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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-0204; Directorate Identifier 2007-NM-083-AD; Amendment 39-15397; AD 2008-05-03]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, 747SP, and 747SR Series Airplanes Powered by General Electric (GE) CF6-45/50 and Pratt & Whitney (P&W) JT9D-70, JT9D-3 or JT9D-7 Series Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: We are adopting a new airworthiness directive (AD) for certain Boeing Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, 747SP, and 747SR series airplanes powered by General Electric (GE) CF6-45/50 and Pratt & Whitney (P&W) JT9D-70, JT9D-3, or JT9D-7 series engines. This AD requires repetitive inspections to find cracks and broken fasteners of the rear engine mount bulkhead of the inboard and outboard nacelle struts, and repair if necessary. For certain airplanes, this AD mandates a terminating modification for certain inspections of the inboard and outboard nacelle struts. This AD results from reports of web and frame cracks and sheared attachment fasteners on the inboard and outboard nacelle struts. We are issuing this AD to detect and correct cracks and broken fasteners of the inboard and outboard nacelle struts, which could result in possible loss of the rear engine mount bulkhead load path and consequent separation of the engine from the airplane.

DATES: This AD is effective April 8, 2008.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 8, 2008.

ADDRESSES: For service information identified in this AD, contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207.

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: Tamara Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6421; 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 Boeing Model 747-100, -100B, -100B SUD, -200B, -200C, -200F, -300, 747SP, and 747SR series airplanes powered by General Electric (GE) CF6-45/50 and Pratt & Whitney (P&W) JT9D-70, JT9D-3, or JT9D-7 series engines. That NPRM was published in the Federal Register on November 19, 2007 (72 FR 64961). That NPRM proposed to require repetitive inspections to find cracks and broken fasteners of the rear engine mount bulkhead of the inboard and outboard nacelle struts, and repair if necessary. For certain airplanes, that NPRM proposed to mandate a terminating modification for certain inspections of the inboard and outboard nacelle struts.

Comments

We gave the public the opportunity to participate in developing this AD. We considered the comment received. Boeing supports the NPRM.

Conclusion

We reviewed the relevant data, considered the comment received, and determined that air safety and the public interest require adopting the AD as proposed.

Costs of Compliance

There are about 460 airplanes of the affected design in the worldwide fleet. This AD affects about 135 airplanes of U.S. registry.

It takes about 4 work hours per airplane to accomplish the required detailed inspection, at an average labor rate of $80 per work hour. Based on these figures, the estimated cost of the required inspection is $43,200, or $320 per airplane, per inspection cycle.

It takes about 32 work hours per airplane to accomplish the required high frequency eddy current inspection, at an average labor rate of $80 per work hour. Based on these figures, the estimated cost of the required high frequency eddy current inspection is $345,600, or $2,560 per airplane, per inspection cycle.

For Groups 1, 2, and 5 airplanes, it takes between approximately 10 and 95 work hours per strut (four struts per airplane) to accomplish the required modification, depending on airplane configuration, at an average labor rate of $80 per work hour. Parts cost for the fasteners is between

$269 and $897 per strut. Based on these figures, the cost impact of the required modification is between $4,276 and $33,988 per airplane. We are unable to provide specific information as to the cost of the actual parts other than the fasteners that are required to accomplish the required modification since the parts will be supplied from operator stock.

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:

2008-05-03 Boeing: Amendment 39-15397. Docket No. FAA-2007-0204; Directorate Identifier 2007-NM-083-AD.

Effective Date

(a) This airworthiness directive (AD) is effective April 8, 2008.

Affected ADs

(b) None.

Applicability

(c) This AD applies to Model 747-100, -100B, -100B SUD,–200B,–200C, -200F, -300, 747SP, and 747SR series airplanes; certificated in any category; powered by General Electric (GE) CF6-45/50 and Pratt & Whitney (P&W) JT9D-70, JT9D-3, or JT9D-7 series engines; as identified in Boeing Alert Service Bulletin 747-54A2202, Revision 1, dated June 22, 2006.

Unsafe Condition

(d) This AD results from reports of web and frame cracks and sheared attachment fasteners on the inboard and outboard nacelle strut. We are issuing this AD to detect and correct cracks and broken fasteners of the inboard and outboard nacelle struts, which could result in possible loss of the rear engine mount bulkhead load path and consequent separation of the engine from the airplane.

Compliance

(e) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Compliance Times

(f) Do all applicable actions specified in paragraphs (g), (h), and (i) of this AD at the applicable times specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-54A2202, Revision 1, dated June 22, 2006, except that where paragraph 1.E. of the service bulletin specifies starting the compliance time from "* * * the release date of Revision 1 of this service bulletin," this AD requires starting the compliance time from the effective date of this AD.

Initial and Repetitive Inspections/Corrective Actions

(g) For all airplanes: Perform detailed and high frequency eddy current inspections for cracks and broken fasteners of the rear engine mount bulkhead of the inboard and outboard nacelle struts, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2202, Revision 1, dated June 22, 2006. Repeat the applicable inspection and actions thereafter at the applicable interval specified

in paragraph 1.E., "Compliance," of the service bulletin. Accomplishing the applicable repair (Repair 1, 2, 3, or 4, or repair per the Boeing 747 Structural Repair Manual, Section 54-11-03 or 54-12-03) terminates the requirements in this paragraph for that nacelle strut only.

Modification

(h) For Groups 1, 2, and 5 airplanes: Do the applicable modification (Repair 2, 3, or 4) of the rear engine mount bulkhead of the inboard and outboard nacelle struts, and all the applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2202, Revision 1, dated June 22, 2006. Accomplishing this modification terminates the requirements in paragraph (g) of this AD for that nacelle strut only.

Post-Modification Inspection/Corrective Actions

(i) For Groups 1, 2, and 5 airplanes on which the applicable corrective actions (Repair 1, 2, 3, or 4) required by paragraph (g) of this AD have been accomplished; or the applicable modification (Repair 2, 3, or 4) required by paragraph (h) of this AD has been accomplished: At the applicable time specified in paragraph 1.E., "Compliance," of Boeing Alert Service Bulletin 747-54A2202, Revision 1, dated June 22, 2006, or within 6 months after the effective date of this AD, whichever occurs later, perform detailed and high frequency eddy current inspections for cracks and broken fasteners of the rear engine mount bulkhead of the inboard and outboard nacelle struts, and do all applicable related investigative and corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2202, Revision 1, dated June 22, 2006. Repeat the applicable inspections and actions thereafter at the applicable interval specified in paragraph 1.E., "Compliance," of the service bulletin.

Exception to Service Bulletin

(j) If any crack or any broken fastener is found during any inspection required by this AD, and Boeing Alert Service Bulletin 747-54A2202, Revision 1, dated June 22, 2006, specifies to contact Boeing for appropriate action: Before further flight, repair the discrepancy using a method approved in accordance with the procedures specified in paragraph (k) 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 in accordance with the procedures found in 14 CFR 39.19.

(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 appropriate principal inspector (PI) in the FAA Flight Standards District Office (FSDO), or lacking a PI, your local FSDO.

(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 an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization who 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.

Material Incorporated by Reference

(l) You must use Boeing Alert Service Bulletin 747-54A2202, Revision 1, dated June 22, 2006, to do the actions required by this AD, unless the AD specifies otherwise.

(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, P.O. Box 3707, Seattle, Washington 98124-2207.

(3) You may review copies of the service information incorporated by reference at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or 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.

Issued in Renton, Washington, on February 20, 2008.

Ali Bahrami,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

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