(n) 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 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 (o) 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, Seattle ACO 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 2021–06–03 are approved as AMOCs for the corresponding provisions of this AD.

(o) Related Information

For more information about this AD, contact Courtney Tuck, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3986; email: *Courtney.K.Tuck@faa.gov.*

(p) 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 January 4, 2023.

(i) Boeing Alert Service Bulletin 777–38A0047, dated March 30, 2021.

(ii) Boeing Alert Requirements Bulletin 777–38A0048 RB, dated October 18, 2021.

(4) The following service information was approved for IBR on March 5, 2021 (86 FR 12809, March 5, 2021).

(i) Boeing Multi Operator Message MOM–MOM–21–0089–01B, dated February 26, 2021.

(ii) [Reserved]

(5) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; website myboeingfleet.com.

(6) 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.

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

Issued on November 1, 2022.

Christina Underwood,

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

[FR Doc. 2022–26080 Filed 11–29–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2022–0103; Project Identifier AD–2021–00977–T; Amendment 39–22238; AD 2022–23–11]

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 777 airplanes. This AD was prompted by reports of discrepancies between the center wing tank (CWT) fuel quantity, as indicated by the fuel quantity indicating system (FQIS), and the refueling truck uploaded fuel amount, followed by certain engine-indicating and crew-alerting system (EICAS) messages. This AD requires installing new software in the fuel quantity processor unit (FQPU), or replacing the FQPU with one that includes new software, depending on airplane configuration; doing a software version check; and doing a FQPU operational check, depending on airplane configuration. This AD also prohibits the installation of certain FQPUs on certain airplanes. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 4, 2023.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 4, 2023.

ADDRESSES:

AD Docket: You may examine the AD docket at *regulations.gov* under Docket No. FAA–2022–0103; 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 service information identified in this final rule, contact Kevin Nguyen, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3555; email: *kevin.nguyen@faa.gov.*
- 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. It is also available at *regulations.gov* under Docket No. FAA–2022–0103.

FOR FURTHER INFORMATION CONTACT: Kevin Nguyen, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3555; email: *kevin.nguyen@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 777 airplanes. The NPRM published in the **Federal Register** on March 21, 2022 (87 FR 15902). The NPRM was prompted by reports of discrepancies between the CWT fuel quantity, as indicated by the FQIS, and the refueling truck uploaded fuel amount, followed by certain EICAS messages. In the NPRM, the FAA proposed to require installing new software in the FQPU, or replacing the FQPU with one that includes new software, depending on airplane configuration; doing a software version check; and doing a FQPU operational check, depending on airplane configuration. In the NPRM, the FAA also proposed to prohibit the installation of certain FQPUs on certain airplanes. The FAA is issuing this AD to address discrepancies in the CWT FQIS, which can result in an airplane being dispatched with insufficient fuel in the CWT and with the flight crew unaware of the insufficient fuel prior to departure. This condition, coupled with continued flight to the destination airport after receiving EICAS messages

while in route to the destination, could result in fuel exhaustion and subsequent power loss to all engines, thereby resulting in the inability to land at the destination airport or at a diversion airport, possibly leading to flight into terrain.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from Air Line Pilots Association, International (ALPA), FedEx Express, and United Airlines (UAL), who supported the NPRM without change.

The FAA received additional comments from seven commenters, including Cathay Pacific Airways (Cathay), Air France (AFA), Korean Air (KAL), Boeing, British Airways (BAB), Ontic, and American Airlines (AAL). The following presents the comments received on the NPRM and the FAA's response to each comment.

