AIRWORTHINESS DIRECTIVE

For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

Embraer EMB-120 (Brasilia) Series Aeroplanes

AD/EMB-120/47 Fuel Booster Pump Electrical Wiring 8/2008 DM

Applicability: EMB-120 aircraft models, serial numbers 120001 to 120359 inclusive.

Requirement:

1. Insert the following statement in Limitations Section of the Aircraft Flight Manual (AFM), this may be accomplished by inserting a copy of this Directive in the AFM.

   "The minimum fuel quantity inside each tank must be 300kg or 370 litres"

Note 1: After the effective date of this Directive, any fuel tank defueling or other maintenance action which requires use of the fuel booster pumps is limited to a minimum fuel quantity not to be less than 300kg or 370 litres inside the respective tank.

2. Inspect the fuel booster pump electrical harness of the left hand and right hand (LH/RH) tanks in accordance with Embraer Service Bulletin 120-28-0016 dated 9 January 2008 or later revisions approved by the Brazilian Agência Nacional de Aviação Civil (ANAC).

3. If, during the Requirement 2 inspection any damage is found, replace the affected fuel booster pump by another one with the same part number.

4. Install clamps on the tank structure and attach each fuel booster pump electrical harness at the LH/RH fuel tanks to avoid eventual chafing against the pump body, adjacent fuel lines, structure or any other part, in accordance with SB120-28-0016 or further revisions approved by the ANAC.

Note 2: Following compliance with Requirements 2 and 4, the AFM limitations imposed by Requirement 1 may be removed from the AFM and the Note 1 maintenance restriction is no longer applicable.

Note 3: ANAC AD 2008-05-01 refers.

Compliance: For Requirement 1 - Within the next 30 days after the effective date of this Directive.

For Requirement 2 and 4 - Within the next 4000 flight hours or 24 calendar months or at next time the fuel tank is opened (scheduled or unscheduled), after the effective date of this Directive, whichever occurs first.

Embraer EMB-120 (Brasilia) Series Aeroplanes

AD/EMB-120/47 (continued)

For Requirement 3 - Before further flight after the Requirement 2 inspection.

This Airworthiness Directive becomes effective on 18 June 2008.

Background: The ANAC has advised that one occurrence of a fuel booster pump circuit breaker opening during an engine maintenance servicing has been reported. An inspection inside the fuel tank revealed the fuel booster pumps electrical harness chafing against its body, causing the loss of the electrical wiring protection and resulting in a short circuit. Further in-tank inspections have showed other fuel booster pump electrical harnesses chafing either with the pump body and/or with adjacent fuel lines, causing damage to the harness protective layers and resulting on possible ignition source inside the fuel tank.

This Directive requires temporary revision of the AFM, inspection of fuel booster pumps electrical harness installed on LH/RH tanks together with installation of clamps on tank structure and tie-raps to attach these electrical harnesses is.

James Coyne
Delegate of the Civil Aviation Safety Authority

12 June 2008