

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 69862 11/21/2000]

[Docket No. 2000-NM-329-AD; Amendment 39-11988; AD 2000-23-16]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747 Series Airplanes Powered By Pratt & Whitney JT9D-3 and -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. This action requires repetitive inspections and torque checks of the hanger fittings and strut forward bulkhead of the forward engine mount and adjacent support structure, and corrective actions, if necessary. This action also provides for optional terminating action for the repetitive inspections and checks. This action is necessary to detect and correct loose fasteners and associated damage to the hanger fittings and bulkhead of the forward engine mount, which could result in separation of the engine from the airplane.

DATES: Effective December 6, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of December 6, 2000.

Comments for inclusion in the Rules Docket must be received on or January 22, 2001.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-329-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-329-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 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 reports indicating the detection of loose fasteners of the hanger fittings and strut forward bulkhead of the forward engine mount. In one occurrence, damage to a hanger fitting also was detected. Such damage has been attributed to loose fasteners of the front spar bulkhead of the strut. The fasteners may not have been fully torqued, or the nuts may have bottomed out on the bolt threads prior to full clamp-up during fastener torque. Certain tolerance build-up conditions also could cause the nuts to shank during installation. These conditions, if not corrected, could result in loose fasteners and associated damage to the hanger fittings and bulkhead of the forward engine mount, and consequent separation of the engine from the airplane.

Explanation of Relevant Service Information

The FAA has reviewed and approved Boeing Alert Service Bulletin 747-54A2203, dated August 31, 2000, which describes procedures for repetitive detailed visual inspections and torque checks of the hanger fittings and strut forward bulkhead of the forward engine mount and adjacent support structure to detect loose fasteners, cracking, and/or damage; and corrective actions, if necessary. The corrective actions consist of a torque check, before further flight, if any loose fasteners are detected; rework of loose hanger fittings, and damaged or cracked fittings that are within the allowable rework limits; and replacement if damage or cracks are detected that are outside the allowable rework limits.

If certain damage of the strut forward bulkhead; bulkhead chords; lower spar web; or bulkhead channel is detected, the alert service bulletin specifies contacting Boeing for rework/replacement instructions. The alert service bulletin also describes procedures for rework or replacement of the fittings, which eliminates the need for the repetitive inspections and checks. The alert service bulletin references Boeing Service Bulletin 747-54A2159, dated November 3, 1994; Revision 1, dated June 1, 1995; or Revision 2, dated March 14, 1996; and the 747 Structural Repair Manual, Chapter 51-30-02, as additional sources of service information for accomplishment of the terminating action.

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 loose fasteners and associated damage to the hanger fittings and bulkhead of the forward engine mount, which could result in separation of the engine from the airplane. This AD requires repetitive inspections and torque checks of the hanger fittings and strut forward bulkhead of the forward engine mount and adjacent support structure to detect loose fasteners, cracking, and/or damage; and corrective actions, if necessary. This action also provides for optional terminating action for the repetitive inspections and checks. The actions are required to be accomplished in accordance with the alert service bulletin described previously, except as discussed below.

Interim Action

This is considered to be interim action. At this time the FAA is considering a separate rulemaking action to mandate accomplishment of the terminating action described in Part 6 of the alert service bulletin, which would terminate the repetitive inspections and checks required by this AD action. The FAA also is considering mandating the torque checks described in Part 3 of the alert service bulletin, which would extend the repetitive inspection and check interval, until accomplishment of the terminating action. 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 Alert Service Bulletin and This AD

Operators should note that, although the effectivity section of the alert service bulletin includes Boeing Model 747 series airplanes having serial numbers 21048 and 20887, these airplanes have been modified and are now powered by General Electric CF6-50 series engines, and are not affected by the actions required by this proposed rule.

Operators also should note that, although the alert service bulletin specifies that the manufacturer may be contacted for certain rework and/or replacement instructions, this AD requires such rework and/or replacement 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-329-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



Aircraft Certification Service
Washington, DC

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

We post ADs on the internet at "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).

2000-23-16 BOEING: Amendment 39-11988. Docket 2000-NM-329-AD.

Applicability: Model 747 series airplanes, certificated in any category, as listed in Boeing Alert Service Bulletin 747-54A2203, dated August 31, 2000; except Model 747 series airplanes having serial numbers 21048 and 20887.

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 (c) 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 loose fasteners and associated damage to the hanger fittings and strut forward bulkhead of the forward engine mount, which could result in separation of the engine from the airplane, accomplish the following:

Repetitive Inspections/Checks

(a) Within 60 days after the effective date of this AD: Perform a detailed visual inspection and torque check as specified in Part 2 of Boeing Alert Service Bulletin 747-54A2203, dated August 31, 2000, to detect loose fasteners and associated damage to the hanger fittings and bulkhead of the forward engine mount, in accordance with Figure 1 of the alert service bulletin. Repeat the inspections/checks thereafter at the applicable intervals specified in Figure 1 of the alert service bulletin.

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

(1) If no loose fastener or associated damage is detected, repeat the inspections/checks thereafter at the applicable intervals specified in Figure 1 of the alert service bulletin until accomplishment of the terminating action specified in paragraph (b) of this AD.

Note 3: Where there are differences between the AD and the alert service bulletin, the AD prevails.

(2) If any loose fastener or associated damage is detected, before further flight, perform the applicable corrective actions (torque check, rework or replacement of fittings), as specified in Figure 1 of the alert service bulletin. Repeat the inspections/checks thereafter at the applicable intervals specified in Figure 1 of the alert service bulletin until accomplishment of the terminating action specified in

paragraph (b) of this AD. Where the alert service bulletin specifies that the manufacturer may be contacted for disposition of certain corrective actions (rework or replacement of fittings), this AD requires such rework and/or replacement to be done 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 Manager's approval letter must specifically reference this AD.

Optional Terminating Action

(b) Accomplishment of the terminating action specified in Part 6 of Boeing Alert Service Bulletin 747-54A2203, dated August 31, 2000, constitutes terminating action for the repetitive inspections/checks required by paragraph (a) of this AD.

Note 4: Installation of two BACW10BP* auxiliary power unit washers on Group A fasteners accomplished prior to the effective date of this AD in accordance with Boeing Service Bulletin 747-54A2159, dated November 3, 1994, Revision 1, dated June 1, 1995, or Revision 2, dated March 14, 1996; and pin or bolt protrusion as specified in the 747 Structural Repair Manual, Chapter 51 30-02 (both referenced in Boeing Alert Service Bulletin 747-54A2203, dated August 31, 2000); is considered acceptable for compliance with the terminating action specified in paragraph (b) of this AD.

Alternative Methods of Compliance

(c) 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 5: 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

(d) 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

(e) Except as provided by paragraph (a)(2) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747-54A2203, dated August 31, 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

(f) This amendment becomes effective on December 6, 2000.

FOR FURTHER INFORMATION CONTACT: Tamara 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 November 8, 2000.

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