



No.	CF-2012-07R1	1/2
Issue Date	7 December 2012	

AIRWORTHINESS DIRECTIVE

The following airworthiness directive (AD) may be applicable to an aircraft which our records indicate is registered in your name. ADs are issued pursuant to **Canadian Aviation Regulation (CAR) 521 Division X**. Pursuant to **CAR 605.84** and the further details of **CAR Standard 625, Appendix H**, the continuing airworthiness of a Canadian registered aircraft is contingent upon compliance with all applicable ADs. Failure to comply with the requirements of an AD may invalidate the flight authorization of the aircraft. Alternative means of compliance shall be applied for in accordance with **CAR 605.84** and the above-referenced **Standard**.

This AD has been issued by the Continuing Airworthiness Division (AARDG), National Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

- Number:** CF-2012-07R1
- Subject:** Cockpit “Engine Fire, Check Fire Detect” Warning and “FUEL OFF” Handle Lights Failure to Reset
- Effective:** 21 December 2012
- Revision:** Supersedes Airworthiness Directive CF-2012-07.
- Applicability:** Bombardier Inc. DHC-8 aeroplane models 400, 401 and 402, serial numbers (S/Ns) 4001 through 4399.
- Compliance:** As indicated below, unless already accomplished.
- Background:** There have been engine fires on DHC-8 Series 400 aeroplanes, where the “ENGINE FIRE, CHECK FIRE DETECT” warning and “FUEL OFF” handle lights failed to reset and remained illuminated after the fire was extinguished. An investigation has revealed that the existing engine fire/overheat detector assemblies “Advance Pneumatic Detectors (APD)” may fail to reset after activation due to permanent deformation of the detector switch diaphragm after being exposed to high temperatures.
- This abnormal condition of a continued engine fire indication in the cockpit, after the actual fire has been extinguished, is misleading and may influence the pilot’s decision to conduct a potentially hazardous “off-airport” landing, which is considered an unsafe condition that warrants mitigating action.
- To mitigate this potentially hazardous condition, Bombardier has issued multiple service bulletins (SBs) to replace all three affected APDs with new detector assemblies that are not susceptible to the subject diaphragm deformation when exposed to excessive heat. Airworthiness Directive (AD) CF-2012-07 was issued in February 2012 to mandate the incorporation of Bombardier SBs 84-26-08A, 84-26-09A and 84-26-12A on the affected aeroplanes.
- This revised AD is issued to include the additional 26 aeroplane S/Ns in the applicability section of the AD. The additional S/Ns, 4374 through 4399, only affect the compliance with Part III of this AD.
- Corrective Actions:** Within 6000 flight hours or 30 months, whichever occurs first, from the effective date of the original issue of this AD (10 February 2012), replace all three engine fire/overheat detector assemblies APDs, at both left and right hand side engine locations, as per the following instructions:

Pursuant to **CAR 202.51** the registered owner of a Canadian aircraft shall, within seven days, notify the Minister in writing of any change of his or her name or address.

To request a change of address, contact the **Civil Aviation Communications Centre (AARC)** at **Place de Ville, Ottawa, Ontario K1A 0N8**, or **1-800-305-2059**, or www.tc.gc.ca/civilaviation/communications/centre/address.asp

Part I – Nacelle – Engine Primary Zone : (Applicable to S/Ns : 4001 through 4373)

Remove APD part number (P/N) 10-1098 and install APD P/N 10-1098-01, in accordance with Bombardier Aerospace SB 84-26-08 Rev. 'B', dated 26 September 2012, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Compliance with SB 84-26-08 Rev. 'A' meets the intent of Part I of this AD.

Part II – Nacelle – Landing Gear Primary Zone : (Applicable to S/Ns : 4001 through 4373)

Remove APD P/N 10-1097 or 10-1097-01 and install APD P/N 10-1097-02, in accordance with Bombardier Aerospace SB 84-26-09 Rev. 'A', dated 12 May 2011, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Part III – Propeller Engine Controller : (Applicable to S/Ns : 4001 through 4399)

Remove APD P/N 10-1096, 10-1096-01 or 10-1096-02 (introduced per SB 84-26-10A, with all numeric character serial number) and install APD P/N 10-1096-02 (with serial number identified by three alpha and four numeric characters), in accordance with Bombardier Aerospace SB 84-26-12 Rev.'B', dated 12 October 2012, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Compliance with SB 84-26-12 Rev. 'A' meets the intent of Part III of this AD.

Authorization: For the Minister of Transport, Infrastructure and Communities,

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

Contact: A.K. Durrani, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail ADs@tc.gc.ca or any Transport Canada Centre.