



適航指令發布單

Airworthiness Directive Issuance Form

民航局 AD 編號 AD number	CAA-2023-09-001	發布日期 Date issued	2023/9/5
適用之航空產品 Applied to (models, serial numbers or part numbers, as applicable)	This AD applies to all The Boeing Company Model 777-200, -200LR, -300, -300ER, and 777F series airplanes, certificated in any category, excluding the airplanes identified in paragraphs (c)(1) and (2) of this AD. (1) Boeing Model 777-200 series airplanes having a maximum taxi weight equal to or less than 547,000 pounds. (2) Boeing Model 777F series airplanes with manufacturer line numbers of 1743 and subsequent.		
主旨摘要 Subject	This AD retains the actions required by AD 2022-18-11(CAA-2022-09-012), and requires a maintenance records review of previously modified airplanes for the procedures used during that modification, and applicable corrective actions.		
民航局 CAA <input type="checkbox"/> 本國產品 Native product <input type="checkbox"/> 其他個案 Other	設計國民航主管機構 Original Authority <input checked="" type="checkbox"/> FAA <input type="checkbox"/> Germany LBA <input type="checkbox"/> EASA <input type="checkbox"/> CAA-NL <input type="checkbox"/> Brazil <input type="checkbox"/> UK CAA <input type="checkbox"/> Transport Canada Civil Aviation <input type="checkbox"/> Japan CAB <input type="checkbox"/> DGAC <input type="checkbox"/> CAA of Israel <input type="checkbox"/> Other _____		
	設計國 AD 編號 Original AD number	2023-17-14	
	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	This AD replaces AD 2022-18-11(CAA-2022-09-012).		
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, 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)2349-6330 / 6332, Fax： (02)2545-8464, e-mail： adcaa@mail.caa.gov.tw			

[Federal Register, Volume 88 Number 168 (Thursday, August 31, 2023)]

[Rules and Regulations]

[Pages 60111-60116]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2023-1814; Project Identifier AD-2023-00773-T; Amendment 39-22541; AD 2023-17-14]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY:

Federal Aviation Administration (FAA), DOT.

ACTION:

Final rule; request for comments.

SUMMARY:

The FAA is superseding Airworthiness Directive (AD) 2022-18-11, which applied to all The Boeing Company Model 777 airplanes. AD 2022-18-11 required repetitive inspections for cracking of the left- and right-side ring chords, repair angles, front spar lower chords, and front spar webs (depending on configuration) common to a certain underwing longeron; modification of the front spar lower chord for some airplanes; repetitive post-modification inspections; and applicable on-condition actions. This AD was prompted by a report of a crack found in a front spar lower chord, and the determination that errors in the service information mandated by AD 2022-18-11 introduced a new unsafe condition related to the application of certain fastener cap seals. This AD retains the actions required by AD 2022-18-11, and requires a maintenance records review of previously modified airplanes for the procedures used during that modification, and applicable corrective actions. The FAA is issuing this AD to address the unsafe condition on these products.

DATES:

This AD is effective September 15, 2023.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 31, 2022 ([87 FR 58259](#), September 26, 2022).

The FAA must receive comments on this AD by October 16, 2023.

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 *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.

AD Docket: You may examine the AD docket at *regulations.gov* by searching for and locating Docket No. FAA–2023–1814; 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 street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT:

Kevin Nguyen, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206–231–3555; email: Kevin.Nguyen@faa.gov.

SUPPLEMENTARY INFORMATION:**Background**

The FAA issued AD 2022–18–11, Amendment 39–22162 ([87 FR 58259](#), September 26, 2022) (AD 2022–18–11), for all The Boeing Company Model 777 airplanes. AD 2022–18–11 required repetitive inspections for cracking of the left- and right-side ring chords, repair angles, front spar lower chords, and front spar webs (depending on configuration) common to the underwing longeron located at station (STA) 1035; modification of the front spar lower chord for some airplanes; repetitive post-modification inspections; and applicable on-condition actions. AD 2022–18–11 was prompted by a report of a crack found in the front spar lower chord of a Model 777–300ER airplane undergoing an underwing longeron replacement. The FAA issued AD 2022–18–11 to address, detect, and correct such cracking, which in combination with cracking in the front spar web, could result in a fuel leak and fire hazard, or in the case of more severe cracking, could also affect the structural integrity of the airplane.

