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-135 and EMB-145 Series Aeroplanes

AD/EMB-145/5 Fuel Pump Electrical Connectors 8/2008 DM

Applicability: Embraer EMB-145, EMB-145EP, EMB-145ER, EMB-145EU, EMB-145LR, EMB-145LU, EMB-145MK, EMB-145MP, EMB-145MR and EMB-145XR model aircraft.

Requirement:

1. Perform a visual inspection of the electrical pins and elastomeric inserts of the electric fuel pumps (right and left hand wings) for general conditions and replace the affected pumps, as necessary, in accordance with Embraer Service Bulletin 145-28-0013 original issue, or further revisions approved by the Brazilian Agência Nacional de Aviação Civil (ANAC).

2. Revise the aircraft approved maintenance plan to include the tasks 28-21-01-220-001-A00 and 28-27-01-220-001-A00 presented in the Appendix 2, Section A2.5.2: Fuel System Limitation Items, as shown in the Maintenance Review Board Report (MRBR), document No. MRB-145/1150 Revision 10, dated 4 Aug. 2006, or further MRBR revisions approved by ANAC, with the interval stated in that document.

Compliance with Requirement 2 terminates the Requirement 1 repetitive inspections.

Note: ANAC AD 2000-08-01R3 refers.

Compliance: For Requirement 1 -

a. For aircraft with less than 1,200 hours total time in service (TIS) on 3 July 2001 (the effective date of the Revision 1 to ANAC AD 2000-08-01) - Before the aircraft reaches 1,600 hours total TIS and thereafter at every 1,200 hours TIS.

b. For aircraft which have logged from 1,200 through 4,000 hours total TIS on 3 July 2001, within the next 400 flight TIS, and thereafter at every 1,200 hours TIS.

c. For aircraft with more than 4,000 hours total TIS on 3 July 2001, before the aircraft reaches 4,400 hours total TIS, or within the next 50 hours TIS, whichever occurs later, and thereafter at every 1,200 hours TIS.

Embraer EMB-135 and EMB-145 Series Aeroplanes

AD/EMB-145/5 (continued)

d. For aircraft that have already replaced all fuel pumps part number (P/N) 2C7-1 with fuel pumps P/N 2C7-4, at every 10,000 hours TIS until Requirement 2 is accomplished.

For Requirement 2 - This is an optional terminating action.

This Airworthiness Directive becomes effective on 23 June 2008.

Background: The ANAC has received reports of damage of pins and elastomeric inserts in the hermetically sealed connectors of the electric fuel pumps on EMB-145( ) aircraft models. The damage of the pins is shown by partially blackened portions, or charring of the elastomeric insert, adjacent to and surrounding the pin. This damage can lead to a failure in the electrical connectors, possibly due to heat generated by degraded spring-tension of the mating connector's female, which may cause arcing between poles.

This Directive requires the repetitive inspections and, if necessary, replacement of affected fuel pumps. The Directive also provides an optional terminating action to the repetitive inspections.

James Coyne
Delegate of the Civil Aviation Safety Authority

16 June 2008