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.

General Electric Turbine Engines - CF34 Series

AD/CF34/17 High Pressure Seal 6/2009

Applicability: General Electric Company (GE) CF34-1A, -3A, -3A1, -3A2, -3B, and -3B1 turbofan engines, with high-pressure (HP) rotor 4-step air balance piston stationary seals (4-step seals), part numbers (P/Ns) 4923T54G01, 6019T90G03, 6037T99G01, 6037T99G02, and 6037T99G03, installed.

Note 1: These engines are installed on, but not limited to, Bombardier, Inc. Aeroplane models CL-600-2A12, -2B16, and -2B19.

Requirement:

1. Remove the 4-step seals, P/Ns 4923T54G01, 6019T90G03, 6037T99G01, 6037T99G02, and 6037T99G03.

2. Incorporate an 8-step seal, either by modifying the existing 4-step seal to an 8-step seal, or by replacing it with an 8-step seal.

Information on modifying the seal and part number configuration charts, can be found in GE Service Bulletin (SB) No. CF34-AL S/B 72-0238, dated 27 July 2007 (CL-600-2B19), and SB No. CF34-BJ S/B 72-0217, dated 27 July 2007 (CL-600-2A12 and CL-600-2B16).

Note 2: FAA AD 2009-07-12 Amdt 39-15871 dated 26 March 2009 refers.

Compliance: At the next piece part exposure after the effective date of this AD, unless the actions have already been done.

Definition

For the purposes of this AD, piece-part exposure means when the 4-step seal is removed from the engine or when the combustion liner is removed.

This Airworthiness Directive becomes effective on 4 June 2009.

Background: This AD results from the investigation of an airplane accident. Both engines experienced high-power flameout. Rotation of the HP rotors was not maintained during descent and the engines could not be restarted.

General Electric Turbine Engines - CF34 Series

AD/CF34/17 (continued)

The issuing of this AD is intended to prevent the inability to restart both engines after flameout due to excessive friction of the 4-step seal, which could result in subsequent forced landing of the aeroplane.

James Coyne
Delegate of the Civil Aviation Safety Authority

17 April 2009