



適航指令發布單

Airworthiness Directive Issuance Form

民航局AD編號 AD number	CAA-2024-09-010	發布日期 Date issued	2024/09/20
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	This AD applies to The Boeing Company Model 747-400F series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023.		
主旨摘要 Subject	This AD requires applying cap seals to certain fastener collars inside the fuel tanks.		
民航局 CAA	設計國民航主管機構 Original Authority		
<input type="radio"/> 本國產品 Native product	<input checked="" type="radio"/> FAA	<input type="radio"/> Germany LBA	
<input type="radio"/> 其他個案 Other	<input type="radio"/> EASA	<input type="radio"/> CAA-NL	
	<input type="radio"/> Brazil	<input type="radio"/> UK CAA	
	<input type="radio"/> Transport Canada Civil Aviation	<input type="radio"/> Japan CAB	
	<input type="radio"/> DGAC	<input type="radio"/> CAA of Israel	
		<input type="radio"/> Other _____	
	設計國AD編號 Original AD number	2024-16-03	
	1. 直接採用原AD之內容? (Is the original AD directly adopted?) <input checked="" type="radio"/> 是(Yes) <input type="radio"/> 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="radio"/> 需要(Yes) <input checked="" type="radio"/> 不需要(No)		
備註 Note	ATA 57. Ref. Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023.		

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)2349-6330 / 6332, Fax：(02)2545-8464,

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 Aviation Administration on Tel：(02)2349-6330 / 6332,

Fax：(02)2545-8464, adcaa@mail.caa.gov.tw

[Federal Register, Volume 89 Number 179 (Monday, September 16, 2024)]
[Rules and Regulations]
[Pages 75462-75464]
From the Federal Register Online via the Government Publishing Office [www.gpo.gov]
[FR Doc No: 2024-20834]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2024-1000; Project Identifier AD-2023-01051-T; Amendment 39-22809; AD 2024-16-03]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule.

SUMMARY:

The FAA is adopting a new airworthiness directive (AD) for certain The Boeing Company Model 747-400F series airplanes. This AD was prompted by a report that cap seals were not applied to certain fasteners in the fuel tanks during production. This AD requires applying cap seals to certain fastener collars inside the fuel tanks. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective October 21, 2024.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 21, 2024.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA-2024-1000; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket

Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

Material Incorporated by Reference:

- For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Boulevard, MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; website myboeingfleet.com.
- You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th Street, Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available at regulations.gov under Docket No. FAA-2024-1000.

FOR FURTHER INFORMATION CONTACT:

Samuel Dorsey, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; telephone 206-231-3415; email samuel.j.dorsey@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

The FAA issued a notice of proposed rulemaking (NPRM) to amend [14 CFR part 39](#) by adding an AD that would apply to certain The Boeing Company Model 747-400F series airplanes. The NPRM published in the **Federal Register** on April 12, 2024 ([89 FR 25823](#)). The NPRM was prompted by a report indicating that cap seals were not applied to certain fasteners in the fuel tank during production. The FAA issued AD 2022-10-11, Amendment 39-22049 ([87 FR 34120](#), June 6, 2022) to require, among other actions, application of cap seals to certain fasteners in the fuel tank on airplanes having line numbers 645 through 1363 inclusive. Cap seals were determined to be a necessary feature by SFAR 88 reviews and were required to be retrofitted onto existing airplanes by AD 2022-10-11 and earlier ADs. Boeing intended to incorporate similar changes on future airplanes, ultimately those having line numbers 1364 through 1419 inclusive, via a production design change. However, Boeing discovered that the design change omitted application of the cap seals on eight fasteners (four each on the left and right wings in the inboard main fuel tanks). Without these cap seals, the ends of the fasteners do not have sufficient electrical insulation to prevent arcing in the event of a lightning strike or high-powered short circuit, possibly creating an ignition source in the inboard main fuel tanks. A failure to prevent possible ignition sources in the fuel tank, in combination with flammable fuel vapors, could result in an explosion or fire and consequent loss of the airplane. In the NPRM, the FAA proposed to require applying cap seals to certain fastener collars inside the fuel tanks. The FAA is issuing this AD to address the unsafe condition on these products.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Air Line Pilots Association, International (ALPA) and an individual who supported the NPRM without change. The FAA also received an additional four comments from individuals who had no objection to the NPRM. One commenter expressed concern about the effect on safety of certain internal Boeing practices. This comment is outside the scope of the NPRM.

