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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. 98-NM-76-AD; Amendment 39-11054; AD 99-05-06]

RIN 2120-AA64

#### Airworthiness Directives; Boeing Model 747 Series Airplanes

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** This amendment supersedes an existing airworthiness directive (AD), applicable to certain Boeing Model 747 series airplanes, that currently requires a one-time inspection to detect cracking and corrosion of various areas at all four nacelle struts; and repair, if necessary. This amendment requires new repetitive inspections to detect fatigue cracking or loose or missing fasteners of the aft torque bulkheads of the outboard nacelle struts; and repair, if necessary. In addition, this action expands the applicability of the existing AD to include additional airplanes. This amendment is prompted by a report indicating that cracking was found in the aft torque bulkheads of the outboard nacelle struts, and by the availability of new service instructions for detecting fatigue cracking that would not have been detected by the required actions of the existing AD. The actions specified in this AD are intended to detect and correct such fatigue cracking and loose or missing fasteners, which could result in failure of an outboard nacelle strut diagonal brace load path and possible separation of the nacelle from the wing.

**DATES:** Effective March 18, 1999.

The incorporation by reference of certain publications listed in the regulations is approved by the Director

of the Federal Register as March 18, 1999.

Comments for inclusion in the Rules Docket must be received on or before May 3, 1999.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 98-NM-76-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

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, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2771; fax (425) 227-1181.

**SUPPLEMENTARY INFORMATION:** On December 31, 1996, the FAA issued AD 96-26-51, amendment 39-9876 (62 FR 1038, January 8, 1997), applicable to Boeing Model 747 series airplanes equipped with Rolls-Royce-type engines, to require a one-time detailed visual inspection to detect cracking and corrosion of various areas at all four nacelle struts; and repair, if necessary. That action was prompted by reports of cracking of the aft torque bulkhead at the number 1 and number 2 nacelle struts. The actions required by that AD are intended to detect and correct cracking of an inboard or outboard nacelle strut, which could result in failure of the nacelle strut and consequent separation of the nacelle from the wing.

#### Actions Since Issuance of Previous Rule

A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 747 series airplanes was published in the **Federal Register** on November 24, 1998 (63 FR 64915). That notice of proposed rulemaking (NPRM) proposed to supersede AD 96-26-51 to require new

repetitive inspections to detect fatigue cracking or loose or missing fasteners of the aft torque bulkheads of the outboard nacelle struts; and repair, if necessary. In addition, that action proposed to expand the applicability of the existing AD to include additional airplanes.

As stated in the NPRM, subsequent to the issuance of the previous rule, the FAA learned of several new findings: The outboard, but not inboard, strut is susceptible to fatigue cracking of the aft torque bulkhead; additional fatigue cracking was found on another Model 747 series airplane (which also was equipped with Rolls-Royce Model RB211 series engines) at certain locations on the number 4 nacelle strut; outboard struts equipped with other types of engines also may be susceptible to fatigue cracking; and additional nacelle struts were found to have loose fasteners at the attachment between the vertical flange of the lower spar fitting and the aft torque bulkhead.

Since the issuance of that NPRM, the manufacturer reported that cracking of the aft torque bulkhead was recently found at the number 4 pylon on a Model 747-300 series airplane. The aft torque bulkhead web and vertical chords (into the chord radius) were fractured above the lower spar fitting. That airplane had accumulated 43,266 total flight hours and 10,673 total flight cycles, and was powered by Rolls-Royce Model RB211 series engines.

#### FAA's Determination

In consideration of this new finding of cracking at a threshold lower than that specified by the NPRM, the FAA has determined that, for airplanes powered by Rolls-Royce Model RB211 series engines, the compliance time for accomplishment of the actions required by this AD should be reduced from 12,000 total flight cycles or 90 days to 8,000 total flight cycles or 30 days.

It should be noted that Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997 (which was cited in the NPRM as the appropriate source of service information), recommends accomplishing the visual inspection within 12,000 total flight cycles. However, for the reasons stated below, the FAA has determined that an interval of 12,000 total flight cycles will not address the identified unsafe condition in a timely manner, and has revised the AD accordingly.

In developing an appropriate compliance time for this AD, the FAA considered not only the manufacturer's recommendation, but the degree of urgency associated with addressing the subject unsafe condition, the average utilization of the affected fleet, and the time necessary to perform the inspection. In light of all of these factors, as discussed earlier, the FAA finds a compliance time of 8,000 total flight cycles or 30 days to be warranted for initiating the required actions (for Groups 1 and 2 airplanes), in that the revised compliance time represents an appropriate interval of time allowable for affected airplanes to continue to operate without compromising safety.

In making this revision, the FAA finds that, with respect to the reduced compliance time, since a situation exists that requires the immediate adoption of this regulation, notice and opportunity for prior public comment hereon are impracticable, and good cause exists for making this amendment effective in less than 30 days.

#### Comments

Due consideration has been given to the comments received regarding the NPRM.

#### Support for the Proposal

One commenter supports the proposed AD.

