[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0664; Project Identifier AD-2021-00158-T]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain The Boeing Company Model 787-8, 787-9, and 787-10 airplanes. This proposed AD was prompted by significant changes, including new or more restrictive requirements, made to the airworthiness limitations (AWLs) related to fuel tank ignition prevention and the nitrogen generation system. This proposed AD would require revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive airworthiness limitations. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

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 https://www.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.

For service information identified in this NPRM, 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 https://www.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.

Examining the AD Docket

You may examine the AD docket at https://www.regulations.gov by searching for and locating Docket No. FAA-2021-0664; 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 NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Tak Kobayashi, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA; phone: 206-231-3553; email: Takahisa.Kobayashi@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include "Docket No. FAA-2021-0664; Project Identifier AD-2021-00158-T" at the beginning of

your comments. The most helpful comments reference a specific portion of the proposal, 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 proposal 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 https://www.regulations.gov, including any personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

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 NPRM 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 NPRM, 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 NPRM. Submissions containing CBI should be sent to Tak Kobayashi, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA; phone: 206-231-3553; email: Takahisa.Kobayashi@faa.gov. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The FAA has assessed the changes, including new or more restrictive requirements, that have been made to the AWLs related to fuel tank ignition prevention

and the nitrogen generation system. The FAA is issuing this AD to address ignition sources inside the fuel tanks and increased flammability exposure of the fuel tanks caused by latent failures, alterations, repairs, or maintenance actions, which could result in a fuel tank explosion and consequent loss of an airplane.

The FAA issued AD 2018-11-13, Amendment 39-19301 (83 FR 25894, June 5, 2018) (AD 2018-11-13), which applies to certain The Boeing Company Model 787-8 airplanes. AD 2018-11-13 requires, among other things, revising the inspection or maintenance program to incorporate an AWL. Since the FAA issued AD 2018-11-13, AWL No. 57-AWL-13, "Inspection Requirements for In-Tank Fasteners and Edge Seal near Disbond Arrestment (DBA) Fastener Installations in Lightning Zone 2," has not been revised, therefore, this proposed AD would require the incorporation of AWL No. 57-AWL-13 that is also mandated by AD 2018-11-13. Incorporating the revision required by this proposed AD would terminate the requirements of paragraph (h) of AD 2018-11-13 for certain Model 787-8 airplanes only.

Airworthiness Limitations Based on Type Design

When a type certificate is issued for a type design, the Airworthiness Limitations section (ALS) of the Instructions for Continued Airworthiness, including its revision level, is part of that type design, as specified in 14 CFR 21.31(c). U.S. operators must operate their airplanes in an airworthy condition, in accordance with 14 CFR 91.7(a). Included in this obligation is the requirement to perform any maintenance or inspections specified in the ALS, and in accordance with the ALS as specified in 14 CFR 43.16 and 91.403(c), unless an alternative has been approved by the FAA.

The sum effect of these requirements is an obligation to comply with the ALS revision defined in the type design referenced in the manufacturer's conformity statement. Therefore, operators are required to maintain each airplane in accordance with the ALS revision that has been approved as part of the type design for that airplane.

Operators are allowed to step up and comply with a "later" ALS revision published after the "type design" ALS revision. However, compliance with a later ALS revision is not a mandatory requirement.

This proposed AD applies to certain Model 787 airplanes. For those affected airplanes, this proposed AD would require revising the maintenance or inspection program by incorporating the information specified in the August 2018 revision of the Model 787 ALS and thereby, would mandate the ALS revision in the proposed AD.

FAA's Determination

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Boeing 787 Special Compliance Items/Airworthiness Limitations, D011Z009-03-04, dated August 2018. This service information specifies AWLs that include airworthiness limitation instructions (ALIs) and critical design configuration control limitations (CDCCLs) related to fuel tank ignition prevention and the nitrogen generation system.

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.

