

DEPARTMENT OF TRANSPORTATION**Federal Aviation Administration****14 CFR Part 39**

[Docket No. FAA-2016-4219; Directorate Identifier 2015-NM-169-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 latently failed fuel shutoff valves discovered during fuel filter replacement. This proposed AD would require doing an inspection to identify the part number of the engine fuel spar motor-operated valve (MOV) actuators; replacing certain MOV actuators with new MOV actuators on both airline information management system (AIMS) V1 and V2 equipped airplanes, or installing a newer software version on AIMS V2 equipped airplanes. We are proposing this AD to prevent latent failure of the fuel shutoff valve to the engine. This valve failure, if not prevented, could result in the inability to terminate fuel flow to the engine, which in case of an engine fire, could lead to wing failure.

DATES: We must receive comments on this proposed AD by April 22, 2016.

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: 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>. You may view this referenced service information at

the FAA, Transport Airplane Directorate, 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 2016-4219.

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-2016-4219; 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:

David Lee, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6497; fax: 425-917-6590; email: david.a.lee@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-2016-4219; Directorate Identifier 2015-NM-169-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 latently failed fuel shutoff valves discovered during fuel filter replacement. Deficiencies in the valve actuator design have resulted in latent failures of the fuel shutoff valve to the engine. This

condition, if not prevented, could result in the inability to terminate fuel flow to the engine, which in case of an engine fire, could lead to wing failure.

We have previously determined that operators should not be required to replace the two fuel spar valve actuators with new actuators when we previously mandated replacement of MOV actuators for other valve positions in AD 2013-05-03, Amendment 39-17375 (78 FR 17290, March 21, 2013). The alternate MOV actuator configurations available at that time were discovered to be susceptible to latent failures that could result in the inability to shut-off fuel to the engine. We are proposing this AD because a new MOV actuator has become available which corrects the latent failure of an MOV actuator.

We have excluded line numbers 1165 and subsequent from the applicability section of this proposed AD as these airplanes were manufactured new with AIMS-2 Blockpoint Version 17 or higher installed, which are not affected by the unsafe condition.

Related Rulemaking

AD 2013-05-03, Amendment 39-17375 (78 FR 17290, March 21, 2013), for certain The Boeing Company Model 777-200, -200LR, -300, and -300ER series airplanes, requires replacing MOV actuators having part number (P/N) MA20A1001-1 with certain new or serviceable MOV actuators; and measuring the electrical resistance of the bond from the adapter plate to the airplane structure, and doing corrective actions if necessary.

AD 2015-19-01, Amendment 39-18264 (80 FR 55521, September 16, 2015), for certain The Boeing Company Model 777 airplanes, requires revising the maintenance or inspection program to add Airworthiness Limitation (AWL) 28-AWL-MOV for an engine fuel shutoff valve (fuel spar valve) actuator inspection.

On October 30, 2014, we issued an NPRM, Docket No. FAA-2014-0755, Directorate Identifier 2014-NM-080-AD (79 FR 66343, November 7, 2014), for all The Boeing Company Model 737-600, -700, -700C, 800, -900, and -900ER series airplanes, Model 757 airplanes, Model 767 airplanes, and Model 777 airplanes, which would require replacement of any spar-mounted MOV actuator having P/N MA20A1001-1 (S343T003 39) for the fuel tanks or fuel feed system with a serviceable, FAA-approved MOV actuator.

Related Service Information Under 1 CFR Part 51

We reviewed Boeing Service Bulletin 777-28A0034, Revision 3, dated

September 25, 2015. This service information describes procedures for, among other things, inspection and replacement of the main and center fuel tank valve actuators.

We also reviewed Boeing Service Bulletin 777-31-0227, Revision 1, dated August 12, 2015. This service information describes procedures for installing the AIMS 2, Blockpoint Version 17, software upgrade.

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 the same type design.

Proposed AD Requirements

This proposed AD would require an inspection to determine the part numbers of installed engine fuel spar MOV actuators; for certain airplanes, replacement of certain MOV actuators with new MOV actuators having part number (P/N) MA30A1017; and for certain other airplanes, replacement of certain MOV actuators with new MOV

actuators having P/N MA30A1017, or installation of a certain version of the airplane information management system (AIMS) software; using the Accomplishment Instructions in the service information described previously. For information on the procedures, see this service information at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2016-4219.