Actions Since AD 2022–18–11 Was Issued

Since the FAA issued AD 2022–18–11, the manufacturer has discovered that Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021, which was mandated by AD 2022–18–11, contains errors relating to the application of cap seals to fasteners penetrating the center wing fuel tank which introduce a second, urgent unsafe condition. These errors necessitate superseding AD 2022–18–11 to add additional actions to correct this new unsafe condition.

Fastener cap seals interior to the airplane's fuel tanks are a critical lightning protection feature. This is particularly true for the center wing fuel tank, which typically contains flammable fuel

vapors more frequently than the main wing fuel tanks. As part of the front spar lower chord and underwing longeron work described in the manufacturer's requirements bulletin and mandated by AD 2022-18-11, many cap seals are removed to accomplish the various modifications and inspections. If these seals are not replaced properly, and the associated fastener has poor electrical bonding to the airplane structure for any reason, the fastener may spark during a lightning strike and cause a fuel tank explosion.

The lack of fault-tolerance introduced by these cap sealing errors in the manufacturer's requirements bulletin places an airplane with compromised cap seals that has no flammability reduction or ignition mitigation means at a level of risk that requires urgent action to address. Airplanes equipped with flammability reduction or ignition mitigation means are also affected by this newly created unsafe condition, but at a lower level of risk. Paragraph (e) of this AD, Unsafe Condition, has been revised to reflect the second unsafe condition created by the errors in the manufacturer's requirements bulletin as described above. Paragraph (e) of this AD has also been revised to reflect the determination that existing structural inspections are expected to detect severe front spar lower chord cracking before the structural integrity of the airplane is put at risk, but are not expected to detect cracking before a possible fuel leak. The unsafe condition therefore now consists of two distinct aspects: structural cracking of the front spar lower chord leading to a fuel leak and possible fire, and failure of fastener cap seals to contain a possible spark following a lightning strike leading to a possible fuel tank explosion.

The manufacturer submitted an initial report of errors in the requirements bulletin affecting cap sealing instructions in late 2022. However, given the length and complexity of the requirements bulletin, detailed and complete documentation of these errors was not received until late July 2023. The manufacturer has stated its intent to revise the requirements bulletin; however, this work will take longer to accomplish than the risk to public safety allows. Therefore, the FAA has proceeded with this supersedure without additional service information as soon as possible following the manufacturer's delivery of the necessary information. The three categories of errors affecting cap sealing instructions in the manufacturer's requirements bulletin are described as follows.

First, certain groups and configurations of airplanes have no requirement to apply cap seals to fasteners associated with the underwing longeron. Without this requirement, a cap seal may fail to be applied following modification of the underwing longeron, compromising the required fault tolerance of the fuel tank lightning protection design. For those airplanes, this AD requires application of a cap seal of the correct sealant type to the minimum thickness or greater, if not already done.

Second, certain other groups and configurations have no thickness requirement for the applied cap seal, and the requirements bulletin mistakenly refers to the Boeing Standard Overhaul Practices Manual (SOPM) section 20-50-19 for procedures to apply the cap seal. The SOPM procedure specifies a thickness that is half the necessary thickness, while the Boeing Model 777 aircraft maintenance manual (AMM) procedure, which is also referred to in the requirements bulletin, specifies the correct thickness for cap seals. It is also possible that operators may have used an accepted method other than that specified in the SOPM and AMM, as no specific procedure was required by the requirements bulletin. A cap seal of insufficient thickness may fail to contain a spark resulting from a lightning strike, similarly compromising the fault tolerance of the fuel tank lightning protection. This AD specifies the minimum thickness and sealant type for an applied cap seal, and requires replacement of any seal that was previously applied using a procedure that specifies an inadequate thickness.

Third, some structural inspections described by the requirements bulletin may require the removal of certain fastener cap seals; however, the requirements bulletin either does not require that the cap seal be replaced, or does not provide a thickness requirement for the replaced seal. These errors affect the fuel tank lightning protection for the same reasons as already described. This AD requires that any seal removed for the inspections required by the requirements bulletin be replaced with a cap seal of correct sealant type and adequate thickness.

