[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-1273; Directorate Identifier 2014-NM-194-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 certain The Boeing Company Model 777 airplanes. This proposed AD was prompted by reports of unreliable performance of the fuel scavenge system. This proposed AD would require changing the main fuel tank water scavenge system, center fuel tank fuel scavenge system, certain electrical panels; related investigative actions, and corrective actions if necessary; and for certain airplanes, changing to give redundant control of the center override/jettison fuel pumps and main jettison fuel pumps. We are proposing this AD to prevent fuel exhaustion and subsequent power loss of all engines due to loss of capability to scavenge fuel in the center fuel tank.

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 Boeing service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet https://www.myboeingfleet.com.

For GE Aviation service information identified in this proposed AD, contact GE Aviation Fleet Support, 1 Neumann Way, Cincinnati, OH 45215; telephone 513-552-3272; Email: aviation.fleetsupport@ge.com; Internet http://www.geaviation.com.

You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221. Boeing service information is also available on the Internet at http://www.regulations.gov by searching for and locating Docket No. FAA-2015-1273.

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-2015-1273; 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 proposed AD, 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: Tak Kobayashi, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6499; fax: 425-917-6590; email: Takahisa.Kobayashi@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-2015-1273; Directorate Identifier 2014-NM-194-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD 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 proposed AD.

Discussion

We have received reports of unreliable performance of the fuel scavenge system. During flight, any water in the fuel can sink to the bottom of the fuel tank. This water can enter the fuel scavenge inlets and can then freeze as it travels from the body center fuel tank into the colder fuel scavenge tubes in the left and right cheek center fuel tanks. The flow of scavenge fuel from the center fuel tank to the main fuel tanks can then decrease or stop. When this occurs, as much as 2,600 pounds of fuel can remain unavailable during flight. On airplanes with airplane information management system (AIMS) version 13 or

older, this can occur without warning. If the fuel quantity decreases to the quantity of the unavailable fuel, then in-flight shutdown of both engines could occur.

Related Service Information under 1 CFR part 51

We reviewed Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014. This service bulletin describes a main fuel tank water scavenge system change and a center fuel tank fuel scavenge system change.

We also reviewed Boeing Service Bulletin 777-28A0047, Revision 5, dated September 20, 2010, and Revision 6, dated July 11, 2013, which describe changes to give redundant control of the center override/jettison fuel pumps and main jettison fuel pumps.

We also reviewed GE Aviation Service Bulletin 5000ELM-28-075, Revision 1, dated August 5, 2014, and GE Aviation Service Bulletin 6000ELM-28-076, Revision 1, dated August 5, 2014, which describe wiring changes in the P110 and P210 panels, respectively.

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 of this NPRM.

Concurrent Actions

For airplanes in Group 10, Configuration 1, Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, specifies prior accomplishment of the actions described in Boeing Service Bulletin 777-28-0060, dated January 30, 2009; Revision 1, dated October 2, 2009; or Revision 2, dated January 08, 2010; which describe single aft auxiliary fuel tank removal and cargo system installation. Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, does not address the configuration of airplanes with the auxiliary fuel tank installed. Group 10 airplanes were delivered with the auxiliary fuel tank installed, and therefore the actions specified in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, cannot

be accomplished on those airplanes unless the auxiliary fuel tank is removed. This proposed AD does not require removal of the auxiliary fuel tank from airplanes in Group 10, Configuration 1, in accordance with the actions specified in Boeing Service Bulletin 777-28-0060, dated January 30, 2009; Revision 1, dated October 2, 2009; or Revision 2, dated January 08, 2010. However, if the auxiliary fuel tank is removed, this proposed AD requires accomplishment of the actions specified in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, prior to the threshold or concurrent with the auxiliary tank removal, and prohibits re-installation of the auxiliary fuel tank thereafter. Once modifications are developed and approved to address an airplane configuration having an auxiliary fuel tank installed, we might consider additional rulemaking to address the fuel scavenge system in those airplanes.

