

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