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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2013-0790; Directorate Identifier 2013-NM-061-AD; Amendment 39-17916; AD 2014-15-14]

RIN 2120-AA64

Airworthiness Directives; the Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are superseding Airworthiness Directive (AD) 89-12-10, for certain The Boeing Company Model 747 airplanes. AD 89-12-10 required replacement of certain underwing fuel tank access doors with stronger, fire-resistant doors. This new AD requires inspecting certain fuel tank access doors for installation of impact-resistant doors, and stencils and index markers; corrective actions if necessary; revising the maintenance program to incorporate certain new airworthiness limitations; and adding airplanes to the applicability. This AD was prompted by a report of a standard access door installed instead of an impact-resistant access door and stencils missing from some impact-resistant access doors and adjacent wing skin. We are issuing this AD to prevent foreign object penetration of the fuel tank, which could cause a fuel leak near an ignition source (e.g., hot brakes or engine exhaust nozzle), consequently leading to a fuel-fed fire.

DATES: This AD is effective September 9, 2014.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of September 9, 2014.

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 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.

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-2013-0790; 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 Docket 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: Suzanne Lucier, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6438; fax: 425-917-6590; email: suzanne.lucier@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 89-12-10, Amendment 39-6230 (Docket No. 88-NM-57-AD; 54 FR 23643, June 2, 1989). AD 89-12-10 applied to certain The Boeing Company Model 747 100, 747-200, 747-300, and 747SP series airplanes. The NPRM published in the Federal Register on September 25, 2013 (78 FR 58962). The NPRM was prompted by reports indicating that a standard access door was located where an impact-resistant access door was required, and stencils were missing from some impact-resistant access doors and adjacent wing skin. The NPRM proposed to require an inspection of the left- and right-hand wing fuel tank access doors to determine whether impact-resistant access doors are installed in the correct locations, and replacement of any standard door with an impact-resistant access door if necessary. The NPRM also proposed to require an inspection for the presence of stencils and index markers on impact-resistant access doors, and application of new stencils or index markers if necessary. The NPRM also proposed to require revising the maintenance program to incorporate changes to the airworthiness limitations section. The NPRM also proposed to add airplanes to the applicability. We are issuing this AD to prevent foreign object penetration of the fuel tank, which could cause a fuel leak near an ignition source (e.g., hot brakes or engine exhaust nozzle), consequently leading to a fuel-fed fire.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the proposal (78 FR 58962, September 25, 2013) and the FAA's response to each comment.

Request To Revise Maintenance Planning Data (MPD) Document Number

United Airlines requested that we revise the MPD document number specified in paragraph (h)(1) of the NPRM (78 FR 58962, September 25, 2013) to reference Boeing 747-400 MPD Document D621U400-9, Revision August 2012. United Airlines pointed out that the airworthiness section of the document is located in Section 9 of the document identified as D621U400-9.

We agree with the commenter for the reason provided. We have revised paragraph (h)(1) of this final rule accordingly.

Request To Reference Aircraft Maintenance Manual (AMM)

British Airways (BA) stated the AMM would be a better location for an appropriate task than the maintenance program. BA stated that Task 57-AWL-01, "Impact-Resistant Fuel Tank Access Doors," of Sub-section B.2, "Impact-Resistant Fuel Tank Access Doors," of Section B, "Airworthiness Limitations (AWLs)–Fuel Systems," of Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), of the D621U400-9 Boeing 747-400 Maintenance Planning Data (MPD) Document D621U400-9, Revision August 2012, does not have a fixed interval or a defined inspection type, but simply requires that the access panels are verified to be impact resistant prior to installation. BA stated that this cannot be described as scheduled maintenance and does not consider the best place for this Critical Design Configuration Control Limitation (CDCCL) to be an operator's maintenance program. BA stated that many CDCCL items are satisfied through the AMM rather than with a maintenance program task. BA gave an example of CDCCL Task 28-AWL-16, "Fuel Tank Access Doors Configuration" of Sub-section B.1, "AWLs–Fuel System Ignition Prevention," of Section B, "Airworthiness Limitations (AWLs)–Fuel Systems," of Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), of the D621U400-9 Boeing 747-400 Maintenance Planning Data (MPD) Document D621U400-9, Revision August 2012, which also relates to fuel tank access door installation and has no fixed interval; however, this CDCCL requirement is satisfied through the AMM procedure relating to these panels, and not through a task in an operator's maintenance program.

