

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 31129 6/11/2001]

[Docket No. 2000-NM-156-AD; Amendment 39-12254; AD 2001-11-11]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737, 747, and 777 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to certain Boeing Model 737, 747, and 777 series airplanes, that requires replacement of the seat track fittings on all passenger seats with new, improved fittings. The actions specified by this AD are intended to prevent unrestrained movement of the passenger seats during high forward deceleration of the airplane, which could result in injury to the passengers or crew members during an emergency landing.

DATES: Effective July 16, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of July 16, 2001.

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: Jan Risheim, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington; telephone (425) 227-1675; fax (425) 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 737, 747, and 777 series airplanes was published in the **Federal Register** on December 22, 2000 (65 FR 80794). That action proposed to require replacement of the seat track fittings on all passenger seats with new, improved fittings.

Comments

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

Change Unsafe Condition and Paragraph (a) of Proposed Rule

A single commenter asks that the unsafe condition in the proposed rule which states, "To prevent unrestrained movement of the passenger seats during high forward deceleration of the airplane, which could result in injury to the passengers or crew members during an emergency landing," be changed to read, "To verify that during seat installation no over-torque on seat track fitting shear bolts occurred." The commenter also asks that paragraph (a) of the proposed rule be changed to read, "Within 1 month after the effective date of this AD: Inspect all the seat track fittings on all the passenger seats as specified in the applicable component maintenance manual under the section titled, 'Troubleshooting,' following the troubleshooting procedure therein."

The commenter states that if the old fitting is properly installed (i.e., the maximum allowable torque value is not exceeded, and the shear plunger is correctly engaged), no risk of unrestrained movement of the passenger seat under any circumstances, including high forward deceleration, can occur. The commenter notes that this has been demonstrated during the certification process of the seat, and found acceptable by all involved airworthiness authorities. To date there is no evidence that such an occurrence is even possible, provided that the installation specifications of the seat manufacturer are fully accomplished. The commenter also states that if the new improved fitting is used, but the maximum allowable torque value is exceeded, then an unrestrained movement of the passenger seat is possible exactly as with the old fitting in the same condition. The commenter concludes that issuance of an airworthiness directive requiring the replacement of old fittings with new, improved fittings having a higher maximum torque value only, is ineffective to prevent unrestrained seat movement. Additionally, the origin of the eventual safety problem resides in the application on the shear bolt of high torque value, exceeding the maximum allowable torque specified by the seat manufacturer.

The FAA does not concur. As stated in the proposed rule, the manufacturer reported that the shear plunger screws of certain seat track fittings broke during installation. Analysis of the broken screws revealed that various modifications had weakened the shear plunger screws. Further analysis revealed that high torque during seat installation resulted in broken shear plunger screws and subsequent disengagement of the shear plunger from the seat track. Additionally, the manufacturer found that the threads used to attach the shear plunger screws to the seat track were filled with coating that was used on the exterior of the screws, which increases the torque required to install the screw. This information indicates that the torque required to install the shear plunger screws is very close to the strength of the screw, and as the seats are moved for maintenance or interior reconfigurations, breaking of the shear plunger screws is to be expected. The new, improved design of the seat track fitting corrects the deficiencies in the existing design, and is necessary to correct the unsafe condition specified in this final rule. Therefore, no change to the final rule is necessary.

Conclusion

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.

Cost Impact

There are approximately 46 Model 737, 747, and 777 series airplanes of the affected design in the worldwide fleet.

For Model 737 series airplanes (2 U.S.-registered airplanes): It will take approximately 10 work hours per airplane to accomplish the replacement, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$15,100 per airplane. Based on these figures, the cost impact of the replacement required by this AD on U.S. operators is estimated to be \$31,400, or \$15,700 per airplane.

The cost impact figure discussed above is 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.

Currently, there are no affected Model 747 series airplanes on the U.S. Register. However, should an affected airplane be imported and placed on the U.S. Register in the future, it requires approximately 29 work hours to accomplish the replacement, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$43,000. Based on these figures, the cost impact of the replacement required by this AD will be \$44,740 per airplane.

Currently, there are no affected Model 777 series airplanes on the U.S. Register. However, should an affected airplane be imported and placed on the U.S. Register in the future, it requires approximately 24 work hours to accomplish the replacement, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$36,400. Based on these figures, the cost impact of the replacement required by this AD will be \$37,840 per airplane.

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.

§ 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**

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).

2001-11-11 BOEING: Amendment 39-12254. Docket 2000-NM-156-AD.

Applicability: Model 737, 747, and 777 series airplanes; certificated in any category; as specified in the Boeing service bulletins listed in Table 1. below:

Table 1. Applicability

For Model 737 series airplanes:	737-25-1371, Revision 2, dated December 9, 1999;
For Model 737 series airplanes:	737-25-1407, dated December 9, 1999;
For Model 747 series airplanes:	747-25-3196, Revision 1, dated May 13, 1999; or
For Model 777 series airplanes:	777-25-0111, Revision 1, dated May 13, 1999.

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 (b) 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 unrestrained movement of the passenger seats during high forward deceleration of the airplane, which could result in injury to the passengers or crew members during an emergency landing, accomplish the following:

Replacement

(a) Within 18 months after the effective date of this AD: Replace all the seat track fittings on all the passenger seats with new, improved fittings, in accordance with the Accomplishment Instructions specified in Boeing Service Bulletin 737-25-1371, Revision 2; or 737-25-1407, both dated December 9, 1999 (for Model 737 series airplanes); Boeing Service Bulletin 747-25-3196, Revision 1, dated May 13, 1999 (for Model 747 series airplanes); or Boeing Service Bulletin 777-25-0111, Revision 1, dated May 13, 1999 (for Model 777 series airplanes); as applicable.

Alternative Methods of Compliance

(b) 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.

Note 2: 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

(c) 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

(d) The replacement shall be done in accordance with Boeing Service Bulletin 737-25-1371, Revision 2, dated December 9, 1999; Boeing Service Bulletin 737-25-1407, dated December 9, 1999; Boeing Service Bulletin 747-25-3196, Revision 1, dated May 13, 1999; or Boeing Service Bulletin 777-25-0111, Revision 1, dated May 13, 1999; as applicable. 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.

Effective Date

(e) This amendment becomes effective on July 16, 2001.

FOR FURTHER INFORMATION CONTACT: Jan Risheim, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington; telephone (425) 227-1675; fax (425) 227-1181.

Issued in Renton, Washington, on May 25, 2001.

Vi L. Lipski, Manager, Transport Airplane Directorate, Aircraft Certification Service.