[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 97-NM-26-AD; Amendment 39-9954 ; AD 97-05-10]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737 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 737 series airplanes. This action requires removal of the main rudder power control unit (PCU) and replacement with a serviceable unit. This amendment is prompted by a report of the installation of an incorrect bolt on the main rudder PCU. The actions specified in this AD are intended to prevent cracking of the bearing of the main rudder PCU due to installation of an incorrect bolt; such cracking could result in seizure of the bearing and resultant uncommanded rudder movement.

DATES: Effective [insert date 15 days after date of publication in the **Federal Register**].

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of [insert date 15 days after date of publication in the **Federal Register**].

Comments for inclusion in the Rules Docket must be received on or before [insert date 60 days after date of publication in the **Federal Register**].

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-103, Attention: Rules Docket No. 97-NM-26-AD, 1601 Lind Avenue, SW., Renton, Washington 98055-4056.

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: Kenneth W. Frey, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Transport Airplane Directorate, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington; telephone (206) 227-2673; fax (206) 227-1181.

SUPPLEMENTARY INFORMATION: The FAA has received a report of cracking of the internal summing lever assembly bearing of the main rudder power control unit (PCU) on a Model 737 series airplane. Investigation revealed that a Hi-Lock bolt had been installed in the lever assembly bearing instead of the correct bolt, Boeing Part Number (P/N) 66-22749-1. Apparently, installation of the incorrect bolt was approved by the repair station performing the installation. The Hi-Lock bolt has a larger radius in the shoulder-to-shank transition than the correct bolt. The larger bolt radius created an interference fit that caused the inner race of the bearing to crack. Such cracking, if not detected and corrected, could cause the bearing to seize and, consequently, lead to an uncommanded rudder movement.

Explanation of Relevant Service Information

The FAA has reviewed Boeing Service Letter, 737-SL-27-112-B, dated February 6, 1997, which lists serial numbers of certain PCU's of the main rudder that have been identified as those having incorrect bolts. The service letter describes procedures for removal of those PCU's from the airplanes, and a one-time visual inspection to detect cracking of the lever assembly bearing with a 10-power magnification and strong light, a one-time eddy current inspection, and repair, if necessary, before the PCU can be reinstalled on the airplane.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other Boeing Model 737 series airplanes of the same type design, this AD is being issued to prevent cracking of the bearing of the main rudder power control unit (PCU) due to the installation of an incorrect bolt; such cracking could result in seizure of the bearing and a consequent uncommanded rudder movement. This AD requires removal of the PCU and replacement with a serviceable unit. This AD also prohibits installation of a subject PCU on any airplane in the future unless the PCU has been inspected (visually and by eddy current) to detect cracking, repaired (if necessary), and tested. The actions are required to be accomplished in accordance with the service letter described previously.

This AD also requires that operators submit a report to the FAA of the inspection results whenever a PCU is inspected for cracking.

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.

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 97-NM-26-AD." The postcard will be date stamped and returned to the commenter.

Regulatory Impact

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.

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:

97-05-10 BOEING: Amendment 39-9954. Docket 97-NM-26-AD.

Applicability: Model 737 series airplanes, having a main rudder power control unit (PCU) that is identified in Boeing Service Letter 737-SL-27-112-B, dated February 6, 1997; certificated in any category.

NOTE 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise 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 prevent cracking and seizing of the internal summing lever assembly bearing of the main rudder power control unit (PCU), which could result in uncommanded rudder movement, accomplish the following:

(a) Within 90 days after the effective date of this AD, remove the main rudder PCU and replace it with a serviceable unit in accordance with Boeing Service Letter 737-SL-27-112-B, dated February 6, 1997.

(b) As of 90 days after the effective date of this AD, no person shall install on any airplane a main rudder PCU having a serial number specified in Boeing Service Letter 737-SL-27-112-B, dated February 6, 1997, unless the following actions have been accomplished in accordance with Boeing Service Letter 737-SL-27-112-B, dated February 6, 1997.

