[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2017-1026; Product Identifier 2017-NM-097-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 707 airplanes, and Model 720 and 720B series airplanes. This proposed AD was prompted by fuel system reviews conducted by the manufacturer. This proposed AD would require revising the maintenance or inspection program to include new airworthiness limitations. We are proposing this AD to address the unsafe condition on these products.

DATES: We 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 http://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, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-1026.

Examining the AD Docket

You may examine the AD docket on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-1026; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Christopher Baker, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6498; fax: 425-917-6590; email: christopher.r.baker@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2017-1026; Product Identifier 2017-NM-097-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory,

economic, environmental, and energy aspects of this NPRM. We will consider all comments received by the closing date and may amend this NPRM because of those comments.

We will post all comments we receive, without change, to http://www.regulations.gov, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this NPRM.

Discussion

The FAA has examined the underlying safety issues involved in fuel tank explosions on several large transport airplanes, including the adequacy of existing regulations, the service history of airplanes subject to those regulations, and existing maintenance practices for fuel tank systems. As a result of those findings, we issued a final rule titled "Transport Airplane Fuel Tank System Design Review, Flammability Reduction and Maintenance and Inspection Requirements" (66 FR 23086, May 7, 2001). In addition to new airworthiness standards for transport airplanes and new maintenance requirements, that rule included Amendment 21-78, which established Special Federal Aviation Regulation No. 88 ("SFAR 88") at 14 CFR part 21. Subsequently, SFAR 88 was amended by Amendment 21-82 (67 FR 57490, September 20, 2002; corrected at 67 FR 70809, November 26, 2002) and Amendment 21-83 (67 FR 72830, December 9, 2002; corrected at 68 FR 37735, June 25, 2003, to change "21-82" to "21-83").

Among other actions, SFAR 88 requires certain type design (i.e., type certificate (TC) and supplemental type certificate (STC)) holders to substantiate that their fuel tank systems can prevent ignition sources in the fuel tanks. This requirement applies to type design holders for large turbine-powered transport airplanes and for subsequent modifications to those airplanes. It requires them to perform design reviews and to develop design changes and maintenance procedures if their designs do not meet the new

fuel tank safety standards. As explained in the preamble to the rule, we intended to adopt ADs to mandate any changes found necessary to address unsafe conditions identified as a result of these reviews.

In evaluating these design reviews, we have established four criteria intended to define the unsafe conditions associated with fuel tank systems that require corrective actions. The percentage of operating time during which fuel tanks are exposed to flammable conditions is one of these criteria. The other three criteria address the failure types under evaluation: single failures, single failures in combination with another latent condition(s), and in-service failure experience. For all four criteria, the evaluations included consideration of previous actions taken that may mitigate the need for further action.

This proposed AD was prompted by fuel system reviews conducted by the manufacturer. We are proposing this AD to detect and correct potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

Related Service Information under 1 CFR part 51

We reviewed Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016, which addresses fuel tank systems and impact-resistant fuel tank access doors. 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.

FAA's Determination

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

Proposed AD Requirements

This proposed AD would require revising the maintenance or inspection program to add airworthiness limitations specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. For information on the procedures and compliance times, see this service information at http://www.regulations.gov by searching for and locating Docket No. FAA-2017-1026.

This proposed AD would require revisions to certain operator maintenance documents to include new actions (e.g., inspections). 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 (k) of this proposed AD. The request should include a description of changes to the required actions that will ensure the continued operational safety of the airplane.

Related Rulemaking

AD 2008-04-11 R1, Amendment 39-16147 (74 FR 68505, December 28, 2009) ("AD 2008-04-11 R1"), applies to all The Boeing Company Model 707 airplanes, and Model 720 and 720B series airplanes. AD 2008-04-11 R1 requires revisions to certain operator maintenance documents to include new inspections. Accomplishing the actions specified in this proposed AD would terminate all requirements of AD 2008-04-11 R1.

AD 2013-24-07, Amendment 39-17681 (78 FR 72550, December 3, 2013) ("AD 2013-24-07"), applies to all The Boeing Company Model 707 airplanes, and Model 720 and 720B series airplanes. AD 2013-24-07 requires an inspection of the left- and right-hand wing fuel tank access doors to determine that impact-resistant access doors are installed in the correct locations, and to replace any door with an impact-

resistant access door if necessary; an inspection for stencils and index markers on impact-resistant access doors, and application of new stencils or index markers if necessary; and revision of the maintenance program to incorporate changes to the airworthiness limitations section. Accomplishing the actions specified in this proposed AD would terminate the requirements of paragraph (h) of AD 2013-24-07.

Costs of Compliance

We estimate that this proposed AD affects 9 airplanes of U.S. registry. We estimate the following costs to comply with this proposed AD:

Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Revise the Maintenance or Inspection Program	1 work-hour X $85 per hour = $85	$0	$85	$765

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

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

Regulatory Findings

We 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) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

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 (AD):

The Boeing Company: Docket No. FAA-2017-1026; Product Identifier 2017-NM-097-AD.

