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 ERJ-190 Series Aeroplanes

AD/ERJ-190/20 Outboard Slat Skew Sensor 5/2009

Applicability: Model ERJ 190-100 ECJ, ERJ 190-100 IGW, ERJ 190-100 LR, ERJ 190-100 STD, ERJ 190-200 IGW, ERJ 190-200 LR and ERJ 190-200 STD aeroplanes equipped with the outboard slat skew sensor part number (P/N) 1702286A or 1702288A.

Requirement:

1. Perform an operational check (OPC) of the outboard slat skew sensor P/N 1702286A or P/N 1702288A in accordance with Aircraft Maintenance Manual (AMM) Task 27-83-01-710-801-A "Outboard Slat Skew Sensor - Operational Test".

2. If during the Requirement 1 OPC, an outboard slat skew sensor failure is found, replace it with a serviceable one.

Note 1: For the purpose of this Directive, an operational check (OPC) is: "A task to determine if an item is fulfilling its intended purpose. Since it is a failure finding task, it does not require quantitative tolerances."

Note 2: For the purpose of this Directive, a serviceable sensor is one that has passed the Requirement 1 OPC.

Note 3: ANAC AD 2009-02-03 refers.

Compliance: For Requirement 1 - Initially, if not previously accomplished, within the next 1,320 hours time in service (TIS) after the effective date of this Directive and thereafter at intervals that do not exceed 1,320 hours TIS.

For Requirement 2 - Before further flight after the Requirement 1 OPC is accomplished.

This Airworthiness Directive becomes effective on 7 May 2009.

Background: The Brazilian Agência Nacional de Aviação Civil (ANAC) has advised that occurrences of outboard slat skew sensor failure in open or closed position have been found. The combination of an outboard slat skew sensor failed closed, an outboard slat actuator structural failure (rupture) and its adjacent actuator torque limiter failing high (allows higher loads to the panel structure) occurring in the same slat surface, under normal flight loads, may lead slat surface to detach from wing with the possibility of hitting and damaging the horizontal stabilizer and elevator, which may affect the aeroplane's controllability.

Embraer ERJ-190 Series Aeroplanes

AD/ERJ-190/20 (continued)

Since this condition affects flight safety, a corrective action is required. Thus, sufficient reason exists to mandate the operational check.

James Coyne
Delegate of the Civil Aviation Safety Authority

26 March 2009