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**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. 2001-NM-119-AD; Amendment 39-12430; AD 2001-18-04]**

**RIN 2120-AA64**

**Airworthiness Directives; Boeing Model 747-400 Series Airplanes**

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

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

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**SUMMARY:** This amendment supersedes an existing airworthiness directive (AD), applicable to certain Boeing Model 747-400 series airplanes, that currently requires repetitive inspections to detect damage or deflection of the crew rest heat exchanger, and follow-on actions, if necessary. This amendment adds a new requirement for a one-time inspection to determine the part number and shop code of the shell of the crew rest heat exchanger; and follow-on actions, if necessary; which terminate the currently required repetitive inspections. This action is necessary to prevent cracking and buckling of the front edge of the crew rest heat exchanger, which could result in a jam of the rudder or elevator control cables, and consequent reduced controllability of the airplane. This action is intended to address the identified unsafe condition.

**DATES:** Effective September 21, 2001.

The incorporation by reference of Boeing Alert Service Bulletin 747-21A2412, Revision 2, dated November 30, 2000, as listed in the regulations, is approved by the Director of the Federal Register as of September 21, 2001.

The incorporation by reference of Boeing Alert Service Bulletin 747-21A2412, dated January 20, 2000, as listed in the regulations, was approved previously by the Director of the Federal Register as of June 8, 2000 (65 FR 33444, May 24, 2000).

Comments for inclusion in the Rules Docket must be received on or before November 5, 2001.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2001-NM-119-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays. Comments may also be sent via the Internet using the following address: [9-anm-iarcomment@faa.gov](mailto:9-anm-iarcomment@faa.gov). Comments sent via the Internet must contain ``Docket No. 2001-NM-119-AD" in the subject line and need not be submitted in triplicate.

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:** Barbara Mudrovich, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2983; fax (425) 227-1181.

**SUPPLEMENTARY INFORMATION:** On May 15, 2000, the FAA issued AD 2000-10-12, amendment 39-11736 (65 FR 33444, May 24, 2000), applicable to certain Boeing Model 747-400 series airplanes, to require repetitive inspections to detect damage or deflection of the crew rest heat exchanger, and follow-on actions, if necessary. That action was prompted by reports of cracking and buckling of the front edge of the crew rest heat exchanger on several airplanes. The requirements of that AD are intended to detect and correct damage or deflection of the crew rest heat exchanger, which could result in jamming of the rudder or elevator control cables, and consequent reduced controllability of the airplane.

In the preamble to AD 2000-10-12, the FAA indicated that the actions required by that AD were considered "interim action" and that further rulemaking action was being considered. We now have determined that further rulemaking action is indeed necessary, and this AD follows from that determination.

#### **Actions Since Issuance of Existing AD**

Since the issuance of AD 2000-10-12, we have reviewed and approved Boeing Alert Service Bulletin 747-21A2412, Revision 2, dated November 30, 2000. (AD 2000-10-12 referred to the original issue of Boeing Alert Service Bulletin 747-21A2412, dated January 20, 2000, as the appropriate source of service information for the required actions.) Among other changes, Revision 2 of the service bulletin adds a new one-time inspection to determine the part number and shop code of the shell assembly of the crew rest heat exchanger. The service bulletin also describes procedures for certain follow-on actions if the shell has a certain part number and shop code, or if the shop code cannot be determined. The follow-on actions involve removing the shell assembly of the heat exchanger; measuring the thickness of the wall of the shell adjacent to the forward flange; remarking the part, if necessary; and replacing the shell assembly of the crew rest heat exchanger with a new shell assembly, if necessary. Accomplishment of the new inspection and applicable follow-on actions eliminates the need for the currently required repetitive inspections for deflection or damage of the crew rest heat exchanger. Accomplishment of the actions specified in Revision 2 of the service bulletin is intended to adequately address the identified unsafe condition.

