

**DEPARTMENT OF TRANSPORTATION****Federal Aviation Administration****14 CFR Part 39**

[Docket No. 2003-NM-173-AD]

RIN 2120-AA64

**Airworthiness Directives; Boeing Model 747-400, -400D, and -400F Series Airplanes**

AGENCY: Federal Aviation Administration, DOT.

ACTION: Notice of proposed rulemaking (NPRM).

**SUMMARY:** This document proposes the adoption of a new airworthiness directive (AD) that is applicable to certain Boeing Model 747-400, -400D, and -400F series airplanes. This proposal would require reviewing airplane maintenance records; inspecting the yaw damper actuator portion of the upper and lower rudder power control modules (PCM) for cracking, and replacing the PCMs if necessary; and reporting airplane maintenance records review and inspection results to the manufacturer. This action is necessary to detect and correct cracking in the yaw damper actuator portion of the upper and lower rudder PCMs, which could result in an uncommanded left rudder hardover, consequent increased pilot workload, and possible runway departure upon landing. This action is intended to address the identified unsafe condition.

**DATES:** Comments must be received by September 29, 2003.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2003-NM-173-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 be submitted via fax to (425) 227-1232. Comments may also be sent via the Internet using the following address: *9-anm-nprmcomment@faa.gov*. Comments sent via fax or the Internet must contain "Docket No. 2003-NM-173-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 or 2000 or ASCII text.

The service information referenced in the proposed rule 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.

**FOR FURTHER INFORMATION CONTACT:**

Doug Tsuji, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6487; fax (425) 917-6590.

**SUPPLEMENTARY INFORMATION:****Comments Invited**

Interested persons are invited to participate in the making of the proposed 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 above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this action may be changed in light of the comments received.

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 proposed 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 proposed 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 summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this action must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 2003-NM-173-AD." The postcard will be date stamped and returned to the commenter.

**Availability of NPRMs**

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM-114, Attention: Rules Docket No. 2003-NM-173-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

**Discussion**

The FAA has received a report that the lower rudder of a Boeing Model 747-400 series airplane made an uncommanded move to the full left position (hardover) during flight. The flight crew used lateral and upper rudder controls to compensate for the lower rudder hardover. The flight crew used these controls and differential engine thrust to land the airplane. Investigation revealed that the yaw damper actuator portion of the lower rudder power control module (PCM) manifold was broken. The broken manifold is attributed to fatigue cracking in the lower rudder PCM, which caused the yaw damper to move out of its correct position and generate the uncommanded lower rudder hardover. An uncommanded left rudder hardover could result in increased pilot workload and possible runway departure upon landing.

The upper rudder PCM has the same design as the lower rudder PCM and can fail in the same manner. An upper rudder PCM failure will result in an upper rudder surface hardover to the left and would create a similar unsafe condition as for a failure of the lower rudder PCM.

The PCM part numbers installed on the 747-400D and 747-400F series airplanes are the same part numbers installed on the affected Model 747-400 series airplane. Therefore those airplanes may be subject to the unsafe condition identified on the Model 747-400 series airplane.

**Explanation of Relevant Service Information**

The FAA has reviewed and approved Boeing Alert Service Bulletin 747-27A2397, dated July 24, 2003. This service bulletin describes the following procedures:

- Reviewing airplane maintenance records to determine if each PCM has a main manifold with less than 15,000 total flight hours or 2,000 total flight cycles.
- Performing ultrasonic inspections for cracking of the yaw damper actuator portion of upper and lower rudder PCMs that have 15,000 or more total flight hours and 2,000 or more total flight cycles.
- Recording the results of the ultrasonic inspections and reporting them to Boeing.
- Replacing subject PCMs that have evidence of possible cracking.

**Explanation of Requirements of Proposed Rule**

Since an unsafe condition has been identified that is likely to exist or

develop on other products of this same type design, the proposed AD would require accomplishment of the actions specified in the service bulletin described previously, except as discussed below.

#### Differences Between This Proposed AD and the Service Bulletin

The Boeing service bulletin recommends accomplishing the review of airplane maintenance records and ultrasonic inspection within 6 months of the issue date of the service bulletin. We have determined that that interval would address the identified unsafe condition soon enough to ensure an adequate level of safety for the affected fleet. In developing an appropriate compliance time for this AD, we considered the 6-month compliance time recommended by the manufacturer, as well as the time required for the rulemaking process. In consideration of these factors, we find that 3 months after the effective date of this final rule will fall approximately at the same time for compliance as recommended by the manufacturer. We find that a 3-month compliance time represents an appropriate interval of time for affected airplanes to continue to operate without compromising safety.

