaust nozzle, which could result in a fire.

**DATES:** This AD is effective April 24, 2012.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of April 24, 2012.

**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; phone: 206-544-5000, extension 1; fax: 206-766-5680; email: me.boecom@boeing.com; 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 address for the Docket Office (phone: 800-647-5527) is 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:** Tung Tran, Aerospace Engineer, Propulsion Branch, ANM-140S, Seattle Aircraft Certification Office (ACO), FAA, 1601 Lind Avenue SW., Renton, Washington 98057-3356; phone: 425-917-6505; fax: 425-917-6590; email: Tung.Tran@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on June 14, 2011 (76 FR 34625). That NPRM proposed to require modifying the fluid drain path in the leading edge area of the wing.

### **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (76 FR 34625, June 14, 2011) and the FAA's response to each comment.

### **Request To Withdraw NPRM (76 FR 34625, June 14, 2011)**

KLM Royal Dutch Airlines (KLM) requested we reassess the necessity for Boeing Special Attention Service Bulletin 747-57-2332, dated November 9, 2010; the NPRM (76 FR 34625, June 14, 2011); and the future AD. KLM stated the Model 747-400 world fleet (as reported by Boeing), as well as the KLM fleet, has had no problems with the issue described by the NPRM; and Model 747-400 airplanes have no slat cans or comparable mechanical construction and are therefore not subject to the unsafe condition. KLM also stated that modifying the drain path away from the pylon on the outboard side of the pylon will not result in an improvement, since the wing leading edge is installed at an angle, so the fuel still can flow towards the engine by gravity after it exits the drain hole (during ground time). KLM also stated that the costs, manpower, and additional downtime associated with the actions in the NPRM are too high for KLM, and it is not convinced the actions will contribute to any additional safety.

We infer the commenter wants the NPRM (76 FR 34625, June 14, 2011) withdrawn. We disagree. The NPRM addresses drain holes of the wing leading edge that are located close to the engine nozzle such that a fuel leak from any cause, not just from a slat housing leak, is drained directly on the engine exhaust nozzle, which could cause a fuel fire. Therefore, we consider that a risk for a fire exists even on the airplane models that do not have the slat cans. We also disagree with the commenter that the modification does not provide an improvement to the fuel drainage system. The service information provides instructions to modify and redirect the leading edge drainage away from the drain hole that directly impinges on the engine exhaust nozzle, which reduces the risk of a fire during a fuel leak event. We have taken the cost of labor and parts into consideration and have found that the actions required by this final rule are needed to address the unsafe condition. We have not changed the final rule in this regard.

### **Request To Include Service Information Revision**

Boeing requested the NPRM (76 FR 34625, June 14, 2011) include Boeing Special Attention Service Bulletin 747-57-2332, Revision 1, dated July 25, 2011, as an option to Boeing Special

Attention Service Bulletin 747-57-2332, dated November 9, 2010 (which was referenced in the proposed AD as the appropriate source of service information for the modification). Boeing justified its request by stating that Revision 1 of this service information adds clarification, but has no new requirements.

We agree. Since the NPRM (76 FR 34625, June 14, 2011) was issued, Boeing has issued Boeing Special Attention Service Bulletin 747-57-2332, Revision 1, dated July 25, 2011, which clarifies certain information and provides optional materials. We have changed paragraphs (c) and (g) of this AD to refer to Boeing Special Attention Service Bulletin 747-57-2332, Revision 1, dated July 25, 2011; added paragraph (h) of the AD to give credit for actions already accomplished in accordance with Boeing Special Attention Service Bulletin 747-57-2332, dated November 9, 2010; and revised subsequent paragraph lettering.

### **Request To Delegate Approval of Structures-Related Alternative Methods of Compliance (AMOCs)**

Boeing requested the final rule be changed to allow Boeing authority to approve AMOCs under Boeing Commercial Airplanes Organization Designation Authorization (ODA). Boeing stated it anticipates repairs will be required to panels and ribs, etc., and that when the service information is embodied, it would be beneficial if the Boeing ODA was authorized to approve these repairs.

We agree with the request to delegate structural AMOC approval to the Boeing ODA because using the Boeing ODA is an appropriate process for making those findings. Accordingly, we have added paragraph (i)(3) to this final rule.

### **Additional Change Made to This Final Rule**

We have revised the heading and marking of paragraph (h) of this AD. This change has not changed the intent of the paragraph.

### **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 and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (76 FR 34625, June 14, 2011) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (76 FR 34625, June 14, 2011).

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**

We estimate that this AD affects 258 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	Cost on U.S. operators
Fluid drainage modification (Groups 1–6) (143 airplanes)	95 work-hours X \$85 per hour = \$8,075	\$33,609	\$41,684	\$5,960,812
Fluid drainage modification (Groups 7–10) (115 airplanes)	90 work-hours X \$85 per hour = \$7,650	\$29,304	\$36,954	\$4,249,710

According to the manufacturer, some of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

### 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):

**SUPERSEDED**



**2012-05-03 The Boeing Company:** Amendment 39-16975; Docket No. FAA-2011-0566; Directorate Identifier 2010-NM-271-AD.

**(a) Effective Date**

This AD is effective April 24, 2012.

**(b) Affected ADs**

None.

**(c) Applicability**

This AD applies to The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 747-57-2332, Revision 1, dated July 25, 2011.

**(d) Subject**

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 57, Wings.

**(e) Unsafe Condition**

This AD was prompted by a design review following a ground fire incident and reports of flammable fluid leaks from the wing leading edge area onto the engine exhaust area. We are issuing this AD to prevent flammable fluid from leaking onto the engine exhaust nozzle, which could result in a fire.

**(f) Compliance**

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

**(g) Leading Edge Installation**

Within 60 months after the effective date of this AD, modify the fluid drain path in the leading edge area of the wing, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-57-2332, Revision 1, dated July 25, 2011.

**(h) Credit for Previous Actions**

This paragraph provides credit for modifications of the fluid drain path required by paragraph (g) of this AD, if the modification was performed before the effective date of this AD, using Boeing Special Attention Service Bulletin 747-57-2332, dated November 9, 2010.

### **(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 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 structural repairs 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.

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

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

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

(1) You must use the following service information to do the actions required by this AD, unless the AD specifies otherwise. The Director of the Federal Register approved the incorporation by reference (IBR) of the following under 5 U.S.C. 552(a) and 1 CFR part 51:

(i) Boeing Special Attention Service Bulletin 747-57-2332, Revision 1, dated July 25, 2011.

(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; phone: 206-544-5000, extension 1; fax: 206-766-5680; email: me.boecom@boeing.com; Internet: <https://www.myboeingfleet.com>.

(3) 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.

(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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on February 27, 2012.

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