Costs of Compliance

We estimate that this proposed AD affects 154 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
Inspection (154 airplanes)	1 work-hour X \$85 per hour = \$85 ..	\$0	\$85	\$13,090.
Replacement of two actuators without fuel tank access (34 airplanes)	5 work-hours X \$85 per hour = \$425.	12,000	12,425	422,450.
AIMS 2, Blockpoint Version 17, installation (120 airplanes)	7 work-hours X \$85 per hour = \$595.	0	595	71,400.

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-2016-4219; Directorate Identifier 2015-NM-169-AD.

(a) Comments Due Date

We must receive comments by April 22, 2016.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 777-200, 777-200LR, 777-300, 777-300ER, and 777F series airplanes, certified in any category, excluding line number 1165 and subsequent.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports of latently failed fuel shutoff valves discovered during fuel filter replacement. We are issuing this AD to prevent latent failure of the fuel shutoff valve to the engine. This valve failure, if not prevented, could result in the inability to terminate fuel flow to the engine, which in case of an engine fire, could lead to wing failure.

(f) Compliance

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

(g) Part Replacement

- (1) For airplanes having Airplane Information Management System (AIMS) 1 installed: Within 24 months after the

effective date of this AD, install new engine fuel spar motor operated valve (MOV) actuators having part number (P/N) MA30A1017, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-28A0034, Revision 3, dated September 25, 2015.

(2) For airplanes having AIMS 2, Blockpoint Version 16 or earlier installed: Within 24 months after the effective date of this AD, do the actions in paragraph (g)(2)(i) or (g)(2)(ii) of this AD.

(i) Install new engine fuel spar MOV actuators having P/N MA30A1017, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-28A0034, Revision 3, dated September 25, 2015.

(ii) Install AIMS 2, Blockpoint Version 17 or later, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 777-31-0227, Revision 1, dated August 12, 2015.

(h) Credit for Previous Actions

This paragraph provides credit for actions required by paragraph (g)(2)(ii) of this AD, if those actions were performed before the effective date of this AD using Boeing Special Attention Service Bulletin 777-31-0227, dated November 7, 2014, which is not incorporated by reference in this AD.

(i) 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 (j)(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, 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) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (i)(4)(i) and (i)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled 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 RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition

(j) Related Information

(1) For more information about this AD, contact David Lee, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6497; fax: 425-917-6590; email: david.a.lee@faa.gov.

(2) For 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>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 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 February 25, 2016.

Dionne Palermo,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2015-0935; Directorate Identifier 2014-NM-243-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Supplemental notice of proposed rulemaking (SNPRM); reopening of comment period.

SUMMARY: We are revising an earlier proposed airworthiness directive (AD) for certain 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 notice of proposed rulemaking (NPRM) proposed to require replacing the wire bundles inside the electrical conduit of the forward and aft boost pumps of the numbers 1 and 4 main fuel tanks with new, improved wire bundles inserted into conduit liners. The NPRM was prompted by several reports of chafing

of the wire bundles inside the electrical conduit of the forward and aft boost pumps of the numbers 1 and 4 main fuel tanks due to high vibration. These wire bundles can chafe through the wire sleeving into the insulation, exposing the wire conductors. This action revises the NPRM by adding a revision to the maintenance or inspection program, as applicable, to include critical design configuration control limitations (CDCCL) for the fuel boost pump wiring. We are proposing this SNPRM to prevent chafing of the wire bundles and subsequent arcing between the wiring and the electrical conduit creating an ignition source in the fuel tanks, which could result in a fire and consequent fuel tank explosion. Since these actions impose an additional burden over that proposed in the NPRM, we are reopening the comment period to allow the public the chance to comment on these proposed changes.

DATES: We must receive comments on this SNPRM by April 22, 2016.

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:** U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this SNPRM, 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>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. Boeing Alert Service Bulletin 747-28A2306, dated October 2, 2014, is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0935.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://>