We infer that the commenter is requesting that Task 57-AWL-01, "Impact-Resistant Fuel Tank Access Doors," of Sub-section B.2, "Impact-Resistant Fuel Tank Access Doors," of Section B, "Airworthiness Limitations (AWLs)–Fuel Systems," of Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), of the D621U400-9 Boeing 747-400 Maintenance Planning Data (MPD) Document D621U400-9, Revision August 2012, contain a reference to the AMM similar to CDCCL Task 28-AWL-16, "Fuel Tank Access Doors Configuration" of Sub-section B.1, "AWLs–Fuel System Ignition Prevention," of Section B, "Airworthiness Limitations (AWLs)–Fuel Systems," of Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs), of the D621U400-9 Boeing 747-400 Maintenance Planning Data (MPD) Document D621U400-9, Revision August 2012.

We disagree with the request to add an AMM reference. The requirement specified in Task 57-AWL-01 identifies the safety critical item to be maintained and does not mandate a specific AMM. The inclusion of a reference to an AMM is not necessary. However, operators may refer to the AMMs that are referenced in CDCCL Task 28-AWL-16. We have not changed this AD in this regard.

Clarification of Inspection Area

Paragraph (g)(2) of the NPRM (78 FR 58962, September 25, 2013) proposed to require an inspection for the presence of stencils and index markers on impact-resistant access doors, and application of new stencils or index markers if necessary. As specified in Boeing Service Bulletin 747-28-2315, dated January 11, 2012, the stencils and index markers are located on the doors and adjacent wing skin. Therefore, we have revised paragraph (g)(2) of this AD to specify doing an inspection for the presence of stencils and index markers on impact-resistant access doors and adjacent wing skin. We have also clarified in the SUMMARY section and Discussion paragraph of the SUPPLEMENTARY INFORMATION section that the AD was prompted by a report of a standard access door installed instead of an impact-resistant access door and stencils missing from some impact-resistant access doors and adjacent wing skin.

Clarification of Maintenance Program Revision

Paragraph (h) of the NPRM (78 FR 58962, September 25, 2013) specifies that the actions specified in paragraphs (h)(1) and (h)(2) of the NPRM must be done; however, the affected airplane models were not identified. We have revised paragraph (h)(1) of this AD to specify that the actions are applicable for Model 747-400, 747-400D, 747-400F series airplanes. We have also revised paragraph (h)(2) of this AD to specify that the actions are applicable for Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes.

Conclusion

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the change described previously and minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (78 FR 58962, September 25, 2013) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (78 FR 58962, September 25, 2013).

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

Costs of Compliance

We estimate that this AD affects 189 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 |
|------------------------------|---|------------|------------------|------------------------|
| Inspection | Up to 13 work-hours × \$85 per hour = \$1,105 | \$0 | Up to \$1,105 | Up to \$208,845. |
| Maintenance program revision | 1 work-hour × \$85 per hour = \$85 | \$0 | \$85 | \$16,065. |

We estimate the following costs to do any necessary replacements that would be required based on the results of the inspection. We have no way of determining the number of aircraft that might need these replacements:

On-Condition Costs

| Action | Labor cost | Parts cost | Cost per product |
|-------------------------------------|---|------------|------------------|
| Replacement (per door) | 3 work-hours × \$85 per hour = \$255 | \$8,000 | \$8,255 |
| Stencil and index marker (14 doors) | 17 work-hours × \$85 per hour = \$1,445 | \$0 | 1,445 |

According to the manufacturer, some of the costs of this 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 have determined that 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 removing Airworthiness Directive (AD) 89-12-10, Amendment 39-6230 (Docket No. 88-NM-57-AD; 54 FR 23643, June 2, 1989), and adding the following new AD:



2014-15-14 The Boeing Company: Amendment 39-17916; Docket No. FAA-2013-0790; Directorate Identifier 2013-NM-061-AD.

