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-190/3 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-190 Series Aeroplanes

AD/ERJ-190/3 Amdt 1 — Flight Guidance Control System — 8/2008 DM

Applicability: All ERJ-190 model aeroplanes equipped with Primus EPIC software load versions 4.3, 4.4, 4.5, 4.6 or 4.7.

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) 190-22-0002, original issue, dated 9 November 2006 or later revisions approved by the Brazilian Agência Nacional de Aviação 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."

2. Install primus EPIC software load 19.3 in accordance with Embraer SB 190-31-0009, original issue, dated 4 May 2007 or later 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 190-31-0014 dated 5 September 2007 or version 21.2 may be installed in accordance with SB 190-31-0015 dated 21 December 2007, 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 2: ANAC AD 2006-11-03R3 refers.

Compliance: For Requirement 1 - Within the next 300 hours time in service (TIS) after the effective date of the original issue of this Directive 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.

This Amendment becomes effective on 18 June 2008.

Embraer ERJ-190 Series Aeroplanes

AD/ERJ-190/3 Amdt 1 (continued)

Background: The ANAC has received reports that some "caution" messages issued by the FGCS are not displayed on aircraft equipped with EPIC software load 4.3, 4.4, 4.5, 4.6 or 4.7. 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 until the software load version 19.3 or higher is installed.

This Amendment continues the repetitive testing of the FGCS and extends the compliance time for Requirement 2 by one year. The Amendment also clarifies how higher versions of the software load may be installed.

The original issue of this Directive became effective on 27 March 2008.

James Coyne
Delegate of the Civil Aviation Safety Authority

12 June 2008