Therefore, for airplanes on which the actions of the requirements bulletin have not yet been accomplished, and for airplanes for which this AD requires rework of already applied cap seals, those cap sealing differences are defined in paragraph (h) of this AD as exceptions to the requirements bulletin. For airplanes on which the actions of the requirements bulletin have been accomplished but a maintenance records check cannot conclusively determine that an appropriate procedure was used to apply the cap seals, paragraph (i) of this AD requires rework of the applied cap seals.

This AD also corrects and clarifies other aspects of AD 2022-18-11 as follows.

Following the publication of AD 2022-18-11, the FAA and manufacturer discovered that Model 777-200 airplanes that do not have a fuel tank in the area affected by the unsafe condition were erroneously included in the applicability of AD 2022-18-11. As the design of these airplanes does not allow fuel to be present in the affected area (between the side-of-body ribs), the unsafe condition is not present on these airplanes. These airplanes are now identified in this AD by their maximum taxi weight of 547,000 pounds or less. Model 777-200 airplanes greater than 547,000 pounds maximum taxi weight, commonly referred to as "777-200ERs" (extended range), remain affected by the unsafe condition. Since the issuance of AD 2022-18-11, the manufacturer has also implemented a design change in production to address the unsafe condition. As a result, the unsafe condition does not exist on Model 777F airplanes having manufacturer line numbers 1743 and subsequent. Paragraph (c) of this AD, Applicability, has been revised accordingly.

In addition, the effectivity of the manufacturer's requirements bulletin also has the potential to cause confusion regarding the required actions for certain Model 777F airplanes. These airplanes, Model 777Fs having line numbers 1713, 1717, 1720, and 1724 through 1742 inclusive were not included in the effectivity of the requirements bulletin. While these airplanes were included in the applicability of AD 2022-18-11 and remain included in the applicability of this AD, the specific instructions applicable to them were not clearly identified in the requirements bulletin. Paragraph (h)(7) of this AD clarifies that Group 6 actions are the applicable actions for these airplanes.

FAA's Determination

The FAA is issuing this AD because the agency has determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Related Service Information Under [1 CFR Part 51](#)

This AD requires Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, which the Director of the Federal Register approved for incorporation by reference as of October 31, 2022 ([87 FR 58259](#), dated September 26, 2022). 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.

AD Requirements

This AD requires accomplishing the actions specified in the service information already described, except for any differences identified as exceptions in the regulatory text of this AD. This AD also requires reviewing the maintenance records of previously modified airplanes to determine the procedure used to apply cap seals, and applying and replacing certain cap seals using new specified thickness dimensions.

Justification for Immediate Adoption and Determination of the Effective Date

Section 553(b)(3)(B) of the Administrative Procedure Act (APA) ([5 U.S.C. 551 et seq.](#)) authorizes agencies to dispense with notice and comment procedures for rules when the agency, for “good cause,” finds that those procedures are “impracticable, unnecessary, or contrary to the public interest.” Under this section, an agency, upon finding good cause, may issue a final rule without providing notice and seeking comment prior to issuance. Further, section 553(d) of the APA authorizes agencies to make rules effective in less than thirty days, upon a finding of good cause.

An unsafe condition exists that requires the immediate adoption of this AD without providing an opportunity for public comments prior to adoption. The FAA has found that the risk to the flying public justifies forgoing notice and comment prior to adoption of this rule because a cap seal below the minimum thickness may fail to contain arcing at a fastener penetrating the center wing fuel tank during a lightning strike, potentially creating an ignition source within the fuel tank and leading to a fuel tank explosion. Accordingly, notice and opportunity for prior public comment are impracticable and contrary to the public interest pursuant to [5 U.S.C. 553\(b\)\(3\)\(B\)](#).

In addition, the FAA finds that good cause exists pursuant to [5 U.S.C. 553\(d\)](#) for making this amendment effective in less than 30 days, for the same reasons the FAA found good cause to forgo notice and comment.

Comments Invited

The FAA invites you to send any written data, views, or arguments about this final rule. Send your comments to an address listed under **ADDRESSES**. Include “Docket No. FAA–2023–1814 and Project Identifier AD–2023–00773–T” at the beginning of your comments. The most helpful comments reference a specific portion of the final rule, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this final rule because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in [14 CFR 11.35](#), the FAA will post all comments received, without change, to *regulations.gov*, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this final rule.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) ([5 U.S.C. 552](#)), CBI is exempt from public disclosure. If your comments responsive to this AD contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this AD, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this AD. Submissions containing CBI should be sent to Kevin

Regulatory Flexibility Act

The requirements of the Regulatory Flexibility Act (RFA) do not apply when an agency finds good cause pursuant to [5 U.S.C. 553](#) to adopt a rule without prior notice and comment. Because the FAA has determined that it has good cause to adopt this rule without notice and comment, RFA analysis is not required.

