



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-2014-39 **Effective Date:** 18 November 2014
- ATA:** 52 **Type Certificate:** A-177
- Subject:** Doors – Passenger Door Tensator Springs Failure
- Replacement:** Supersedes AD CF-2010-14, issued 13 May 2010.
- Applicability:** Bombardier Inc. model BD-700-1A10 and BD-700-1A11 aeroplanes, serial numbers (S/Ns) 9002 and subsequent.
- Compliance:** As indicated below, unless already accomplished.
- Background:** Following the issuance of AD CF-2010-14, additional qualification testing of the passenger door tensator spring, Part Number (P/N) GS321-0580-1, determined that the tensator springs could be susceptible to failure prior to reaching the life limit mandated by AD CF-2010-14.

In addition, there have been in-service reports of passenger door tensator spring failures. Investigation determined that the material used to manufacture the tensator springs were improperly heat treated.

The passenger door assembly is installed with four tensator springs that assist the door actuator in opening and closing the door. In-service experience has shown that a failed tensator spring could uncoil and foul up the rotating tensator spools, resulting in the inability to open the main passenger door. The inability to open the main passenger door could impede evacuation in the event of an emergency.

This AD mandates the revision to the approved maintenance schedule to reduce the repetitive discard task interval and mandates the replacement of non-conforming tensator springs.

Corrective Actions:

Part I – Life Limit Revision: Applicable to all aeroplanes

Within 30 days from the effective date of this AD, amend the Transport Canada approved maintenance schedule by revising the repetitive discard task, Task Number 52-11-41-101, for the passenger door tensator spring, P/N GS321-0580-1. This task was revised by the following Temporary Revisions (TRs) to the applicable BD-700 Time Limits/Maintenance Checks (TLMC), Part 2, Section 5-10-11:

Aeroplane Model	TLMC Manual Number	TR Number	Date
BD-700-1A10	GL 700 TLMC	TR 5-2-44	4 June 2014
	GL XRS TLMC	TR 5-2-7	4 June 2014
	GL 6000 TLMC	TR 5-2-9	4 June 2014

BD-700-1A11	GL 5000 TLMC	TR 5-2-13	4 June 2014
	GL 5000 GVFD TLMC	TR 5-2-9	4 June 2014

The above-referenced TLMC TRs contain a phase-in schedule for aeroplanes with passenger door tensator springs that have exceeded 550 flight cycles.

Compliance with superseding TRs or later revisions of the above-mentioned TLMC Manual approved by Transport Canada also meets the requirements of Part I of this AD.

Part II – Replacement of Non-Conforming Passenger Door Tensator Springs: Applicable to aeroplanes with S/Ns included in Section 1.A, Effectivity, of Bombardier Service Bulletin (SBs) 700-52-046 dated 4 October 2013, or SB 700-1A11-52-023 dated 4 October 2013

Within 15 months after the effective date of this AD, but prior to exceeding the applicable life limit of the passenger tensator spring specified in Part I of this AD, replace the passenger door tensator springs, P/N GS321-0580-1. Approved instructions for the replacement of the passenger doors tensator springs are contained in the applicable Bombardier SBs shown in the table below, or later revisions approved by the Chief, Continuing Airworthiness, Transport Canada:

Aeroplane Model	Bombardier SB	Date
BD-700-1A10	700-52-046	4 October 2013
BD-700-1A11	700-1A11-52-023	4 October 2013

For aeroplanes with S/Ns 9278 through 9360, previous replacement of the passenger door tensator springs meets the requirements of Part II of this AD. Follow the TLMC, as revised in Part I of this AD for subsequent spring replacements.

For all other applicable aeroplanes, accomplishment of the TLMC discard task as revised in Part I of this AD after the effective date of this AD meets the requirements of Part II of this AD.

Authorization: For the Minister of Transport,

ORIGINAL SIGNED BY

Derek Ferguson
Chief, Continuing Airworthiness

Contact: Helen Tsai, Continuing Airworthiness, Ottawa, telephone 613-952-4357, facsimile 613-996-9178 or e-mail AD-CN@tc.gc.ca or any Transport Canada Centre.