

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.

Testing the Firex Electrical Circuits

(f) Within 18 months after the accumulation of 15,000 total flight hours, or within 18 months after September 24, 2003 (the effective date of AD 2003-17-07, amendment 39-13281), whichever occurs later: Test the capability of the electrical circuits of the Firex fire extinguishers for the engine and the APU, as applicable, per the applicable alert service bulletin (ASB) listed in Table 1 of this AD.

(1) For any airplane equipped with an APU: If any electrical circuit of the Firex fire extinguishers for the APU does not pass the testing, before further flight, accomplish the troubleshooting procedures specified in the applicable ASB. Dispatch with an inoperative APU is permitted for the amount of time specified in the Minimum Equipment List. Dispatch after that time is not permitted until the circuits are repaired per the Boeing Standard Wiring Practices Manual (SWPM) D6-82481.

(2) For all airplanes: If any electrical circuit of the Firex fire extinguishers for the engine does not pass the testing, before further flight, accomplish the troubleshooting procedures specified in the applicable ASB, and repair per SWPM D6-82481. Dispatch is not permitted until the circuits have been repaired.

Actions Accomplished per Previous Issue of Service Bulletins

(g) Tests and troubleshooting procedures accomplished before the effective date of this AD per McDonnell Douglas Alert Service Bulletin DC9-26A029, dated July 27, 2000; or MD11-26A039, dated July 31, 2000; are considered acceptable for compliance with the corresponding action specified in paragraph (f) of this AD.

Alternative Methods of Compliance

(h) 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, Los Angeles Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Los Angeles ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Los Angeles ACO.

Special Flight Permits

(i) 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.

Issued in Renton, Washington, on April 1, 2005.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20879; Directorate Identifier 2004-NM-55-AD]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-100, -100B, 100B SUD, -200B, and -300 Series Airplanes; and Model 747SP and 747SR Series Airplanes

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for certain Boeing Model 747-100, -100B, 100B SUD, -200B, and -300 series airplanes; and Model 747SP and 747SR series airplanes. This proposed AD would replace certain requirements of an existing AD. This proposed AD would require repetitive inspections to detect cracks in various areas of the upper deck floor beams, and repair if necessary. This proposed AD is prompted by the results of fatigue testing that revealed severed upper chords of the upper deck floor beams due to fatigue cracking. We are proposing this AD to detect and correct cracking in the upper chords of the upper deck floor beams. Undetected cracking could result in large deflection or deformation of the upper deck floor beams, resulting in damage to wire bundles and control cables for the flight control system, and reduced controllability of the airplane. Multiple adjacent severed floor beams could result in rapid decompression of the airplane.

DATES: We must receive comments on this proposed AD by May 26, 2005.

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

- By 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.

For service information identified in this proposed AD, contact Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207.

You can examine the contents of this AD docket on the Internet at <http://dms.dot.gov>, or in person at the Docket Management Facility, U.S. Department of Transportation, 400 Seventh Street SW., Room PL-401, on the plaza level of the Nassif Building, Washington, DC. This docket number is FAA-2005-20879; the directorate identifier for this docket is 2004-NM-55-AD.

FOR FURTHER INFORMATION CONTACT: Ivan Li, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6437; fax (425) 917-6590.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to submit any relevant written data, views, or arguments regarding this proposed AD. Send your comments to an address listed under **ADDRESSES**. Include "Docket No. FAA-2005-20879; Directorate Identifier 2004-NM-55-AD" in the subject line of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of the proposed AD. We will consider all comments submitted by the closing date and may amend the proposed AD in light of those comments.

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 proposed AD. Using the search function of that website, 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 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 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 DMS receives them.

Discussion

On May 14, 2002, the FAA issued AD 2002-10-10, amendment 39-12756 (67 FR 36081, May 23, 2002), applicable to certain Boeing Model 747 series airplanes. That AD superseded AD 93-08-12, amendment 39-8559 (58 FR 27927, May 12, 1993), to require repetitive inspections to detect cracks in various areas of the fuselage internal structure, and repair if necessary. AD 2002-10-10 was prompted by the results of fatigue testing that revealed severed upper chords of the upper deck floor beams due to fatigue cracking. The requirements of that AD are intended to prevent loss of the structural integrity of the fuselage, which could result in rapid depressurization of the airplane.