(a) Comments Due Date

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD affects the ADs specified in paragraphs (b)(1) and (b)(2) of this AD.

(1) AD 2008-04-11 R1, Amendment 39-16147 (74 FR 68505, December 28, 2009) ("AD 2008-04-11 R1").

(2) AD 2013-24-07, Amendment 39-17681 (78 FR 72550, December 3, 2013) ("AD 2013-24-07").

(c) Applicability

This AD applies to all The Boeing Company airplanes, certificated in any category, identified in paragraphs (c)(1) and (c)(2) of this AD.

(1) Model 707-100 long body, -200, -100B long body, and -100B short body, -300, -300B, -300C, and -400 series airplanes.

(2) Model 720 and 720B series airplanes.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by fuel system reviews conducted by the manufacturer. We are issuing this AD to detect and correct potential ignition sources inside fuel tanks caused by latent failures, alterations, repairs, or maintenance actions, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

(f) Compliance

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

(g) Revision of Maintenance or Inspection Program

Within 60 days after the effective date of this AD, revise the maintenance or inspection program, as applicable, to incorporate the information in Section A, including Subsections A.1, A.2, and Appendix 1, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016; except as provided in paragraph (h) of this AD. The initial compliance times for the AWL tasks are within the applicable compliance times specified in paragraphs (g)(1) through (g)(5) of this AD.

(1) AWL No. 28-AWL-01, External Wires Over Center Fuel Tank, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-01 is specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-01 as of the effective date of this AD: Conduct the inspection within 120 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-01: Conduct the inspection within 12 months after the effective date of this AD.

(2) AWL No. 28-AWL-18, AC Fuel Boost Pump Bonding Installation, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated

October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-18 is specified in paragraph (g)(2)(i) or (g)(2)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-18 as of the effective date of this AD: Conduct the inspection within 72 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-18 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(3) AWL No. 28-AWL-19, Fuel Valve Bonding Jumper Installation – Engine Fuel Shutoff, Defuel, Reserve Tank Transfer, Fuel Dump, and Fuel Manifold Valves, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-19 is specified in paragraph (g)(3)(i) or (g)(3)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-19 as of the effective date of this AD: Conduct the inspection within 72 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-19 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(4) AWL No. 28-AWL-21, Dry Bay Fuel Manifold Assembly – Bonding Jumper Installation, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-21 is specified in paragraph (g)(4)(i) or (g)(4)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-21 as of the effective date of this AD: Conduct the inspection within 72 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-21 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(5) AWL No. 28-AWL-23, Reserve Tank Transfer Piping Assembly – Bonding Jumper Installation, as specified in Boeing 707/720 Airworthiness Limitations (AWLs), D6-7552-AWL, dated October 2016. The initial compliance time for accomplishment of the actions specified by AWL No. 28-AWL-23 is specified in paragraph (g)(5)(i) or (g)(5)(ii) of this AD, as applicable.

(i) For airplanes that have been previously inspected as specified in 28-AWL-23 as of the effective date of this AD: Conduct the inspection within 72 months after the most recent inspection.

(ii) For airplanes that have not been inspected as specified in 28-AWL-23 as of the effective date of this AD: Conduct the inspection within 12 months after the effective date of this AD.

(h) Additional Acceptable Wire Types and Sleeving

(1) Where AWL No. 28-AWL-03 identifies wire types BMS 13-48, BMS 13-58, and BMS 13-60, the following wire types are also acceptable: MIL-W-22759/16, MIL-W-22759/32, MIL-W-22759/34, MIL-W-22759/41, MIL-W-22759/86, MIL-W-22759/87, and MIL-W-22759/92; and MIL-C-27500 cables, which are constructed from the MIL Specification wire types identified in this paragraph.

(2) Where AWL No. 28-AWL-03 identifies TFE-2X Standard wall for wire sleeving, the following sleeving materials are also acceptable: Roundit 2000NX and Varglas Type HO, HP, or HM.

(i) No Alternative Actions and Intervals

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

(j) Terminating Action for Other ADs

(1) Accomplishment of the actions required by paragraph (g) of this AD terminates all requirements of AD 2008-04-11 R1 for that airplane.

(2) Accomplishment of the actions required by paragraph (g) of this AD terminates the requirements of paragraph (h) of AD 2013-24-07 for that 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 local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (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 local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO Branch, to make those findings. To be

approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(l) Related Information

(1) For more information about this AD, contact Christopher Baker, Aerospace Engineer, Propulsion Section, FAA, Seattle ACO Branch, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6498; fax: 425-917-6590; email: christopher.r.baker@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 service information at the FAA, Transport Standards Branch, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on November 8, 2017.

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