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**AIRWORTHINESS DIRECTIVE**

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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.

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**Boeing 737 Series Aeroplanes****AD/B737/251****Smiths Industries Aerospace Flight  
Management Computers****12/2005**

**Applicability:** Model 737-300, -400, -500, -600, -700, -700C, -800 and -900 series aeroplanes, equipped with two Smiths Industries Aerospace Flight Management Computers (FMC) having part number 171497-05-01 or 176200-01-01; installed with operational program software (OPS) version U10.3, U10.4, U10.4A or U10.5.

- Requirement:**
1. Carry out the following in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin (ASB) 737-34A1801, dated 15 July 2004 (for Model 737- 600, -700, -700C, -800 and -900 series aeroplanes) or Boeing ASB 737-34A1821, dated 15 July 2004 (for Model 737- 300, -400 and -500 series aeroplanes); as applicable.
    - a. Install the updated version of the OPS, the compatible model/engine database (MEDB) software if applicable, the current version of the navigational database (NDB) software, and the software options database (OPC) in the left and right FMCs.
    - b. Do configuration checks of the left and right FMCs to ensure that the updated version of the OPS, compatible version of the MEDB software if applicable, and OPC software is correctly installed.
  2. If the incorrect software version of the OPS, MEDB software if applicable, or OPC software is found installed on any FMC during any configuration check required by Requirement 1, reinstall the applicable software in accordance with the Accomplishment Instructions ASB 737-34A1801 or ASB 737-34A1821, as applicable.

Optional installation of software in accordance with the Accomplishment Instructions of Boeing Service Bulletin (SB) 737-34-1768, dated 11 August 2005 (for Model 737-600, -700, -700C, -800 and -900 series aeroplanes); or Boeing SB 737-34-1879, dated 11 August 2005 (for Model 737-300, -400 and -500 series aeroplanes), as applicable, is acceptable for compliance with the corresponding requirements of Requirements 1 and 2 providing the following sub-paragraphs are followed:

## Boeing 737 Series Aeroplanes

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- a. Install version U10.6 of the OPS software, the applicable OPC software, the new compatible MEDB software if applicable, and the NDB software in the left and right FMCs; install the common display system (CDS) OPC software in the left and right display electronic units if applicable; and do configuration checks to ensure that certain software is properly installed.
- b. If the incorrect software version of the OPS, OPC software, CDS OPC software if applicable, or MEDB software if applicable, is found installed during any configuration check required by the above sub-paragraph, before further flight, reinstall the software, in accordance with the applicable service bulletin.

Later revisions of the above ASBs or SBs, approved by the United States Federal Aviation Administration (FAA) as an Alternate Method of Compliance (AMOC) to FAA AD 2005-19-19, are considered acceptable for compliance with the equivalent Requirements of this Directive.

*Note 3: FAA AD 2005-19-19 Amdt 39-14284 refers.*

Compliance: For Requirement 1 - Within 180 days after the effective date of this Directive.

For Requirement 2 - Before further flight, after the Requirement 1.b. configuration check.

This Airworthiness Directive becomes effective on 24 November 2005.

Background: The United States Federal Aviation Administration (FAA) has received advice from an operator reporting FMC map shifts on several Model 737-400 series aeroplanes with dual FMCs, using OPS version U10.4A. This condition if not corrected could prevent adequate alerting of a potential navigation error and could result in a near miss with other aeroplanes or terrain, or collision if other warning systems also fail.

This Directive requires the installation of an updated version of the operational program software (OPS) and certain other software in the flight management computers (FMCs) together with the completion of configuration checks to ensure that certain software is properly installed.



Jayaprakashan Ambali  
Delegate of the Civil Aviation Safety Authority

12 October 2005