Request To Remove or Modify Paragraph (j) Parts Installation Prohibition

Boeing requested that the FAA remove the parts installation prohibition specified in paragraph (j) of the proposed AD. Boeing stated that the safety rationale for immediate prohibition of installation of FQIS–1 FQPU P/N 0320KPU01 is unclear, and that the actions and compliance times outlined in paragraph (g) of the proposed AD are sufficient without the additional prohibitions identified in paragraph (j) of the proposed AD. Boeing stated that operators have indicated a need to continue installing FQIS–1 FQPU part number (P/N) 0320KPU01 within the compliance period prior to availability of replacement FQIS–2 FQPUs P/Ns 0335KPU01, 0335KPU02, and 0335KPU03; and that prohibiting the installation of a FQIS–1 FQPU would present an unnecessary hardship due to insufficient availability of FQIS–2 FQPU. Boeing added that the statement ''This proposed AD would also prohibit the installation of certain FQPUs on certain airplanes'' in the Summary of the NPRM should also be removed.

AFA requested that the FAA modify the parts prohibition specified in paragraph (j) of the proposed AD in order to give more flexibility and allow installation of FQIS–1 FQPU P/N 0320KPU01 on airplanes that have not yet been retrofitted in accordance with Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021. AFA explained that unplanned removal (*e.g.,* due to failure or troubleshooting) of FQIS–1 FQPU would necessitate replacement with FQIS–2 FQPU, but demand for that cannot be met by the manufacturer. AFA stated that if the installation prohibition per paragraph (j) of the proposed AD is adopted as is, airplanes would be grounded because of the lack of required serviceable spares. AFA asserted that the safety risk is already addressed by AD 2020–11–11, Amendment 39–19915 (85 FR 34090, June 3, 2020) (AD 2020–11–11).

KAL requested that the FAA consider removing the parts installation prohibition specified in paragraph (j) of this proposed AD, or clarify and mitigate the parts installation prohibition conditions. KAL said the vendor was not able to provide the FQIS–2 FQPU until December 2023.

BAB proposed removing paragraph (j) of the proposed AD (the ''Parts Installation Prohibition,'' requirement) because the forecast supply of upgraded FQPUs (FQIS–2 FQPUs P/Ns 0335KPU01, 0335KPU02, and 0335KPU03) does not support the requirement, and the resulting cost of aircraft grounding is disproportionate to the fleet safety risk mitigation provided to the fleet by the proposed AD. BAB said the action is not justified; is not required for fleet safety; and was not required, recommended, or communicated to operators in the Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021, which the FAA has previously approved.

BAB explained that due to material shortages, the manufacturer is forecasting that deliveries of the new FQPUs will not commence until the second quarter of 2023. Should the AD be published with the prohibition specified in paragraph (j) of the proposed AD, BAB asserted that there will be a significant risk of grounding aircraft due to lack of availability of FQIS–2 FQPU P/N 0335KPU03. BAB also said the mandated integrated refuel panel (IRP) door cycling procedure required by AD 2020–11–11 is performed for all fuel uplifts regardless of whether the CWT is being utilized, and will continue until Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021, has been accomplished on the entire fleet. BAB concluded that the risk of departing with less than the minimum fuel for the mission has been effectively mitigated since 2020 with this mandated IRP door cycling procedure.

AAL requested that the FAA allow replacement of FQIS–1 FQPU P/N 0320KPU01 with the same FQPU while the fleet is being upgraded to the FQIS–2 FQPU (*e.g.,* P/N 0335KPU03), as specified in Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021. AAL noted that the parts installation prohibition specified in paragraph (j) of the proposed AD specifies that, for certain airplanes, ''as of the effective date of the AD,'' FQIS–1 FQPU P/N 0320KPU01 may not be installed. AAL said that the manufacturer is unable to meet delivery schedules. AAL noted it will likely not have the spare FQIS–2 FQPU P/N 0335KPU03 necessary for out-of-service events caused by failure of FQIS–1 FQPU P/N 0320KPU01, potentially causing extended down time. AAL explained that the fuel cycling procedure required by AD 2020–11–11 will continue while the upgrade is in progress, eliminating fuel drop events potentially caused by the FQIS–1 FQPU.

