

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 2000-NM-220-AD; Amendment 39-12483; AD 2001-22-04]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD), applicable to all Boeing Model 747 series airplanes, that currently requires a one-time inspection of the fuselage skin adjacent to the drag splice fitting to detect cracking, and follow-on actions, if necessary. This amendment requires new repetitive inspections for cracking of the fuselage skin adjacent to the drag splice fitting. This amendment is prompted by reports of fatigue cracking in the fuselage skin and adjacent structure. The actions specified by this AD are intended to detect and correct such cracking, which could result in reduced structural integrity of the fuselage, and consequent rapid depressurization of the airplane.

DATES: Effective December 3, 2001.

The incorporation by reference of Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001, as listed in the regulations, is approved by the Director of the Federal Register as of December 3, 2001.

The incorporation by reference of Boeing Service Bulletin 747-53A2444, Revision 1, dated June 15, 2000, as listed in the regulations, was approved previously by the Director of the Federal Register as of July 28, 2000 (65 FR 43219, July 13, 2000).

ADDRESSES: 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 Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 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: Rick Kawaguchi, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1153; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 2000-14-04, amendment 39-11813 (65 FR 43219, July 13, 2000), which is applicable to all Boeing Model 747 series airplanes, was published in the Federal Register on June 5, 2001 (66 FR 30109). The action proposed to require a one-time inspection of the fuselage skin adjacent to the drag splice fitting to detect cracking, and follow-on actions, if necessary. The action also proposed to mandate new repetitive inspections for cracking of the fuselage skin adjacent to the drag splice fitting.

Comments

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

Add Service Information

One commenter asks that Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001 (referenced as the appropriate source of service information for accomplishment of certain actions in the proposed rule), be added to paragraph (a) of the proposed rule, which referenced Revision 1 of the bulletin, as another source of service information for accomplishment of the external detailed visual inspection. The FAA agrees that Revision 2 of the service bulletin can be added to paragraph (a) of the final rule, and we have revised the final rule accordingly.

Change Note 5 and Title

One commenter asks that Note 5 of the proposed rule, which gives credit for inspections and repairs accomplished before July 28, 2000, be changed to also give credit for previous accomplishment of the determination of a secondary inspection, as specified in paragraph (c) of the proposed rule. The commenter does not provide a reason for this request. The FAA agrees and we have changed Note 5 of the final rule, for clarification, to include previous accomplishment of the determination of a secondary inspection. We also have removed "repairs" from the note because the original release of the service bulletin does not provide instructions for repairs.

The same commenter asks that the title "Repetitive Inspections," which precedes paragraph (d) of the final rule, be changed to "Initial and Repetitive Inspections." We agree and have changed the title accordingly.

Previously Accomplished Inspections

One commenter asks for clarification of the compliance time for the repetitive inspections specified in paragraph (d) of the proposed rule for operators who previously accomplished the initial inspections in that paragraph per Figure 4 of the Work Instructions of Boeing Alert Service Bulletin 747-53A2444, dated May 25, 2000, or Revision 1, dated June 15, 2000. The commenter wants clarification that if it did the inspections per either of those service bulletins, it is only required to continue the repetitive inspections per Figures 4, 5, 6, or 7 of the Work Instructions of Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001, at 3,000 flight cycle intervals.

The FAA infers that the commenter is asking to do the repetitive inspections specified in paragraph (d) of the final rule within 3,000 flight cycles after doing the initial inspections per Boeing Alert Service Bulletin 747-53A2444, dated May 25, 2000, or Revision 1, dated June 15, 2000. We do not concur because the inspections specified in Revision 2 involve more comprehensive inspection procedures than those in the previous versions of the service bulletin. Operators that have done the initial inspections per previous versions of the service bulletin do not meet the requirements for the

repetitive inspection intervals specified in paragraph (d) of the final rule until the initial inspections have been done per Revision 2. As specified in the preamble of the proposed rule, since the issuance of AD 2000-14-04, we received a report of severe cracking on a Model 747 series airplane, and Revision 2 of the service bulletin was issued to address that additional cracking. No change to the final rule is necessary in this regard.

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.

Interim Action

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

Cost Impact

There are approximately 1,301 airplanes of the affected design in the worldwide fleet. The FAA estimates that 260 airplanes of U.S. registry will be affected by this AD.

The actions that are currently required by AD 2000-14-04 take approximately 2 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the currently required actions on U.S. operators is estimated to be \$31,200, or \$120 per airplane.

The new inspections that are required by this AD action will take approximately 7 work hours per airplane to accomplish, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the new requirements of this AD on U.S. operators is estimated to be \$109,200, or \$420 per airplane, per inspection cycle.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

Regulatory Impact

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

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 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.