(1) Remove the internal summing lever assembly of the main rudder PCU in accordance with the service letter.

(2) Perform a one-time visual inspection using 10-power magnification and strong light to detect cracking of the bearing, in accordance with the service letter.

(i) If no cracking is detected during the visual inspection, perform an eddy current inspection to detect cracking of the bearing in accordance with the service letter.

(A) If no cracking is detected during the eddy current inspection, the unit may be reinstalled on the airplane after it is reassembled and tested in accordance with the service letter.

(B) If any cracking is detected during the eddy current inspection, before reinstallation of the PCU on any airplane, repair the lever assembly, reassemble, and test; in accordance with the service letter.

(ii) If any cracking is detected during the visual inspection, before reinstallation of the PCU on any airplane, repair the lever assembly, reassemble, and test, in accordance with the service letter.

(c) Within 14 days after accomplishing the requirements of paragraph (b) of this AD, submit a report of any cracked PCU bearing to the Manager, Seattle Aircraft Certification Office (ACO), FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, WA 98055-4056; fax (206) 227-1181. The report shall include the information specified in paragraphs (c)(1) and (c)(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) The PCU part number and serial number.

(2) The date of the inspection and the inspection findings.

(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 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 Service Letter 737-SL-27-112-B, dated February 6, 1997. 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 [insert date 15 days after date of publication in the **Federal Register**].

Issued in Renton, Washington, on February 25, 1997.

Original Signed By:

James V. Devany, Acting Manager,

Transport Airplane Directorate,
Aircraft Certification Service.

AD ECONOMIC EVALUATION

Docket Number: 97-NM-26-AD
Airplane Make/Model/Series: Boeing Model 737 series airplanes
Number of airplanes (U.S. Operators): **365**

The Airworthiness Directive (AD) requires: Removal of the main rudder power control unit (PCU) and replacement with a serviceable unit within 90 days after the effective date of the AD.

Costs:

Parts per aircraft	$	25
Labor per aircraft (17 work hours x $60/hour)	$	1,020
Other (explain)	$	0
Cost per aircraft	$	1,045
Fleet cost	$	372,300

Executive Order 12866:

Could the AD be considered a "significant regulatory action?"

YES ( ) explain NO (X)

DOT Regulatory Policies and Procedures:

Is the AD significant?

YES ( ) explain NO (X)

Regulatory Flexibility Act:

Will the AD have a significant economic impact on a substantial number of small entities?

YES ( ) explain NO (X)

Project Engineer/Office Routing Symbol: Ken Frey, ANM-130S

AOA-1 ALERT NECESSARY? _____

SYNOPSIS

DATE: February 14, 1997

SUBJECT: Boeing Model 737 series airplanes; Immediately Adopted Rule; Docket 97-NM-26-AD

PROJECT ENGINEER/TECH WRITER: Ken Frey, ANM-130S, x2673
Judy Golder, ANM-103, x1119

ACTION: Requires removal of the main rudder power control unit (PCU) and replacement with a serviceable unit. Compliance time is 90 days.

This AD is not related to the CDR AD's or other AD issued/upcoming on the B737 rudder issues. It is a maintenance-created problem.

COST IMPACT: Worldwide fleet: 365; U.S. registered airplanes: 365
365 airplanes x [(17 work hours @ $60/hour) + ($25 parts)] = $372,300

AFFECTED U.S. OPERATORS: Carnival; Southwest; Aloha; USAir; America West; Delta; Westpac; United; Alaska; Airtran Airways; Frontier; Eastwind; Vanguard; Casino Express; Air South; Nations Air Express; Sierra Pacific

CONTACTED DURING DATA GATHERING: Boeing, ATA

QC PROBLEM INVOLVED?: No

CONTROVERSIAL ISSUES / MEDIA INTEREST: (see above)