



No.	CF-2009-21R1	1/2
Issue Date	20 May 2009	

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

Number: CF- 2009-21R1

Subject: Nose Landing Gear Selector Valve and Nose Gear Door Selector Valve End Caps – Incorrect Assembly

Effective: 26 May 2009

Cancellation: Supersedes and cancels Airworthiness Directives (AD) CF-2006-16R1, dated 4 June 2007 and CF-2009-21, dated 5 May 2009.

Applicability: Bombardier Inc. Models:

CL-600-1A11 – Serial Numbers 1004 through 1085
CL-600-2A12 – Serial Numbers 3001 through 3066
CL-600-2B16 – Serial Numbers 5001 through 5194
CL-600-2B16 – Serial Numbers 5301 through 5665

Compliance: Within 250 hours air time or within 6 months after the effective date of this directive, whichever comes first.

Background: A specific batch of nose landing gear (NLG) and NLG door selector valves, part number (P/N) 601R75146-1 (Kaiser Fluid Technologies P/N 750006000), may have had their end caps incorrectly lock-wired and/or incorrectly torqued during assembly. This condition can lead to the end cap backing off, with consequent damage to a seal and internal leakage within the valve. Subsequently, if electrical power is transferred or removed from the aircraft before the NLG safety pin is installed, any pressure, including residual pressure, in the No. 3 hydraulic system can result in an uncommanded NLG retraction.

Although there have been no such cases reported on the Challenger models covered by this directive, there have been six cases reported on the CRJ (CL600-2B19) aircraft, one of which resulted in the collapse of the NLG at the departure gate.

This directive mandates a check of the NLG and NLG door selector valves installed on all aircraft in the Applicability section above. Depending on the results; replacement, rework and/or additional identification of the valves may be required.

This revision corrects a Service Bulletin number in the Corrective Actions table.

Notes:

1. The check is required whether or not an aircraft has previously been checked in accordance with AD CF-2006-16R1 (now superseded and cancelled by this AD). This is necessary since, following the issuance of AD CF-2006-16R1, it has been determined that the serial number (S/N) range of the affected valves requires expansion from the previous upper limit of S/N 0767 to S/N 2126 and the exact location of each of these additional valves is unknown.
2. Valves that have a S/N with suffix "T" have been manufactured by Tactair Fluid Controls Inc. and do not require any corrective action.
3. Valves manufactured by Kaiser Fluid Technologies, P/N 750006000, with S/N 0001 through 2126, and ink stamp "SB750006000-1", have already been checked and

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

reworked as necessary and do not require any additional corrective action.

4. The Illustrated Parts Catalog, for each of the models covered in the Applicability section above, gives instructions not to install a valve manufactured by Kaiser Fluid Technologies, P/N 750006000, with S/N 0001 through 2126, if the marking "SB750006000-1" is not ink stamped on the valve.
5. CL-600-2B16 (CL-605) aircraft, S/Ns 5701 and subsequent, are not affected by this directive. They were delivered with valves, P/N 750006000, that have either a S/N with suffix "T" or have the ink stamp marking "SB750006000-1".

**Corrective
Actions:**

Check the NLG selector valve and NLG door selector valve that are installed on the aircraft and replace, rework, and/or identify the valves, as required, in accordance with the Accomplishment Instructions of the applicable Service Bulletin (SB) listed below, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada.

Model	Service Bulletin	Date
CL-600-1A11 (CL-600)	SB 600-0721, Revision 03	23 February 2009
CL-600-2A12 (CL-601)	SB 601-0558, Revision 03	23 February 2009
CL-600-2B16 (CL-601-3A/3R)	SB 601-0558, Revision 03	23 February 2009
CL-600-2B16 (CL-604)	SB 604-32-021, Revision 04	23 February 2009

Notes:

1. Accomplishment in accordance with one of the following SB revisions also satisfies the requirements of this directive:
 - SB 600-0721 Revision 02, dated 16 June 2008,
 - SB 601-0558, Revision 02, dated 16 June 2008, or
 - SB 604-32-021, Revision 03, dated 16 June 2008,
2. Accomplishment in accordance with the original issuance of, or an earlier revision of, the SBs specified in Note 1 above **DOES NOT** satisfy the requirements of this directive.

Authorization: For Minister of Transport, Infrastructure and Communities

Derek Ferguson
Acting Chief, Continuing Airworthiness

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