



# AIRWORTHINESS DIRECTIVE

*This Airworthiness Directive (AD) is issued pursuant to Civil Aviation Regulation (CAR) 521.427. No person shall conduct a take-off or permit a take-off to be conducted in an aircraft that is in their legal custody and control, unless the requirements of CAR 605.84 pertaining to ADs are met. Standard 625 - Aircraft Equipment and Maintenance Standards Appendix H provides information concerning alternative means of compliance (AMOC) to ADs.*

<b>Number:</b>	<b>Effective Date:</b>
CF-2015-07R2	28 December 2016
<b>ATA:</b>	<b>Type Certificate:</b>
27	A-142

**Subject:**  
Flight Control System – Cracking of the Spoiler Power Control Unit

**Revision:**  
Supersedes AD CF-2015-07R1, issued 18 October 2016.

**Applicability:**  
Bombardier Inc. model DHC-8-400 series 401 and 402 aeroplanes, serial numbers (S/Ns) 4001 and 4003 through 4527, equipped with spoiler Power Control Unit (PCU) part number (P/N) 390700-1007 and -1009 with S/Ns 0474 through 1321, any of the S/Ns listed in the Parker Service Bulletin (SB) 390700-27-002 section 4, Appendix, or S/Ns 1394 through 1876 without suffix 'A'.

**Compliance:**  
Within 12 000 hours air time or 72 months, whichever occurs first, from the original effective date, 28 April 2015, of this AD, unless already accomplished.

**Background:**  
During endurance and impulse testing of the spoiler PCU, cracks were discovered on two test spoiler PCU manifolds. Investigation determined that the crack initiation was due to the heat treat process. A cracked spoiler PCU manifold could cause the loss of one of the two hydraulic systems, resulting in the loss of multiple flight controls and landing gear systems. This condition, if not corrected, could adversely affect the continued safe operation and landing of the aeroplane.

This AD mandates the replacement of the affected spoiler PCUs.

Revision 1 of this AD was issued to extend the applicability to include additional aeroplane serial numbers and also modify the Corrective Actions to specifically mandate section 3.B of the SB 84-27-64, Revision A.

Revision 2 of this AD was issued to correct the SB referenced in the Background section. SB 84-27-64, Revision A should have been referenced in lieu of SB 84-27-63, Revision A.

**Corrective Actions:**  
Remove and replace the affected spoiler PCUs with the PCUs that have serial numbers outside the affected range as shown in the Applicability section of this AD or reworked PCUs with serial numbers that have suffix "A". Section 3.B of Bombardier Aerospace SB 84-27-64, Revision A, dated 26 July 2016, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, provides approved instructions for replacing the spoiler PCUs.

Upon completion of SB 84-27-64, Revision A, dated 26 July 2016 or later revisions, approved by the Chief, Continuing Airworthiness, Transport Canada, no person shall install the spoiler PCUs P/N 390700-1007 and -1009 with any of the S/Ns listed in the Parker SB 390700-27-002 section 4, Appendix, or S/Ns 0474 through 1321 and 1394 through 1876 without suffix "A".

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Rémy Knoerr  
Chief, Continuing Airworthiness  
Issued on 14 December 2016

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