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## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2008-0978; Directorate Identifier 2008-NM-014-AD; Amendment 39-16234; AD 2010-06-10]**

**RIN 2120-AA64**

#### **Airworthiness Directives; The Boeing Company Model 767-200, -300, and -300F Series Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

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**SUMMARY:** We are adopting a new airworthiness directive (AD) for certain Model 767-200, -300, and -300F series airplanes. For certain airplanes, this AD requires installing support hardware and modifying the interfacing wiring of the fuel quantity indicating system (FQIS) densitometer. For certain other airplanes, this AD requires replacing the existing hot short protector (HSP) on the FQIS densitometer with a new HSP. This AD also requires revising the Airworthiness Limitations (AWL) section of the Instructions for Continued Airworthiness to incorporate AWL No. 28-AWL-22. This AD results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent the center tank fuel densitometer from overheating and becoming a potential ignition source inside the center fuel tank, which, in combination with flammable fuel vapors, could result in a center fuel tank explosion and consequent loss of the airplane.

**DATES:** This AD is effective May 3, 2010.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of May 3, 2010.

**ADDRESSES:** For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov>; 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 AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (telephone 800-647-5527) is the Document Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue, SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Georgios Roussos, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6482; fax (425) 917-6590.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an airworthiness directive (AD) that would apply to certain Model 767-200, -300, and -300F series airplanes. That NPRM was published in the Federal Register on July 2, 2009 (74 FR 31640). For certain airplanes, that NPRM proposed to require modifying the fuel quantity indicating system (FQIS) densitometer. For certain other airplanes, that NPRM proposed to require replacing the existing hot short protector (HSP) on the FQIS densitometer with a new HSP. That NPRM also proposed to require revising the Airworthiness Limitations (AWL) section of the Instructions for Continued Airworthiness to incorporate AWL No. 28-AWL-22.

### **Comments**

We gave the public the opportunity to participate in developing this AD. We considered the comments received.

### **Support for the NPRM**

Continental Airlines has no technical objection to the NPRM.

### **Request To Clarify Certain Language**

Boeing asks that we clarify certain language in the Summary section of the NPRM, and notes that the fuel quantity indicating system (FQIS) densitometer is not being modified as specified in that section. Boeing states that the proposed actions are for the installation of appropriate support hardware and modifications to the densitometer interfacing wiring to install an HSP, or to replace the HSP in a limited number of airplanes.

We agree with the Boeing comment. We specified in the Relevant Service Information section of the NPRM that the service bulletin describes procedures for modifying the FQIS densitometer, which include installing new HSP support brackets and grounding brackets, installing an HSP and bonding jumper, rerouting certain wire bundles, and installing new wire bundles. These actions are described in Boeing Service Bulletin 767-28A0094, Revision 1, dated April 23, 2009 (referred to in the NPRM as the appropriate source of service information for accomplishing the actions). However, after further review we have determined that using the phrase "modifying the FQIS densitometer" is too broad. Therefore, for clarification, we have changed that language in the Summary section and paragraph (f) of this AD to specify "installing support hardware and modifying the interfacing wiring of the FQIS densitometer."

## **Clarification of HSP Replacement**

Boeing also states, for information only, that there are no safety-related concerns regarding use of the existing HSP. Boeing notes that an operator can choose to replace the existing HSP with a new HSP if it experiences in-service problems with the HSP. Boeing adds that it plans to revise Service Bulletin 767-28A0094, Revision 1, dated April 23, 2009, to remove the only airplane in Group 4; the procedures for Group 4 airplanes require replacement of the existing HSP with a new HSP.

We acknowledge the Boeing comment; no change to the AD is necessary in this regard.

## **Request To Extend Compliance Time**

The Air Transport Association (ATA), on behalf of its member American Airlines (AAL), asks that the compliance time in the NPRM be extended from 60 to 72 months. ATA states that this would allow operators to modify the majority of airplanes during scheduled heavy maintenance visits. ATA adds that the Boeing 767 Maintenance Review Board document recommends heavy maintenance visits at intervals of 72 months, and carrier maintenance programs, facilities, and resources are organized to best support maintenance involving fuel tank entry and sensitive testing at that time. ATA notes that a shorter compliance time could require establishing dedicated modification lines and impose additional impact outside of Part 39 rulemaking. ATA believes that an extension would maintain an acceptable level of safety in view of previous ADs that addressed the same unsafe condition. AAL further states that 28-AWL-22 will now require a loop resistance check of the new wire bundles after installation in order to verify the bonding requirements are being met. Because of the extreme sensitivity of the test equipment, AAL believes that this modification should be accomplished at the same time as the majority of other fuel tank inspections and modifications, which would be at the heavy check.