For airplanes in Group 10, Configuration 2, Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, specifies prior accomplishment of the actions described in Work Package 2 of the Accomplishment Instructions of Boeing Service Bulletin 777-28-0062, dated June 30, 2009; or Revision 1, dated November 18, 2010; which describes removal of one body auxiliary fuel tank (Work Package 1 describes installation of the auxiliary fuel tank). Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, does not address the configuration of airplanes with the auxiliary fuel tank installed. Group 10 airplanes are delivered with the auxiliary fuel tank installed, and therefore, the actions specified in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, cannot be accomplished on those airplanes unless the auxiliary fuel tank is removed. This proposed AD does not require removal of the auxiliary fuel tank from airplanes in Group 10, Configuration 2, in accordance with the actions specified in Work Package 2 of the Accomplishment Instructions of Boeing Service Bulletin 777-28-0062, dated June 30, 2009; or Revision 1, dated November 18, 2010. However, if the auxiliary fuel tank is removed, this proposed AD requires accomplishment of the actions specified in Boeing

Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, prior to the threshold or concurrent with the auxiliary tank removal, and prohibits re-installation of the auxiliary fuel tank thereafter. Once modifications are developed and approved to address an airplane configuration having an auxiliary fuel tank installed, we might consider additional rulemaking to address the fuel scavenge system in those airplanes.

Related Rulemaking

AD 2011-09-05, Amendment 39-16667 (77 FR 22305, April 21, 2011), specifies the actions described in Boeing Service Bulletin 777-28A0047, Revision 5, dated September 20, 2010. For certain airplanes, the actions described in this service bulletin must be done prior to the accomplishment of the actions described in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014.

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 accomplishing the actions specified in the service information described previously, except as discussed under "Differences Between this Proposed AD and the Service Information."

The phrase "related investigative actions" might be used in this proposed AD. "Related investigative actions" are follow-on actions that: (1) are related to the primary actions, and (2) are actions that further investigate the nature of any condition found. Related investigative actions in an AD could include, for example, inspections.

In addition, the phrase "corrective actions" might be used in this proposed AD. "Corrective actions" are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

Explanation of "RC" Steps in Service Information

The FAA worked in conjunction with industry, under the Airworthiness Directive Implementation Aviation Rulemaking Committee (ARC), to enhance the AD system. One enhancement was a new process for annotating which steps in the service information are required for compliance with an AD. Differentiating these steps from other tasks in the service information is expected to improve an owner's/operator's understanding of crucial AD requirements and help provide consistent judgment in AD compliance. The steps identified as RC (required for compliance) in any service information identified previously have a direct effect on detecting, preventing, resolving, or eliminating an identified unsafe condition.

Steps that are identified as RC in any service information must be done to comply with the proposed AD. However, steps that are not identified as RC are recommended. Those steps that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an alternative method of compliance (AMOC), provided the steps identified as RC can be done and the airplane can be put back in a serviceable condition. Any substitutions or changes to steps identified as RC will require approval of an AMOC.

Costs of Compliance

We estimate that this proposed AD affects 55 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
Fuel system modification	200 work-hours X $85 per hour = $17,000	$68,535	$85,535	$4,704,425
P110 and P210 panel modification	2 work-hours X $85 per hour =$170	$0	$170	$9,350

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this proposed AD.

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

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.

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-2015-1273; Directorate Identifier 2014-NM-194-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

None.

(c) Applicability

This AD applies to The Boeing Company Model 777-200, -200LR, -300, -300ER, and -777F series airplanes, certificated in any category, as identified in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports of unreliable performance of the fuel scavenge system. We are issuing this AD to prevent fuel exhaustion and subsequent power loss of all engines due to loss of capability to scavenge fuel in the center fuel tank.

