



SERVIÇO PÚBLICO FEDERAL

DEPARTAMENTO DE AVIAÇÃO CIVIL

BRAZILIAN AIRWORTHINESS DIRECTIVE

EFFECTIVE DATE

14 Oct. 2004

AD No.:

2003-03-01R1

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. 2003-03-01R1 - EMBRAER - Amendment 39-1040.

APPLICABILITY:

This Airworthiness Directive is applicable to Embraer EMB-145() and EMB-135() aircraft models, of serial numbers 145003 thru 145189, 145191 thru 145373, 145375 thru 145589, 145592 thru 145596, 145598 thru 145606, 145608 thru 145642, 145644, 145647, 145651 thru 145653, 145656, 145663, 145665, 145667 thru 145669, 145673, 145676 and 145679.

CANCELLATION / REVISION:

This AD cancels and supersedes the AD No. 2003-03-01, original issue – Amdt 39-985, dated 03 Apr. 2003, and is being issued to include new P/N for the horizontal stabilizer control unit (HSCU).

REASON:

It has been found the occurrence of cases of temporary loss of the pitch trim command during the climb after take-off.

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:

Modification of the pitch trim system.

COMPLIANCE:

Required as indicated below, unless already accomplished.

Within 18 calendar months or 5000 flight hours after 03 Apr. 2003, the effective date of the original issue of this AD, whichever occurs first, modify the pitch trim system as required below:

- (a) Replace the horizontal stabilizer control unit (HSCU) P/N 362100-1007, 362100-1007 Mod. 0, 362100-1007 Mod. 1, 362100-1007 Mod. 2, 362100-1009 Mod. 0, 362100-1009 Mod. 1, 362100-5009 Mod. 0 or 362100-5009 Mod. 1 with a unit bearing P/N 362100-5009 Mod.2, 362100-1011, or 362100-1013, according to Embraer Service Bulletins Nos. 145-27-0084 Rev. 1, 145LEG-27-0002, original issue, 145-27-0106, original issue, or 145LEG-27-0016, original issue, or further revisions approved by the CTA.
- (b) Replace the horizontal stabilizer actuator (HSA) P/N 362200-1009, 362200-1011 or 362200-1013 with a unit bearing P/N 362200-1015, 362200-5015 or 362200-9015, according to Embraer Service Bulletin No. 145-27-0091, original issue, or further revisions approved by the CTA.
- (c) Replace the aural warning unit (AWU) P/N 80-0694-2-2, 80-0694-2-3 or 80-0694-2-4 with a unit bearing P/N 80-0694-2-5, according to Embraer Service Bulletin No. 145-31-0028, original issue, or further revisions approved by the CTA.
- (d) Modify the EICAS/EFIS system introducing the 18.5 software version, replacing units IC-600 bearing P/N 7107000-82407, 7107000-82407 MODS-B, 7107000-82427,

7107000-83407, 7107000-83407 MODS-B and 7107000-83427 with units bearing P/N 7017000-82428 or 7017000-83428, as applicable according to Embraer Service Bulletins Nos. 145-31-0033 Rev. 1 or 145LEG-31-0001, original issue, or further revisions approved by the CTA, or with units having further software versions, i.e., greater than 18.5, presented on Embraer Service Bulletins approved by the CTA.

- (e) Replace the control yoke pitch trim switch P/N 145-30477-401 or 309-4343 with units bearing P/N 145-63000-401, according to Embraer Service Bulletins Nos. 145-27-0096, original issue, or 145LEG-27-0004, original issue, or further revisions approved by the CTA.
- (f) Replace the pitch trim back-up control switches P/N 993-9015 with units bearing P/N 993-9017, according to Embraer Service Bulletin No. 145-27-0073, original issue, or further revisions approved by the CTA.
- (g) Perform the connections between the HSCU and the data acquisition unit (DAU) and replace the pitch trim system circuit breakers, according to Parts II, III, IV and V of Embraer Service Bulletin No. 145-27-0084 Rev. 1, or Part II of Embraer Service Bulletin No. 145LEG-27-0002, original issue, or further revisions approved by the CTA, as applicable according to aircraft serial number.

NOTE: One or more of the modifications required by this AD may have been accomplished during manufacturing; crosscheck effectivity with the corresponding Service Bulletin.

The detailed instructions and procedures to accomplish this AD are described in the Embraer Service Bulletins Nos. 145-27-0073, original issue, 145-27-0083, original issue, 145-27-0084 Rev. 1, 145-27-0091, original issue, 145-27-0096, original issue, 145-27-0106, original issue, 145-31-0028, original issue, 145-31-0033 Rev. 1, 145LEG-27-0002, original issue, 145LEG-27-0004, original issue, 145LEG-27-0016, original issue, and 145LEG-31-0001, 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:

Centro Técnico Aeroespacial - CTA
Instituto de Fomento e Coordenação Industrial - IFI
Divisão de Homologação Aeronáutica - FDH
Praça Mal. Eduardo Gomes, 50 - Vila das Acácias
Caixa Postal 6001
Fax: 55 (12) 3941-4766
12231-970 - São José dos Campos - SP, BRAZIL.
e-mail: pds@ifi.cta.br

For acquisition, contact:

Departamento de Aviação Civil - DAC
Seção de Publicações do DAC (4GAB-4)
R. Santa Luzia, 651, 2º Mezanino, Centro
Fax: 55 (21) 3814-6929
20030-040 - Rio de Janeiro - RJ, BRAZIL.
e-mail: publicacoes@dac.gov.br

APPROVAL:

CLÁUDIO PASSOS SIMÃO - Ten Cel Eng
Chief of the Civil Aviation Certification Division
IFI/CTA

VENÂNCIO ALVARENGA GOMES - Cel Eng
Director of the Industrial Coordination and Fostering Institute
CTA

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.