The FAA partially agrees with the request to modify paragraph (j) of this AD because, as the commenters explained, there is a limited availability of FQIS–2 FQPU, and AD 2020–11–11 is still in effect for airplanes with FQIS–1 FQPU installed. The FAA agrees to provide relief to the parts installation prohibition specified in paragraph (j) of this AD by allowing airplanes identified in Group 1 of Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021, that still have FQIS–1 FQPU installed to continue installing FQIS–1 FQPU P/N 0320KPU01 within the 30-month compliance time. For those airplanes, FQIS–1 FQPU must be replaced by FQIS–2 FQPU by the end of the compliance time as required by paragraph (g) of this AD, which mandates Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021. Note that paragraph (h) of this AD (''Exceptions to Service Information Specifications'') defines the compliance time as 30 months after ''the effective date of this AD'' rather than after ''the original issue date of Requirements Bulletin 777–28A0090 RB.''

The FAA disagrees with removing paragraph (j) of this AD completely because the installation of FQIS–1 FQPU onto Group 1 airplanes that already have the FQIS–2 FQPU installed must be prevented, even when there is an unplanned removal of the FQPU.

Paragraph (j) of this AD has been revised to read ''For Group 1 airplanes identified in Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021, that have a FQIS–2 fuel quantity processor unit (FQPU) part number (P/N) 0335KPU01, 0335KPU02, or 0335KPU03 installed: As of the effective date of this AD, no person may install a FQIS–1 FQPU P/N 0320KPU01

(Boeing P/N S345W001–010), on any airplane.''

Request To Extend Compliance Time

AFA requested a reasonable timescale for replacement of FQIS–1 FQPU P/N 0320KPU01 due to the shortage of FQIS–2 FQPU replacement units.

KAL also requested that the FAA provide a compliance time long enough (*e.g.,* a compliance time extension) to support the shortage of FQPU (the FAA infers the commenter is referring to FQIS–2 FQPU) because of lack of availability of replacement units. KAL said the vendor was not able to provide the FQIS–2 FQPU until December 2023, and they are unable to meet the compliance deadline of ''September 2023.'' The FAA infers that KAL is measuring the 30-month compliance time from March 30, 2021, the publication date of Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021.

Ontic stated that the limited availability of FQIS–2 FQPU could not support the fleet of aircraft still in operation within the 30 months compliance time specified in Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021. Ontic further stated that it understands the 30-month compliance time typically commences on the release of the AD, and not the service information. The FAA infers a request by Ontic to extend the compliance time if it commences on the publication date of Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021.

The FAA disagrees with the request to change the compliance time of 30 months to accomplish Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021. The FAA has confirmed with the manufacturers that a sufficient supply of FQIS–2 FQPU would be available to meet the compliance time if replacement of a FQIS–1 FQPU with a serviceable FQIS–1 FQPU is done within that time. As stated previously, the 30-month compliance time commences on the effective date of this AD, as specified in paragraph (h) of this AD. If operators encounter difficulty with accomplishing the actions required by this AD within the compliance time, they may request an alternative method of compliance (AMOC) in accordance with paragraph (k) of this AD. This AD has not been changed regarding this request.

AMOC Guidance From Boeing

Boeing offered to provide guidance for operators who request continued use of AD 2020–11–11 as an AMOC to this AD. Boeing said that individual airlines operate Model 777 airplanes differently, therefore a global AMOC is not practical for this AD. Boeing advised that considerations for requesting an AMOC would include frequency and quantity of center tank fuel loaded for mission profiles, planned end-of-life retirement of the airplane, and other factors impacting individual airline operations.

The FAA supports the manufacturer's offer of guidance. Operators may request AMOCs under the provisions of paragraph (k) of this AD. This AD has not been changed regarding this request.

Request To Revise the Summary Section

Boeing requested that the Summary section of the NPRM be revised for clarity. Boeing stated that the Summary description is inconsistent with the service bulletin regarding the operational check and the software version check. Boeing explained that the software version check should be accomplished when the software is downloaded to the FQPU onboard, and when a new FQPU is installed on the airplane. Boeing added that the operational check is only required when installing a new or updated FQPU on the airplane.