(f) Compliance

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

(g) Fuel Scavenge System Changes, Wiring Changes, and Software Changes

For airplanes identified in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, except for Group 10 airplanes on which the actions specified in Boeing Service Bulletin 777-28-0060; or Work Package 2 of the Accomplishment Instructions of Boeing Service Bulletin 777-28-0062, have not been accomplished: Within 60 months after the effective date of this AD, do the applicable actions specified in paragraphs (g)(1) through (g)(6) of this AD; and do all applicable related investigative and corrective actions; in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014. Do all applicable related investigative and corrective actions before further flight.

(1) Do applicable mechanical changes to the main fuel tank water scavenge system and center fuel tank fuel scavenge system.

(2) Install relays and related equipment on the P301 and P302 panels in the main equipment center.

(3) Do applicable wiring changes between the P105, P110 and P301 panels, and between the P200, P205, P210 and P302 panels.

(4) Do wiring changes in the P105 panel.

(5) Install new electrical load management system 2 (ELMS2) software.

(6) Do a functional test consisting of operational tests, a leak test, system tests, and a fuel scavenge system functional test. If any of the tests fail, before further flight accomplish corrective actions and repeat the test and applicable corrective actions until the test is passed.

(h) Concurrent Actions

(1) For Group 13 through 16 airplanes, as identified in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, prior to accomplishing the actions required by paragraph (g) of this AD, install a new P301 panel on the left side of the airplane, install a new P302 panel on the right side of the airplane, and change the wiring; or perform bonding resistance measurements and rework the airplane installations; as applicable; in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-28A0047, Revision 5, dated September 20, 2010; or Boeing Service Bulletin 777-28A0047, Revision 6, dated July 11, 2013.

(2) For airplanes identified in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, except for Group 10 airplanes on which the actions described in Boeing Service Bulletin 777-28-0060; or Work Package 2 of the Accomplishment Instructions of Boeing Service Bulletin 777-28-0062, have not been accomplished: Prior to or concurrently with accomplishing the requirements of paragraph (g) of this AD, do wiring changes in the P110 and P210 panels, in accordance with the applicable Accomplishment Instructions of GE Aviation Service bulletin 5000ELM-28-075, Revision 1, dated August 5, 2014; and GE Aviation Service Bulletin 6000ELM-28-076, Revision 1, dated August 5, 2014.

(i) Parts Installation Prohibition

For Group 10 airplanes, as identified in Boeing Special Attention Service Bulletin 777-28-0078, dated September 4, 2014, after completion of the actions required by paragraph (g) of this AD, no person may install an auxiliary fuel tank on any Group 10 airplane.

(j) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (h)(1) of this AD, if those actions were performed before May 26, 2011 (the effective date of AD 2011-09-05, Amendment 39-16667 (77 FR 22305, April 21, 2011)) using a service bulletin identified in paragraph (j)(1) or (j)(2) of this AD, which are not incorporated by reference in this AD.

(1) Boeing Service Bulletin 777-28A0047, Revision 3, dated June 11, 2009.

(2) Boeing Service Bulletin 777-28A0047, Revision 4, dated May 20, 2010.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), 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 ACO, send it to the attention of the person identified in paragraph (k)(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 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, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) If any service information contains steps that are identified as RC (Required for Compliance), those steps must be done to comply with this AD; any steps that are not identified as RC are recommended. Those steps that are not identified as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the steps identified as RC can be done and the airplane can be put back in a serviceable condition. Any substitutions or changes to steps identified as RC require approval of an AMOC.

(l) Related Information

(1) For more information about this AD, Tak Kobayashi, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6499; fax: 425-917-6590; email: Takahisa.Kobayashi@faa.gov.

(2) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet https://www.myboeingfleet.com. For GE Aviation service information identified in this proposed AD, contact GE Aviation Fleet Support, 1 Neumann Way, Cincinnati, OH 45215; telephone 513-552-3272; Email: aviation.fleetsupport@ge.com; Internet http://www.geaviation.com. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on April 28, 2015.

Michael Kaszycki,
Acting Manager,
Transport Airplane Directorate,
Aircraft Certification Service.

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