Since the issuance of 2002-10-10 AD we have received a report indicating

that cracking has been found in areas not included in the previous releases of Boeing Service Bulletin 747-53A2349. (Revision 1 of that service bulletin, dated October 12, 2000, was cited as the appropriate source of service information for accomplishing certain actions required by AD 2002-10-10.) One of these areas is the upper chords of the upper deck floor beams. Cracking in these chords can cause large deflection or deformation of the floor, fuselage skin, frames, and stringers. Wire bundles and control cables are routed through cutouts in the upper deck floor beams. Deflection or deformation of the floor beams could result in damage to wire bundles and control cables for the flight control system, and reduced controllability of the airplane. Multiple adjacent severed floor beams could result in rapid decompression of the airplane.

Relevant Service Information

We have reviewed Boeing Alert Service Bulletin 747-53A2452, dated April 3, 2003. The inspections in this service bulletin were previously included in Boeing Alert Service Bulletin 747-53A2349, Revision 1. Boeing Alert Service Bulletin 747-53A2452 reduces the threshold for high frequency eddy current (HFEC) inspections of Area 1, the upper deck floor beams, from 28,000 to 22,000 total flight cycles. The threshold is being reduced because of the critical nature of the header floor beams that reinforce the

upper deck floor stairway cutouts. Repetitive inspections have also been included for a new area, Area 3, which was not included in Boeing Alert Service Bulletin 747-53A2349, Revision 1. The Area 3 inspections are included to address a location where cracking was found on Boeing's 747SR fatigue test airplane.

Boeing Alert Service Bulletin 747-53A2452 includes procedures for:

- Doing repetitive open-hole HFEC inspections for cracking of the floor panel attachment fastener holes in the upper chords.
- Modifying the clipnuts for the floor panel attachment fasteners.
- Doing repetitive surface HFEC inspections for cracking of the forward and aft horizontal flanges of the upper chords.
- Repairing cracking.
- Repetitively inspecting repaired areas.

The alert service bulletin recommends that any repair be done before further flight in accordance with the alert service bulletin or instructions from Boeing. The alert service bulletin also indicates that Boeing should be contacted for a post-repair inspection plan if any repair is different from what is specified in the service bulletin.

Figure 1 of the alert service bulletin recommends the following thresholds and repetitive intervals for accomplishing the actions specified in the alert service bulletin.

COMPLIANCE TIMES FOR AREA 1 IN FIGURE 1 OF BOEING ALERT SERVICE BULLETIN 747-53A2452

Actions	Initial threshold in flight cycles (FCs)	Inspection results	Related investigative/corrective actions
Open-hole HFEC inspection of fastener holes at the upper chord of the upper deck floor beams.	22,000 total FCs; 1,000 FCs after service bulletin issuance; or 3,000 FCs after the most recent visual inspection of Area 1; whichever is latest.	No cracks Cracks found	Repetitive inspection at 3,000 FCs. Repair crack before further flight; subsequent inspection 5,000-15,000 FCs; repetitive inspection at 3,000 FCs.
Oversize fastener holes for floor panel attachment.	10,000 FCs after oversizing the holes.	Not applicable	Repetitive inspection at 3,000 FCs.
Surface HFEC inspection of the horizontal flanges of the upper deck floor beams.	22,000 total FCs; 1,000 FCs after service bulletin issuance; or 3,000 FCs after the most recent visual inspection of Area 1; whichever is latest.	No cracks Cracks found	Repetitive inspection at 750 FCs. Repair crack before further flight; subsequent inspection 5,000-15,000 FCs; repetitive inspection at 3,000 FCs.

COMPLIANCE TIMES FOR AREA 2 IN FIGURE 1 OF BOEING ALERT SERVICE BULLETIN 747-53A2452

Actions	Initial threshold in flight cycles (FCs)	Inspection results	Related investigative/corrective actions
Open-hole HFEC inspection of fastener holes at the upper chord of the upper deck floor beams.	28,000 total FCs; 3,000 FCs after the most recent visual inspection of Area 1; whichever is latest.	No cracks Cracks found	Repetitive inspection at 6,000 FCs. Repair crack before further flight; subsequent inspection 5,000-15,000 FCs; repetitive inspection at 3,000 FCs.

