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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2007-26811; Directorate Identifier 2006-NM-262-AD; Amendment 39-14387; AD 2007-01-15]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP Series Airplanes Equipped with General Electric CF6-45 or -50 Series Engines, or Equipped with Pratt & Whitney JT9D or -7 (Excluding -70) Series Engines

AGENCY: Federal Aviation Administration (FAA), Department of Transportation (DOT).

ACTION: Final rule; request for comments.

SUMMARY: The FAA is superseding an existing airworthiness directive (AD) that applies to certain Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes. The existing AD currently requires repetitive inspections to detect cracks and fractures of the strut front spar chord assembly at each strut location, and repair if necessary. This new AD expands the inspection area by requiring repetitive inspections for any cracks or fracture of the strut front spar chord assembly in an area forward of the existing inspection area at each strut location, and repair if necessary. This AD results from a strut front spar chord assembly that was found fractured, forward of the inspection area required by the existing AD. We are issuing this AD to detect and correct cracks and fracture of the nacelle strut front spar chord assembly. Fracture of the front spar chord assembly could lead to loss of the strut upper link load path and consequent fracture of the diagonal brace, which could result in in-flight separation of the strut and engine from the airplane.

DATE: This AD becomes effective January 29, 2007.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in the AD as of January 29, 2007.

On December 27, 2004 (69 FR 71349, December 9, 2004), the Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin 747-54A2224, dated September 30, 2004.

We must receive any comments on this AD by March 13, 2007.

ADDRESSES: Use one of the following addresses to submit comments on this AD.

- DOT Docket Web site: Go to <http://dms.dot.gov> and follow the instructions for sending your comments electronically.

- Government-wide rulemaking Web site: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.
- Mail: Docket Management Facility; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, Room PL-401, Washington, DC 20590.
- Fax: (202) 493-2251.
- Hand Delivery: Room PL-401 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for service information identified in this AD.

You may examine the contents of the AD docket on the Internet at <http://dms.dot.gov>, or contact a person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Washington, DC. This docket number is FAA-2007-26811; the docketing and reporting identifier for this docket is 2006-NM-262-AD.

FOR FURTHER INFORMATION CONTACT: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98057-3356; telephone (425) 917-6437; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Discussion

On November 30, 2004, we issued AD 2004-25-05, Amendment 39-13893 (69 FR 71349, December 9, 2004). That AD applies to certain Boeing Model 747-100, 747-100B, 747-100B SUD, 747-200B, 747-200C, 747-200F, 747-300, 747-400, and 747-500 series airplanes. That AD requires repetitive inspections to detect cracks and fractures of the strut front spar chord assembly at each strut location, and repair if necessary. That AD resulted from a report of a fractured front spar chord assembly for strut No. 3, which resulted in the loss of the strut upper link load path. The actions specified in that AD are intended to prevent loss of the strut upper link load path and consequent fracture of the diagonal brace, which could result in in-flight separation of the strut and engine from the airplane.

Actions Since AD Was Issued

Since we issued AD 2004-25-05, we have received a report that the front spar chord assembly for strut No. 3 was found fractured on a Boeing Model 747-200 series airplane equipped with General Electric (GE) CF6-50E series engines. The fracture was located forward of the inspection area required by AD 2004-25-05. The airplane had accumulated about 79,800 total flight hours and 15,100 total flight cycles. (Since strut modification, the airplane had accumulated about 9,800 flight cycles and 46,200 flight hours.) We have determined that the inspection area required by AD 2004-25-05 must be expanded to adequately detect and correct cracks and fracture of the nacelle strut front spar chord assembly. Fracture of the front spar chord assembly could lead to loss of the strut upper link load path and consequent fracture of the diagonal brace, which could result in in-flight separation of the strut and engine from the airplane.

Relevant Service Information

We have reviewed Boeing Alert Service Bulletin 747-54A2224, Revision 1, dated November 16, 2006. The Accomplishment Instructions of the service bulletin are divided into two parts: Part 1—Aft Side Inspection and Part 2—Forward Side Inspection. Part 1 describes procedures for accomplishing

detailed and high frequency eddy current (HFEC) inspections for any cracks or fracture of the front spar chord assembly for strut Nos. 1, 2, 3, and 4. For struts carrying Pratt & Whitney JT9D-3 or -7 (excluding -70) series engines and inboard struts carrying GE CF6-45 or -50 series engines, the inspection area is aft of the rear engine mount bulkhead. For outboard struts carrying GE CF6-45 or -50 series engines, the inspection area is aft of the strut station 270 bulkhead. (Part 1 contains the same procedures as those described in the original issue of the service bulletin, dated September 30, 2006, which we referred to as the appropriate source of service information for AD 2004-25-05.) Part 2 describes procedures for accomplishing detailed and HFEC inspections for any cracks or fracture of the front spar chord assembly for strut Nos. 1, 2, 3, and 4, forward of the rear engine mount bulkhead or strut station 270 bulkhead, as applicable. The Part 2 inspections include inspecting in areas adjacent to the frame, around certain fasteners, and on the front spar chord radius. If any crack or fracture is found, Part 1 and Part 2 specify to contact Boeing for additional instructions and repair.

