



適航指令發布單

Airworthiness Directive Issuance Form

民航局AD編號 AD Number	CAA-2017-09-002	發布日期 Date issued	2017/9/6
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	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,		
主旨摘要	To prevent flammable fluid from leaking onto the engine exhaust nozzle		
民航局 CAA  <input type="checkbox"/> 本國產品 Native products  <input type="checkbox"/> 其他個案 Other	設計國民航主關機構 Original Authorities <input checked="" type="checkbox"/> FAA <input type="checkbox"/> EASA <input type="checkbox"/> Brazil <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> DGAC <input type="checkbox"/> Germany LBA <input type="checkbox"/> CAA-NL <input type="checkbox"/> UK CAA <input type="checkbox"/> Japan CAB <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____		
	設計國AD編號 Original AD number	2017-18-06	
	1. 直接採用原AD之內容?(Is the original AD directly adopted?) <input checked="" type="checkbox"/> 是(Yes) <input type="checkbox"/> 否(No) ___ a. 生效日期另訂為(Re-specify the effective date as) : _____ b. 執行時限另訂為(Re-specify the compliance time or period as) : _____ 2. 使用人是否需要將AD執行結果向民航局提出報告?(Do Users need to report the status of compliance to the CAA?) <input type="checkbox"/> 是(Yes) <input checked="" type="checkbox"/> 否(No)		
備註 Note	(i) This AD replaces FAA AD 2012-05-03(CAA-2012-03-009). (ii) Boeing Special Attention Service Bulletin 747-57-2332, Revision 2, dated February 22, 2016.		
註： 1. AD內容後附。 2. 航空器產品使用人得向民航局提出豁免、替代符合方法、執行時限之展延之申請。 3. 如有任何問題，請聯絡交通部民用航空局初始適航科。Tel：(02)2349-6331-3, Fax：(02)2545-8464, e-mail：adcaa@mail.caa.gov.tw Note： 1. The AD text is enclosed. 2. Exemption, an alternative method of compliance or adjustment of the compliance time may be proposed to the CAA for approval. 3. For further information, please contact Civil Aeronautics Administration on Tel：(02)2349-6331-3, Fax：(02)2545-8464, e-mail：adcaa@mail.caa.gov.tw			

[Federal Register Volume 82, Number 168 (Thursday, August 31, 2017)]

[Rules and Regulations]

[Pages 41326-41329]

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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

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

**[Docket No. FAA-2017-0247; Product Identifier 2016-NM-180-AD; Amendment 39-19015; AD 2017-18-06]**

**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 superseding Airworthiness Directive (AD) 2012-05-03, which applied to 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. AD 2012-05-03 required modifying the fluid drain path in the leading edge area of the wing. This AD requires additional work to seal those drainage holes in the wing access panels. 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 address the unsafe condition on these products.

**DATES:** This AD is effective October 5, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 5, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain other publication listed in this AD as of April 24, 2012 (77 FR 16143, March 20, 2012).

**ADDRESSES:** For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Transport Standards Branch, 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-2017-0247.

## **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-2017-0247; 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 final rule, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket 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 Section, Seattle ACO Branch, FAA, 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:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2012-05-03, Amendment 39-16975 (77 FR 16143, March 20, 2012) (“AD 2012-05-03”). AD 2012-05-03 applied to 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. The NPRM published in the Federal Register on April 11, 2017 (82 FR 17403). The NPRM 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. The NPRM proposed to continue to require modifying the fluid drain path in the leading edge area of the wing. The NPRM also proposed to require additional work to seal those drainage holes in the wing access panels. We are issuing this AD to prevent flammable fluid from leaking onto the engine exhaust nozzle, which could result in a fire.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We received no comments on the NPRM or on the determination of the cost to the public.

### **Conclusion**

We reviewed the relevant data and determined that air safety and the public interest require adopting this AD as proposed, except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

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

We reviewed Boeing Special Attention Service Bulletin 747-57-2332, Revision 2, dated February 22, 2016. This service information divides the affected airplanes into 10 groups.

For all groups, this service information describes procedures for modifying the fluid drain path in the leading edge area of the wing. The modification consists of changing fluid dam assemblies at wing outboard leading edge station (OLES) 1250, and installing seal assemblies at OLES 1185.

