

EMERGENCY AIRWORTHINESS DIRECTIVE



Aircraft Certification Service
Washington, DC

U.S. Department
of Transportation
**Federal Aviation
Administration**

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DATE: December 20, 2002
AD #: 2002-26-51

Transmitted as follows is emergency airworthiness directive (AD) 2002-26-51, for the attention of all owners and operators of certain Empresa Brasileira de Aeronautica S.A. (EMBRAER) Model EMB-135 and -145 series airplanes.

Background

The Departamento de Aviacao Civil (DAC), which is the airworthiness authority for Brazil, recently notified the FAA that an unsafe condition may exist on certain EMBRAER Model EMB-135 and -145 series airplanes. The DAC received a report indicating that the elevator locked during takeoff run on a Model EMB-145 series airplane. The locking was caused by a restart of the locking sequence, which was initiated by a rearward movement of the gust lock lever (and aggravated by a possible ineffective plunger spring) after the elevator had been unlocked. Locking of the elevator during takeoff could result in loss of controllability of the airplane.

The DAC issued Brazilian airworthiness directive 2002-12-03, dated December 20, 2002, in order to ensure the continued airworthiness of these airplanes in Brazil.

FAA's Determination

In light of this information, the FAA finds that certain procedures must be included in the AFM for Model EMB-135 and -145 series airplanes to provide the flightcrew with appropriate procedures for preventing a locked elevator during takeoff. The FAA has determined that such procedures currently are not defined adequately in the AFM for these airplanes.

FAA's Conclusions

This airplane model is manufactured in Brazil and is type certificated for operation in the United States under the provisions of section 21.29 of the Federal Aviation Regulations (14 CFR 21.29) and the applicable bilateral airworthiness agreement. Pursuant to this bilateral airworthiness agreement, the DAC has kept the FAA informed of the situation described above. The FAA has examined the findings of the DAC, reviewed all available information, and determined that AD action is necessary for products of this type design that are certificated for operation in the United States.

Explanation of the Requirements of the Rule

Since an unsafe condition has been identified that is likely to exist or develop on other airplanes of this same type design registered in the United States, this airworthiness directive is issued to require revising the Limitations Section of the Airplane Flight Manual to advise the flightcrew of the possibility of locking of the elevator during takeoff and to provide the appropriate procedures to prevent it. This AD is consistent with the Brazilian airworthiness directive.

Interim Action

This is considered to be interim action until final action is identified, at which time the FAA may consider additional rulemaking.

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 AD effective in less than 30 days.

This rule is issued under 49 U.S.C. Section 44701 (formerly section 601 of the Federal Aviation Act of 1958) pursuant to the authority delegated to me by the Administrator, and is effective immediately upon receipt of this AD.

2002-26-51 EMPRESA BRASILEIRA DE AERONAUTICA S.A. (EMBRAER): Docket No. 2002-NM-348-AD.

Applicability: Model EMB-135 and -145 series airplanes, certificated in any category, equipped with an electromechanical gust lock system.

Compliance: Required as indicated, unless accomplished previously.

To prevent locking of the elevator during takeoff, which could result in loss of controllability of the airplane, accomplish the following:

(a) Within 24 clock hours after receipt of this AD, revise the Limitations Section of the Airplane Flight Manual (AFM) to include the following statement. This may be accomplished by inserting a copy of this AD in the AFM.

“Every single time the gust lock lever is set to the unlocked position, the elevator movement must be checked. This check must be performed no sooner than 10 seconds after positioning the gust lock lever to the fully forward unlocked position by moving the control column from the full up stop and to the full down stop and back to the full up stop.”

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, International Branch, ANM-116, Transport Airplane Directorate, FAA. Operators shall submit their requests through an appropriate FAA Principal Operations Inspector, who may add comments and then send it to the Manager, International Branch, ANM-116.

NOTE 1: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the International Branch, ANM-116.

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.

NOTE 2: The subject of this AD is addressed in Brazilian airworthiness directive 2002-12-03, dated December 20, 2002.

(d) AD 2002-26-51, issued on December 20, 2002, becomes effective upon receipt.

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Issued in Renton, Washington, on December 20, 2002.

Original signed by:

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