

flight compartment, and revising the Limitations Section of the Airplane Flight Manual to ensure the flightcrew is advised not to extend the speedbrake lever beyond the flight detent. For certain airplanes, this AD requires modifying the elevator and elevator tab assembly. This action is necessary to prevent severe vibration of the elevator and elevator tab assembly, which could result in severe damage to the horizontal stabilizer followed by possible loss of the elevator tab and consequent loss of controllability of the airplane. This action is intended to address the identified unsafe condition.

DATES: Effective March 12, 2003.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of March 12, 2003.

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: Nancy H. Marsh, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office, 1601 Lind Avenue, SW., Renton, Washington 98055-4056; telephone (425) 917-6440; fax (425) 917-6590.

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 737-600, -700, -700C, -800, and -900 series airplanes was published in the **Federal Register** on November 15, 2002 (67 FR 69157). That action proposed to require installing speedbrake limitation placards in the flight compartment, and revising the Limitations Section of the Airplane Flight Manual (AFM) to ensure the flightcrew is advised not to extend the speedbrake lever beyond the flight detent. For certain airplanes, that action also proposed to require modifying the elevator and elevator tab assembly.

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. One commenter concurs with the proposed AD. Two

commenters state that they have no comments on the proposed AD.

Request To Clarify Certain Language in Paragraph (a)(2)

One commenter asks that certain language, as specified in paragraph (a)(2) of the proposed AD, be clarified. The commenter notes that the current language, which is to be included in the AFM, states the following: "Do not extend the speedbrake lever beyond the flight detent in flight." That statement, as written, does not match the language specified in the existing AFM. The language should be changed, for clarification, to match the AFM language and should state: "In flight, do not extend the speedbrake lever beyond the FLIGHT detent."

The FAA agrees with the commenter in that the language used in paragraph (a)(2) of the AD should be clarified to match the AFM language. We have changed paragraph (a)(2) of this final rule accordingly.

Request To Change Discussion Section

The same commenter asks that the Discussion section of the proposed AD be changed to remove the reference to Boeing Model 737-900 series airplanes from the first sentence. That sentence states, "The FAA has received several reports of excessive in-flight vibrations of the elevator and elevator tab on certain Boeing Model 737-600, -700, -700C, -800, and -900 series airplanes." The commenter notes that no excessive in-flight vibrations of the elevator and elevator tab have occurred on Model 737-900 series airplanes.

The same commenter asks that certain terminology in the Discussion section of the proposed AD be changed. That section reads, in part, "[t]he elevator and elevator tab are susceptible to excessive vibration and, under certain conditions, limit-cycle flutter. These vibration events have been attributed to loose or missing components, excessive wear, or excessive freeplay of the tab." The commenter requests that it be changed to, "[t]he elevator and elevator tab are susceptible to excessive vibration and, under certain conditions, limit-cycle oscillation (LCO). These vibration events have been attributed to lack of torsional rigidity (in the case of LCO); or missing components, excessive wear, or excessive freeplay of the tab." The commenter states that LCO is the accepted and proper term to use when referring to the severe vibrations associated with lack of torsional stiffness.

We acknowledge that no excessive in-flight vibrations of the elevator and elevator tab have been reported on

Model 737-900 series airplanes in-service. The intent of the Discussion section is to provide the background and events that prompted the proposed AD, and to specify that vibrations did occur on Model 737-600, -700, -700C, and -800 series airplanes in-service.

We acknowledge that the term "lack of torsional rigidity" is a valid term and could be used to describe a design deficiency that also contributes to excessive in-flight vibration. However, the terms "LCO" and "LCF" are not commonly used terms in the airline industry; these terms are used primarily by airplane manufacturers. We have concluded that the term "high amplitude oscillations of the elevator tab" best describes the condition in a manner understood by the airline industry.

Since the Discussion section of a proposed AD is not restated in a final rule, no change to this final rule is necessary to address the issues raised by the commenters.

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 1,174 airplanes of the affected design in the worldwide fleet. We estimate that 550 airplanes of U.S. registry will be affected by this AD.

It will take approximately 1 work hour per airplane to accomplish the required placard installation, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the required installation on U.S. operators is estimated to be \$33,000, or \$60 per airplane.

It will take approximately 1 work hour per airplane to accomplish the required AFM revision, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the required revision on U.S. operators is estimated to be \$33,000, or \$60 per airplane.

It will take approximately 88 work hours per airplane to accomplish the required modification of the elevator and elevator tab assembly, at an average labor rate of \$60 per work hour. The FAA has been advised by Boeing that the manufacturer will provide parts for the elevator/tab retrofit, including