Additionally, paragraph (b) of AD 2000-10-12 contains a requirement to measure the thickness of the material of discrepant heat exchanger and send certain discrepant heat exchangers and inspection results to the airplane manufacturer. Because the airplane manufacturer has issued the new service bulletin discussed above, which contains a terminating action for the repetitive inspections required previously, we find that it is no longer necessary to require the measurement and return of discrepant heat exchangers. Paragraph (b) has been revised accordingly, and Note 3 of the existing AD, which contains information related to the return of damaged heat exchangers, has not been included in this AD.

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

Since an unsafe condition has been identified that is likely to exist or develop on other products of this same type design, this AD supersedes AD 2000-10-12 to continue to require repetitive inspections to detect damage or deflection of the crew rest heat exchanger, and follow-on actions, if necessary. This AD adds a new requirement for a one-time inspection to determine the part number and shop code of the shell of the crew rest heat exchanger, and follow-on actions, if necessary, which terminate the currently required repetitive inspections. The actions are required to be accomplished in accordance with the service bulletins described previously, except as discussed below.

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

This AD differs from the service bulletin in that the service bulletin specifies that the new inspection to determine the part number and shop code of the shell of the crew rest heat exchanger be accomplished at "the next heavy maintenance visit." We find that such a compliance time will not necessarily ensure that the inspection will be done in a timely manner. In developing an appropriate compliance time for the new inspection required by this AD, we 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 new inspection (less than one hour). In light of all of these factors, we find an 18-month compliance time for completing the required inspection to be warranted, in that it represents an appropriate interval of time allowable for affected airplanes to continue to operate without compromising safety. We find that this compliance time will also be sufficient to allow the inspections to be conducted during a regularly scheduled maintenance visit for the majority of the affected fleet.

## **Cost Impact**

None of the Model 747-400 series airplanes affected by this action are on the U.S. Register. All airplanes included in the applicability of this rule currently are operated by non-U.S. operators under foreign registry; therefore, they are not directly affected by this AD action. However, the FAA considers that this rule is necessary to ensure that the unsafe condition is addressed in the event that any of these subject airplanes are imported and placed on the U.S. Register in the future.

Should an affected airplane be imported and placed on the U.S. Register in the future, it would take approximately 1 work hour to accomplish the inspection currently required by AD 2000-10-12, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of this inspection would be \$60 per airplane, per inspection cycle.

Should an affected airplane be imported and placed on the U.S. Register in the future, it would take approximately 1 work hour to accomplish the new inspection required by this AD, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the new required inspection would be \$60 per airplane.

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

Since this AD action does not affect any airplane that is currently on the U.S. register, it has no adverse economic impact and imposes no additional burden on any person. Therefore, prior notice and public procedures hereon are unnecessary and the amendment may be made effective in less than 30 days after publication in the Federal Register.

## **Comments Invited**

Although this action is in the form of a final rule and was not preceded by notice and 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 2001-NM-119-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.

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 39-11736 (65 FR 33444, May 24, 2000), and by adding a new airworthiness directive (AD) amendment 39-12430, 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).

**2001-18-04 Boeing:** Amendment 39-12430. Docket 2001-NM-119-AD. Supersedes AD 2000-10-12, Amendment 39-11736.

*Applicability:* Model 747-400 series airplanes, line numbers 1 through 1205 inclusive, certificated in any category, and equipped with dual crown skin heat exchangers.

**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 (f)(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.

## Restatement of Requirements of AD 2000-10-12

### Repetitive Inspections

(a) Within 1,200 flight hours or 90 days after June 8, 2000 (the effective date of AD 2000-10-12, amendment 39-11736), whichever occurs first, perform a general visual inspection of the crew rest heat exchanger to detect deflection or damage, in accordance with Boeing Alert Service Bulletin 747-21A2412, dated January 20, 2000, or Revision 2, dated November 30, 2000. Repeat the inspection thereafter at intervals not to exceed 2,500 flight hours, until paragraph (d) of this AD is accomplished.

