



# AIRWORTHINESS DIRECTIVE

*This Airworthiness Directive (AD) is issued pursuant to Canadian 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.*

**Number:**

CF-2011-14R1

**Effective Date:**

21 May 2015

**ATA:**

32

**Type Certificate:**

A-142

**Subject:**

Landing Gear - Main Landing Gear Retraction Actuator - Retract Port Flexible Hose Failure

**Revision:**

Supersedes AD CF-2011-14, dated 17 June 2011.

**Applicability:**

Bombardier Inc. DHC-8 aeroplanes, models 400, 401 and 402, serial numbers 4001 through 4424.

**Compliance:**

As indicated below unless already accomplished.

**Background:**

Testing has shown that in the event of a main landing gear (MLG) retraction actuator retract port flexible hose failure, in-flight vibrations may cause excessive hydraulic fluid leakage. This could potentially lead to an undamped extension of the MLG, which may result in MLG structural failure, leading to an unsafe asymmetric landing configuration.

The original issue of this AD mandated the inspection of the retract port flexible hose and its replacement, when required, to prevent damage to the MLG caused by undamped gear extensions.

Revision 1 of this AD mandates the reorientation of the MLG Retraction Actuator to prevent hydraulic fluid leakage in the event of a damaged retract port flexible hose.

**Corrective Actions:**

**Part I – Initial and Repetitive Inspections of the MLG Retraction Actuator - Retract Port Flexible Hydraulic Hose**

In accordance with the following schedule:

- A. Initially, within 600 hours air time from the effective date of the original issue of this AD (6 July 2011); and
- B. Subsequently, at intervals not to exceed 600 hours air time from the previous inspection.

Perform a detailed inspection of the left and right MLG retraction - actuator retract port flexible hose, and replace as required, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin (SB) 84-32-89, dated 22 March 2011, or later revision approved by the Chief, Continuing Airworthiness, Transport Canada.

**Part II – Terminating Action**

Within 6000 hours air time or 36 months, whichever occurs first, from the effective date of this AD, incorporate Bombardier ModSums 4-902418 and 4-902327, to re-orientate the MLG Retraction Actuators. Bombardier SBs 84-32-105 and 84-32-106, Revision A, dated 24 April 2015, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada, provide approved instructions for re-orientating the MLG Retraction Actuators.

Bombardier SB 84-32-105, Initial Issue, dated 28 September 2012, and SB 84-32-106, Initial Issue, dated 10 September 2012, also provide approved instructions for re orientating the MLG Retraction Actuators.

Incorporation of Modsums 4-902418 and 4-902327 constitute terminating action to this AD.

**Authorization:**

For the Minister of Transport,

*ORIGINAL SIGNED BY*

Derek Ferguson  
Chief, Continuing Airworthiness  
Issued on 7 May 2015

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