FAA's Determination and Requirements of This AD

The unsafe condition described previously is likely to exist or develop on other airplanes of the same type design. For this reason, we are issuing this AD to supersede AD 2004-25-05. This new AD retains the requirements of the existing AD. This AD also requires repetitive inspections for any cracks or fracture of the strut front spar chord assembly forward of the bulkhead at each strut location, and repair if necessary, except as discussed under "Difference Between the AD and Service Bulletin."

Difference Between the AD and Service Bulletin

The service bulletin specifies to contact the manufacturer for instructions on how to repair certain conditions, but this AD requires repairing those conditions in one of the following ways:

- Using a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by an Authorized Representative for the Boeing Commercial Airplanes Delegation Option Authorization Organization whom we have authorized to make those findings.

Change to Existing AD

This AD retains all requirements of AD 2004-25-05. Since AD 2004-25-05 was issued, the AD format has been revised, and certain paragraphs have been rearranged. As a result, the corresponding paragraph identifiers have changed in this AD, as listed in the following table:

Revised Paragraph Identifiers

Requirement in AD 2004-25-05	Corresponding requirement in this AD
Paragraph (b)	paragraph (c)
paragraph (c)	paragraph (d)
paragraph (d)	paragraph (e)
paragraph (e)	paragraph (f)
paragraph (f)	paragraph (g)
paragraph (g)	paragraph (h)
paragraph (h)	paragraph (i)

Explanation of Change Made to This AD

Boeing Commercial Airplanes has received a Delegation Option Authorization (DOA). We have revised paragraph (i) of this AD to delegate the authority to approve an alternative method of compliance for any repair required by this AD to an Authorized Representative for the Boeing Commercial Airplanes DOA, rather than a Designated Engineering Representative (DER).

Clarification of Alternative Method of Compliance (AMOC) Paragraph

We have revised this action to clarify the appropriate procedure for notifying the principal inspector before using any approved AMOC on any airplane to which the AMOC applies.

Interim Action

This is considered to be interim action. The manufacturer has advised that it currently is developing a modification that will address the unsafe condition addressed by this AD. Once this modification is developed, approved, and available, the FAA may consider additional rulemaking.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD; therefore, providing notice and opportunity for public comment before the AD is issued is impracticable, and good cause exists to make this AD effective in less than 30 days.

Comments Invited

This AD is a final rule that involves requirements that affect flight safety and was not preceded by notice and an opportunity for public comment. However, we invite you to submit any relevant written data, views, or arguments regarding this AD. Send your comments to an address listed in the ADDRESSES section. Include "Docket No. FAA-2007-26811; Directorate Identifier 2006-NM-262-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the AD that might suggest a need to modify it.

We will post all comments we receive, without change, to <http://dms.dot.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of that Web site, anyone can find and read the comments in any of our dockets, including the name of the individual who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78), or you may visit <http://dms.dot.gov>.

Examining the Docket

You may examine the AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The Docket Management Facility office (telephone (800) 647-5227) is located on the plaza level of the Nassif Building at the DOT street address stated in the ADDRESSES section. Comments will be available in the AD docket shortly after the Docket Management System receives them.

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

We have determined that 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 the regulation:

1. Is not a "significant regulatory action" under Executive Order 12866;
2. Is not a "significant rule" under the 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.

We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket. See the ADDRESSES section for a location to examine the regulatory evaluation.

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 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. The Federal Aviation Administration (FAA) amends § 39.13 by removing amendment 39-13893 (69 FR 71349, December 9, 2004) and adding the following new airworthiness directive (AD):



2007-01-15 BOEING: Docket No. FAA-2007-26811; Directorate Identifier 2006-NM-262-AD; Amendment 39-14887.

Effective Date

(a) This AD becomes effective January 29, 2007.

Affected ADs

(b) This AD supersedes AD 2004-25-05.

Applicability

(c) This AD applies to Boeing Model 747-100, 747-100B, 747-100B SUPERJET, 747-200B, 747-200C, 747-200F, 747-300, 747SR, and 747SP series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-54A2224, Revision 1, dated November 16, 2006.