Costs of Compliance

The FAA estimates that this AD affects 291 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
Inspection(s) (retained actions from AD 2022-18-11)	44 work-hours × \$85 per hour = \$3,740 per inspection cycle	\$0	\$3,740 per inspection cycle	\$1,088,340 per inspection cycle.
Modification* (retained actions from AD 2022-18-11)	137 work-hours × \$85 per hour = \$11,645	47,964	\$59,609	\$17,346,219.
Post-modification inspection(s)* (retained actions from AD 2022-18-11)	46 work-hours × \$85 per hour = \$3,910 per inspection cycle	0	\$3,910 per inspection cycle	\$1,137,810 per inspection cycle.
Maintenance records review* (new action)	1 work-hour × \$85 per hour = \$85	85	\$85	Up to \$24,735.

**Number of affected airplanes that will be required to do this action is unknown.*

The FAA estimates the following costs to do any necessary cap sealing that would be required based on the results of the maintenance records review. The FAA has no way of determining the number of aircraft that might need the cap sealing:

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Cap sealing	Up to 109 work-hours × \$85 per hour = Up to \$9,265	\$90	Up to \$9,355.

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, and
- (2) Will not affect intrastate aviation in Alaska.

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:

- a. Removing Airworthiness Directive (AD) 2022–18–11, Amendment 39–22162 ([87 FR 58259](#),

September 26, 2022); and

b. Adding the following new AD:

2023–17–14 The Boeing Company: Amendment 39–22541; Docket No. FAA–2023–1814; Project Identifier AD–2023–00773–T.

(a) Effective Date

This airworthiness directive (AD) is effective September 15, 2023.

(b) Affected ADs

This AD replaces AD 2022–18–11, Amendment 39–22162 ([87 FR 58259](#), September 26, 2022) (AD 2022–18–11).

(c) Applicability

This AD applies to all The Boeing Company Model 777–200, –200LR, –300, –300ER, and 777F series airplanes, certificated in any category, excluding the airplanes identified in paragraphs (c)(1) and (2) of this AD.

(1) Boeing Model 777–200 series airplanes having a maximum taxi weight equal to or less than 547,000 pounds.

(2) Boeing Model 777F series airplanes with manufacturer line numbers of 1743 and subsequent.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by a report of a crack found in a front spar lower chord undergoing an underwing longeron replacement, and the determination that AD 2022–18–11 did not specify the appropriate thickness for the application of cap seals to fasteners penetrating the center wing fuel tank. The FAA is issuing this AD to detect and correct such cracking, which in combination with cracking in the front spar web, could result in a fuel leak and fire hazard. In addition, cap seals applied below the necessary thickness may fail to contain a spark resulting from a lightning strike, possibly resulting in a fuel tank explosion.

(f) Compliance

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

(g) Retained Required Actions, With No Changes

This paragraph restates the requirements of paragraph (g) of AD 2022–18–11, with no changes. Except as specified by paragraph (h) of this AD: At the applicable times specified in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021.

Actions identified as terminating action in Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, terminate the applicable required actions of this AD, provided the terminating action is done in accordance with the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021.

