

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 53161 9/1/2000]

[Docket No. 2000-NM-270-AD; Amendment 39-11886; AD 2000-18-01]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747 Series Airplanes Powered By Pratt & Whitney JT9D-7 Series Engines

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to certain Boeing Model 747 series airplanes powered by Pratt & Whitney JT9D-7 series engines. This action requires inspection of the lugs on the bulkhead fitting of the rear engine mount, and corrective action, if necessary. This action is necessary to detect and correct bushing migration, corrosion, or cracking of the lugs on the bulkhead fitting of the rear engine mount, which could result in separation of the engine from the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective September 18, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 18, 2000.

Comments for inclusion in the Rules Docket must be received on or before October 31, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-270-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2000-NM-270-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Tamara L. Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: The FAA has received a report of cracking of the inboard lug on the bulkhead fitting of the rear engine mount on the number 3 engine pylon on a Boeing Model 747-200B series airplane powered by Pratt & Whitney JT9D-7Q series engines. The affected airplane had accumulated 13,941 flight cycles and 73,356 flight hours. The lug was cracked completely through the cross-section. The cracking is thought to be due to corrosion and fatigue. This condition, if not corrected, could result in separation of the engine from the airplane.

**Explanation of Relevant Service Information**

The FAA has reviewed and approved Boeing Alert Service Bulletin 747-54A2200, dated July 7, 2000. Among other actions, the service bulletin describes procedures for repetitive detailed visual inspections for bushing migration, corrosion, or cracking; and a physical measurement inspection for bushing migration; of the lugs on the bulkhead fitting of the rear engine mount. If light corrosion or any bushing migration is found, the corrective action includes interim rework to remove corrosion and restore the finish of the fitting.

If cracking or moderate-to-heavy corrosion is found, the service bulletin specifies to contact Boeing for rework instructions. The service bulletin also describes procedures for repetitive ultrasonic inspections for cracking of the lugs on the bulkhead fitting of the rear engine mount, which, if accomplished, extend the repetitive inspection interval for the detailed visual inspections.

### **Explanation of the Requirements of the Rule**

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of the same type design, this AD is being issued to detect and correct bushing migration, corrosion, or cracking of the lugs on the bulkhead fitting of the rear engine mount, which could result in separation of the engine from the airplane. This AD requires accomplishment of the actions specified in the service bulletin described previously, except as discussed below.

### **Interim Action**

This is considered to be interim action. The FAA is currently considering requiring the repetitive ultrasonic inspections for cracking of the lugs on the bulkhead fitting of the rear engine mount, which are described in the service bulletin. Accomplishment of these ultrasonic inspections would extend the repetitive interval for the detailed visual and physical measurement inspections required by this AD. The FAA is also considering requiring the rework specified in Part 5 of the service bulletin for airplanes other than those required to do the Part 5 rework in accordance with this AD. However, the planned compliance time for these actions is sufficiently long so that notice and opportunity for prior public comment will be practicable.

### **Differences Between Service Bulletin and This AD**

As described previously, the service bulletin recommends accomplishment of the ultrasonic inspections for cracking of the lugs on the bulkhead fitting of the rear engine mount within 9 months after accomplishment of the initial detailed visual inspection. This AD does not require these ultrasonic inspections. However, paragraph (c) of this AD provides the repetitive ultrasonic inspections as an option that extends the repetitive interval for the detailed visual and physical measurement inspections required by paragraph (a) of this AD.

Operators should note that, although the service bulletin specifies that the manufacturer may be contacted for certain rework instructions, this AD requires such rework to be done in accordance with a method approved by the FAA, or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative who has been authorized by the FAA to make such findings.

### **Determination of Rule's Effective Date**

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

### **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- For each issue, state what specific change to the AD is being requested.
- Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-270-AD." The postcard will be date stamped and returned to the commenter.

## **Regulatory Impact**

The regulations adopted herein 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. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a “significant regulatory action” under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption “ADDRESSES.”