The FAA received an additional comment from Boeing. The following presents that comment and the FAA's response.

Request for Clarification of Sealant Part Number

Boeing requested an exception be added to paragraph (h) of the proposed AD to correct an incorrect part number listed in the service bulletin for the sealant. Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023, inadvertently specifies the application of sealant Boeing Material Specification (BMS) 5-45, CLASS B-2, GRADE 1, for certain required actions. GRADE 1 does not apply to the specification noted. Boeing informed customers of this typographical error via Information Notice 747-57A2371 IN-01 dated May 20, 2024.

The FAA agrees and has added an exception in paragraph (h)(2) of this AD to correct the typographical error. As stated by Boeing, Class B BMS 5-45 sealant does not have an additional grade identifier. Only Class A BMS 5-45 sealant possesses a grade identifier.

Conclusion

The FAA reviewed the relevant data, considered any comments received, and determined that air safety requires adopting this AD as proposed. Accordingly, the FAA is issuing this AD to address the unsafe condition on these products. Except for minor editorial changes, and any other changes described previously, this AD is adopted as proposed in the NPRM. None of the changes will increase the economic burden on any operator.

Material Incorporated by Reference Under [1 CFR Part 51](#)

The FAA reviewed Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023. This material specifies procedures for applying cap seals to four fastener collars inside the fuel tank common to the stiffeners located at the front spar on the left and right wings. This material 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

The FAA estimates that this AD affects 15 airplanes of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated Costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Apply cap seals	37 work-hours × \$85 per hour = \$3,145	\$1,000	\$4,145	\$62,175

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators.

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.

The FAA is 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) Will not affect intrastate aviation in Alaska, and
- (3) 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 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:

2024-16-03 The Boeing Company: Amendment 39-22809; Docket No. FAA-2024-1000; Project Identifier AD-2023-01051-T.

(a) Effective Date

This airworthiness directive (AD) is effective.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 747-400F series airplanes, certificated in any category, as identified in Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by a report that cap seals were not applied to certain fasteners in the fuel tanks during production. The FAA is issuing this AD to address missing cap seals in the fuel tanks. The unsafe condition, if not addressed, could result in a failure to prevent possible ignition sources in the fuel tanks, which in combination with flammable fuel vapors, could result in an explosion or fire and consequent loss of the airplane.

(f) Compliance

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

(g) Required Actions

Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023.

Note 1 to paragraph (g):

Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 747-57A2371, dated September 29, 2023, which is referred to in Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023.

(h) Exceptions to Service Information Specifications

(1) Where Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023, use the phrase “the original issue date of Requirements Bulletin 747-57A2371 RB,” this AD requires using the effective date of this AD.

(2) Where Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023, states “BMS 5-45, CLASS B-2, GRADE 1,” this AD requires replacing that text with “BMS 5-45, CLASS B-

2.”

(i) Alternative Methods of Compliance (AMOCs)

(1) The Manager, AIR-520, Continued Operational Safety 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 responsible Flight Standards 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 (j)(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 responsible Flight Standards 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 Company Organization Designation Authorization (ODA) that has been authorized by the Manager, AIR-520, Continued Operational Safety Branch, FAA, 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.

(j) Related Information

(1) For more information about this AD, contact Samuel Dorsey, Aviation Safety Engineer, FAA, 2200 South 216th Street, Des Moines, WA 98198; telephone 206-231-3415; email samuel.j.dorsey@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the address specified in paragraph (k)(3) of this AD.

(k) Material Incorporated by Reference

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

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

(i) Boeing Alert Requirements Bulletin 747-57A2371 RB, dated September 29, 2023.

(ii) [Reserved]

(3) For Boeing material identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Boulevard, MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; website myboeingfleet.com.

(4) You may view this material at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th Street, Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

(5) You may view this material at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, visit www.archives.gov/federal-

register/cfr/ibr-locationsoremailfr.inspection@nara.gov.

Issued on July 30, 2024.

Peter A. White,

Deputy Director, Integrated Certificate Management Division, Aircraft Certification Service.

[[FR Doc. 2024-20834](#). Filed 9-13-24; 8:45 am]

BILLING CODE 4910-13-P