



No.	CF-2006-14	1/2
Issue Date	14 June 2006	

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) 593**. 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), Aircraft Certification Branch, Transport Canada, Ottawa, telephone 613 952-4357.

Number: **CF-2006-14**

Subject: **Main Landing Gear Shock Strut Over-Extension**

Effective: 21 July 2006

Applicability: Bombardier Inc. DHC-8 Models 101,102,103,106,201,202, 301, 311, 314 and 315, serial numbers 003 through 618.

Compliance: Compliance is required as indicated unless already accomplished.

Background: Over the past 10 years there have been six cases reported in which the main landing gear (MLG) shock strut piston has over-extended, allowing the torque links to go over-center and rest on the piston. This resulted in a loss of shock absorption on touchdown and, in one case, also resulted in failure of the shock strut cylinder housing. Although it has not occurred in any of the reported cases, failure of the shock strut cylinder housing could also possibly result in a subsequent loss of directional control.

Investigation has determined that over-extension of the shock strut resulted from damage to the upper bearing and seal carrier, caused by a loss of internal damping.

Corrective Actions: **Part A. Applicable to Bombardier DHC-8 Models 311, 314 and 315, serial numbers 202 through 516, with main landing gear shock struts in the serial number range DCL3501/90 to DCL3768/97 installed. Also all spare main landing gear shock struts in the same serial number range.**

Within 3000 flight hours after the effective date of this directive, unless already accomplished, remove the anti-rotation needle roller from the upper bearing of the main landing gear shock strut by incorporating Modsum 8/3331. Bombardier Service Bulletin 8-32-144 Revision A, dated 29 April 2002, or later revisions approved by the Chief, Continuing Airworthiness, Aircraft Certification, Transport Canada, provides approved instructions for incorporating Modsum 8/3331.

Note: Previous incorporation of Modsum 8/3331, in accordance with the Accomplishment Instructions in the original issue of Bombardier Service Bulletin 8-32-144, dated 10 August 1998, meets the requirements of this part.

Part B. Applicable to DHC-8 Models 101,102,103,106,201,202, 301, 311, 314 and 315 serial numbers 003 to 614.

Within 30 days after the effective date of this directive, unless already accomplished, amend the Transport Canada approved maintenance schedule by incorporating MLG Shock Strut Servicing task 3210/15 into Part 1 of the DHC-8 Maintenance Program Manual as specified below:

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



A/C Series	PSM No.	Rev No.	Task No.
100	1-8-7	20	3210/15
200	1-82-7	11	3210/15
300	1-83-7	20	3210/15

Part C. Applicable to DHC-8 Models 101,102,103,106,201,202, 301, 311, 314 and 315 serial numbers 003 to 618.

As of the effective date of this directive, the following parts shall not be used as replacements during the repair or overhaul of any shock strut assembly:

Part	Number
Upper Bearing	P/N 10130-3, 10130-551
Damper Ring	P/N 10129-3, 10129-551

Instead, the following parts are to be used:

Part	Number
Upper Bearing	P/N 10130-5
Damper Ring	P/N 10129-5, 10129-553

In addition, for any MLG with a reworked oversize cylinder bore (part number identified as per the Component Maintenance Manual (CMM), the following parts are to be used in accordance with the applicable CMM:

Part	Number
Upper Bearing	P/N CRS85-167-11
Damper Ring	P/N CRS85-167-31, CRS85-167-33
Seal Carrier	P/N CRS85-167-21

Authorization: For Minister of Transport, Infrastructure and Communities

R. William Taylor
for B. Goyaniuk
Chief, Continuing Airworthiness

Contact: Mr. Richard Topham, Continuing Airworthiness, Ottawa, telephone 613-952-4428, facsimile 613-996-9178 or e-mail tophamr@tc.gc.ca or any Transport Canada Centre.