Proposed AD Requirements in this NPRM

This proposed AD would require revising the existing maintenance or inspection program, as applicable, to incorporate new or more restrictive AWLs.

This proposed AD would also require revisions to certain operator maintenance documents to include new actions (e.g., inspections) and CDCCLs. Compliance with these actions is required by 14 CFR 91.403(c). For airplanes that have been previously

modified, altered, or repaired in the areas addressed by this proposed AD, the operator may not be able to accomplish the actions described in the revisions. In this situation, to comply with 14 CFR 91.403(c), the operator must request approval for an alternative method of compliance according to paragraph (j) of this proposed AD.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 121 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

The FAA has determined that revising the existing maintenance or inspection program takes an average of 90 work-hours per operator, although the agency recognizes that this number may vary from operator to operator. Since operators incorporate maintenance or inspection program changes for their affected fleet(s), the FAA has determined that a per-operator estimate is more accurate than a per-airplane estimate. Therefore, the FAA estimates the average total cost per operator to be $7,650 (90 work-hours x $85 per work-hour).

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

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 this proposed regulation:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Would not affect intrastate aviation in Alaska, and

(3) Would 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 Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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:

The Boeing Company: Docket No. FAA-2021-0664; Project Identifier AD-2021-00158-T.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD affects AD 2018-11-13, Amendment 39-19301 (83 FR 25894, June 5, 2018) (AD 2018-11-13).

(c) Applicability

This AD applies to The Boeing Company Model 787-8, 787-9, and 787-10 airplanes, certificated in any category, having line numbers (L/Ns) 1 through 871 inclusive, excluding L/N 688; and L/Ns 873, 875, 877, 878, 879, 881, and 883.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by significant changes, including new and more restrictive requirements, made to the airworthiness limitations (AWLs) related to fuel tank ignition prevention and the nitrogen generation system. The FAA is issuing this AD to address ignition sources inside the fuel tanks and increased flammability exposure of the fuel tanks caused by latent failures, alterations, repairs, or maintenance actions, which could result in a fuel tank explosion and consequent loss of an airplane.

(f) Compliance

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

(g) Maintenance or Inspection Program Revision

Within 180 days after the effective date of this AD, revise the existing maintenance or inspection program, as applicable, to incorporate the information specified in Sections C through F of Boeing 787 Special Compliance Items/Airworthiness Limitations, D011Z009-03-04, dated August 2018. The initial

compliance time for doing the airworthiness limitation instruction (ALI) tasks is at the times specified in paragraphs (g)(1) through (14) of this AD.

(1) For airworthiness limitation (AWL) No. 28-AWL-89, "Fuel Quantity Data Concentrator (FQDC) Bracket Inspections," at the applicable time in paragraph (g)(1)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 28-AWL-89: Within 5 years or 10,000 flight cycles, whichever occur first after the most recent inspection was performed as specified in AWL No. 28-AWL-89.

(ii) For airplanes on which no initial inspection was performed: Within 5 years or 10,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(2) For AWL No. 57-AWL-01, "Edge and Fillet Seals at Stringer and Spar Locations (Zone 2)," at the applicable time in paragraph (g)(2)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-01: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-01.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(3) For AWL No. 57-AWL-02, "Fasteners on Bare Carbon Fiber Reinforced Plastic (CFRP) Stripes," at the applicable time in paragraph (g)(3)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-02: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-02.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(4) For AWL No. 57-AWL-03, "Head-in-tank Thin-Sleeved Interference-Fit Fasteners with Heads in the Fuel Tank" at the applicable time in paragraph (g)(4)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-03: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-03.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(5) For AWL No. 57-AWL-05, "Titanium Collars - BACC30CT Fasteners (Clearance Fit)." at the applicable time in paragraph (g)(5)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-05: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-05.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(6) For AWL No. 57-AWL-06, "Titanium Collars - BACC30CY Collars (Interference-Fit with Swaged Collars)" at the applicable time in paragraph (g)(6)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-06: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-06.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(7) For AWL No. 57-AWL-07, "Tension-rated Bolt Locations at Side of Body (SOB) and Nacelle Fittings" at the applicable time in paragraph (g)(7)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-07: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-07.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(8) For AWL No. 57-AWL-08, "Dielectric Top on Wing Surface," at the applicable time in paragraph (g)(8)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-08: Within 6 years or 12,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-08.