#### Request to Revise Unsafe Condition

One commenter requests that the FAA expand the details of the identified unsafe condition to more fully describe the failure sequence. Specifically, the commenter requests a revision of the NPRM to specify that fatigue cracking or loose or missing fasteners could result first in failure of the diagonal brace load path, and then possible separation of the nacelle from the wing.

The FAA agrees that the requested language helps to clarify the sequence of possible failures. The unsafe condition in this AD has been revised accordingly.

#### Request to Defer Inspection for Certain Airplanes

One commenter states that certain airplanes have already accomplished the terminating action required by AD 95-13-05, amendment 39-9285 (60 FR 33333, June 28, 1995). The commenter requests that those airplanes be allowed to defer inspection until 12,000 flight cycles after completing that terminating action. As justification for its request, the commenter explains that, after modification in accordance with AD 95-13-05, the chords are replaced with new chords. Therefore, the commenter requests that inspections start 12,000

flight cycles after accomplishment of the terminating modification in accordance with AD 95-13-05.

The FAA concurs partially. The FAA concurs that accomplishment of the initial inspections required by paragraphs (a) and (b) of this AD may be deferred, for Groups 1 and 2 airplanes, following accomplishment of the terminating action in accordance with AD 95-13-05. This AD has been revised accordingly, as shown in paragraphs (a) and (b). However, as stated previously, the compliance time for these actions has been reduced from 12,000 to 8,000 flight cycles.

#### Request for Clarification

One commenter requests a revision to the section of the NPRM titled "Actions Since Issuance of Previous Rule." Specifically, the commenter requests that the statement "\* \* \* analysis shows that this is not the case for many of the different types that can be installed on the outboard strut" be changed to "\* \* \* analysis shows sufficient similarities for many \* \* \*". The FAA agrees that this language more accurately reflects relevant conditions. However, because this section of the preamble to an NPRM is not restated in this AD, no change to this AD is necessary.

#### Conclusion

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule with the changes previously described. The FAA has determined that these changes will neither increase the economic burden on any operator nor increase the scope of the AD.

#### Explanation of Requirements of Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of this same type design, this AD supersedes AD 96-26-51 to require new repetitive inspections to detect fatigue cracking or loose or missing fasteners of the aft torque bulkheads of the outboard nacelle struts; and repair, if necessary. In addition, this AD expands the applicability of the existing AD to include additional airplanes. The actions are required to be accomplished in accordance with Boeing Alert Service Bulletin 747-54A2184, except as discussed previously and in the NPRM.

#### 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.

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 98-NM-76-AD." The postcard will be date stamped and returned to the commenter.

#### Regulatory Impact

The regulations adopted herein will not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

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 removing amendment 39-9876 (62 FR 1038, January 8, 1997), and by adding a new airworthiness directive (AD), amendment 39-11054, to read as follows:

**99-05-06 Boeing:** Amendment 39-11054. Docket 98-NM-76-AD. Supersedes AD 96-26-51, Amendment 39-9876.

**Applicability:** Model 747 series airplanes, as listed in Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997; 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 (e) 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 fatigue cracking and loose or missing fasteners of the aft torque bulkheads of the outboard nacelle struts, which could result in failure of an outboard nacelle strut diagonal brace load path and possible separation of the nacelle from the wing, accomplish the following:

(a) For airplanes identified as Groups 1 and 2 airplanes in Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997: Prior to the accumulation of 8,000 total flight cycles, or

within 8,000 flight cycles since modification in accordance with AD 95-13-05, amendment 39-9285, or within 30 days after the effective date of this AD, whichever occurs latest, perform a detailed visual inspection of the aft torque bulkheads of the number 1 and number 4 nacelle struts to detect fatigue cracking and loose or missing fasteners. The inspection shall be accomplished in accordance with Part I of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997.

**Note 2:** There is a typographical error on Sheet 3 of Figure 1 of the alert service bulletin. The words "Group 1 airplanes" should read "Groups 1 and 2 airplanes."

(1) If no cracking, and no loose or missing fastener, is found, repeat the inspection thereafter at the intervals specified in Figure 1 of the alert service bulletin.

(2) If any cracking, or any loose or missing fastener, is found, prior to further flight, repair in accordance with Part III of the alert service bulletin. Repeat the inspection thereafter at the intervals specified in Figure 1 of the alert service bulletin. Where the service bulletin specifies that the manufacturer may be contacted for disposition of certain repair conditions, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate; 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.

(b) For airplanes identified as Groups 1 and 2 airplanes in Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997: Prior to the accumulation of 8,000 total flight cycles, or within 8,000 flight cycles since modification in accordance with AD 95-13-05, amendment 39-9285, or within 30 days after the effective date of this AD, whichever occurs latest, perform a non-destructive test (NDT) inspection of the aft torque bulkheads of the number 1 and number 4 nacelle struts to detect fatigue cracking. The NDT inspection shall be accomplished in accordance with Part II of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997.

**Note 3:** The alert service bulletin refers to a variety of NDT inspections, consisting of ultrasonic inspections, surface eddy current inspections, and open-hole eddy current inspections. The logic diagram in Figure 1 of the alert service bulletin states the conditions under which each of these inspections is to be performed.

(1) If no cracking is found, repeat the inspection thereafter at the intervals specified in Figure 1 of the alert service bulletin.