COMPLIANCE TIMES FOR AREA 2 IN FIGURE 1 OF BOEING ALERT SERVICE BULLETIN 747-53A2452—Continued

Actions	Initial threshold in flight cycles (FCs)	Inspection results	Related investigative/corrective actions
Oversize fastener holes for floor panel attachment. Surface HFEC inspection of the horizontal flanges of the upper deck floor beams.	10,000 FCs after oversizing the holes. 22,000 total FCs; 3,000 FCs after the most recent visual inspection of Area 1; whichever is latest.	Not applicable No cracks Cracks found	Repetitive inspection at 6,000 FCs. Repetitive inspection at 2,000 FCs. Repair crack before further flight; subsequent inspection 5,000–15,000 FCs; repetitive inspection at 3,000 FCs.

COMPLIANCE TIMES FOR AREA 3 IN FIGURE 1 OF BOEING ALERT SERVICE BULLETIN 747-53A2452

Actions	Initial threshold in flight cycles (FCs)	Inspection results	Related investigative/corrective actions
Open-hole HFEC inspection of station 440 floor beam upper chord and gusset.	22,000 total FCs; 1,000 FCs after service bulletin issuance; or 3,000 FCs after the most recent visual inspection in Area 1; whichever is latest.	No cracks Cracks found	Repetitive inspection at 3,000 FCs. Repair crack before further flight. (Repetitive inspection interval not defined.)

We have also reviewed Boeing Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003. This service bulletin describes procedures for repetitive internal detailed visual inspections for cracking of the upper deck floor beams, as well as certain other areas of the fuselage internal structure. For airplanes on which any cracking is found, the service bulletin references the Boeing 747 Structural Repair Manual (SRM) for repair instructions. For airplanes on which the damage is beyond the limits specified in the SRM, the service bulletin specifies contacting Boeing for repair data.

Compliance Times Specified in Previous Revision of Service Information

Paragraph (i) of the proposed AD specifies to repeat the applicable inspection at the times specified in Sheet 7, Figure 2, of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000. For the area at station 380, between buttock lines (BL) 40 and 76, left and right sides, the service bulletin specifies that the open-hole and upper and lower surface HFEC inspections should be repeated every 3,000 flight cycles; and that the surface HFEC from below should be repeated every 750 flight cycles. For the area at station 380, between left BL 40 and right BL 40, and all other affected floor beam locations, the service bulletin specifies that the open-hole and upper and lower surface HFEC inspections should be repeated every 6,000 flight cycles; and that the surface HFEC from below should be repeated every 2,000 flight cycles.

FAA's Determination and Requirements of the Proposed AD

We have evaluated all pertinent information and identified an unsafe condition that is likely to exist or develop on other airplanes of this same type design. Therefore, we are proposing this AD, which would require repetitive inspections to detect cracks in various areas of the upper deck floor beams, and repair if necessary. The proposed AD would require you to use the service information described previously to perform these actions, except as discussed under "Differences Between the Proposed AD and the Service Information."

Other Related Rulemaking

Operators should note that we plan to issue a separate AD rulemaking action (reference Directorate Identifier 2003-NM-229-AD) to address the identified unsafe condition as it relates to various areas of the fuselage internal structure, excluding the upper deck floor beams. Therefore, we will propose to include all requirements from AD 2002-10-10 that relate to various areas of the fuselage internal structure, excluding the upper deck floor beams, in that separate AD rulemaking action. Additionally, the new procedures described in Boeing Service Bulletin 747-53A2349, Revision 2, for various internal and external detailed visual inspections of fuselage internal structure, excluding those related to the upper deck floor beams, are included in that separate AD rulemaking action.

Differences Between the Proposed AD and the Service Information

The compliance times for the HFEC inspections in the proposed AD are dependent upon what type of inspections, if any, have been accomplished previously. Boeing Alert Service Bulletin 747-53A2452 does not base the compliance times on what type of inspection was accomplished previously.

Operators should note that, although Boeing Alert Service Bulletin 747-53A2452, dated April 3, 2003, specifies that you may contact the manufacturer for instructions on how to repair certain conditions, this proposed AD would require you to repair 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 Delegation Option Authorization Organization whom we have authorized to make those findings.

Figure 2, sheet 7, of Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000, specifies that if a surface HFEC inspection of the upper deck floor beams was performed from below the floor beams, the repetitive inspection intervals would be 2,000 flight cycles. Figure 1 of Boeing Alert Service Bulletin 747-53A2452, dated April 3, 2003, specifies that the repetitive inspection intervals would be 750 flight cycles. This proposed AD would require the next surface HFEC inspection within 2,000 flight cycles from the most recent inspection, or within 750 flight cycles after the effective date of the AD, whichever is

first. We have concluded that, for operators that have scheduled repetitive inspections at intervals not to exceed 2,000 flight cycles, an immediate reduction to intervals not to exceed 750 flight cycles could unnecessarily ground airplanes. The compliance time for the next surface HFEC inspection in the proposed AD would allow operators to transition from repetitive inspection intervals not to exceed 2,000 flight cycles to repetitive inspection intervals not to exceed 750 flight cycles.