(a) Effective Date

This AD is effective September 9, 2014.

(b) Affected ADs

This AD replaces AD 89-12-10, Amendment 39-6230 (Docket No. 88-NM-57-AD; 54 FR 23643, June 2, 1989).

(c) Applicability

This AD applies to 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; certificated in any category; as identified in Boeing Service Bulletin 747-28-2315, dated January 11, 2012.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by report of a standard access door installed instead of an impact-resistant access door and stencils missing from some impact-resistant access doors and adjacent wing skin. We are issuing this AD to prevent foreign object penetration of the fuel tank, which could cause a fuel leak near an ignition source (e.g., hot brakes or engine exhaust nozzle), consequently leading to a fuel-fed fire.

(f) Compliance

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

(g) Inspection and Corrective Action

Within 72 months after the effective date of this AD, do the actions specified in paragraphs (g)(1) and (g)(2) of this AD, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-28-2315, dated January 11, 2012.

(1) Do either a general visual inspection or ultrasonic non-destructive test of the left- and right-hand wing fuel tank access doors to determine whether impact-resistant access doors are installed in the correct locations. If any standard access door is found, before further flight, replace with an impact-resistant access door, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-28-2315, dated January 11, 2012.

(2) Do a general visual inspection of the left- and right-hand wing fuel tank impact-resistant access doors and adjacent wing skin to verify stencils and index markers are applied. If a stencil or index marker is missing, before further flight, apply a stencil or index marker, as applicable, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-28-2315, dated January 11, 2012.

(h) Maintenance Program Revisions

Within 60 days after the effective date of this AD, do the actions specified in paragraphs (h)(1) or (h)(2) of this AD, as applicable.

(1) For Model 747-400, -400D, and -400F series airplanes: Revise the maintenance program to incorporate Critical Design Configuration Control Limitation (CDCCL) Task 57-AWL-01, "Impact-Resistant Fuel Tank Access Doors," of Sub-section B.2, "Impact-Resistant Fuel Tank Access Doors," of Section B, "Airworthiness Limitations (AWLs)–Fuel Systems," of Section 9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs) D621U400-9, of the Boeing 747-400 Maintenance Planning Data (MPD) Document D621U400-9, Revision August 2012.

(2) For Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes: Revise the maintenance program to incorporate CDCCL Task 57-AWL-01, "Impact-Resistant Fuel Tank Access Doors," of Sub-section C.2, "Impact-Resistant Fuel Tank Access Doors," of Section C, "Airworthiness Limitations–Fuel Systems," of the Boeing 747-100/200/300/SP Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs) Document D6-13747-CMR, Revision August 2012.

(i) No Alternative Actions, Intervals, and/or CDCCL

After accomplishing the revisions required by paragraph (h) of this AD, no alternative actions (e.g., inspections), intervals, and/or CDCCLs may be used unless the actions, intervals, and/or CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (j) 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 paragraph (k) 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.

(k) Related Information

For more information about this AD, contact Suzanne Lucier, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6438; fax: 425-917-6590; email: suzanne.lucier@faa.gov.

(I) 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 Service Bulletin 747-28-2315, dated January 11, 2012.

(ii) CDCCL Task 57-AWL-01, "Impact-Resistant Fuel Tank Access Doors," of Sub-section B, Airworthiness Limitations (AWLs)–Fuel Systems, of Section 9, D621U400-9, Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs) of Boeing 747-400 Maintenance Planning Data (MPD) Document, Revision August 2012.

(iii) CDCCL Task 57-AWL-01, "Impact-Resistant Fuel Tank Access Doors," of Sub-section C.2., "Impact Resistant Fuel Tank Access Doors," of Section C, "Airworthiness Limitations–Fuel Systems," of the Boeing 747-100/200/300/SP Airworthiness Limitations (AWLs) and Certification Maintenance Requirements (CMRs) Document D6-13747-CMR, Revision August 2012.

(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 view this service information at 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 July 13, 2014.

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