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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0856; Directorate Identifier 2012-NM-093-AD; Amendment 39-17464; AD 2013-11-04]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain The Boeing Company Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes; Model 767-200, -300, -300F, and -400ER series airplanes; and Model 777-200, -200LR, -300, and -300ER series airplanes. This AD was prompted by operator or in-service reports of burned Boeing Material Specification (BMS) 8-39 urethane foam, and a report from the airplane manufacturer indicating that airplanes were assembled, throughout various areas of the airplane (including flight deck and cargo compartments), with seals made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age. This AD requires replacing certain seals made of BMS 8-39 urethane foam. We are issuing this AD to prevent the failure of urethane seals to maintain sufficient Halon concentrations in the cargo compartments to extinguish or contain fire or smoke, and to prevent penetration of fire or smoke in areas of the airplane that are difficult to access for fire and smoke detection or suppression.

DATES: This AD is effective July 9, 2013.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the AD as of July 9, 2013.

ADDRESSES: 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 review copies of the 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.

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 (phone: 800-647-5527) is 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: Eric M. Brown, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6476; fax: 425-917-6590; email: Eric.M.Brown@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to include an AD that would apply to the specified products. That NPRM published in the Federal Register on August 21, 2012 (77 FR 50411). That NPRM proposed to require replacing seals made of BMS 8-39 urethane foam in certain areas of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (77 FR 50411, August 21, 2012) and the FAA's response to each comment.

Request for Safety Determination

United Parcel Service (UPS) noted that the proposed actions specified in the NPRM (77 FR 50411, August 21, 2012) affect a relatively small quantity of small parts in the airplane, and that the referenced sources of service information were not identified as "alert" service bulletins. UPS therefore requested additional information on the risk assessment that was done to determine that those parts pose a significant risk to flight safety.

We agree to provide additional information to support the need to issue the AD as proposed. The intent of the AD, as explained in the NPRM (77 FR 50411, August 21, 2012), is to prevent penetration of smoke or fire in areas of the airplane that are difficult to access for fire and smoke detection or suppression. Further, BMS 8-39 fire properties degrade over time and may result in BMS 8-39 material becoming a fuel source for an ignition event in hidden parts of the airplane. The FAA made this safety determination based on tests of aged BMS 8-39 material and in-service experience that demonstrated that this material may propagate a fire when exposed to an ignition source. We have therefore determined that it is necessary to proceed with issuing the final rule.

Request To Clarify Re-Installation Restrictions

Boeing and United Airlines (UAL) requested that we revise paragraph (i) of the NPRM (77 FR 50411, August 21, 2012), which proposed to prohibit installation of BMS 8-39 foam seals on any airplane. Noting that paragraph (g) of the NPRM would require seal replacement only in certain areas of the airplane, the commenters requested that paragraph (i) of the NPRM be revised to explicitly identify the areas that are subject to re-installation restrictions.

UPS noted that not all BMS 8-39 foam is removed from the airplane as part of the rework as specified in Boeing Special Attention Service Bulletin 747-25-3381, Revision 1, dated May 17, 2012; and Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012. Those service bulletins state that the foam is "not replaced in areas where it is encapsulated by a protective fire resistant barrier or where it is physically isolated from an ignition source." UPS was concerned that BMS 8-39 foam may be used to replace damaged foam in these encapsulated areas, creating noncompliance with paragraph (i) of the NPRM (77 FR 50411, August 21, 2012).

We agree with the request. The intent of paragraph (i) of this AD is to maintain the level of safety established by the corrective action of this AD, not to prohibit BMS 8-39 installation in locations excluded by this AD. We have revised paragraph (i) in this final rule accordingly.

Request To Allow Re-Installation During Maintenance

UPS requested that we revise paragraph (i) of the NPRM (77 FR 50411, August 21, 2012) to allow re-installation of items removed for access without the need to replace serviceable BMS 8-39 foam seals before the proposed rework is done. UPS suggested adding the following sentence: "Parts removed and reinstalled to facilitate maintenance, or removed, repaired in accordance with the approved manuals, and reinstalled, on the same airplane are not affected by this rule."

We acknowledge the commenter's concern, and agree to clarify the requirement. Once we have determined that an unsafe condition exists, an AD generally specifies not to allow that condition to be introduced into the fleet. Although the word "install" is generally considered to be broader than the word "replace," operators can interpret "install" in this AD as meaning "replace" and still meet the intent of paragraph (i) of this AD ("Parts Installation Prohibition"). By simply re-installing a part removed during maintenance, the operator is not "installing" a different part. Therefore, the AD allows operators to remove a part to gain access, and then re-install that same part for other maintenance activities not associated with the AD.