We do not agree with the commenters' request. In developing an appropriate compliance time for the modification, we considered the safety implications and the practical aspect of accomplishing the modification within a period of time that corresponds to the normal scheduled maintenance for most affected operators. In consideration of these items, we have determined that a 60-month compliance time will ensure an acceptable level of safety and allow the modification to be done during scheduled maintenance intervals for most affected operators. However, under the provisions of paragraph (k)(1) of the AD, we will consider requests to adjust the compliance time if sufficient data are submitted to substantiate that the new compliance time would provide an acceptable level of safety. We have made no change to the AD in this regard.

## **Request To Exclude Cargo-Only Airplanes**

The ATA, on behalf of its member UPS, asks that all cargo-only airplanes currently in operation be exempt from the NPRM requirements. ATA adds that these airplanes have significantly less exposure to flammable conditions in fuel tanks. UPS notes that changing the maintenance programs to add bonding checks will be sufficient to address the HSP issue in the existing cargo-only airplanes. UPS states that it does not object to new cargo-only airplanes having the HSP installed.

We do not agree with the commenters' request. The unsafe condition identified in this AD has been evaluated under the criteria established for conditions associated with fuel tank systems, as specified in the "Discussion" section of the NPRM. We determined that the actions identified in this AD are necessary to reduce the potential of ignition sources inside the center wing tank. The center wing tank has been identified as a high flammability tank under the Special Federal Aviation Regulation No. 88 ("SFAR 88," Amendment 21-78, and subsequent Amendments 21-82 and 21-83), fuel tank safety assessments, and the failure type and fuel tank exposure to flammable conditions were taken into consideration. The type of failure that is addressed in this AD cannot be mitigated by performing bonding checks. Cargo-only airplanes having the same design are still subject to the unsafe condition. We have made no change to the AD in this regard.

UPS adds that the cost benefit (analysis) does not justify retrofit on current cargo airplanes.

We infer that UPS means that the cost benefit (analysis) does not justify retrofit on current cargo airplanes; we do not agree. The data in the Costs of Compliance section (below) is limited only to the cost of actions actually required by the AD. The cost analysis in AD rulemaking actions does not include the costs of "on-condition" actions that are necessary when doing those on-condition actions. Regardless of AD direction, those actions would be required to correct an unsafe condition identified in an airplane and ensure operation of that airplane in an airworthy condition, as required by the Federal Aviation Regulations. Therefore, we have made no change to the AD in this regard.

**Clarification to Final Rule**

We have revised this final rule to identify the legal name of the manufacturer as published in the most recent type certificate data sheet for the affected airplane models.

**Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting the AD with the changes described previously. We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

**Explanation of Change to Costs of Compliance**

Since issuance of the NPRM, we have increased the labor rate used in the Costs of Compliance from \$80 per work hour to \$85 per work hour. The Costs of Compliance information, below, reflects this increase in the specified hourly labor rate.

**Costs of Compliance**

We estimate that this AD affects 192 airplanes of U.S. registry. The following table provides the estimated costs for U.S. operators to comply with this AD.

<b>Estimated Costs</b>						
<b>Affected Airplane Groups/Action</b>	<b>Work hours</b>	<b>Average labor rate per hour</b>	<b>Parts</b>	<b>Cost per product</b>	<b>Number of U.S.-registered airplanes</b>	<b>Fleet cost</b>
Group 1, Group 2, Configuration 1, and Group 3, modification	Between 4 and 8	\$85	Between \$11,377 and \$14,376	Between \$11,717 and \$15,056	191	Between \$2,237,947 and \$2,875,696
Group 4, replacement	2	\$85	None	170	1	\$170
AWL revision	1	\$85	None	\$85	192	\$16,320

**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**

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

You can find our regulatory evaluation and the estimated costs of compliance in the AD Docket.

### **List of Subjects in 14 CFR Part 39**

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

### **Adoption of 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 AD:



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**2010-06-10 The Boeing Company:** Amendment 39-16234. Docket No. FAA-2008-0978; Directorate Identifier 2008-NM-014-AD.

**Effective Date**

(a) This airworthiness directive (AD) is effective May 3, 2010.

**Affected ADs**

(b) None.

**Applicability**

(c) This AD applies to The Boeing Company Model 767-200, -300, and -300F series airplanes, certificated in any category; as identified in Boeing Service Bulletin 767-28A0094, Revision 1, dated April 23, 2009.

Note 1: This AD requires revisions to certain operator maintenance documents to include new inspections. Compliance with these inspections is required by 14 CFR 91.403(c). For airplanes that have been previously modified, altered, or repaired in the areas addressed by these inspections, the operator may not be able to accomplish the inspections 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 (AMOC) according to paragraph (k) of this AD. The request should include a description of changes to the required inspections that will ensure the continued operational safety of the airplane.

**Unsafe Condition**

(d) This AD results from fuel system reviews conducted by the manufacturer. We are issuing this AD to prevent the center tank fuel densitometer from overheating and becoming a potential ignition source inside the center fuel tank, which, in combination with flammable fuel vapors, could result in a center fuel tank explosion and consequent loss of the airplane.