Figure 2, sheet 7, of Boeing Alert Service Bulletin 747-53A2349, Revision 1, also specifies that, if a surface HFEC inspection of the upper deck floor beams was most recently performed from above and below the floor beams, or if an open-hole HFEC inspection of the floor beams was performed, the repetitive inspection intervals would be 6,000 flight cycles. Figure 1 of Boeing Alert Service Bulletin 747-53A2452 specifies that the repetitive inspection intervals would be 3,000 flight cycles. This proposed AD would require that the next HFEC inspection be performed within 6,000 flight cycles from the most recent inspection, or within 3,000 flight cycles after the effective date of the AD, whichever is first. We have concluded that, for operators that have scheduled repetitive inspections at intervals of 6,000 flight cycles, a reduction to intervals of 3,000 flight cycles could unnecessarily ground airplanes. The compliance time in the proposed AD for the next HFEC inspection above and below the floor beams, or the next open-hole HFEC inspection, would allow operators to transition from repetitive inspection intervals of 6,000 flight cycles to repetitive inspection intervals of 3,000 flight cycles.

Some of the compliance times in Figure 1 of Boeing Alert Service Bulletin 747-53A2452 are stated in terms of 1,000 flight cycles after the date on the service bulletin. This proposed AD would require accomplishment within 1,000 flight cycles after the effective date of the AD.

Costs of Compliance

There are about 489 airplanes of the affected design worldwide. This proposed AD would affect about 155 airplanes of U.S. registry.

The actions for the upper deck floor beams that are required by AD 93-08-12, and retained in AD 2002-10-10 and this proposed AD, take about 150 work hours per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the estimated costs of these currently required actions are \$9,750 per airplane, per inspection cycle.

The inspections of the upper deck floor beams that are required by AD 2002-10-10 and retained in this proposed AD take about 255 work hours per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the estimated cost of these currently required inspections is \$16,575 per airplane, per inspection cycle.

The new proposed inspections would take about 155 work hours per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the estimated cost of the new actions specified in this proposed AD for U.S. operators is \$1,561,625 or \$10,075 per airplane, per inspection cycle.

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 proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would 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 proposed 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 proposed AD. 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, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 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 airworthiness directive (AD):

Boeing: Docket No. FAA-2005-20879; Directorate Identifier 2004-NM-55-AD.

Comments Due Date

(a) The Federal Aviation Administration (FAA) must receive comments on this AD action by May 26, 2005.

Affected ADs

(b) Related to AD 2002-10-10, amendment 39-12756 (67 FR 36081, May 23, 2002).

Applicability

(c) This AD applies to Boeing Model 747-100, -100B, 100B SUD, -200B, and -300 series airplanes; and Model 747SP and 747SR series airplanes; certificated in any category; identified in Boeing Alert Service Bulletin 747-53A2452, dated April 3, 2003.

Unsafe Condition

(d) This AD was prompted by the results of fatigue testing by the manufacturer that revealed severed upper chords of the upper deck floor beams due to fatigue cracking. We are issuing this AD to detect and correct cracking in the upper chords of the upper deck floor beams. Undetected cracking could result in large deflection or deformation of the upper deck floor beams, resulting in damage to wire bundles and control cables for the flight control system, and reduced controllability of the airplane. Multiple adjacent severed floor beams could result in rapid decompression of 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.

Note 1: Paragraphs (f) and (g) of this AD restate the requirements of paragraphs (a) and (b) of AD 2002-10-10. As allowed by the phrase, "unless accomplished previously," if those requirements of AD 2002-10-10 have already been accomplished, this AD does not require that those actions be repeated.

Inspection

(f) Before the accumulation of 22,000 total flight cycles, or within 1,000 flight cycles after June 11, 1993 (the effective date of AD 93-08-12, amendment 39-8559), whichever occurs later, unless accomplished previously within the last 2,000 flight cycles; and thereafter at intervals not to exceed 3,000 flight cycles: Do a detailed inspection to detect cracks in the upper deck floor beams in Sections 41 and 42, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-53-2349, dated June 27, 1991; Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000; or Boeing Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003. After the effective date of this AD, only Boeing Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003, may be used. Continue doing the inspections required by this paragraph until the inspections required by paragraph (h) or (l) of this AD are accomplished.