(2) If any cracking is found, prior to further flight, repair in accordance with Part III of the alert service bulletin. Repeat the inspection thereafter at the intervals specified in Figure 1 of the alert service bulletin. Where the alert service bulletin specifies that the manufacturer may be

contacted for disposition of certain repair conditions, repair 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.

(c) For airplanes identified as Groups 3 and 4 airplanes in Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997: Prior to the accumulation of 12,000 total flight cycles, or within 90 days after the effective date of this AD, whichever occurs later, perform a detailed visual inspection of the aft torque bulkheads of the number 1 and number 4 nacelle struts to detect fatigue cracking and loose or missing fasteners. The inspection shall be accomplished in accordance with Part I of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997.

(1) If no cracking, and if no loose or missing fastener is found, repeat the inspection thereafter at the intervals specified in Figure 1 of the alert service bulletin, until the applicable requirements of paragraph (d) are accomplished.

(2) If any cracking, or if any loose or missing fastener is found, prior to further flight, repair in accordance with Part III of the alert service bulletin. Where the alert service bulletin specifies that the manufacturer may be contacted for disposition of certain repair conditions, repair 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.

(d) For airplanes identified as Groups 3 and 4 airplanes in Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997: Accomplishment of the nacelle strut modifications required in AD 95-13-07, amendment 39-9287 (applicable to airplanes equipped with either General Electric CF6-45/50 or Pratt & Whitney JT9D-70 nacelle struts), constitutes terminating action for the requirements of this AD.

(e) 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.

(f) 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.

(g) Except as provided in paragraphs (a)(2), (b)(2), and (c)(2) of this AD, the actions shall be done in accordance with Boeing Alert Service Bulletin 747-54A2184, dated July 3, 1997. 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.

(h) This amendment becomes effective on March 18, 1999.

Issued in Renton, Washington, on February 22, 1999.

**Darrell M. Pederson,**

*Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.*

[FR Doc. 99-4892 Filed 3-2-99; 8:45 am]

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 39

[Docket No. 94-SW-23-AD; Amendment 39-11055; AD 99-05-07]

RIN 2120-AA64

#### **Airworthiness Directives; Bell Helicopter Textron, Inc. Model 214B and 214B-1 Helicopters**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to Bell Helicopter Textron, Inc. (BHTI) Model 214B and 214B-1 helicopters, that requires creation of a component history card or an equivalent record using the Retirement Index Number (RIN) system, establishing a system for tracking increases to the accumulated RIN, and establishing a maximum accumulated RIN for the pillow block bearing bolts (bearing bolts) of 17,000 before they must be removed from service. This amendment is prompted by fatigue analyses and tests that show certain bearing bolts fail sooner than originally anticipated because of the unanticipated high number of lifts and takeoffs (torque events) performed with those bearing bolts in addition to the time-in-service (TIS) accrued under other operating conditions. The actions specified by this AD are intended to prevent fatigue failure of the bearing bolts, which could result in failure of the main rotor system and subsequent loss of control of the helicopter.

**EFFECTIVE DATE:** May 3, 1999.

**FOR FURTHER INFORMATION CONTACT:** Harry Edmiston, Aerospace Engineer,

FAA, Rotorcraft Directorate, Rotorcraft Certification Office, Fort Worth, Texas 76193-0170, telephone (817) 222-5158, fax (817) 222-5961.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that is applicable to BHTI Model 214B and 214B-1 helicopters was published in the **Federal Register** on July 6, 1998 (63 FR 36377). That action proposed to require creation of a component history card or an equivalent record using the RIN system, establishing a system for tracking increases to the accumulated RIN, and establishing a maximum accumulated RIN for the bearing bolts of 17,000 before they must be removed from service.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

The FAA estimates that 54 helicopters of U.S. registry will be affected by this AD, that it will take, per helicopter, approximately (1) 24 work hours to replace the affected bearing bolts due to the new method of determining the retirement life; (2) 2 work hours to create the component history card or equivalent record (record); and (3) 10 work hours to maintain the record each year; and that the average labor rate is \$60 per work hour. Required parts will cost approximately \$2,000 per helicopter. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$224,640 for the first year and \$128,520 for each subsequent year. These costs assume replacement of the bearing bolts in the fleet the first year, and creation and maintenance of the records for all the fleet; and replacement of one-half of the fleet's bolts, creation of the records for one-half of the fleet, and maintenance of the records for all the fleet each subsequent year.

The regulations adopted herein will not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

For the reasons discussed above, I certify that this action (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. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 94-SW-23-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137.

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

Air transportation, Aircraft, Aviation safety, 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 a new airworthiness directive to read as follows:

**AD 99-05-07 Bell Helicopter Textron, Inc.:** Amendment 39-11055. Docket No. 94-SW-23-AD.

**Applicability:** Model 214B and 214B-1 helicopters, certificated in any category.

**Note 1:** This AD applies to each helicopter 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 helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must use the authority provided in paragraph (e) to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition, or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any helicopter from the applicability of this AD.

**Compliance:** Required within 25 hours time-in-service (TIS), unless accomplished previously.