**Compliance**

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

**Install Support Hardware and Modify Wiring of the Fuel Quantity Indicating System (FQIS) Densitometer; Replace Hot Short Protector (HSP)**

(f) Within 60 months after the effective date of this AD, do the actions specified in paragraphs (f)(1) and (f)(2) of this AD, as applicable, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 767-28A0094, Revision 1, dated April 23, 2009.

(1) For Group 1 airplanes, Group 2 airplanes, Configuration 1, and Group 3 airplanes: Install support hardware and modify the interfacing wiring of the FQIS densitometer.

(2) For Group 4 airplanes: Replace the existing HSP with a new HSP.

Note 2: In Figure 9, Step 8, of the Accomplishment Instructions of Boeing Service Bulletin 767-28A0094, Revision 1, dated April 23, 2009, the ground identification number is identified as GD19393S; however, the correct ground identification number is GD10393S.

### **Credit for Service Information Accomplished Previously**

(g) Actions done before the effective date of this AD in accordance with Boeing Alert Service Bulletin 767-28A0094, dated November 20, 2007, are acceptable for compliance with the requirements of paragraph (f) of this AD.

### **Airworthiness Limitations (AWL) Revision**

(h) Concurrently with accomplishing the actions required by paragraph (f) of this AD, revise the AWL section of the Instructions for Continued Airworthiness by incorporating AWL No. 28-AWL-22 into the Boeing 767 Maintenance Planning Data (MPD) Document, D622T001-9, Section 9, Revision May 2009.

### **No Alternative Critical Design Configuration Control Limitations (CDCCL)**

(i) After the actions specified in paragraph (h) of this AD have been accomplished, no alternative CDCCL for AWL No. 28-AWL-22 may be used, unless the CDCCL is approved as an AMOC in accordance with the procedures specified in paragraph (k) of this AD.

### **Terminating Action for AWL Revision**

(j) Incorporating AWL No. 28-AWL-22 into the AWL section of the Instructions for Continued Airworthiness in accordance with paragraph (g)(2) of AD 2008-11-01, amendment 39-15523, terminates the action required by paragraph (h) of this AD.

### **Alternative Methods of Compliance (AMOCs)**

(k)(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. Send information to ATTN: Georgios Roussos, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6482; fax (425) 917-6590. Or, e-mail information to 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) To request a different method of compliance or a different compliance time for this AD, follow the procedures in 14 CFR 39.19. Before using any approved AMOC on any airplane to which the AMOC applies, notify your principal maintenance inspector (PMI) or principal avionics inspector (PAI), as appropriate, or lacking a principal inspector, your local Flight Standards District Office. The AMOC approval letter must specifically reference this AD.

### **Material Incorporated by Reference**

(l) You must use Boeing Service Bulletin 767-28A0094, Revision 1, dated April 23, 2009; and AWL No. 28-AWL-22 of the Boeing 767 Maintenance Planning Data (MPD) Document, D622T001-9, Section 9, Revision May 2009; as applicable; to do the actions required by this AD, unless the AD specifies otherwise. The Boeing 767 MPD Document, D622T001-9, Section 9, Revision May 2009, contains the following effective pages:

**List of Effective Pages:**

<b>Page title/description</b>	<b>Page No(s).</b>	<b>Revision</b>	<b>Date shown on page(s)</b>
Title Page, MPD Section 9	9.0-1	May 2009	May 2009.
	9.0-2	None Shown *	None Shown.*
Table of Contents, MPD Section 9	9.0-3	May 2009	May 2009.
	9.0-4	None Shown *	None Shown.*
Revisions, MPD Section 9	9.0-5—9.0-14	May 2009	May 2009.
List of Effective Pages, MPD Section 9	9.0-15	May 2009	May 2009.
	9.0-16	None Shown *	None Shown.*
AWL No. 28-AWL-22	9.0-85	April 2008	April 2008.

\* The dates shown on the pages of Boeing 767 MPD Document D622T001-9, Revision May 2009, are the revision level of those pages. Pages 9.0-2, 9.0-4, and 9.0-16 of Boeing 767 MPD Document D622T001-9, Revision May 2009, are intentionally not dated.

(1) The Director of the Federal Register approved the incorporation by reference of this service information under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H-65, Seattle, Washington 98124-2207; telephone 206-544-5000, extension 1, fax 206-766-5680; e-mail me.boecom@boeing.com; Internet <https://www.myboeingfleet.com>.

(3) You may review copies of the 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 or 425-227-1152.

(4) You may also review copies of the 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, call 202-741-6030, or go to: [http://www.archives.gov/federal\\_register/code\\_of\\_federal\\_regulations/ibr\\_locations.html](http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html).

Issued in Renton, Washington, on March 4, 2010.  
Suzanne Masterson,  
Acting Manager, Transport Airplane Directorate,  
Aircraft Certification Service.