AIRWORTHINESS DIRECTIVE

On the effective date specified below, and for the reasons set out in the background section, the CASA delegate whose signature appears below revokes Airworthiness Directive (AD) AD/ERJ-170/18 and issues the following 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 ERJ-170 Series Aeroplanes

AD/ERJ-170/18 Electrical Wiring and ARINC 429 Data Bus 1/2009 Amdt 1

Applicability: ERJ 170-100 STD, ERJ 170-100 LR, ERJ 170-100 SU, ERJ 170-100 SE, ERJ 170-200 STD, ERJ 170-200 LR and ERJ 170-200 SU, with serial numbers (S/N) identified in Embraer Service Bulletins (SB) 170-24-0019 original issue, dated 6 December 2006, 170-24-0020 original issue, dated 30 November 2006, and 170-31-0020 original issue, dated 20 July 2007.

Requirement:

1. Modify the electrical wiring on the overhead panel in the cockpit in accordance with SB 170-24-0019 original issue.

2. Change the Air Data Smart Probe 3 channel B power supply bus from ESS2 to ESS3, in accordance with SB 170-24-0020 original issue.

3. Duplicate the ARINC 429 airspeed signal for an extension longer than the rotor burst impact area; change the primary power source for MAU 2 from DC BUS 2 to DC ESS BUS 2; and, change the wiring of Slat/Flap Actuators Control Electronics (SF-ACE) 1 and 2 to Primary Actuator Control Electronics (P-ACE) 1, 2 and 3, in accordance with SB 170-31-0020 original issue.

Later revision of the above SBs, approved by the Brazilian Agência Nacional de Aviação Civil (ANAC), are acceptable for compliance with the relevant requirements of this Directive.

Note: ANAC AD 2008-09-01 refers.

Compliance: For Requirements 1, 2 and 3 - Within the next 6000 hours time in service after the effective date of the original issue of this Directive.

This Amendment becomes effective on 15 January 2009.

Background: The ANAC has advised that a re-assessment of rotor burst analysis has shown the possibility of loss of electrical power supply to the following aircraft systems could result in loss of the aircraft pitch and yaw control:

Air data, ailerons, multifunctional spoilers and rudder.

Embraer ERJ-170 Series Aeroplanes

AD/ERJ-170/18 Amdt 1 (continued)

Since the loss of aircraft pitch and yaw control affects flight safety, the original issue of this Directive mandated corrective actions.

This Amendment results from advice from an Australian operator that the dates associated with the service bulletins referenced in the original issue of this Directive were incorrect. The dates used were based on those in the original ANAC Directive and are corrected by this Amendment, no other changes are made.

The original issue of this Directive became effective on 20 November 2008.

James Coyne
Delegate of the Civil Aviation Safety Authority

28 November 2008