## **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (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. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION  
P.O. BOX 26460  
OKLAHOMA CITY, OKLAHOMA 73125-0460



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*AD's are posted on the internet at <http://av-info.faa.gov>*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2000-18-01 BOEING:** Amendment 39-11886. Docket 2000-NM-270-AD.

Applicability: Model 747 series airplanes powered by Pratt & Whitney JT9D-7 series engines, as listed in Boeing Alert Service Bulletin 747-54A2200, dated July 7, 2000; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct bushing migration, corrosion, or cracking of the lugs on the bulkhead fitting of the rear engine mount, accomplish the following:

## **Repetitive Detailed Visual Inspections**

(a) At the later of the times in paragraphs (a)(1) and (a)(2) of this AD, perform a detailed visual inspection for bushing migration, corrosion, or cracking; and a physical measurement inspection using feeler gages for bushing migration; of the lugs on the bulkhead fitting of the rear engine mount, in accordance with Boeing Alert Service Bulletin 747-54A2200, dated July 7, 2000. Thereafter, repeat the inspection at intervals not to exceed 90 days, except as provided by paragraph (c) of this AD.

(1) Prior to the accumulation of 10,000 total flight cycles, or within 15 years since the date of manufacture of the airplane, whichever occurs first.

(2) Within 90 days after the effective date of this AD.

Note 2: For the purposes of this AD, a detailed visual inspection is defined as: "An intensive visual examination of a specific structural area, system, installation, or assembly to detect damage, failure, or irregularity. Available lighting is normally supplemented with a direct source of good lighting at intensity deemed appropriate by the inspector. Inspection aids such as mirror, magnifying lenses, etc., may be used. Surface cleaning and elaborate access procedures may be required."

## **Corrective Actions**

(b) During any inspection accomplished in accordance with paragraph (a) or (c) of this AD, if bushing migration, corrosion, or cracking is detected, accomplish paragraph (b)(1) or (b)(2) of this AD, as applicable.

(1) If light corrosion or bushing migration is found: Prior to further flight, do interim rework in accordance with Part 4 of the service bulletin; EXCEPT where the service bulletin specifies to contact Boeing, prior to further flight, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the approval letter must specifically reference this AD.

Note 3: The ultrasonic inspection described in Part 3 of Boeing Alert Service Bulletin 747-54A2200, dated July 7, 2000, and the rework described in Part 5 are not required by paragraph (b)(1) of this AD. However, the repetitive detailed visual inspections required by paragraph (a) of this AD continue to be required.

(2) If moderate to severe corrosion or any cracking is found: Prior to further flight, rework in accordance with a method approved by the Manager, Seattle ACO; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company DER who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the approval letter must specifically reference this AD.

**Optional Ultrasonic Inspection**

(c) Accomplishment of the repetitive ultrasonic inspections specified in Part 3 of Boeing Alert Service Bulletin 747-54A2200, dated July 7, 2000, at intervals not to exceed 1,400 flight cycles or 18 months, whichever occurs first; extends the interval for the repetitive detailed visual and physical measurement inspections required by paragraph (a) of this AD to the interval stated in paragraph (c)(1) or (c)(2) of this AD, as applicable.

(1) If no bushing migration is found, the repetitive interval is not to exceed 1,400 flight cycles or 18 months, whichever occurs first.

(2) If any bushing migration is found, the repetitive interval is not to exceed 180 days.

**Alternative Methods of Compliance**

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Seattle ACO. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Seattle ACO.

Note 4: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

**Special Flight Permits**

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

**Incorporation by Reference**

(f) Except as provided by paragraphs (b)(1) and (b)(2) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747-54A2200, dated July 7, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**Effective Date**

(g) This amendment becomes effective on September 18, 2000.

FOR FURTHER INFORMATION CONTACT: Tamara L. Anderson, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax (425) 227-1181.

Issued in Renton, Washington, on August 25, 2000.

Donald L. Riggan, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.