Repair

(g) Before further flight, repair any cracking detected during the inspections done in accordance with paragraph (f) of this AD, according to a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or according to data meeting the certification basis of the airplane approved a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings; or by an Authorized Representative (AR) for the Boeing Delegation Option Authorization (DOA) Organization who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the approval must specifically reference this AD.

Note 2: Paragraphs (h), (i), (j), and (k), of this AD restate the requirements of paragraphs (d), (e), (f), and (g), of AD 2002-10-10. As allowed by the phrase, "unless accomplished previously," if those requirements of AD 2002-10-10 have already been accomplished, this AD does not require that those actions be repeated.

Inspections

(h) Before the accumulation of 22,000 total flight cycles, or within 3,000 flight cycles after doing the most recent inspection required by paragraph (f) of this AD, whichever occurs later: Do a detailed inspection to find cracking in the areas specified in paragraph (h)(1) or (h)(2), as applicable, in accordance with Figure 2 of the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000; or Boeing Service Bulletin 747-53-2349, Revision 2, dated April 3, 2003. After the effective date of this AD, only Boeing Alert Service Bulletin 747-53A2349, Revision 2, may be used. Repeat the inspection thereafter at intervals not to exceed 3,000 flight cycles. Continue doing the inspection required by this paragraph until the initial inspection required by paragraph (l) of this AD is accomplished. Accomplishment of the inspection in this paragraph terminates the

inspections required by paragraph (f) of this AD.

(1) For Groups 1, 2, 4, and 5 airplanes: Do the inspections of Area 1 (sections 41 and 42 upper deck floor beams), including existing repairs and modifications.

(2) For Group 3 airplanes: Do the inspections of Area 1 (sections 41, 42, and 44 upper deck floor beams from body stations 380 through 1100 inclusive), including existing repairs and modifications.

Note 3: For the purposes of this AD, a detailed 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."

(i) Before the accumulation of 28,000 total flight cycles, or within 3,000 flight cycles after doing the most recent inspection required by paragraph (f) of this AD, whichever occurs later: Do a high frequency eddy current (HFEC) inspection to find cracking of the open holes in the horizontal flanges of the upper chord of the upper deck floor beams in the areas specified in paragraph (i)(1) or (i)(2) of this AD, as applicable, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000. Do the inspection in accordance with the "Inspection Alternatives" as specified in Sheet 7 of Figure 2 of the Accomplishment Instructions of the service bulletin. Repeat the applicable inspection at the times specified in the "Repeat Inspection Intervals" in Sheet 7 of Figure 2 of the Accomplishment Instructions of the service bulletin. After the effective date of this AD, Boeing Alert Service Bulletin 747-53A2452, dated April 3, 2003, must be used to perform the inspections required by this paragraph. Repeat the inspections until the requirements of paragraph (m) of this AD are accomplished.

(1) For Group 1, 2, 4, and 5 airplanes: Do the inspections at the applicable locations (BS 380 through BS 780 inclusive for Groups 1, 2, and 4, BS 380 through BS 860 inclusive for Group 5) as specified in Sheet 7 of Figure 2.

(2) For Group 3 airplanes: Do the inspections as specified in Sheet 7 of Figure 2, at the upper deck floor beams from BS 380 through BS 1100 inclusive.

Note 4: HFEC inspections of the left and right sides of the upper deck floor beam at body station 380, between buttock lines 40 and 76, done in accordance with AD 2000-04-17, are considered acceptable for compliance with the applicable inspections specified in paragraph (i) of this AD.

Adjustments to Compliance Time: Cabin Differential Pressure

(j) For the purposes of calculating the compliance threshold and repetitive interval for the actions required by paragraphs (h) and (i) of this AD: For Area 1 only, the number

of flight cycles in which cabin differential pressure is at 2.0 pounds per square inch (psi) or less need not be counted when determining the number of flight cycles that have occurred on the airplane, provided that flight cycles with momentary spikes in cabin differential pressure above 2.0 psi are included as full pressure cycles. For this provision to apply, all cabin pressure records must be maintained for each airplane: No fleet-averaging of cabin pressure is allowed.