#### Interim Action

We consider this proposed AD interim action. The inspection reports that are required by this AD will enable the manufacturer and the FAA to obtain better insight into the nature, cause, and extent of the cracking, and eventually to develop final action to address the unsafe condition. Once final action has been identified, we may consider further rulemaking.

#### Changes to 14 CFR Part 39/Effect on the Proposed AD

On July 10, 2002, the FAA issued a new version of 14 CFR part 39 (67 FR 47997, July 22, 2002), which governs the FAA's airworthiness directives system. The regulation now includes material that relates to altered products, special flight permits, and alternative methods of compliance (AMOCs). Because we have now included this material in part 39, only the office authorized to approve AMOCs is identified in each individual AD.

#### Change to Labor Rate Estimate

We have reviewed the figures we have used over the past several years to calculate AD costs to operators. To account for various inflationary costs in the airline industry, we find it necessary to increase the labor rate used in these calculations from \$60 per work hour to

\$65 per work hour. The cost impact information, below, reflects this increase in the specified hourly labor rate.

#### Cost Impact

There are approximately 180 airplanes of the affected design in the worldwide fleet. The FAA estimates that 13 airplanes of U.S. registry would be affected by this proposed AD, that it would take approximately 1 work hour per airplane to accomplish the proposed airplane maintenance records review, at an average labor rate of \$65 per work hour. Based on these figures, the cost impact of the proposed airplane maintenance records review on U.S. operators is estimated to be \$845, or \$65 per airplane.

Should an operator be required to accomplish the inspection, it would take approximately 4 work hours per airplane, at an average labor rate of \$65 per work hour. Based on these figures, the cost impact of the proposed inspection is estimated to be \$260 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the proposed requirements of this AD action, and that no operator would accomplish those actions in the future if this proposed 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 proposed herein 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. Therefore, it is determined that this proposal would not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this 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) if promulgated, 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 copy of the draft regulatory evaluation prepared for this

action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

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

Air transportation, Aircraft, Aviation safety, Safety.

#### The Proposed Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration proposes to amend 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:

**Boeing:** Docket 2003-NM-173-AD.

**Applicability:** Model 747-400, -400D, and -400F series airplanes; as listed in Boeing Alert Service Bulletin 747-27A2397, dated July 24, 2003; certificated in any category.

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

To detect and correct cracking in the yaw damper actuator portion of the upper and lower rudder power control modules (PCM), which could result in an uncommanded left rudder hardover, consequent increased pilot workload, and possible runway departure upon landing, accomplish the following:

#### Review of Airplane Maintenance Records

(a) Within 3 months after the effective date of this AD: Review the airplane maintenance records to determine if each PCM has a main manifold with less than 15,000 total flight hours or fewer than 2,000 total flight cycles, or do the inspection required by paragraph (c) of this AD.

#### Follow-On Actions: PCMs With Less Than 15,000 Total Flight Hours or Less Than 2,000 Flight Cycles

(b) If it can be positively determined from the review of the airplane maintenance records that each rudder PCM is below either of the thresholds specified in paragraph (a) of this AD: Submit a report to the manufacturer in accordance with paragraph (d) of this AD.

#### Follow-On Actions: PCMs With 15,000 Total Flight Hours or More and 2,000 Flight Cycles or More

(c) If it cannot be positively determined that each rudder PCM is below either of the thresholds specified in paragraph (a) of this AD: Within 3 months after the effective date of this AD, do an ultrasonic inspection of the yaw damper actuator portion of the upper

and lower rudder PCMs in accordance with the Accomplishment Instructions specified in Boeing Alert Service Bulletin 747-27A2397, dated July 24, 2003. After completing the actions required by paragraphs (c)(1) or (c)(2) of this AD, as applicable, submit a report to the manufacturer in accordance with paragraph (d) of this AD.

(1) If no cracking is found: Apply sealant and a torque stripe and install a lockwire on the applicable rudder PCM per Figure 1 or Figure 2, as applicable, and the Accomplishment Instructions specified in Boeing Alert Service Bulletin 747-27A2397, dated July 24, 2003.

(2) If any cracking is found: Before further flight, replace the affected PCM with a PCM having less than 15,000 total flight hours and less than 2,000 total flight cycles, or a PCM that has been ultrasonically inspected (either by the operator or the supplier) in accordance with the Accomplishment Instructions specified in Boeing Alert Service Bulletin 747-27A2397, dated July 24, 2003.

#### Reporting Requirements

(d) At the applicable time specified in paragraph (d)(1) or (d)(2) of this AD, accomplish paragraph (e).

