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 39.1 (1) of CAR 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.

CFM International Turbine Engines - CFM56 Series

AD/CFM56/22 EGT Harnesses and EGT Couplings 3/2003

Applicability: CFM56-5 and -5B series turbofan engines that have an exhaust gas temperature (EGT) upper harness part number (P/N) CA170-00, with a serial number (S/N) of YC021674 or lower, or an EGT lower harness P/N CA171-00, with a S/N of YC026641 or lower, or an EGT coupling P/N CA172-02 with a S/N of YC166736 or lower.

Note 1: These engines are installed on, but not limited to, Airbus Industrie A318, A319, A320 and A321 aeroplanes.

Note 2: Harnesses or couplings having a serial number that is followed by the letter "W" are not affected by this Directive.

Requirement:

1. If EGT harnesses and EGT couplings have accumulated less than 3,000 engine flight hours since installation, carry out either of the following actions:

   a. Replace affected EGT harnesses and EGT couplings, not being trend monitored, with serviceable parts in accordance with CFM International Service Bulletins CFM56-5 S/B 77-0020 or CFM56-5B S/B 77-0008, both dated 4 March 2002, as applicable, or

   b. Review the smooth data EGT trend via the System for Analysis of Gas Turbine Engines (SAGE), or equivalent, since the affected components were first installed on the current engine. This trend monitoring must continue for the affected EGT harnesses and couplings to ensure that the system does not show a minimum of 30°C downward (i.e. cooler) indication, or more, without a corresponding change in other associated engine parameters such as N1 (LPT rotor speed), N2 (HPT rotor speed), and fuel flow.

2. If the Requirement 1b. SAGE monitoring shows a minimum of 30°C downward indication, or more, without a corresponding change in other associated engine parameters such as N1, N2 and fuel flow, provided that there is sufficient actual EGT margin to do so, replace the EGT harnesses and couplings.

Note 3: FAA AD 2003-02-04 Amdt 39-13020 and DGAC AD 2003-001(B) refer.

CFM International Turbine Engines - CFM56 Series

AD/CFM56/22 (Continued)

Compliance: For Requirement 1a. - Within 500 hours time in service (TIS) after the effective date of this Directive.

For Requirement 1b. - As of the effective date of this Directive until 3,000 engine flight hours have been accumulated since the first installation on the current engine or until the harness and coupling have either been replaced with a serviceable part or a part that has a letter "W" following the S/N.

For Requirement 2 - Within 100 hours TIS after the harness and coupling have been determined to be defective.

This Airworthiness Directive becomes effective on 20 March 2003.

Background: This Directive requires the establishment of an EGT baseline and trend monitoring using SAGE, or equivalent, as an option to EGT harness replacement, and if necessary, replacement of certain EGT harnesses and EGT couplings as soon as a slow and continuous EGT drift downward is noticed.

Both the United States Federal Aviation Administration and the Direction Générale de l'Aviation Civile of France have received reports of erroneous EGT readings. The actions specified by this Directive are intended to prevent unexpected deterioration of critical rotating engine parts due to higher than desired engine operating EGTs.

James Coyne
Delegate of the Civil Aviation Safety Authority

30 January 2003

The above AD is notified in the *Commonwealth of Australia Gazette* on 26 February 2003.