Repair

(k) Before further flight, repair any cracking found during the inspections done in accordance with paragraphs (h) and (i) of this AD, in accordance with Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000. Where the service bulletin specifies to contact Boeing for repair instructions, repair according to a method approved by the Manager, Seattle ACO; or according to 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; or by an AR for the Boeing DOA who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the approval must specifically reference this AD.

New Requirements of This AD*Detailed Inspection*

(l) Before the accumulation of 22,000 total flight cycles, or within 3,000 flight cycles after the most recent inspection required by paragraph (f) or (h) of this AD, whichever is later: Do a detailed inspection for cracking of the horizontal flanges of the upper chord of the upper deck floor beams. Do the inspection in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-53A2349, Revision 2, dated April 3, 2003. Repeat the inspection thereafter at intervals not to exceed 3,000 flight cycles. Doing the initial inspection required by this paragraph terminates the inspections required by paragraphs (f) and (h) of this AD.

High Frequency Eddy Current (HFEC) Inspection

(m) Do a HFEC inspection for cracking of the horizontal flanges of the upper chord of the upper deck floor beams, in accordance with the Accomplishment Instructions of Boeing Service Bulletin 747-53A2452, dated April 3, 2003, at the applicable time specified in paragraph (m)(1), (m)(2), (m)(3), or (m)(4) of this AD. Areas 1, 2, and 3, as specified in paragraphs (m) and (n) of this AD, are defined in the service bulletin. Accomplishment of this inspection terminates the inspections required by paragraph (i) of this AD.

(1) For airplanes that have not been inspected in accordance with the requirements of paragraph (f), (h), or (i) of this AD:

(i) For Area 1: Before the accumulation of 22,000 total flight cycles, or within 1,000 flight cycles after the effective date of this AD, whichever is later.

(ii) For Area 2: Before the accumulation of 28,000 total flight cycles.

(iii) For Area 3: Before the accumulation of 22,000 total flight cycles, or within 1,000 flight cycles after the effective date of this AD, whichever is later.

(2) For airplanes that have been inspected in accordance with the requirements of paragraph (f) or (h) of this AD, but not the requirements of paragraph (i) of this AD:

(i) For Area 1: Before the accumulation of 22,000 total flight cycles, or within 3,000 flight cycles after the most recent inspection required by paragraph (f) or (h) of this AD, whichever is later.

(ii) For Area 2: Before the accumulation of 28,000 total flight cycles, or within 3,000 flight cycles after the most recent inspection required by paragraph (f) or (h) of this AD, whichever is later.

(iii) For Area 3: Before the accumulation of 22,000 total flight cycles, or within 3,000 flight cycles after the most recent inspection required by paragraph (f) or (h) of this AD, whichever is later.

(3) For airplanes on which a surface HFEC inspection of the horizontal flanges of the upper chord of the upper deck floor beams, as required by paragraph (i) of this AD, was accomplished, and the surface HFEC inspection was accomplished from below the upper deck floor beams as specified by Figure 2, circle note 2c., of Boeing Alert Service Bulletin 747-53A2349, Revision 1:

(i) For Area 1: At the later of the times specified in paragraphs (m)(3)(i)(A) and (m)(3)(i)(B) of this AD.

(A) Before the accumulation of 22,000 total flight cycles.

(B) Within 2,000 flight cycles after the most recent inspection required by paragraph (i) of this AD, or 750 flight cycles after the effective date of this AD, whichever is first.

(ii) For Area 2: Before the accumulation of 28,000 total flight cycles, or within 2,000 flight cycles after the most recent inspection required by paragraph (i) of this AD, whichever is later.

(iii) For Area 3: Before the accumulation of 22,000 total flight cycles, or within 3,000 flight cycles after the most recent inspection required by paragraph (f) or (h) of this AD, whichever is later.

(4) For airplanes on which either a surface or open-hole HFEC inspection of the horizontal flanges of the upper chord of the upper deck floor beams, as required by paragraph (i) of this AD has been accomplished, and the surface HFEC inspection was accomplished from above and below the upper deck floor beams, as specified by Figure 2, circle note 2b., of Boeing Alert Service Bulletin 747-53A2349, Revision 1:

(i) For Area 1: At the later of the times specified in paragraphs (m)(4)(i)(A) and (m)(4)(ii)(B) of this AD.

(A) Before the accumulation of 22,000 total flight cycles.

