



SERVIÇO PÚBLICO FEDERAL

DEPARTAMENTO DE AVIAÇÃO CIVIL

# BRAZILIAN AIRWORTHINESS DIRECTIVE

EFFECTIVE DATE:

24 Apr. 2006

AD No.:

2005-02-01R1

The following Airworthiness Directive (AD), issued by the Departamento de Aviação Civil (DAC) 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 de Homologação Aeronáutica (RBHA) 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. 2005-02-01R1 - EMBRAER - Amendment 39-1125.**

### **APPLICABILITY:**

This Airworthiness Directive is applicable to all Embraer ERJ-170( ) aircraft models in operation, equipped with Air Data Smart Probes P/N 2015G2H2H-4, 2015G2H2H-4A, 2015G2H2H-5 or 2015G2H2H-5A.

### **CANCELLATION / REVISION:**

This AD cancels and supersedes the AD No. 2005-02-01, original issue – Amdt 39-1069, dated 03 Mar. 2005, and is being revised to introduce new procedure to the installation of new P/Ns of the "Air Data Smart Probes", and constitutes terminal action to this AD.

### **REASON:**

It has been found the occurrence of cases of contamination of the Air Data Smart Probes during the manufacturing process. As a consequence, a variation of the calibration values may occur, resulting on the transmission of erroneous information to the aircraft air data system, which can affect the correct operation of several aircraft systems including the flight control system.

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 without prior notice.

### **REQUIRED ACTION:**

Test and possible replacement of the Air Data Smart Probes.

### **COMPLIANCE:**

Required as indicated below, unless already accomplished.

- (a) Within the next 600 flight hours or 90 calendar days after 03 Mar. 2005, the effective date of the original issue of this AD, whichever occurs first, perform a test on the four aircraft Air Data Smart Probes to check their deviation over the nominal calibration values.
  - (1) If the deviations found are below those limits shown at the Embraer Service Bulletin No. 170-34-0001, original issue, or further revisions approved by the CTA, return aircraft to flight.
  - (2) If the deviations found are above the limits shown at the Embraer Service Bulletin No. 170-34-0001, original issue, or further revisions approved by the CTA, replace the affected Air Data Smart Probe before next flight.
  - (3) In either of the two cases above, repeat the test at intervals not to exceed 600 flight hours until all aircraft Air Data Smart Probes are replaced by others with a P/N not affected by this AD.

- (b) After 03 Mar. 2005, the effective date of the original issue of this AD, if a replacement of one or more Air Data Smart Probes is required during routine maintenance procedures, perform the test required at item (a) above before the next flight if two or more Probes are replaced simultaneously, or within the next 50 flight hours if only one Smart Probe is replaced.
- (c) Within the next 30 calendar days after 03 Mar. 2005, the effective date of the original issue of this AD, modify the Limitations Section of the AFM to include the following operational limitations:
- **Reduce the calculated MTOW in 110 kgf whenever it is defined by obstacle clearance on the final segment.**
  - **Increase the reference speed (VREF) in 1 kt when landing with Flap 5.**
- NOTE:** The insertion of this AD in the AFM can be considered a satisfactory means of compliance for this requirement.
- (d) Within the next 90 calendar days after the effective date of this revision 01 of the AD, replace all the existing Air Data Smart Probes with new improved ones bearing new P/Ns, according to the detailed instructions described in the Embraer Service Bulletin No. 170-034-0003. The accomplishment of this item constitutes terminal action to this AD.

The detailed instructions and procedures to accomplish this AD are described in the Embraer Service Bulletin No. 170-34-0001 and No. 170-34-0003, original issue, or further revisions approved by the CTA.

Record compliance with this AD in the applicable maintenance log book.

**CONTACT:**

For additional technical information, contact:

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**APPROVAL:**

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**NOTE:** Original in Portuguese language signed and available in the files of the Registro Geral de Aeronavegabilidade (RGA/TE-1/STE) of the Departamento de Aviação Civil.