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/CF6/58 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.

General Electric Turbine Engines - CF6 Series

AD/CF6/58 Amdt 1 — Electronic Control Unit Software — 11/2007

Applicability: CF6-80E1A1, CF6-80E1A2, CF6-80E1A3, CF6-80E1A4 and CF6-80E1A4/B turbofan engines.

Note 1: These engines are known to be installed on, but not limited to, Airbus A330 series aeroplanes.

Requirement:

1. Unless already accomplished, remove the following software versions from the engine electrical control unit (ECU):

Table 1

Software Version	ECU Part Number
E.1.D	1799M99P01
E.1.F	1799M99P03
E.1.G	1799M99P04
E.1.H	1799M99P05
E.1.I	1799M99P06, 1799M99P07, 1851M74P01, 1851M80P01
E.1.J	1799M99P08, 1799M99P09, 1851M74P02, 1851M80P02
E.1.K	1799M99P10, 1851M74P03, 1851M80P03, 1960M84P01
E.1.L	1799M99P11, 1851M74P04, 1851M80P04, 1960M84P02
E.1.M	1799M99P12, 1851M74P05, 1851M80P05, 1960M84P03
E.1.N	1799M99P13, 1851M74P06, 1851M80P06, 1960M84P04, 2043M29P01, 2043M29P02

2. Until 31 January 2008, once an ECU containing a software version not listed in Table 1 is installed on an engine, that ECU can be replaced with an ECU containing a previous version of software listed in Table 1.

3. Once the software version listed in Table 1 has been removed and new FAA-approved software version is installed in an ECU, reverting to those older software versions in that ECU is prohibited.

4. Use of an ECU with a software version listed in Table 1 is prohibited.

General Electric Turbine Engines - CF6 Series

AD/CF6/58 Amdt 1 (continued)

Note 2: Information on removing ECU software and installing new software, which provides increased margin to flameout, can be found in GE Service Bulletin CF6-80E1 S/B 73-0091, Revision 1, dated 26 June 2007.

Note 3: FAA AD 2007-17-01 Amdt 39-15159 refers.

Compliance: For Requirement 1 - Before 31 January 2008.

For Requirements 2 and 3 - As of the effective date of this Amendment.

For Requirement 4 - After 31 January 2008.

This Amendment becomes effective on 25 October 2007.

Background: The original issue of this Directive required removing ECU software version E.1.M. or earlier installed software and installing improved software for the ECU.

This Amendment is complementary to AD/A330/57 Amdt 2 and replaces the original issue of this Directive. This Amendment requires removing software version E.1.N or earlier from the engine ECU. Engines with the new version software will have increased margin to flameout. Both this Amendment and the original issue of this Directive results from reports of engine flameout events during flight, including reports of events where all engines simultaneously experienced a flameout or other adverse operation. Although the root cause investigation is not yet complete, the United States Federal Aviation Administration (FAA) believe that exposure to ice crystals during flight is associated with these flameout events and that further rulemaking may be necessary.

This Amendment is issued to minimize the potential of an all-engine flameout event caused by ice accretion and shedding during flight.

The original issue of this Directive became effective on 4 August 2005.

Charles Lenarcic
Delegate of the Civil Aviation Safety Authority

7 September 2007