(B) Within 6,000 flight cycles after the most recent inspection required by paragraph (i) of this AD, or within 3,000 flight cycles after the effective date of this AD whichever is first.

(ii) For Area 2: Before the accumulation of 28,000 total flight cycles, or within 6,000 flight cycles after the most recent inspection required by paragraph (i) of this AD, whichever is later.

(iii) For Area 3: Before the accumulation of 22,000 total flight cycles, or within 3,000 flight cycles after the most recent inspection required by paragraph (f) or (h) of this AD, whichever is latest.

Repetitive Inspections

(n) Except as required by paragraphs (o), (p), and (q) of this AD, repeat the inspections required by paragraph (m) of this AD at intervals not to exceed those specified in paragraphs (n)(1), (n)(2), and (n)(3) of this AD:

(1) For Area 1: 3,000 flight cycles if an open-hole HFEC inspection was accomplished, or 750 flight cycles if a surface HFEC inspection was accomplished.

(2) For Area 2: 6,000 flight cycles if an open-hole HFEC inspection was accomplished, or 2,000 flight cycles if a surface HFEC inspection was accomplished.

(3) For Area 3: 3,000 flight cycles.

Repair

(o) Before further flight, repair any cracking found during any inspection required by paragraph (l), (m), or (n) of this AD in accordance with Boeing Alert Service Bulletin 747-53A2452, dated April 3, 2003. Repairs done in accordance with the service bulletin terminates the requirements of paragraphs (l), (m), and (n) of this AD for the repaired area only. Where the service bulletin specifies to contact Boeing for repair instructions, repair according to a method approved by the Manager, Seattle ACO; or according to data meeting the certification basis of the airplane approved by an AR for the Boeing DOA who has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the approval must specifically reference this AD.

After-Repair Inspections

(p) At the applicable new inspection thresholds specified in Figure 1 of Boeing Alert Service Bulletin 747-53A2452, dated April 3, 2003, perform the after-repair inspections for cracking in Areas 1 and 2, as specified in the service bulletin. Where the service bulletin specifies a threshold after the date of the service bulletin, use that same threshold after the effective date of this AD. Perform the after-repair inspections by accomplishing all of the applicable actions specified in the alert service bulletin. Repair any cracking found during any inspection required by this paragraph, according to a method approved by the Manager, Seattle ACO; or according to data meeting the certification basis of the airplane approved by an AR for the Boeing DOA who has been authorized by the Manager, Seattle ACO, to make those 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. Any cracking found during any inspection must be repaired before further flight. Repeat the inspections of Areas 1 and 2 thereafter at intervals not to exceed 3,000 flight cycles.

Optional Preventative Modification

(q) If no cracking was found during the open-hole HFEC inspections required by paragraph (m) or (n) of this AD, repairing or

modifying Areas 1 and 2, as defined in Figure 1 of Boeing Alert Service Bulletin 747-53A2452, dated April 3, 2003, in accordance with the service bulletin, defers the repetitive inspections required by paragraph (n) of this AD, and establishes new inspection methods, thresholds, and repetitive inspection intervals for the repaired or modified area. The new inspection thresholds and intervals are specified in Figure 1 of the service bulletin. Where the service bulletin specifies a threshold after the date of the service bulletin, use that same threshold after the effective date of this AD.

Inspections Done Previously

(r) Doing the inspections required by paragraphs (m) and (n) of this AD before the effective date of this AD, in accordance with the Accomplishment Instructions in Boeing Alert Service Bulletin 747-53A2349, Revision 1, dated October 12, 2000, is acceptable for compliance with the corresponding actions required by this AD.

Alternative Methods of Compliance (AMOCs)

(s)(1) The Manager, Seattle ACO, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19.

(2) Alternative methods of compliance and FAA-approved repairs, approved previously in accordance with AD 2002-10-10 are approved as AMOCs for the corresponding actions required by this AD.

Issued in Renton, Washington, on April 1, 2005.

Kalene C. Yanamura,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.
[FR Doc. 05-7154 Filed 4-8-05; 8:45 am]

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2005-20880; Directorate Identifier 2003-NM-229-AD]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747-100, -100B, -100B SUD, -200B, and -300 Series Airplanes; and Model 747SP and 747SR Series Airplanes

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

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede an existing airworthiness directive (AD) for certain Boeing Model 747 series airplanes. That AD currently requires repetitive inspections to detect cracks in various areas of the fuselage