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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2016-9053; Directorate Identifier 2016-NM-075-AD; Amendment 39-18808; AD 2017-04-13]

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 all The Boeing Company Model 747-8 and 747-8F series airplanes. This AD was prompted by reports of damaged vapor seals, block seals, and heat shield seals on the outboard pylons between the engine strut and aft fairing. This AD requires repetitive inspections for heat damage of the vapor seals between the engine strut and aft fairing, and replacement of the seals with new seals if necessary. We are issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective April 3, 2017.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 3, 2017.

ADDRESSES: For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740; telephone 562-797-1717; 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-2016-9053.

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-2016-9053; 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: Tung Tran, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6505; fax: 425-917-6590; email: tung.tran@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 all The Boeing Company Model 747-8 and 747-8F series airplanes. The NPRM published in the Federal Register on August 30, 2016 (81 FR 59544). The NPRM was prompted by reports of damaged vapor seals, block seals, and heat shield seals on the outboard pylons between the engine strut and aft fairing. The NPRM proposed to require repetitive inspections for heat damage of the vapor seals between the engine strut and aft fairing, and replacement of the seals with new seals if necessary. We are issuing this AD to detect and correct heat damage to the vapor seals between the engine strut and aft fairing. Such damage could allow flammable fluid leakage out of the aft fairing, which could result in an uncontrolled fire in the engine strut.

Comments

We gave the public the opportunity to participate in developing this AD. The following presents the comment received on the NPRM and the FAA's response to the comment.

Request To Clarify the Unsafe Condition

Boeing asked that we change the unsafe condition in the SUMMARY and Discussion sections and in paragraph (e) of the proposed AD from "Such damage could allow flammable fluid leakage into the aft fairing . . ." to "Such damage could allow flammable fluid leakage out of the aft fairing . . ." Boeing stated that the aft fairing is a flammable leakage zone, and escaping fluid passing the vapor seal is leaving the aft fairing.

We agree with the commenter for the reason provided. However, the unsafe condition is not carried over into the SUMMARY section of this final rule. We have changed the unsafe condition in the Discussion section and paragraph (e) of this AD accordingly.

Conclusion

We reviewed the relevant data, considered the comment 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 for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

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

Related Service Information Under 1 CFR Part 51

We reviewed Boeing Alert Service Bulletin 747-54A2246, dated February 5, 2016. The service information describes procedures for repetitive inspections for heat damage of the vapor seals between the engine strut and aft fairing, and replacement of the seals with new seals. 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.

Costs of Compliance

We estimate that this AD affects 10 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
Vapor seal inspections	4 work-hours × $85 per hour = $340 per inspection cycle	$0	$340 per inspection cycle	$3,400 per inspection cycle.

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

On-Condition Costs

Action	Labor cost	Parts cost	Cost per product
Seal replacement	132 work-hours × $85 per hour = $11,220	$0	$11,220

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):

2017-04-13 The Boeing Company: Amendment 39-18808; Docket No.

FAA-2016-9053; Directorate Identifier 2016-NM-075-AD.

(a) Effective Date

This AD is effective April 3, 2017.

(b) Affected ADs

None.

(c) Applicability

This AD applies to all The Boeing Company Model 747-8 and 747-8F series airplanes, certificated in any category.

(d) Subject

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

(e) Unsafe Condition

This AD was prompted by reports of damaged vapor seals, block seals, and heat shield seals on the outboard pylons between the engine strut and aft fairing. We are issuing this AD to detect and correct heat damage to the vapor seals between the engine strut and aft fairing. Such damage could allow flammable fluid leakage out of the aft fairing, which could result in an uncontrolled fire in the engine strut.

(f) Compliance

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

(g) Repetitive Inspections

At the later of the times specified in paragraphs (g)(1) and (g)(2) of this AD: Do a detailed inspection for heat damage of the vapor seals on the outboard pylons between the strut and aft fairing of the numbers 1 and 4 engines, in accordance with Part 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2246, dated February 5, 2016. Repeat the inspection thereafter at intervals not to exceed 1,200 flight cycles.

(1) Before the accumulation of 1,800 total flight cycles, or within 1,800 flight cycles after the most recent vapor seal, block seal, and heat shield seal replacement, whichever is later.

(2) Within 6 months after the effective date of this AD.

(h) Replacement

If during any inspection required by paragraph (g) of this AD any heat damage of any vapor seal is found: Before further flight, replace the vapor seal, heat shield seal, and block seal with new seals, in accordance with Part 3 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2246, dated February 5, 2016. Repeat the inspection required by paragraph (g) of this AD within 1,800 flight cycles after doing the replacement, and thereafter at intervals not to exceed 1,200 flight cycles.

(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) 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) 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

For more information about this AD, contact Tung Tran, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6505; fax: 425-917-6590; email: tung.tran@faa.gov.

(k) 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 747-54A2246, dated February 5, 2016.

(ii) Reserved.

(3) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminster Blvd., MC 110-SK57, Seal Beach, CA 90740; telephone 562-797-1717; Internet https://www.myboeingfleet.com.

(4) You may view this 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 February 10, 2017.

Michael Kaszycki,

Acting Manager, Transport Airplane Directorate,

Aircraft Certification Service.