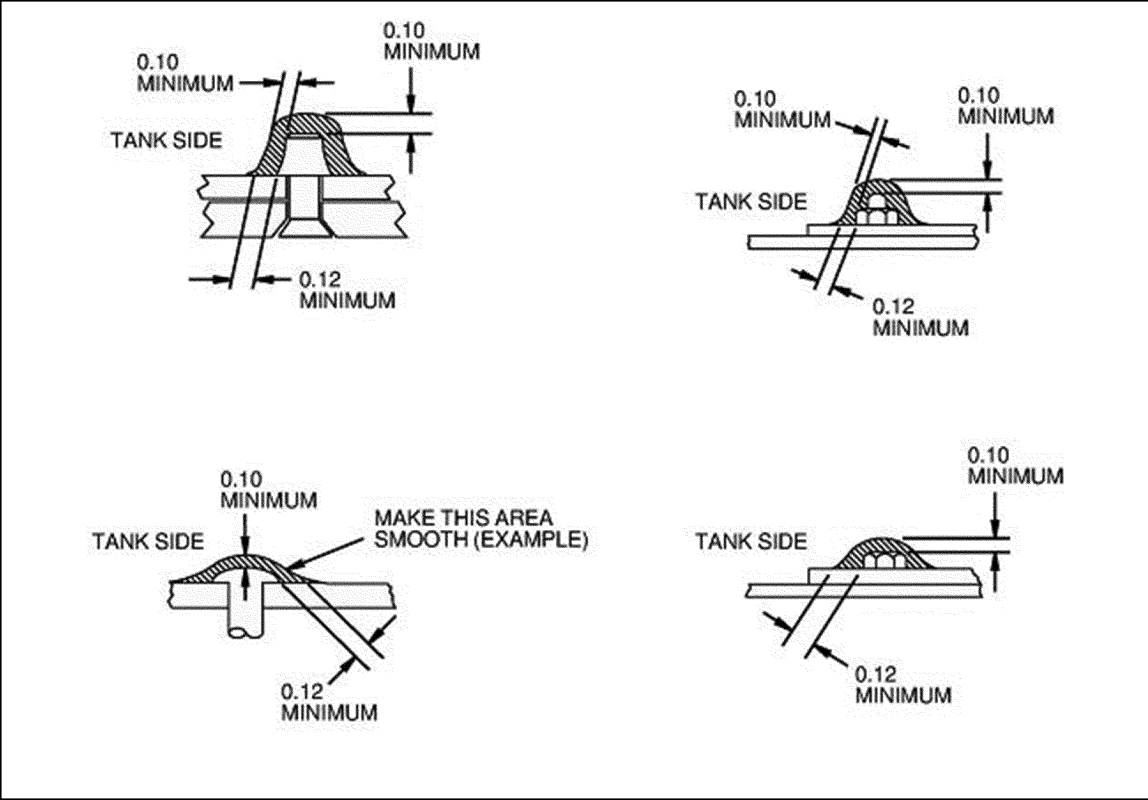
Note 1 to paragraph (g):

Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 777-57A0122, dated October 8, 2021, which is referred to in Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021.

(h) Exceptions to Service Information Specifications

- (1) Where the Compliance Time columns of the tables in the “Compliance” paragraph of Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, use the phrase “the original issue date of Requirements Bulletin 777-57A0122 RB,” this AD requires replacing those words with “October 31, 2022, the effective date of AD 2022-18-11.”
- (2) Where Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, specifies contacting Boeing for repair instructions: This AD requires repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.
- (3) Where the “Compliance” paragraph of Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, uses the phrase “Tables 1 through 50,” this AD requires replacing those words with “Tables 1 through 54.”
- (4) During application of any cap seal to a fastener, fastener head, and fastener threads and collars, as required by this AD, the cap seal must be applied with a thickness equal to or greater than the dimensions specified in figure 1 to paragraph (h)(4) of this AD.

Figure 1 to paragraph (h)(4) — Cap seal minimum thickness (all dimensions in inches)



(5) Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, does not require the application of cap seals to underwing longeron fasteners, fastener heads, and fastener threads and collars for the airplane groups and configurations identified in paragraphs (h)(5)(i) through (iv) of this AD. For those airplane groups and configurations, however, this AD requires application of a cap seal to the underwing longeron fasteners at the locations identified in Figures 81 and 144 of Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, during installation of the underwing longeron.

(i) Groups 7 and 8, Configurations 5 through 8, on the left side.

(ii) Group 9, Configurations 1 and 2, on the left side.

(iii) Groups 7 and 8, Configurations 2, 6, 10, and 14, on the right side.

(iv) Group 9, Configurations 1 and 3, on the right side.

(6) Where Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, requires inspections that may require the removal of fastener cap seals, this AD requires that if the cap seal is removed, a cap seal of BMS 5-45 sealant be reapplied with a thickness equal to or greater than the dimensions specified in figure 1 to paragraph (h)(4) of this AD before further flight after completion of the inspection.

(7) The Effectivity of Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, does not include Boeing Model 777F series airplanes having line numbers 1713, 1717, 1720, and 1724 through 1742 inclusive. However, for those airplanes, this AD requires accomplishment of the applicable actions specified in the Boeing Alert Requirements Bulletin for Group 6.

