[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 75595 12/4/2000]

[Docket No. 2000-NM-107-AD; Amendment 39-12007; AD 2000-23-34]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-300, -400, and -500 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment adopts a new airworthiness directive (AD), applicable to all Boeing Model 737-300, -400, and -500 series airplanes, that requires replacement of the existing autothrottle computer with a new, improved autothrottle computer. This amendment is prompted by reports of asymmetric thrust conditions during flight caused by irregular autothrottle operation in which the thrust levers slowly move apart causing the airplane to bank excessively and go into a roll. The actions specified by this AD are intended to prevent such conditions, which could result in loss of control of the airplane.

DATES: Effective January 8, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 8, 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: Thanh Truong, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2552; 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 all Boeing Model 737-300, -400, and -500 series airplanes was published in the **Federal Register** on June 12, 2000 (65 FR 36803). That action proposed to require replacement of the existing autothrottle computer with a new, improved autothrottle computer.

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.

Support for the Proposal

Two commenters state no objection to the proposed rule and indicate that the proposed replacements are already in progress on their fleets.

Request to Increase Compliance Time

Three commenters request an increase in the compliance time above the proposed one year after the effective date of this AD. One commenter suggests a compliance time of 18 months, but states no reason for its request. A second commenter suggests a compliance time of two years, to account for

the amount of time necessary for a particular repair station to accomplish the modification. A third commenter does not make a specific suggestion for a compliance time, though it states that it will need four years to complete the proposed replacement using existing spares, considering the amount of time necessary for the repair station (the same one referenced by the second commenter) to modify existing autothrottle computers.

The FAA concurs that the compliance time for the requirements of this AD may be extended. To assist in determining an appropriate compliance time, the FAA contacted the manufacturer of the autothrottle computers to determine the number of authorized repair facilities and the manpower available. The FAA also obtained data on the number of autothrottle computers manufactured, the number of units already converted, and the number of airplanes that are affected. Based on this information, the FAA finds that an extension of the compliance time to 18 months will be sufficient to allow accomplishment of this AD on all affected airplanes. The FAA also finds that such an extension of the compliance time will not adversely affect the continued safety of the airplane fleet. Therefore, paragraph (a) of this AD has been revised to state a compliance time of 18 months after the effective date of this AD.

Request to Remove "Spares" Requirement

One commenter requests that the FAA revise the proposed AD to remove paragraph (b), the "Spares" paragraph. That paragraph states, "As of the effective date of this AD, no person shall install on any airplane, an autothrottle computer having part number 10-62017-1, -2, -3, -4, -5, -11, -21, -23, -25, or -27." The commenter's request was based on the length of time necessary for modification of the existing autothrottle computers by an authorized repair facility.

The FAA does not concur with the commenter's request to delete the "Spares" requirement. As stated previously, the FAA finds that extension of the compliance time for this AD from one year to 18 months after the effective date of this AD will allow adequate time for autothrottle computers to be modified by an authorized repair facility and for operators to comply with the requirements of this AD, without compromising safety. No change to the final rule is necessary in this regard.

Request to Reduce Compliance Time and Consider Interim Actions

One commenter states that there is an inconsistency between the urgency of the unsafe condition, as explained in the proposal, and the length of the compliance time. The commenter points to the statement in the "Differences Between Proposed Rule and Alert Service Bulletin" section of the proposed AD, which reads, "The FAA also finds that such a compliance time will not adversely affect the safety of the affected airplanes." The commenter states that it does not understand "an 'unsafe condition' that has already been identified that does not come into effect until 6th June 2001" and requests an explanation. The commenter also notes that the proposed AD does not contain any interim actions to be undertaken to ensure safety of the airplane fleet prior to accomplishment of the proposed replacement.

While the commenter makes no specific request for a change to the proposed AD, the FAA infers that the commenter is requesting that the FAA reduce the compliance time and include revisions to the flight procedures in this AD. The FAA does not concur with the commenter's request. As explained in the proposed AD, in developing an appropriate compliance time for the proposed replacement, the FAA considered not only the degree of urgency associated with addressing the subject unsafe condition, but also the number of proposed requirements and the availability of required parts. As stated previously in this AD, since the issuance of the proposed rule, the FAA has received information indicating that 18 months is an appropriate compliance time wherein all of these actions can be accomplished during scheduled airplane maintenance and an ample number of required parts will be available for modification of the U.S. fleet within the compliance period. The FAA also finds that such a compliance time will not adversely affect the safety of the affected airplanes.

With regard to the lack of interim actions in this AD, the FAA provides the following explanation. In 1994, the airplane manufacturer issued a Flight Operations Procedure to advise operators of an anomaly related to asymmetric thrust lever settings occurring during autothrottle operation. Such a procedure, if followed, adequately addresses the unsafe condition identified in this

AD. However, this procedure does not take into account human factors that may result in the flightcrew failing to recognize an abnormality that develops over an extended period of time, resulting in an excessive bank angle for the airplane. There have been eight reported incidents of asymmetric thrust that occurred with delayed intervention by the pilots. Six of these eight incidents resulted in a bank angle of more than 30 degrees. In two incidents, airplanes have rolled more than 40 degrees before the flightcrew recognized the condition. For this reason, revisions to flight procedures are not considered adequate to provide the degree of safety assurance necessary for the transport airplane fleet. Consideration of these factors has led the FAA to mandate the replacement required by this AD. No change to the final rule is necessary in this regard.

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 with the change previously described. The FAA has determined that this change will neither increase the economic burden on any operator nor increase the scope of the AD.

Cost Impact

There are approximately 1,974 Model 737-300, -400, and -500 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 799 airplanes of U.S. registry will be affected by this AD, that it will take approximately 1 work hour per airplane to accomplish the required replacement, and that the average labor rate is $60 per work hour. Required parts will cost between $1,400 and $4,200 per airplane. Based on these figures, the cost impact of the AD on U.S. operators is estimated to be between $1,460 and $4,260 per airplane.

The 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 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 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).

2000-23-34 BOEING: Amendment 39-12007. Docket 2000-NM-107-AD.

Applicability: All Model 737-300, -400, and -500 series airplanes; 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 request approval for an alternative method of compliance in accordance with paragraph (c) 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 a severe asymmetric thrust condition during flight which could result in loss of control of the airplane, accomplish the following:

Replacement

(a) Within 18 months after the effective date of this AD: Replace the existing autothrottle computer with a new, improved autothrottle computer in accordance with Boeing Alert Service Bulletin 737-22A1130, dated September 24, 1998.

Spares

(b) As of the effective date of this AD, no person shall install on any airplane, an autothrottle computer having part number 10-62017-1, -2, -3, -4, -5, -11, -21, -23, -25, or -27.

Alternative Methods of Compliance

(c) 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

(d) 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

(e) The replacement shall be done in accordance with Boeing Alert Service Bulletin 737-22A1130, including Appendix A, dated September 24, 1998. 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

(f) This amendment becomes effective on January 8, 2001.

FOR FURTHER INFORMATION CONTACT: Thanh Truong, Aerospace Engineer, Systems and Equipment Branch, ANM-130S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 227-2552; fax (425) 227-1181.

Issued in Renton, Washington, on November 16, 2000.
Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.