Unsafe Condition

(d) This AD results from a strut front spar chord assembly that was found fractured, forward of the inspection area required by AD 2004-25-05. We are issuing this AD to detect and correct cracks and fracture of the nacelle strut front spar chord assembly. Fracture of the front spar chord assembly could lead to loss of the strut upper link load path and consequent fracture of the diagonal brace, which could result in in-flight separation of the strut and 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.

Restatement of Requirements of AD 2004-25-05

Aft Side Detailed and High Frequency Eddy Current (HFEC) Inspections With New Service Information

(1) Within 90 days after December 27, 2004 (the effective date of AD 2004-25-05), perform detailed and HFEC inspections to detect any cracks or fractures of the front spar chord assembly for strut numbers 1 through 4 inclusive, in accordance with Boeing Alert Service Bulletin 747-54A2224, dated September 30, 2004; or in accordance with Part 1–Aft Side Inspection of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2224, Revision 1, dated November 16, 2006. As of the effective date of this AD, only Part 1–Aft Side Inspection of the Accomplishment Instructions of Revision 1 of the service bulletin may be used.

(g) Accomplishment of the detailed and HFEC inspections in accordance with Boeing 747 Fleet Team Digest 747-FTD-54-04002, dated April 15, 2004, May 4, 2004, June 1, 2004, July 12, 2004, or July 28, 2004; or Boeing Message 1-C6ELC (Service Request ID No.: 218724992), dated April 14, 2004; before December 27, 2004, is considered acceptable for compliance with the requirements of paragraph (f) of this AD.

Repetitive Inspections

(h) For airplanes on which no crack or fracture is detected during the inspections required by paragraph (f) of this AD: At the applicable times specified in Table 1—Repetitive Intervals of this AD, repeat the detailed and HFEC inspections required by paragraph (f) of this AD.

Table 1.—Repetitive Intervals

For Airplanes Identified in Boeing Alert Service Bulletin 747-54A2224, dated September 30, 2004; or Revision 1, dated November 16, 2006; as -	Repeat the inspections at intervals not to exceed -
Group 1	1,000 flight cycles or 18 months, whichever occurs first.
Group 2 and Group 3	1,200 flight cycles or 18 months, whichever occurs first.
Group 4 and Group 6	1,500 flight cycles or 18 months, whichever occurs first.
Group 5	2,000 flight cycles or 18 months, whichever occurs first.

Corrective Action

(i) If any crack or fracture is found during any inspection required by paragraphs (f) and (h) of this AD, and the bulletin specifies contacting Boeing for appropriate action: Before further flight, repair the crack or fracture according to a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or using a method approved in accordance with the procedures specified in paragraph (g) of this AD. For a repair method to be approved, the approval must specifically reference this AD.

New Requirements of this Ad

Forward Side Detailed and HFEC Inspections

(j) Within 90 days after the effective date of this AD, do detailed and HFEC inspections for any cracks or fracture of the front spar chord assembly for strut numbers 1, 2, 3, and 4, in accordance with Part 2—Forward Side Inspection of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-54A2224, Revision 1, dated November 16, 2006. If no crack or fracture is found, repeat the inspections thereafter at the applicable interval specified in Table 1 of this AD.

Corrective Action for Forward Side Inspection

(k) If any crack or fracture is found during any inspection required by paragraph (j) of this AD, and Boeing Alert Service Bulletin 747-54A2224, Revision 1, dated November 16, 2006, specifies to

contact Boeing for appropriate action: Before further flight, repair the crack or fracture using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

Credit for Inspections Done According to Boeing 747 Fleet Team Digest

(l) Detailed and HFEC inspections done before the effective date of this AD in accordance with Boeing 747 Fleet Team Digest 747-FTD-54-06002, dated June 29, 2006; or October 16, 2006; are acceptable for compliance with the initial inspection required by paragraph (j) of this AD.

Alternative Methods of Compliance (AMOCs)

(m)(1) The Manager, Seattle 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) Before using any AMOC approved in accordance with § 39.19 on any airplane to which the AMOC applies, notify the appropriate principal inspector in the FAA Flight Standards Certificate Holding District Office.

(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.