(1) If the inspection was done after the effective date of this AD: Submit the report and PCM, if applicable, within 20 days after the inspection.

(2) If the inspection was accomplished prior to the effective date of this AD: Submit the report and PCM, if applicable, within 20 days after the effective date of this AD.

(e) Do the requirements of paragraphs (e)(1) and (e)(2) of this AD. 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.

(1) Submit a report of the airplane maintenance records review or the inspection findings (positive and negative) to: The Boeing Company, Service Engineering—Mechanical Systems, Attn: R. Adams, fax: (425) 342-5224. The report must contain the airplane and rudder PCM serial numbers, the total flight hours and flight cycles for each rudder PCM, and a description of any damage found. Submission of the Inspection Report Form (Figure 3 of Boeing Alert Service Bulletin 747-27A2397, dated July 24, 2003) is an acceptable method of complying with this requirement.

(2) Send parts to Parker Hannifin Corporation in accordance with the shipping instructions specified in Appendix A of the service bulletin.

#### Parts Installation

(f) As of the effective date of this AD, no person shall install on any airplane a rudder PCM with 15,000 total flight hours or more, or 2,000 total flight cycles or more, unless it has been ultrasonically inspected (either by the operator or the supplier) in accordance with the Accomplishment Instructions specified in Boeing Alert Service Bulletin 747-27A2397, dated July 24, 2003.

#### Alternative Methods of Compliance

(g) In accordance with 14 CFR 39.19, the Manager, Seattle Aircraft Certification Office, FAA, is authorized to approve alternative methods of compliance for this AD.

Issued in Renton, Washington, on August 22, 2003.

Ali Bahrami,

Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03-22001 Filed 8-27-03; 8:45 am]

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## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

#### 14 CFR Part 71

[Docket No. FAA-2003-15529; Airspace Docket No. 03-ANM-03]

RIN 2120-AA66

#### Proposed Establishment of VOR Federal Airway 584

AGENCY: Federal Aviation Administration (FAA) DOT.

ACTION: Notice of proposed rulemaking.

**SUMMARY:** This action proposes to establish Very High Frequency Omnidirectional Range (VOR) Federal Airway 584 (V-584) between the Helena, MT, Very High Frequency Omnidirectional Radio Range and Tactical Air Navigation Aid (VORTAC), and the Missoula, MT, VORTAC. This proposed airway would allow aircraft to fly a direct route between Helena, MT, and Missoula, MT, during outages of the Drummond VOR. This airway is intended to improve the management of aircraft operations in Montana.

**DATES:** Comments must be received on or before October 14, 2003.

**ADDRESSES:** Send comments on this proposal to the Docket Management System, Department of Transportation, Room Plaza 401, 400 Seventh Street, SW., Washington, DC 20590-0001. You must identify "FAA Docket No. FAA-2003-15529, and Airspace Docket No. 03-ANM-03," at the beginning of your comments. You may also submit comments on the Internet at <http://dms.dot.gov>.

**FOR FURTHER INFORMATION CONTACT:** Ken McElroy, Airspace and Rules Division, ATA-400, Office of Air Traffic Airspace Management, Federal Aviation Administration, 800 Independence Avenue, SW., Washington, DC 20591; telephone: (202) 267-8783.

**SUPPLEMENTARY INFORMATION:**

#### Comments Invited

Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments, as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal.

Communications should identify both docket numbers (FAA Docket No. FAA-2003-15529, and Airspace Docket No. 03-ANM-03) and be submitted in triplicate to the Docket Management System (see ADDRESSES section for address and phone number). You may also submit comments through the Internet at <http://dms.dot.gov>.

Commenters wishing the FAA to acknowledge receipt of their comments on this action must submit with those comments a self-addressed, stamped postcard on which the following statement is made: "Comments to FAA Docket No. FAA-2003-15529, and Airspace Docket No. 03-ANM-03." The postcard will be date/time stamped and returned to the commenter. All communications received on or before the specified closing date for comments will be considered before taking action on the proposed rule. The proposal contained in this action may be changed in light of comments received.

All comments submitted will be available for examination in the public docket both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

#### Availability of NPRM's

An electronic copy of this document may be downloaded through the Internet at <http://dms.dot.gov>. Recently published rulemaking documents can also be accessed through the FAA's Web page at <http://www.faa.gov> or the Federal Register's Web page at <http://www.gpoaccess.gov/fr/index.html>.

You may review the public docket containing the proposal; any comments received; and any final disposition in person at the Dockets Office (see address in "Comments Invited" section) between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. An informal docket may also be examined during normal business hours at the office of the Regional Air Traffic Division, Federal Aviation