Request To Supplement Service Information

UPS noted that the number and location of affected foam insulation parts are not specified in Boeing Special Attention Service Bulletin 747-25-3381, Revision 1, dated May 17, 2012; or Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012. This leaves the decision to remove and replace insulation to the mechanic. UPS added that those service bulletins do not clearly depict the affected parts, whereas typical AD-related service bulletins are very specific as to the location, quantity, and condition being addressed. UPS asserted that neither of these service bulletins has the expected level of detail necessary to prevent the risk of noncompliance.

We infer that the commenter is requesting additional AD instructions to supplement the service bulletins. We disagree. The level of detail necessary to comply with the requirements of the AD is clear in Boeing Special Attention Service Bulletin 747-25-3381, Revision 1, dated May 17, 2012; and Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012. These service bulletins cannot provide specific information for every airplane because the location of the parts may not be identical on every airplane. Therefore, these service bulletins may not provide explicit directions regarding the location of the parts needed to be removed; instead the service bulletins provide inspection procedures to locate those parts. Once the affected parts are located, operators can document the parts/locations as necessary to ensure that compliance with the AD is maintained in the future. Because the service information is adequate to perform the required tasks, we have not changed the final rule regarding this issue.

Request To Clarify Service Information

Paragraph (i) of the NPRM (77 FR 50411, August 21, 2012) would prohibit installing a BMS 8-39 urethane foam seal on any airplane as of the effective date of the AD. UPS stated that, in many

cases, Boeing has given unique part numbers to the new seals, but has not changed the assembly part numbers of the associated line replaceable units (LRUs). UPS added that certain modifications (such as the installation of felt on Model 767 airplanes per Figure 18 of Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012) identified in the associated service bulletins do not bear specific part numbers and are unrelated to the installation of BMS 8-39. UPS stated that Boeing has not provided any revisions to the illustrated parts catalog (IPC) or airplane maintenance manual (AMM) associated with the service bulletin changes. Without such manual support, UPS asserted that there are no industry controls in place to effectively maintain a post-modification configuration.

We infer that the commenter is requesting that we revise the NPRM (77 FR 50411, August 21, 2012) to clarify the referenced procedures and parts. We disagree. Operators are required to both comply with the AD requirements and have controls in place to effectively maintain the configuration of their airplanes. The IPC and AMM are not FAA approved and are not used to control the configuration of the airplane. Operators can, however, request from Boeing any updated documents that would facilitate the maintenance of the AD-mandated configuration. We have not changed the final rule regarding this issue.

Request To Cite Latest Service Information

Paragraphs (c)(2) and (g)(2) of the NPRM (77 FR 50411, August 21, 2012) referred to Boeing Special Attention Service Bulletin 767-25-0381, dated August 19, 2010, as the appropriate source for the applicability and service information for Model 767 airplanes. UAL requested that we revise the NPRM to refer to the recently revised service bulletin: Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012.

We agree. Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012, changes certain airplane groups and provides other administrative changes, but adds no work for any affected airplane. We have revised paragraphs (c)(2) and (g)(2) in this the final rule accordingly. We have also added new paragraph (h)(2) in this final rule to provide credit for actions done on affected airplanes in accordance with Boeing Special Attention Service Bulletin 767-25-0381, dated August 19, 2010.

Request To Delay AD Issuance Pending Revised Service Information

UPS reported that it has submitted service bulletin comments and questions directly to Boeing and requested that the FAA permit Boeing to address these concerns by revising the referenced service information before issuing the final rule.

We disagree. Delaying issuance of the AD would negatively affect safety. If the commenter has a specific concern with the ability to comply with the AD, we will consider requests to approve specific procedures for compliance under the provisions of paragraph (j) of this AD, if sufficient data are submitted to substantiate that the procedures would provide an acceptable level of safety.

Request To Consider Information Notices

UAL questioned whether the AD will cover the changes introduced by two Information Notices (INs): Boeing Service Bulletin 777-25-0362 IN 01, dated February 27, 2012; and Boeing Service Bulletin 777-25-0362 IN 02, dated August 14, 2012.

We have not changed the final rule to refer to the INs, which are for information only. The INs do not affect compliance with the final rule.

