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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2014-0343; Directorate Identifier 2014-NM-077-AD; Amendment 39-17971; AD 2014-19-03]

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 747-8 and 747-8F series airplanes. This AD was prompted by an analysis by the manufacturer, which revealed that certain fuse pins for the strut-to-wing attachment of the outboard aft upper spar are susceptible to migration in the event of a failed fuse pin through bolt. This AD requires replacing the fuse pins for the strut-to-wing attachment of the outboard aft upper spar with new fuse pins, and replacing the access cover assemblies with new access cover assemblies. We are issuing this AD to prevent migration of these fuse pins, which could result in the complete disconnect and loss of the strut-to-wing attachment load path for the outboard aft upper spar. The complete loss of an outboard aft upper spar strut-to-wing attachment load path could result in divergent flutter in certain parts of the flight envelope, which could result in loss of control of the airplane.

DATES: This AD is effective October 31, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of October 31, 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 98057-3356. 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-2014-0343; 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: Narinder Luthra, Aerospace Engineer, Airframe Branch, ANM-120S, Seattle Aircraft Certification Office (ACO), FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6513; fax: 425-917-6590; email: narinder.luthra@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 by adding an AD that would apply to certain The Boeing Company Model 747-8 and 747-8F series airplanes. The NPRM published in the Federal Register on June 25, 2014 (79 FR 35966). The NPRM was prompted by an analysis by the manufacturer, which revealed that certain fuse pins for the strut-to-wing attachment of the outboard aft upper spar are susceptible to migration in the event of a failed fuse pin through bolt. The NPRM proposed to require replacing the fuse pins for the strut-to-wing attachment of the outboard aft upper spar with new fuse pins, and replacing the access cover assemblies with new access cover assemblies. We are issuing this AD to prevent migration of these fuse pins, which could result in the complete disconnect and loss of the strut-to-wing attachment load path for the outboard aft upper spar. The complete loss of an outboard aft upper spar strut-to-wing attachment load path could result in divergent flutter in certain parts of the flight envelope, which could result in loss of control of the airplane.

Comments

We gave the public the opportunity to participate in developing this AD. We have considered the comment received. Boeing supported the NPRM (79 FR 35966, June 25, 2014).

Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting this AD as proposed except for minor editorial changes. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (79 FR 35966, June 25, 2014) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (79 FR 35966, June 25, 2014).

Costs of Compliance

We estimate that this AD affects 5 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	97 work-hours × \$85 per hour = \$8,245	\$31,076	\$39,321	\$196,605

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

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):



2014-19-03 Boeing: Amendment 39-17971; Docket No. FAA-2014-0343; Directorate Identifier 2014-NM-077-AD.

(a) Effective Date

This AD is effective October 31, 2014.

(b) Affected ADs

None.

(c) Applicability

This AD applies to The Boeing Company Model 747-8 and 747-8F series airplanes; certificated in any category; having a variable number identified in paragraph 1.A., "Effectivity," of Boeing Alert Service Bulletin 747-54A2238, dated January 31, 2014; and variable number RC573.

(d) Subject

Air Transport Association (ATA) of America Code 54, Nacelles/Pylons.

(e) Unsafe Condition

This AD was prompted by an analysis by the manufacturer, which revealed that the fuse pins for the strut-to-wing attachment of the outboard aft upper spar are susceptible to migration in the event of a failed fuse pin through bolt. We are issuing this AD to prevent migration of these fuse pins, which could result in the complete disconnect and loss of the strut-to-wing attachment load path for the outboard aft upper spar. The complete loss of the an outboard aft upper spar strut-to-wing attachment load path could result in divergent flutter in certain parts of the flight envelope, which could result in loss of control of the airplane.

(f) Compliance

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

(g) Replacement of Fuse Pins and Access Cover Assemblies

Within 48 months after the effective date of this AD: Replace the fuse pins for the outboard aft upper spar and the access cover assemblies on struts Nos. 1 and 4, with new fuse pins and access cover assemblies, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2238, dated January 31, 2014.

(h) 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 (i) 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 the service information contains steps that are labeled as RC (Required for Compliance), those steps must be done to comply with this AD; any steps that are not labeled as RC are recommended. Those steps that are not labeled as RC may be deviated from, done as part of other actions, or done using accepted methods different from those identified in the specified service information without obtaining approval of an AMOC, provided the steps labeled as RC can be done and the airplane can be put back in a serviceable condition. Any substitutions or changes to steps labeled as RC require approval of an AMOC.

(i) Related Information

For more information about this AD, contact Narinder Luthra, Aerospace Engineer, Airframe Branch, ANM-120S, Seattle Aircraft Certification Office (ACO), FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6513; fax: 425-917-6590; email: narinder.luthra@faa.gov.

(j) 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 Alert Service Bulletin 747-54A2238, dated January 31, 2014.

(ii) Reserved.

(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 98057-3356. 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 September 12, 2014.

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