Additionally, this service information specifies changing the lower leading edge wing panels through repairs and installation of parts.

For Groups 1 through 6 airplanes, this service information also specifies installing fluid dam assemblies at wing OLES 770.

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.

### Costs of Compliance

We estimate that this AD will affect 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) (actions retained from AD 2012-05-03)	95 work-hours × \$85 per hour = \$8,075	\$33,609	\$41,684	\$5,960,812
Fluid drainage modification (Groups 7-10) (115 airplanes) (actions retained from AD 2012-05-03)	90 work-hours × \$85 per hour = \$7,650	29,304	36,954	4,249,710
Drainage hole repair (258 airplanes) (new action)	2 work-hours × \$85 per hour = \$170	9	179	46,182

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.

This AD is issued in accordance with authority delegated by the Executive Director, Aircraft Certification Service, as authorized by FAA Order 8000.51C. In accordance with that order, issuance of ADs is normally a function of the Compliance and Airworthiness Division, but during this transition period, the Executive Director has delegated the authority to issue ADs applicable to transport category airplanes to the Director of the System Oversight Division.

## **Regulatory Findings**

We have determined that 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 removing Airworthiness Directive (AD) 2012-05-03, Amendment 39-16975 (77 FR 16143, March 20, 2012), and adding the following new AD:



**FAA**  
**Aviation Safety**

## **AIRWORTHINESS DIRECTIVE**

[www.faa.gov/aircraft/safety/alerts/](http://www.faa.gov/aircraft/safety/alerts/)  
[www.gpoaccess.gov/fr/advanced.html](http://www.gpoaccess.gov/fr/advanced.html)

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**2017-18-06 The Boeing Company:** Amendment 39-19015; Docket No. FAA-2017-0247; Product Identifier 2016-NM-180-AD.

**(a) Effective Date**

This AD is effective October 5, 2017.

**(b) Affected ADs**

This AD replaces AD 2012-05-03, Amendment 39-16975 (77 FR 16143, March 20, 2012) (“AD 2012-05-03”).

**(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 2, dated February 22, 2016.

**(d) Subject**

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) Retained Leading Edge Installation, With Revised Service Information**

This paragraph restates the requirements of paragraph (g) of AD 2012-05-03, with revised service information. Within 60 months after April 24, 2012 (the effective date of AD 2012-05-03), modify the fluid drain path in the leading edge area of the wing, in accordance with all applicable parts of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-57-2332, Revision 1, dated July 25, 2011; or Revision 2, dated February 22, 2016.

**(h) Retained Credit for Previous Actions, With No Changes**

This paragraph restates the provisions of paragraph (h) of AD 2012-05-03, with no changes. This paragraph provides credit for modification of the fluid drain path required by paragraph (g) of this AD, if the modification was performed before April 24, 2012, using Boeing Special Attention Service Bulletin 747-57-2332, dated November 9, 2010.

**(i) New Requirement to Seal Drainage Holes**

For airplanes on which the actions specified in Boeing Special Attention Service Bulletin 747-57-2332, dated November 9, 2010; or Revision 1, dated July 25, 2011; were done: Within 2 years after the effective date of this AD, fill the drainage holes in wing panels 521EB and 621EB with sealant, in accordance with Part 5 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 747-57-2332, Revision 2, dated February 22, 2016.

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

(1) The Manager, Seattle ACO Branch, 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 certification office, send it to the attention of the person identified in paragraph (k)(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, modification, or alteration 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 Branch, to make those findings. 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.

(4) AMOCs approved previously for AD 2012-05-03 are approved as AMOCs for the corresponding provisions of paragraph (g) of this AD.

**(k) Related Information**

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

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (l)(5) and (l)(6) of this AD.

**(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.

(3) The following service information was approved for IBR on October 5, 2017.

(i) Boeing Special Attention Service Bulletin 747-57-2332, Revision 2, dated February 22, 2016.

(ii) Reserved.

(4) The following service information was approved for IBR on April 24, 2012 (77 FR 16143, March 20, 2012).

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

(ii) Reserved.

(5) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; Internet <https://www.myboeingfleet.com>.

(6) You may view this service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(7) 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 August 21, 2017.

Dionne Palermo,  
Acting Director, System Oversight Division,  
Aircraft Certification Service.