Request To Extend Compliance Time

All Nippon Airways (ANA) requested that we revise the NPRM (77 FR 50411, August 21, 2012) to extend the compliance time from 72 months to 88 months to correspond to ANA's 4C check interval. ANA reported that removal of stowage bins and other cabin items, typically done as part of the 4C check, would allow access to the areas affected by the NPRM. But with the 72-month compliance time, as proposed, ANA asserted that additional tasks would be necessary to get access to those areas, and would add work-hours and large costs for most of its fleet.

We acknowledge ANA's concern, but do not agree with the request. In developing an appropriate compliance time for this action, we considered the urgency associated with the subject unsafe condition, the availability of required parts, and the practical aspect of accomplishing the required seal replacement within a period of time that corresponds to the normal scheduled maintenance for most affected operators. Under the provisions of paragraph (j) of this AD, however, we will consider requests to approve an extension of the compliance time if sufficient data are submitted to substantiate that the new compliance time would provide an acceptable level of safety. We have not changed the AD in this regard.

Request To Exclude Certain Airplanes

The NPRM (77 FR 50411, August 21, 2012) stated that deteriorated BMS 8-39 urethane foam seals in a cargo compartment compromise the Halon retention and smoke- and fire-blocking capabilities of the cargo compartment. UPS reported that its Model 767-300F package freighters are not equipped with Class C cargo compartments and do not have issues with containment of Halon.

We infer that the commenter is requesting that we revise the applicability to remove airplanes that do not have Class C cargo compartments. We disagree. The unsafe condition identified in this AD—penetration of smoke/fire in areas of the airplane that are difficult to access for fire/smoke detection or suppression—is not limited to airplanes equipped with Halon fire suppression. In addition, BMS 8-39 fire retardant properties, which deteriorate over time, can provide a fuel source for an ignition event in hidden areas of the airplane. We have therefore determined that UPS's package freighters are subject to the identified unsafe condition. We have not changed the final rule regarding this issue.

Request To Revise Inspection Requirement

Paragraph (g)(1) in the NPRM (77 FR 50411, August 21, 2012) would require replacement of the BMS 8-39 urethane foam seals with BMS 8-371 insulation foam or BMS 1-68 silicone foam rubber seals, in accordance with Boeing Special Attention Service Bulletin 747-25-3381, Revision 1, dated May 17, 2012. Japan Airlines (JAL) noted that these actions include removal of a certain foam pad, as specified in Figure 16, View 1, of that service bulletin. JAL reported that the cargo light part number BR7203-701 does not contain any foam, and no foam was found installed around the cargo light. JAL concluded that it cannot identify the existence of the foam pad and therefore requested that we revise the NPRM to specify that this removal step would apply only if the foam pad exists.

We agree to provide clarification on this issue. We have determined that some sort of padding should exist near the cargo light. If the pad has been removed, however, the operator can request approval of an alternative method of compliance for appropriate procedures in accordance with the provisions of paragraph (j) of this AD. We have not changed the final rule regarding this issue.

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— and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (77 FR 50411, August 21, 2012) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (77 FR 50411, August 21, 2012).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of the AD.

Costs of Compliance

We estimate that this AD affects 694 airplanes of U.S. registry. We estimate the following costs to comply with this AD:

Estimated Costs				
Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Replacement—165 Model 747 airplanes.	Up to 432 work-hours × \$85 per hour = \$36,720.	Up to \$6,162	Up to \$42,882	Up to \$7,075,530.
Replacement—399 Model 767 airplanes.	Up to 72 work-hours × \$85 per hour = \$6,120.	Up to \$3,967	Up to \$10,087	Up to \$4,024,713.
Replacement—130 Model 777 airplanes.	16 work-hours × \$85 per hour = \$1,360.	\$1,038	\$2,398	\$311,740.

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),
- (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.

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 airworthiness directive (AD):



2013-11-04 The Boeing Company: Amendment 39-17464; Docket No. FAA-2012-0856; Directorate Identifier 2012-NM-093-AD.

(a) Effective Date

This AD is effective July 9, 2013.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company airplanes, certificated in any category, identified in paragraphs (c)(1), (c)(2), and (c)(3) of this AD.

(1) Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes, as identified in Boeing Special Attention Service Bulletin 747-25-3381, Revision 1, dated May 17, 2012.

(2) Model 767-200, -300, -300F, and -400ER series airplanes, as identified in Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012.

