

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 43219 7/13/2000]

[Docket No. 2000-NM-206-AD; Amendment 39-11813; AD 2000-14-04]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 747 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule; request for comments.

SUMMARY: This amendment adopts a new airworthiness directive (AD) that is applicable to all Boeing Model 747 series airplanes. This action 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 action is necessary to detect and correct fatigue cracking of the fuselage skin, which could result in reduced structural integrity of the fuselage, and consequent rapid depressurization of the airplane.

DATES: Effective July 28, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 28, 2000.

Comments for inclusion in the Rules Docket must be received on or before September 11, 2000.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2000-NM-206-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9:00 a.m. and 3:00 p.m., Monday through Friday, except Federal holidays. Comments may be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: 9-anm-iarcomment@faa.gov. Comments sent via fax or the Internet must contain "Docket No. 2000-NM-206-AD" in the subject line and need not be submitted in triplicate. Comments sent via the Internet as attached electronic files must be formatted in Microsoft Word 97 for Windows or ASCII text.

The service information referenced in this AD may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Rick Kawaguchi, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1153; fax (425) 227-1181.

SUPPLEMENTARY INFORMATION: The FAA has received reports indicating that, during regular maintenance of certain Boeing Model 747 series airplanes, operators detected cracking of certain areas of the fuselage skin adjacent to the drag splice fitting. One operator reported finding four skin cracks, which ranged in length from 0.19 to 1.37 inches, under the drag splice fitting of the right side underwing. On another airplane, an 8.5-inch long crack under the drag splice fitting of the left side was detected. Another operator found a 25-inch long diagonal crack between body station (BS) 982 and BS 990 at stringers 37L through 38L. The lower drag splice angle and stringer 38L also were cracked, and the BS 1000 bulkhead ring chord was severed. Such conditions, if not corrected, could result in reduced structural integrity of the fuselage, and consequent rapid depressurization of the airplane.

### **Explanation of Relevant Service Information**

The FAA has reviewed and approved Boeing Service Bulletin 747-53A2444, Revision 1, dated June 15, 2000, which describes procedures for a one-time external detailed visual inspection of the fuselage skin adjacent to the drag splice fitting to detect cracking. If no cracking is detected, the service bulletin describes procedures for repetitive ultrasonic, high frequency eddy current (HFEC), and internal detailed visual inspections. The service bulletin also describes procedures for a secondary inspection to detect additional cracking, if cracking is outside certain limits.

### **Explanation of the Requirements of the Rule**

Since an unsafe condition has been identified that is likely to exist or develop on other Model 747 series airplanes of the same type design, this AD is being issued 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. This AD requires a one-time inspection of the fuselage skin adjacent to the drag splice fitting to detect cracking, and repair, if necessary. This AD also requires a follow-on inspection to detect additional cracking, if cracking is outside certain limits.

### **Interim Action**

This is considered to be interim action until final action is identified. At this time the FAA is considering a separate rulemaking action to address the procedures for repetitive ultrasonic, HFEC, and internal detailed visual inspections of the fuselage skin adjacent to the drag splice fitting to detect additional cracking, and repair of any cracking detected, as described in the service bulletin. However, the planned compliance time for these actions is sufficiently long so that notice and opportunity for prior public comment will be practicable.

Due to the urgency of the need to inspect the fleet and repair any cracking, this AD will address only the sections in the service bulletin that pertain to an initial detailed visual inspection of the fuselage skin adjacent to the drag splice fitting to detect cracking, repair of any cracking detected, and accomplishment of a secondary inspection to detect additional cracking, if necessary.

### **Differences Between Service Bulletin and This AD**

Operators should note that the service bulletin recommends accomplishing the initial detailed visual inspection within 60 days (after the release of the service bulletin) for airplanes with more than 13,000 flight cycles. The FAA has determined, however, that limiting the inspection to airplanes with more than 13,000 flight cycles would not address all affected airplanes, in light of the fact that the unsafe condition is likely to exist or develop on other Model 747 series airplanes. In developing an appropriate compliance time for all airplanes that are affected by 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 required inspection (approximately 2 hours). In light of all of these factors, the FAA finds that, for all Model 747 series airplanes, a compliance time of, "Prior to the accumulation of 13,000 total flight cycles, or within 60 days after the effective date of this AD" for initiating the required inspection is warranted, in that it represents an appropriate interval of time allowable for affected airplanes to continue to operate without compromising safety.

### **Determination of Rule's Effective Date**

Since a situation exists that requires the immediate adoption of this regulation, it is found that notice and opportunity for prior public comment hereon are impracticable, and that good cause exists for making this amendment effective in less than 30 days.

### **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Submit comments using the following format:

- ? Organize comments issue-by-issue. For example, discuss a request to change the compliance time and a request to change the service bulletin reference as two separate issues.
- ? For each issue, state what specific change to the AD is being requested.
- ? Include justification (e.g., reasons or data) for each request.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2000-NM-206-AD." The postcard will be date stamped and returned to the commenter.

#### **Regulatory Impact**

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

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

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

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

##### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION  
P.O. BOX 26460  
OKLAHOMA CITY, OKLAHOMA 73125-0460



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

*AD's are posted on the internet at <http://av-info.faa.gov>*

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

**2000-14-04 BOEING:** Amendment 39-11813. Docket 2000-NM-206-AD.

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 (d) 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:

## **One-Time Detailed Visual Inspection**

(a) Prior to the accumulation of 13,000 total flight cycles or within 60 days after the effective date of this AD, 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. If no cracking is detected, no further action is required by this AD.

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 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 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.

## **Secondary Inspection**

(c) For airplanes on which cracking is detected during the inspection required by paragraph (a) 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. If required, prior to further flight, accomplish the inspection in accordance with the service bulletin.

Note 3: Inspections and repairs accomplished prior to the effective date of this AD in accordance with Boeing Alert Service Bulletin 747-53A2444, dated May 25, 2000, are considered acceptable for compliance with the applicable action specified in this amendment.

## **Alternative Methods of Compliance**

(d) 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.

**Special Flight Permits**

(e) 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**

(f) The inspections shall be done in accordance with Boeing Service Bulletin 747-53A2444, Revision 1, dated June 15, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Boeing Commercial Airplane Group, P.O. Box 3707, Seattle, Washington 98124-2207. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective on July 28, 2000.

FOR FURTHER INFORMATION CONTACT: Rick Kawaguchi, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-1153; fax (425) 227-1181.

Issued in Renton, Washington, on July 3, 2000.

Vi L. Lipski, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

SUPERSEDED