Sec. 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-11813 (65 FR 43219, July 13, 2000), and by adding a new airworthiness directive (AD), amendment 39-12483, to read as follows:

AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

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

We post ADs on the internet at "av-info.faa.gov"

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

2001-22-04 Boeing: Amendment 39-12483. Docket 2000-NM-220-AD. Supersedes AD 2000-14-04, Amendment 39-11813.

Applicability: All Model 747 series airplanes, 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)(1) 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 of certain areas of the fuselage skin, which could result in reduced structural integrity of the fuselage, and consequent rapid depressurization of the airplane, accomplish the following:

Restatement of Requirements of AD 2000-14-04

One-Time Detailed Visual Inspection

(a) Prior to the accumulation of 13,000 total flight cycles or within 60 days after July 28, 2000 (the effective date of AD 2000-14-04, amendment 39-11813), whichever occurs later: Perform a one-time external detailed visual inspection of the fuselage skin adjacent to the drag splice fitting as illustrated in Figure 2 of Boeing Service Bulletin 747-53A2444, Revision 1, dated June 15, 2000, or Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001. If no cracking is detected, no further action is required by this paragraph.

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

Corrective Action

(b) If any cracking is detected during any inspection required by this AD, prior to further flight, repair in accordance with Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001. Where the service bulletin specifies to contact Boeing for repair instructions, repair in accordance with a method approved by the Manager, Seattle Aircraft Certification Office (ACO), FAA; or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company Designated Engineering Representative (DER) who has been authorized by the Manager, Seattle ACO, to make such findings. For a repair method to be approved by the Manager, Seattle ACO, as required by this paragraph, the approval letter must specifically reference this AD.

Note 3: Repairs accomplished prior to the effective date of this AD in accordance with a method approved by the Manager, Seattle ACO, FAA, or in accordance with data meeting the type certification basis of the airplane approved by a Boeing Company DER, are considered acceptable for compliance with the repair specified in paragraph (b) of this AD.

Note 4: Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001, references the 747 Structural Repair Manual (SRM) as an appropriate source of service information for accomplishment of the repair of the fuselage skin. However, the use of 7075-T6 aluminum as specified in certain revisions of the SRM is not an option for skin replacement when accomplishing the subject repair.

Secondary Inspection

(c) For airplanes on which cracking is detected during any inspection required by paragraph (a) or (d) of this AD, prior to further flight after accomplishment of paragraph (b) of this AD: Determine if a secondary inspection of adjacent structure is required, using the Logic Diagram illustrated in Figure 1 of Boeing Service Bulletin 747-53A2444, Revision 1, dated June 15, 2000, or Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001. If required, prior to further flight, accomplish the inspection in accordance with the service bulletin.

Note 5: Inspections (including secondary inspection determination) accomplished prior to July 28, 2000, in accordance with Boeing Alert Service Bulletin 747-53A2444, dated May 25, 2000, are considered acceptable for compliance with paragraphs (a) and (c) of this AD.

New Requirements of This AD

Initial and Repetitive Inspections

(d) Perform ultrasonic, high frequency eddy current, and detailed visual inspections in accordance with the Work Instructions of Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001, at the applicable times specified in Figure 1 of the Logic Diagram of the service bulletin; except where the compliance time in the logic diagram specifies an interval of "after the release date of the service bulletin," this AD requires compliance within the interval specified in the service bulletin "after the effective date of this AD." Repeat the applicable inspections at the intervals shown in Figure 1 of the Logic Diagram of the service bulletin. Accomplishment of the inspections required by this paragraph ends the inspections required by paragraph (a) of this AD.

Note 6: Where there are differences between the AD and the service bulletin, the AD prevails.

Alternative Methods of Compliance

(e) (1) 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.

(2) Alternative methods of compliance, approved previously in accordance with AD 2000-14-04, amendment 39-11813, are approved as alternative methods of compliance with this AD.

Note 7: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

Special Flight Permits

(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.

Incorporation by Reference

(g) Except as provided by paragraph (b) of this AD, the actions shall be done in accordance with Boeing Service Bulletin 747-53A2444, Revision 1, dated June 15, 2000; or Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001; as applicable.

(1) The incorporation by reference of Boeing Alert Service Bulletin 747-53A2444, Revision 2, dated May 24, 2001, is approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51.

(2) The incorporation by reference of Boeing Service Bulletin 747-53A2444, Revision 1, dated June 15, 2000, was approved previously by the Director of the Federal Register as of July 28, 2000 (65 FR 43219, July 13, 2000).

(3) Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

Effective Date

(h) This amendment becomes effective on December 3, 2001.

Issued in Renton, Washington, on October 19, 2001.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 01-26952 Filed 10-26-01; 8:45 am]

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