(3) Model 777-200, -200LR, -300, and -300ER series airplanes, as identified in Boeing Special Attention Service Bulletin 777-25-0362, dated August 19, 2010.

(d) Subject

Joint Aircraft System Component (JASC)/Air Transport Association (ATA) of America Code 25, Equipment/furnishings.

(e) Unsafe Condition

This AD was prompted by reports of burned Boeing Material Specification (BMS) 8-39 urethane foam, and a report from the airplane manufacturer indicating that airplanes were assembled, throughout various areas of the airplane (including flight deck and cargo compartments), with seals made of BMS 8-39 urethane foam, a material with fire-retardant properties that deteriorate with age. We are issuing this AD to prevent the failure of urethane seals to maintain sufficient Halon concentrations in the cargo compartments to extinguish or contain fire or smoke, and to prevent penetration of fire or smoke in areas of the airplane that are difficult to access for fire and smoke detection or suppression.

(f) Compliance

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

(g) BMS 8-39 Urethane Foam Seal Replacements

Within 72 months after the effective date of this AD, do the actions specified in paragraph (g)(1), (g)(2), or (g)(3) of this AD, as applicable.

(1) For Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200F, 747-300, 747-400, 747-400D, 747-400F, 747SR, and 747SP series airplanes: Replace the BMS 8-39 urethane foam seals (including doing a general visual inspection of the airplane sidewalls for air baffles, and of the BMS 8-39 urethane foam for penetrations (e.g., wire penetrations)) with BMS 8-371 insulation foam or BMS 1-68 silicone foam rubber seals, as applicable, in accordance with the Accomplishment Instructions and Appendix A, as applicable, of Boeing Special Attention Service Bulletin 747-25-3381, Revision 1, dated May 17, 2012.

(2) For Model 767-200, -300, -300F, and -400ER series airplanes: Perform a general visual inspection for the presence of BMS 8-39 urethane foam, cover the BMS 8-39 foam with cargo liner joint sealing tape in certain areas, replace certain BMS 8-39 foam pads with Nomex felt in certain areas, and replace BMS 8-39 urethane foam seals with BMS 8-371 insulation foam or BMS 1-68 silicone foam rubber seals, as applicable, in accordance with the Accomplishment Instructions and Appendix A, as applicable, of Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012.

(3) For Model 777-200, -200LR, -300, and -300ER series airplanes: Replace BMS 8-39 urethane foam seals with BMS 1-68 silicone foam rubber seals in the forward and aft cargo compartments of the airplane, in accordance with the Accomplishment Instructions of Boeing Special Attention Service Bulletin 777-25-0362, dated August 19, 2010.

(h) Credit for Previous Actions

(1) For Groups 4 and 5 airplanes, as identified in Boeing Special Attention Service Bulletin 747-25-3381, Revision 1, dated May 17, 2012: This paragraph provides credit for the actions required by paragraph (g)(1) of this AD, if those actions were done before the effective date of this AD using Boeing Special Attention Service Bulletin 747-25-3381, dated August 19, 2010.

(2) For Model 767 airplanes: This paragraph provides credit for the actions required by paragraph (g)(2) of this AD, if those actions were done before the effective date of this AD using Boeing Special Attention Service Bulletin 767-25-0381, dated August 19, 2010.

(i) Parts Installation Prohibition

As of the effective date of this AD, no person may install a BMS 8-39 urethane foam seal in any location identified in paragraphs (g)(1), (g)(2), and (g)(3), as applicable, of this AD.

(j) 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 the Related Information section 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.

(k) Related Information

(1) For more information about this AD, contact Eric M. Brown, Aerospace Engineer, Cabin Safety and Environmental Systems Branch, ANM-150S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6476; fax: 425-917-6590; email: Eric.M.Brown@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 review copies of the 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.

(l) Material Incorporated by Reference

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

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Special Attention Service Bulletin 747-25-3381, Revision 1, dated May 17, 2012.

(ii) Boeing Special Attention Service Bulletin 767-25-0381, Revision 1, dated September 17, 2012.

(iii) Boeing Special Attention Service Bulletin 777-25-0362, dated August 19, 2010.

(3) 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>.

(4) You may review copies of the 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.

(5) You may view this 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/cfr/ibr-locations.html>.

Issued in Renton, Washington, on May 16, 2013.

Jeffrey E. Duven,
Acting Manager, Transport Airplane Directorate,
Aircraft Certification Service.