The FAA agrees to the request to revise the Summary section of this AD for the reason provided by the commenter. The third sentence of the Summary has been changed by adding '', depending on airplane configuration'' to the end of the sentence.

Recommendation To Modify Background Paragraphs

Boeing recommended that the technical description of the design flaw in the Background paragraphs be refined for clarity and reduce the possibility of reader misperception. Boeing provided revised language for the paragraph discussing the design flaw. Boeing also asked that the paragraph discussing the events where there was incorrect fuel quantity information be removed; that paragraph includes a description of the situation where the FQIS could indicate less than the actual fuel quantity in the CWT.

The FAA disagrees with this recommendation because the referenced information provided in the Background paragraphs of the NPRM is not repeated in the final rule. Furthermore, the information given adequately describes the design flaw in the FQIS, including the one in-service event where more fuel was added to the center tank than required for the mission. This AD has not been changed with regard to this request.

Request for Further Information About Software Loading and the AMOC Process

Cathay asked for the lead time for an AMOC to retain the door cycling procedure of AD 2020–11–11. Cathay also asked whether a certain Boeing information notice will be part of the AD requirement because of difficulties encountered with software loading.

The FAA advises that the standard response time for an AMOC application is 30 days. AMOC requests may be submitted as indicated in paragraph (k) of this AD. This AD requires only that FQPU software be upgraded or the FQPU replaced. There is no requirement regarding how the software upgrade is to be accomplished. Operators may refer to the Boeing information notice without requesting an AMOC. This AD has not been revised in this regard.

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.

Related Service Information Under 1 CFR Part 51

The FAA reviewed Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021. This service information specifies procedures for a check of maintenance or delivery records or an inspection to determine the part number of the FQPU for Group 1 airplanes. For Group 1 airplanes with a FQIS–1 FQPU, this service information specifies procedures for removing the existing FQPU; installing certain FQIS–2 FQPU with upgraded software; and doing a software version check and FQPU operational check. For Group 1 airplanes with a FQIS–2 FQPU and Group 2 airplanes, this service information specifies procedures for upgrading the FQPU software, and doing a software version check.

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 **ADDRESSES**.

Costs of Compliance

The FAA estimates that this AD affects 257 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
Records review or inspection of FQPU part number for Group 1 airplanes (143 airplanes).	1 work-hour × $85 per hour = $85	$0	$85	$12,155
Group 1 with FQIS–1 FQPU (125 airplanes): Replace FQPU with FQIS–2 FQPU, and do software and FQPU checks.	1 work-hour × $85 per hour = $85	48,300	48,385	6,048,125
Group 1 with FQIS–2 FQPU and Group 2 (132 airplanes): Upgrade software and do software check.	1 work-hour × $85 per hour = $85	0	85	11,220

The FAA has included all known costs in its cost estimate. According to the software 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:

2022–23–11 The Boeing Company: Amendment 39–22238; Docket No. FAA–2022–0103; Project Identifier AD–2021–00977–T.

(a) Effective Date

This airworthiness directive (AD) is effective January 4, 2023

(b) Affected ADs

This AD affects AD 2020–11–11, Amendment 39–19915 (85 FR 34090, June 3, 2020) (AD 2020–11–11).

(c) Applicability

This AD applies to The Boeing Company Model 777–200, –200LR, –300, –300ER, and 777F series airplanes, certificated in any category, Group 1 and Group 2 as identified in Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports of discrepancies between the center wing tank (CWT) fuel quantity, as indicated by the fuel quantity indicating system (FQIS), and the actual amount uploaded from the refueling truck. The FAA is issuing this AD to address discrepancies in the CWT FQIS, which can result in an airplane being dispatched with insufficient fuel in the CWT and with the flight crew unaware of the insufficient fuel prior to departure. This condition, coupled with continued flight to the destination airport after receiving engine-indicating and crew-alerting system (EICAS) messages while in route to the destination, could result in fuel exhaustion and subsequent power loss to all engines, thereby resulting in the inability to land at the destination airport or at a diversion airport, possibly leading to flight into terrain.

