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[Page 39631]

## DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [60 FR 39631 NO. 149 8/3/95]

Docket No. 95-NM-06-AD; Amendment 39-9321; AD 95-16-02

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

AGENCY: Federal Aviation Administration, DOT

ACTION: Final rule

**SUMMARY:** This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 747 SP, SR, -100, -200, and -300 series airplanes, that requires repetitive operational tests of the reversible gearbox pneumatic drive unit (PDU) or the reversing air motor PDU to ensure that the unit can restrain the thrust reverser sleeve, and correction of any discrepancy found. This amendment is prompted by the results of an investigation, which revealed that, in the event of thrust reverser deployment during high-speed climb or during cruise, these airplanes could experience control problems. The actions specified by this AD are intended to ensure the integrity of the fail safe features of the thrust reverser system by preventing possible failure modes in the thrust reverser control system that can result in inadvertent deployment of a thrust reverser during flight.

**DATES:** Effective September 5, 1995.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of September 5, 1995.

**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:** G. Michael Collins, Aerospace Engineer, Propulsion Branch, ANM-140S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (206) 227-2689; fax (206) 227-1181.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an airworthiness directive (AD) that is applicable to certain Boeing Model 747 SP, SR, -100, -200, and -300 series airplanes was published in the Federal Register on March 30, 1995 (60 FR 16392). [A correction of the proposal was published in the Federal Register on April 5, 1995 (60 FR 17385).] That action proposed to require

repetitive operational tests of the reversible gearbox pneumatic drive unit (PDU) or the reversing air motor PDU to ensure that the unit can restrain the thrust reverser sleeve, and correction of any discrepancy found during the test.

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

Two commenters support the proposed rule.

One commenter requests an extension of the intervals for repeating the operational tests from 2,000 flight hours to 2,200 flight hours so that the tests can be performed during regularly scheduled maintenance visits. The commenter indicates that it has performed the initial test and one repetitive test on all of its aircraft, and no anomalies have been found. The FAA does not concur. The FAA established the repetitive test interval of 2,000 flight hours to provide an acceptable level of safety and to allow the majority of affected operators to schedule the tests during normal maintenance intervals at a maintenance base where special equipment and trained maintenance personnel will be available, if necessary. In addition, the interval is consistent with the interval recommended by the manufacturer in the alert service bulletin cited in this AD. However, under the provisions of paragraph (d) of the final rule, operators may apply for the approval of an adjustment of the compliance time if sufficient justification is presented to the FAA.

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 as proposed.

This AD is considered to be interim action until final action is identified, at which time the FAA may consider additional rulemaking.

There are approximately 456 Model 747 SP, SR, -100, -200, and -300 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 173 airplanes of U.S. registry will be affected by this AD, that it will take approximately 16 work hours per airplane to accomplish the required actions, and that the average labor rate is \$60 per work hour. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$166,080, or \$960 per airplane.

The total cost impact figure discussed above is 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 regulations adopted herein will not have substantial direct effects 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, in accordance with Executive Order 12612, it is determined that this final rule does not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

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. App. 1354(a), 1421 and 1423; 49 U.S.C. 106(g); and 14 CFR 11.89. § 39.13 - [Amended]
2. Section 39.13 is amended by adding the following new airworthiness directive:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



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

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Federal Aviation Regulations, 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 FAR Subpart 39.3).

**95-16-02 BOEING:** Amendment 39-9321. Docket 95-NM-06-AD.

Applicability: Model 747 SP, SR, -100, -200, and -300 series airplanes equipped with Pratt & Whitney Model JT9D series engines (excluding Model JT9D-70 engines), 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 use the authority provided in paragraph (d) of this AD to request approval from the FAA. This approval may address either no action, if the current configuration eliminates the unsafe condition; or different actions necessary to address the unsafe condition described in this AD. Such a request should include an assessment of the effect of the changed configuration on the unsafe condition addressed by this AD. In no case does the presence of any modification, alteration, or repair remove any airplane from the applicability of this AD.

**Compliance:** Required as indicated, unless accomplished previously.

To ensure the integrity of the fail safe features of the thrust reverser system, accomplish the following:

(a) Within 90 days after the effective date of this AD, perform an operational test of the reversible gearbox pneumatic drive unit (PDU) or the reversing air motor PDU to ensure that the unit can restrain the thrust reverser sleeve, in accordance with Boeing Alert Service Bulletin 747-78A2131, dated September 15, 1994. Repeat the test thereafter at intervals not to exceed 2,000 flight hours.

(b) If any of the tests required by this AD cannot be successfully performed, or if any discrepancy is found during those tests, accomplish either paragraph (b)(1) or (b)(2) of this AD.

(1) Prior to further flight, correct the discrepancy found, in accordance with Boeing Alert Service Bulletin 747-78A2131, dated September 15, 1994. Or

(2) The airplane may be operated in accordance with the provisions and limitations specified in an operator's FAA-approved Minimum Equipment List (MEL), provided that no more than one thrust reverser on the airplane is inoperative.

(c) Within 30 days after performing each initial test required by this AD, submit a report of the test results, both positive and negative, to the FAA, Seattle Aircraft Certification Office (ACO), ANM-100S, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; fax (206) 227-1181. Information collection requirements contained in this regulation have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.) and have been assigned OMB Control Number 2120-0056.

(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 Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate. 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 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Seattle ACO.

(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.

(f) The actions shall be done in accordance with Boeing Alert Service Bulletin 747-78A2131, dated September 15, 1994. 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 September 5, 1995.