



AGÊNCIA NACIONAL DE AVIAÇÃO CIVIL – BRAZIL

BRAZILIAN AIRWORTHINESS DIRECTIVE

AD No.: 2011-05-03

Effective Date: 20 May 2011

The following Brazilian Airworthiness Directive (AD), issued by the Agência Nacional de Aviação Civil (ANAC) in accordance with provisions of Chapter IV, Title III of Código Brasileiro de Aeronáutica - Law No. 7,565 dated 19 December 1986 - and Regulamento Brasileiro da Aviação Civil (RBAC) 39, applies to all aircraft registered in the Registro Aeronáutico Brasileiro. No person may operate an aircraft to which this AD applies, unless it has previously complied with the requirements established herein.

AD No. 2011-05-03 - EMBRAER / 39-1338.

APPLICABILITY:

This Airworthiness Directive (AD) applies to Embraer S.A. model EMB-500 airplanes of serial numbers 50000005 thru 50000217, 50000219 thru 50000221 and, 50000226, that are equipped with Angle of Attack (AOA) sensors part number (P/N) C-100117-2 and cover plates P/N 500-01702-401 and/or P/N 500-01702-402.

CANCELLATION / REVISION:

This AD cancels and supersedes the AD No. 2010-11-01 – Amd 39-1325, dated December 20, 2010, and is being issued to extend the applicability and include additional actions for airplanes that previously have complied with AD No. 2010-11-01.

REASON:

This It has been found that moisture may accumulate and freeze, under certain conditions, in the gap between the AOA vane base assembly and the stationary ring of the sensor's body. If freezing occurs both AOA sensors may get stuck and the Stall Warning Protection System (SWPS) will be no longer effective without alerting. This may result in inadvertent aerodynamic stall and loss of controllability of the airplane.

Since this condition may occur in other airplanes of the same type and affects flight safety, a corrective action is required. Thus, sufficient reason exists to request compliance with this AD in the indicated time limit.

REQUIRED ACTION:

Replacement of both AOA sensors, rework and reidentification of the respective cover plates and sealant application on the interface between the AOA sensors and cover plates, if necessary.

COMPLIANCE:

The actions required by this AD, must be executed as indicated below, unless already accomplished before.

Restatement of requirements of AD 2010-11-01, with revised instructions.

(a) Within 12 months or 300 flight hours after December 20,2010 (the effective date of AD 2010-11-01), whichever occurs first, replace the left hand (LH) and the right hand (RH) AOA sensors P/N C-100117-2 by another ones bearing P/N C-100117-3 and; rework the LH cover plate P/N 500-01702-401 and the RH cover plate P/N 500-01702-402 and reidentify them to P/N 500-01702-403 and P/N 500-01702-404 respectively, in compliance with instructions described

in Part I and II of Embraer Service Bulletin (SB) 500-27-0006 revision 02, dated January 14, 2011.

New requirements of this AD

(b) Within 07 months or 200 flight hours after May 20, 2011 the effective date of this AD, whichever occur first, do a general visual inspection (GVI) to determine if the sealant is correctly applied on the interface between AOA cover plates and AOA sensors, in accordance with Figure 3 of Embraer SB 500-27-0006 revision 2, dated January 14, 2011, Part II.

(1) If the sealant is correctly applied, in accordance with Figure 3, no corrective action is required by this AD.

(2) If the sealant is not correctly applied or is missing, before further flight, apply the sealant in accordance with part II in Accomplishment with Embraer Service Bulletin 500-27-0006 revision 02, dated January 14, 2011.

Note: For the purpose of this AD a General Visual Inspection (GVI) is: “A visual examination of an interior or exterior area, installation or assembly to detect obvious damage, failure or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight or drop-light and may require removal or opening of access panels or doors. Stands, ladders or platforms may be required to gain proximity to the area being checked”.

Alternative means of Compliance (AMOC)

(c) A different method or a different compliance time, with requirements of this AD, may be used if approved by the General Manager of the Aeronautical Product Certification Branch (Gerência-Geral de Certificação de Produtos Aeronáuticos - GGCP).

CONTACT:

For additional technical information, contact:

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NOTE: Original in Portuguese language signed and available in the files of the Aeronautical Products Certification Branch (GGCP) of the National Civil Aviation Agency (ANAC).