(i) Actions for Previously Modified Airplanes

For airplanes on which the applicable actions of Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, have been accomplished before the effective date of this AD: Within 30 days after the effective date of this AD, review the maintenance records to determine the procedures used to apply cap seals during accomplishment of the actions in Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021.

(1) If all of the conditions specified in paragraphs (i)(1)(i) through (iii) of this AD are met, no further work is required by paragraph (i) of this AD.

(i) If the underwing longeron was removed for any reason during accomplishment of the actions in Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, a cap seal was applied to the underwing longeron fasteners, fastener threads, and fastener collars at the locations identified in Figures 81 and 144 of Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, during installation.

(ii) All cap seals were applied using procedures with thickness dimensions greater than or equal to those given in figure 1 to paragraph (h)(4) of this AD.

(iii) All cap seals that were removed to accomplish any inspection in accordance with Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, were replaced with cap seals of BMS 5-45 sealant of thickness dimensions greater than or equal to those given in figure 1 to paragraph (h)(4) of this AD.

(2) If any cap seal was applied using procedures with thickness dimensions less than those given in figure 1 to paragraph (h)(4) of this AD, or if the maintenance records do not definitively specify the procedures used: At the applicable time specified in paragraph (i)(2)(i) or (ii) of this AD, replace the cap seal in accordance with the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777-57A0122 RB, dated October 8, 2021, using a cap sealing procedure with thickness greater than or equal to the dimensions given in figure 1 to paragraph (h)(4) of this AD.

(i) For airplanes equipped with a flammability reduction means approved by the FAA as compliant with the fuel tank flammability reduction (FTFR) requirements of [14 CFR 25.981\(b\)](#) or [26.33\(c\)\(1\)](#), or an ignition mitigation means approved by the FAA as compliant with the FTFR requirements of [14 CFR 25.981\(c\)](#) or [26.33\(c\)\(2\)](#): Within 180 days after the effective date of this AD,

(ii) For airplanes not described in paragraph (i)(2)(i) of this AD: Within 90 days after the effective date of this AD.

(3) For any cap seal that was not applied, or for any cap seal that was removed for inspections and not replaced, or if the maintenance records do not definitively specify the procedures used: At the applicable time specified in paragraph (i)(3)(i) or (ii) of this AD, apply a cap seal of BMS 5-45 sealant using an accepted method with thickness greater than or equal to the dimensions given in figure 1 to paragraph (h)(4) of this AD.

Note 2 to paragraph (i)(3):

Guidance for applying a cap seal can be found in the Boeing Model 777 Aircraft Maintenance Manual section 28-11-00.

(i) For airplanes equipped with a flammability reduction means approved by the FAA as compliant with the fuel tank flammability reduction (FTFR) requirements of [14 CFR 25.981\(b\)](#) or [26.33\(c\)\(1\)](#), or an ignition mitigation means approved by the FAA as compliant with the FTFR requirements of [14 CFR 25.981\(c\)](#) or [26.33\(c\)\(2\)](#): Within 180 days after the effective date of this AD.

(ii) For airplanes not described in paragraph (i)(3)(i) of this AD: Within 90 days after the effective date of this AD.

(j) 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 (k) 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.

(4) AMOCs approved for AD 2022–18–11 are approved as AMOCs for the corresponding provisions of Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021, that are required by paragraph (g) of this AD.

(k) Related Information

For more information about this AD, contact Kevin Nguyen, Aviation Safety Engineer, FAA, 2200 South 216th St., Des Moines, WA 98198; phone: 206–231–3555; email: Kevin.Nguyen@faa.gov.

(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 this AD specifies otherwise.

(3) The following service information was approved for IBR on October 31, 2022 ([87 FR 58259](#), dated September 26, 2022).

(i) Boeing Alert Requirements Bulletin 777–57A0122 RB, dated October 8, 2021.

(ii) [Reserved]

(4) 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 myboeingfleet.com.

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

(6) 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, email fr.inspection@nara.gov, or go to: www.archives.gov/federal-register/cfr/ibr-locations.html.

Issued on August 28, 2023.

Victor Wicklund,

Deputy Director, Compliance & Airworthiness Division, Aircraft Certification Service.

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