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-170/4 Amdt 3 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-170/4 Amdt 4 — Flight Guidance Control Unit — 8/2008 DM

Applicability: ERJ 170 model aeroplanes equipped with Primus EPIC software load version 17.3, 17.4, 17.5, 17.6 or 17.7.

Requirement:

1. Carry out a functional test to check the engagement of the Flight Guidance Control System (FGCS) channels in accordance with Embraer Service Bulletin (SB) 170-22-0003, original issue, dated 9 November 2006 or further revisions approved by the Brazilian Agência Nacional de Avição Civil (ANAC).

Note 1: For the purpose of this Directive, a functional check is defined as: "A quantitative check to determine if one or more functions of an item perform within specified limits."

Functional tests accomplished in accordance with earlier issues of this Directive are acceptable for compliance with Requirement 1 of this Amendment.

2. Install either Primus EPIC software load version 19.3 in accordance with Embraer SB 170-31-0019 original issue, dated 3 May 2007, or further revisions approved by the ANAC; or a higher software load version in accordance with an Embraer SB approved by the ANAC.

Note 2: For example version 19.4 may be installed in accordance with SB 170-31-0026 dated 5 October 2007 or version 21.2 may be installed in accordance with SB 170-31-0028 Revision 01 dated 14 January 2008, other versions may be installed in accordance with an applicable approved SB.

Note 3: The installation of the Primus EPIC software load version 19.3 or higher is considered a terminating action for the Requirement 1 repetitive functional check.

Note 4: ANAC AD 2006-11-02R3 refers.

Compliance: For Requirement 1 - Within the next 300 hours time in service (TIS), after the first issue of an Australian Certificate of Airworthiness, and thereafter, at intervals that do not exceed 600 hours TIS until Requirement 2 is accomplished.

For Requirement 2 - No later than 30 June 2009.

Embraer ERJ-170 Series Aeroplanes

AD/ERJ-170/4 Amdt 4 (continued)

This Amendment becomes effective on 18 June 2008.

Background: The ANAC has received reports that some "caution" messages issued by the FGCS are not displayed on aircraft equipped with EPIC software load 17.3, 17.4, 17.5, 17.6 or 17.7. Therefore, following a possible failure on one FGCS channel during a given flight, such a failure condition will remain undetected or latent in subsequent flights. If another failure occurs on the second FGCS channel, the result may be a command hard-over by the autopilot.

Since this condition may affect the safety of the aeroplane, the original issue of this Directive required the repetitive functional testing of the FGCS.

Amendment 1 continued the repetitive inspection requirement until software load version 19.3 or higher was installed.

Amendment 2, whilst continuing the initial repetitive inspection requirement and the additional terminating requirement, introduced by Amendment 1, changed the applicability of the Directive following similar action by the Brazilian ANAC.

Amendment 3, whilst continuing the initial repetitive inspection requirement and the additional terminating requirement introduced by Amendment 1, clarified how higher load versions of the Primus EPIC software may be installed.

This Amendment continues the repetitive inspection requirement but extends the terminating action date by 12 months.

The original issue of this Directive became effective on 4 April 2007.

Amendment 1 became effective on 19 October 2007.

Amendment 2 became effective on 2 November 2007.

Amendment 3 became effective on 5 June 2008.

James Coyne
Delegate of the Civil Aviation Safety Authority

12 June 2008