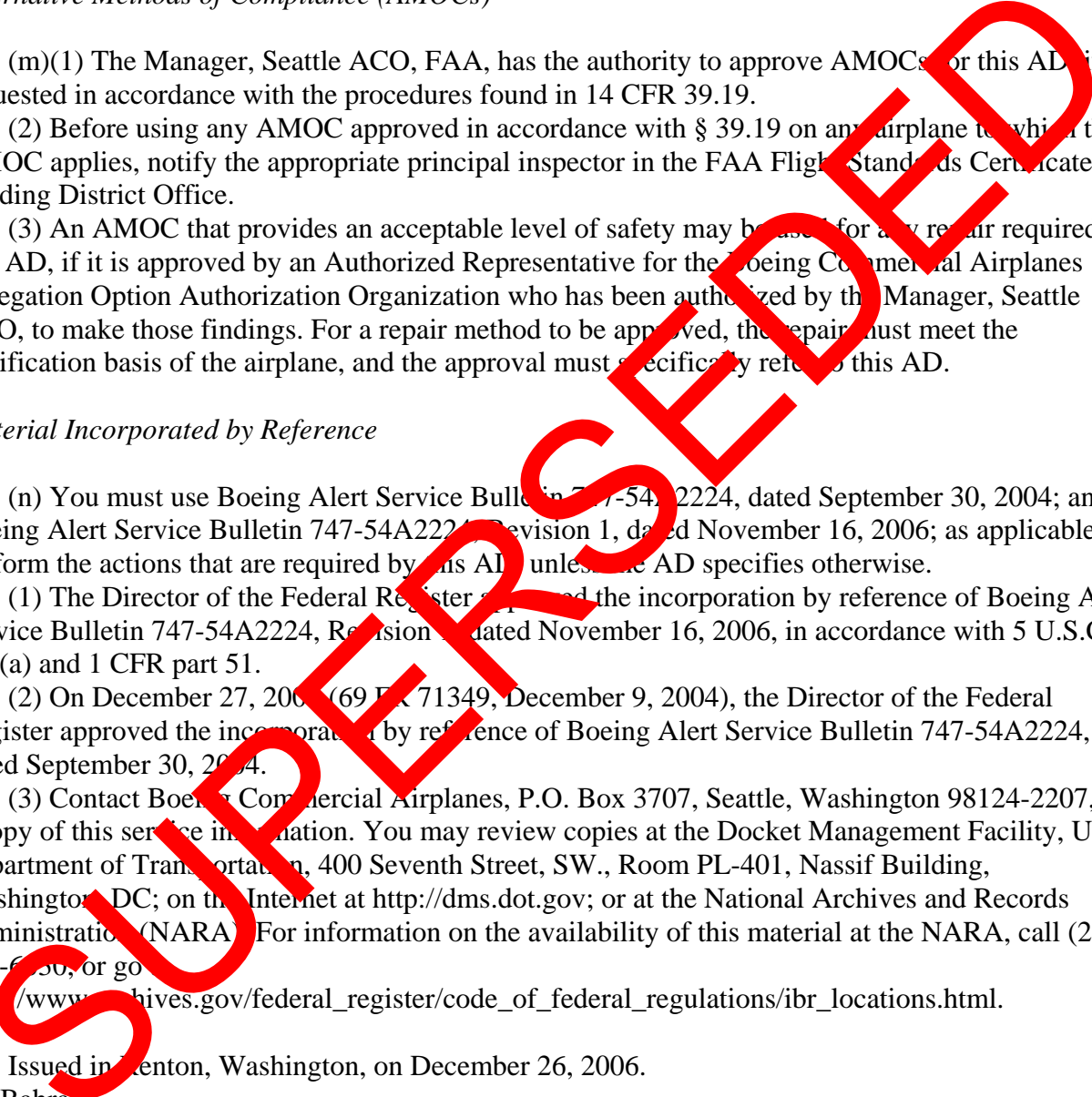
Material Incorporated by Reference

(n) You must use Boeing Alert Service Bulletin 747-54A2224, dated September 30, 2004; and Boeing Alert Service Bulletin 747-54A2224, Revision 1, dated November 16, 2006; as applicable; to perform the actions that are required by this AD unless the AD specifies otherwise.

(1) The Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin 747-54A2224, Revision 1, dated November 16, 2006, in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) On December 27, 2004 (69 FR 71349, December 9, 2004), the Director of the Federal Register approved the incorporation by reference of Boeing Alert Service Bulletin 747-54A2224, dated September 30, 2004.

(3) Contact Boeing Commercial Airplanes, P.O. Box 3707, Seattle, Washington 98124-2207, for a copy of this service information. You may review copies at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street, SW., Room PL-401, Nassif Building, Washington, DC; on the Internet at <http://dms.dot.gov>; or at the National Archives and Records Administration (NARA). For information on the availability of this material at the 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 December 26, 2006.

Ali Bahrami,
Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. E7-220 Filed 1-11-07; 8:45 am]