
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/DHC-8/120 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.

Bombardier (Boeing Canada/De Havilland) DHC-8 Series Aeroplanes**AD/DHC-8/120
Amdt 1****Power Transfer Unit Overspeed****12/2009**

Applicability: Bombardier Inc. Models DHC-8-400, DHC-8-401 and DHC-8-402, Serial Numbers (S/N) 4001, 4003, 4004, 4006 and 4008 through 4184.

Requirement:

1. Amend the Aeroplane Flight Manual (AFM), PSM 1-84-1A, by inserting Temporary Amendment (TA) No. 13, dated 14 July 2005, or later approved changes to this AFM temporary amendment.
2. Advise all flight crew of the changes introduced by the AFM temporary amendment.

Note 1: Aircraft S/N 4185 and subsequent have been removed from the applicability of this AD since an equivalent PTU control logic modification (consisting of both (a) Modsum 4-126354 and (b) Modsum 4-901472 or Modsum 4-901473) has been installed in production. As a result, it is permissible to amend AFM PSM 1-84-1A by removing TA No.13 for these specific aircraft S/Ns.

3. Modify/rework the PTU control logic by incorporating Modsum 4-126425. Bombardier Service Bulletin (SB) 84-29-22, Revision A, dated 24 February 2009, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada, provides approved instruction for incorporating Modsum 4-126425.

Note 2: For Bombardier Inc. Models DHC-8-400, DHC-8-401 and DHC-8-402 Aircraft, SNs 4001, 4003, 4004, 4006 and 4008 through 4094, accomplishment in accordance with the original issue of Bombardier SB 84-29-22, dated 5 December 2008, also meets the intent of Requirement 2 of this AD.

4. Amend AFM PSM 1-84-1A by removing TA No.13.

Note 3: Transport Canada AD CF-2006-08R1 dated 31 August 2009 refers.

Compliance: For Requirements 1 and 2 - Remains unchanged as detailed in the original issue of this AD as: Within 14 days after the 31 May 2006 (the effective date of the original issue of this AD), unless previously accomplished.

Bombardier (Boeing Canada/De Havilland) DHC-8 Series Aeroplanes

AD/DHC-8/120 Amdt 1 (continued)

For Requirement 3 - Within 6,000 flight hours of the effective date of this AD, unless previously accomplished.

For Requirement 4 - Upon completion of SB 84-29-22, initial issue, dated 5 December 2008, Revision A, or later revision approved by the Chief, Transport Canada.

This Amendment becomes effective on 19 November 2009.

Background: Several cases have been reported where a loss of fluid in the No.2 hydraulic system has caused the power transfer unit (PTU) to over speed, resulting in pressure fluctuations and increased fluid flow within the No.1 hydraulic system. In one case, the hydraulic system control logic did not shut down the PTU and the over speed condition persisted, resulting in the illumination of the No.1 HYD FLUID HOT caution light.

As an interim action to avoid possible loss of both the No.1 and No.2 hydraulic systems, the AFM has been revised to include pulling the HYD PWR XFER circuit breaker in the event of the loss of all hydraulic fluid in the No.2 hydraulic system.

Amendment 1 of this AD mandates modification of the PTU control logic, including the provision of automatic PTU shutdown in the event of loss of fluid in the No. 2 hydraulic system. In addition, the applicability of the AD has been revised to remove aircraft S/N 4185 and subsequent, since an equivalent modification has been installed in production on these aircraft.

The original issue of this AD became effective on 31 May 2006.



David Villiers
Delegate of the Civil Aviation Safety Authority

28 September 2009