(ii) For airplanes on which no initial inspection was performed: Within 6 years or 12,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(9) For AWL No. 57-AWL-09, “Inspection Requirements for Class 1A Seal Installations created as a result of Boeing Material Review Board,” at the applicable time in paragraph (g)(9)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-09: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-09.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(10) For AWL No. 57-AWL-10, “Inspection Requirements for In-Tank Fasteners near Side of Body (SOB) Rib and between Ribs 7 and 18,” at the applicable time in paragraph (g)(10)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-10: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-10.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(11) For AWL No. 57-AWL-13, “Inspection Requirements for In-Tank Fasteners and Edge Seal near Disbond Arrestment (DBA) Fastener Installations in Lightning Zone 2,” at the applicable time in paragraph (g)(11)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-13: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-13.

(ii) For airplanes on which no initial inspection was performed: At the applicable time in paragraph (g)(11)(ii)(A) or (B) of this AD.

(A) For airplanes on which Boeing Service Bulletin B787-81205-SB570030-00 is applicable: Within 12 years or 24,000 flight cycles, whichever occurs first after the incorporation of Boeing Service Bulletin B787-81205-SB570030-00.

(B) For airplanes on which Boeing Service Bulletin B787-81205-SB570030-00 is not applicable: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(12) For AWL No. 57-AWL-14, "Supplemental Inspection Requirements for Pre-cured Sealant Caps, Fillet Seals, and Edge Seals associated Stringer Splice Fitting Installation located at Right Wing Upper Panel Stringer No.3, just Outboard of the Side of Body Rib," at the applicable time in paragraph (g)(12)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-14: Within 12 years or 24,000 flight cycles whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-14.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(13) For AWL No. 57-AWL-15, "Inspection Requirements for Pre-cured Sealant Caps, Injection Seals, Fillet Seals, and Edge Seals associated with the Wing Lower Panel Stringer Attachments to the Lower Side of Body (SOB) Chord," at the applicable time in paragraph (g)(13)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-15: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-15.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(14) For AWL No. 57-AWL-16, "Supplemental Inspection Requirements for Edge Seals located at Left Wing Upper Panel Stringer No. 19, Between Ribs 8 and 9," at the applicable time in paragraph (g)(14)(i) or (ii) of this AD.

(i) For airplanes on which an inspection was performed as specified in AWL No. 57-AWL-16: Within 12 years or 24,000 flight cycles, whichever occurs first after the most recent inspection was performed as specified in AWL No. 57-AWL-16.

(ii) For airplanes on which no initial inspection was performed: Within 12 years or 24,000 flight cycles, whichever occurs first after the date of issuance of the original standard airworthiness certificate or the date of issuance of the original export certificate of airworthiness.

(h) No Alternative Actions, Intervals, or CDCCLs

After the existing maintenance or inspection program has been revised as required by paragraph (g) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs may be used unless the actions, intervals, and CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j) of this AD.

(i) Terminating Actions

Accomplishment of the revision required by paragraph (g) of this AD terminates the requirements specified in paragraph (h) of AD 2018-11-13, for Model 787-8 airplanes only.

(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 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 Related Information. 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.

(k) Related Information

(1) For more information about this AD, contact Tak Kobayashi, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 2200 South 216th St., Des Moines, WA; phone: 206-231-3553; email: Takahisa.Kobayashi@faa.gov.

(2) 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 https://www.myboeingfleet.com. You may view this referenced 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.

Issued on August 7, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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