



SERVIÇO PÚBLICO FEDERAL

DEPARTAMENTO DE AVIAÇÃO CIVIL

# BRAZILIAN AIRWORTHINESS DIRECTIVE

EFFECTIVE DATE

29 Nov. 2004

AD No.:

2004-11-06

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. 2004-11-06 - EMBRAER - Amendment 39-1055.**

### **APPLICABILITY:**

This Airworthiness Directive is applicable to all Embraer ERJ-170( ) aircraft models in operation.

### **CANCELLATION / REVISION:**

Not applicable.

### **REASON:**

It has been found the occurrence of one case of cracking at the outlet tube of the aircraft engine driven hydraulic pump. Considering that this crack was caused by a fail at the tube manufacturing process, besides the massive hydraulic fluid leakage at engine compartment, there is also the possibility of a simultaneous failure of hydraulic systems 1 and 2, which reduces significantly the capability to control the aircraft.

Since this condition may occur in other aircraft 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:**

Inspection and replacement of hydraulic tubes.

### **COMPLIANCE:**

Required as indicated below, unless already accomplished.

- (a) Within the next 100 flight hours after the effective date of this AD, inspect the hydraulic pressure tubes at outlet of the engine driven hydraulic pumps, to verify the P/N and serial number of the tubes.
  - (1) For tubes of P/N 15E0804003 and serial numbers 52773 thru 52782, 61788, 62255, 62257, 62259 thru 62265, 62267, 62270 thru 62273, 63951 thru 63954, and 63957 thru 63966; or tubes of P/N 15E0804005 and serial numbers 57652 thru 57665, 57667 thru 57669, 58332 thru 58337, 58449 thru 58451, 59884 thru 59887, 62253, 62254, 62256, 62258, 62266, 62268 and 62269:
    - (i) If both engine tubes are among the affected ones, replace, before next flight, at least one of the tubes with one bearing a non-affected P/N and serial number;
    - (ii) If only one of the tubes is among the affected ones, replace the affected tube with one bearing a non-affected P/N and serial number within the next 600 flight hours.

- (2) If none of the tubes installed on the engines is among the affected ones, no additional action is required.
- (b) After the effective date of this AD, no hydraulic tubes kept as spare and included in the affected list, according to item (a)(1) above, can be installed at Embraer ERJ-170( ) aircraft engines.

The detailed instructions and procedures to accomplish this AD are described in the Embraer Service Bulletin No. 170-29-0001, 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 Certificação de Aviação Civil - CAVC  
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.