**Note 2:** For the purposes of this AD, a general visual inspection is defined as: "A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or drop-light, and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked."

## **Corrective Action**

(b) If any damage or deflection is detected during any inspection required by paragraph (a) of this AD, prior to further flight, replace the discrepant heat exchanger with a new heat exchanger, in accordance with Boeing Alert Service Bulletin 747-21A2412, dated January 20, 2000, or Revision 2, dated November 30, 2000.

## **New Requirements of This AD**

**Note 3:** Inspections and replacements accomplished prior to the effective date of this AD in accordance with Boeing Alert Service Bulletin 747-21A2412, Revision 1, dated August 31, 2000; are considered acceptable for compliance with paragraphs (a) and (b) of this AD.

## **Determination of the Part Number of the Heat Exchanger Shell**

(c) Within 18 months after the effective date of this AD, do an inspection to determine the part number of the shell assembly of the crew rest heat exchanger, according to Boeing Alert Service Bulletin 747-21A2412, Revision 2, dated November 30, 2000.

(1) If the part number of the shell is NOT listed in the "Existing Part Number" column of the "Existing Parts Accountability" table under Section 2.E. of the service bulletin: No further action is required by this AD. This terminates the repetitive inspections required by paragraph (a) of this AD.

(2) If the part number is listed in the "Existing Part Number" column of the "Existing Parts Accountability" table under Section 2.E. of the service bulletin, but the shop code is NOT A3210: No further action is required by this AD. This terminates the repetitive inspections required by paragraph (a) of this AD.

(3) If the part number is listed in the "Existing Part Number" column of the "Existing Parts Accountability" table under Section 2.E. of the service bulletin, and the shop code is A3210 or cannot be determined, do paragraph (d) of this AD.

## **Measurement of Wall of Shell Assembly and Corrective Action**

(d) For airplanes on which the shell assembly of the crew rest heat exchanger has the part number listed in the "Existing Part Number" column of the "Existing Parts Accountability" table under Section 2.E. of Boeing Alert Service Bulletin 747-21A2412, Revision 2, dated November 30, 2000, and the shop code is A3210 or cannot be determined: Before further flight, remove the shell assembly of the heat exchanger and measure the thickness of the wall of the shell adjacent to the forward flange, according to the service bulletin.

(1) If the thickness of the wall of the shell is equal to or greater than 0.028 inch: Re-mark the part if the part marking was unreadable, and reinstall the shell assembly, according to the service bulletin. No further action is required by this AD. This terminates the repetitive inspections required by paragraph (a) of this AD.

(2) If the thickness is less than 0.028 inch: Replace the shell assembly with a new shell assembly, according to the service bulletin. This terminates the repetitive inspections required by paragraph (a) of this AD.

## **Spares**

(e) As of the effective date of this AD, no one may install a crew rest heat exchanger on any airplane unless paragraphs (c) and (d) of this AD, as applicable, have been done on that heat exchanger.

## **Alternative Methods of Compliance**

(f) (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 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, Seattle ACO.

(2) Alternative methods of compliance, approved previously in accordance with AD 2000-10-12, amendment 39-11736, are approved as alternative methods of compliance with this AD.

**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**

(g) 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**

(h) The actions shall be done in accordance with Boeing Alert Service Bulletin 747-21A2412, dated January 20, 2000; or Boeing Alert Service Bulletin 747-21A2412, Revision 2, dated November 30, 2000; as applicable.

(1) The incorporation by reference of Boeing Alert Service Bulletin 747-21A2412, Revision 2, dated November 30, 2000, 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 Alert Service Bulletin 747-21A2412, dated January 20, 2000, was approved previously by the Director of the Federal Register as of June 8, 2000 (65 FR 33444, May 24, 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**

(i) This amendment becomes effective on September 21, 2001.

Issued in Renton, Washington, on August 27, 2001.

**Kalene C. Yanamura,**

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

[FR Doc. 01-22087 Filed 9-5-01; 8:45 am]

**BILLING CODE 4910-13-U**