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.

Bombardier (Canadair) CL-600 (Challenger) Series Aeroplanes

AD/CL-600/70 AC Contactors 8/2007

Applicability: Model CL-600-2B19 aeroplanes, serial number 7003 through 7990 inclusive and 8000 through 8070 inclusive.

Requirement:

1. Unless already accomplished, visually inspect the AC service bus contactors 1K4XD and 2K4XD, part number (P/N) D-18ZZA, and the utility bus contactor K4XA, P/N D-7GRZ, to determine whether the AC contactors have a non-G9 terminal base plate. The above inspection is to be accomplished in accordance with Bombardier Service Bulletin (SB) 601R-24-123, Revision B, dated 16 February 2007, or later revision approved by Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada.

2. If the contactors 1K4XD, 2K4XD or K4XA are determined to have a non-G9 terminal base plate, replace the AC service bus contactors 1K4XD and 2K4XD with new P/N D-18ZZC and the utility bus contactor K4XA with new P/N D-7GSZ, in accordance with SB 601R-24-123, Revision B, or later revision approved by Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada.

3. AC contactor 1K4XD, 2K4XD or K4XA with a non-G9 terminal base plate may not be installed on any aircraft as a replacement part.

Note: Transport Canada AD CF-2006-17R1 refers.

Compliance: For Requirements 1 and 2 - Within twelve months after the effective date of this Directive.

For Requirement 3 - As of the effective date of this Directive.

This Airworthiness Directive becomes effective on 2 August 2007.

Background: Transport Canada has advised that there have been eight incidents of short-circuit failures of Tyco Hartman AC contactors - 1K4XD and K4XA - located in the avionics bay. All of the failed AC contactors had a terminal base plate made from non-G9 melamine material (Ultem 2200 material or black in colour).

Bombardier (Canadair) CL-600 (Challenger) Series Aeroplanes

AD/CL-600/70 (continued)

In several cases, the arcing, which was initiated due to the presence of contaminants between the power studs, resulted in a fire that continued until power to the contactor was interrupted, either by burned-through wire or through the generator falling offline.

The original issue of Transport Canada AD CF-2006-17, which was not mandated in Australia, required the sealing of non-G9 terminal base plates with RTV sealant to reduce the risk of arcing and fire. The application of RTV sealant on the non-G9 terminal base plates is now considered interim action.

This Directive requires the inspection of the AC contactors and, if necessary, their replacement with contactors that have a terminal base plate made from G9 melamine material. The Directive also prohibits the installation, as replacement spares, of contactors with non-G9 terminal base plates.

David Punshon
Delegate of the Civil Aviation Safety Authority

14 June 2007