(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 777–28A0090 RB, dated March 30, 2021, do all applicable actions identified in, and in accordance with, the Accomplishment Instructions of Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021.

Note 1 to paragraph (g): Guidance for accomplishing the actions required by this AD can be found in Boeing Alert Service Bulletin 777–28A0090, dated March 30, 2021, which is referred to in Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021.

(h) Exceptions to Service Information Specifications

Where the Compliance Time column of the tables in the ''Compliance'' paragraph of Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021, uses the phrase ''the original issue date of Requirements Bulletin 777–28A0090 RB,'' this AD requires using ''the effective date of this AD.''

(i) Terminating Action for AD 2020–11–11

Accomplishing the actions required by this AD on all affected airplanes in an operator's fleet terminates the requirements of AD 2020–11–11 for that fleet.

(j) Parts Installation Prohibition

For Group 1 airplanes identified in Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021, that have a FQIS–2 fuel quantity processor unit (FQPU) part number (P/N) 0335KPU01, 0335KPU02, or 0335KPU03 installed: As of the effective date of this AD, no person may install a FQIS–1 FQPU P/N 0320KPU01 (Boeing P/N S345W001–010) on any airplane.

(k) 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 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 (l)(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, Seattle ACO 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.

(l) Related Information

(1) For more information about this AD, contact Kevin Nguyen, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3555; email: *kevin.nguyen@faa.gov.*

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(3) and (4) of this AD.

(m) 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.

(i) Boeing Alert Requirements Bulletin 777–28A0090 RB, dated March 30, 2021.

(ii) [Reserved]

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet myboeingfleet.com.

(4) 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.

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

Issued on November 1, 2022.

Christina Underwood,

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

[FR Doc. 2022–26079 Filed 11–29–22; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2022–1059; Project Identifier AD–2022–00204–T; Amendment 39–22239; AD 2022–23–12]

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 all 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 reports that high temperature composite trim air diffuser ducts (TADD) showed composite degradation and signs of hot air leakage. This AD requires a one-time low frequency eddy current (LFEC) inspection of certain center tank upper skin panels on the right and left side for any structural damage due to heat exposure, and repair if necessary. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective January 4, 2023.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of January 4, 2023.

ADDRESSES:

AD Docket: You may examine the AD docket at regulations.gov under Docket No. FAA–2022–1059; 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 service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110–SK57, Seal Beach, CA 90740–5600; telephone 562–797–1717; internet *myboeingfleet.com.*

• 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. It is also available at *regulations.gov* under Docket No. FAA–2022–1059.

FOR FURTHER INFORMATION CONTACT: Nicole Tsang, Aerospace Engineer, Cabin Safety and Environmental Systems Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA 98198; phone and fax: 206–231–3959; email: *nicole.s.tsang@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 all 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 September 8, 2022 (87 FR 54927). The NPRM was prompted by reports that high temperature composite TADD showed composite degradation and signs of hot air leakage. In the NPRM, the FAA proposed to require a one-time LFEC inspection of certain center tank upper skin panels on the right and left side for any structural damage due to heat exposure, and repair if necessary. The FAA is issuing this AD to address possible sustained hot air leakage from damaged TADDs, which could result in undetected damage to adjacent airframe structure. This condition, if not addressed, could lead to heat damage to the wing center section and adjacent structure and adversely affect the structural integrity of the airplane, resulting in the inability of the structure to carry limit load and the possible loss of continued safe flight and landing.

Discussion of Final Airworthiness Directive

Comments

The FAA received comments from The Air Line Pilots Association, International (ALPA), who supported the NPRM without change.