


EASA	AIRWORTHINESS DIRECTIVE	
	<p style="text-align: center;">AD No : 2007-0272</p> <p style="text-align: center;">Date: 16 October 2007</p>	
<p>No person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of that Airworthiness Directive unless otherwise agreed with the Authority of the State of Registration.</p>		
Type Approval Holder's Name :	Type/Model designation(s)	
Bombardier, Inc.	DHC-8-400 series aircraft	
TCDS Number: EASA IM.A.191; Canada A-142		
Foreign AD: Transport Canada Civil Aviation (TCCA) Airworthiness Directive (AD) No. CF-2007-20 R1, issued 11 October 2007.		
Supersedure: This AD supersedes EASA Emergency AD 2007-025 E, dated 13 September 2007. NOTE: For aircraft operated under EU regulations, the requirements of this AD take precedence over those contained in TCCA AD CF-2007-20 R1.		
ATA 32	Landing Gear – Main Landing Gear System & Parts - Inspection	
Manufacturer(s):	Bombardier, Inc.	
Applicability:	<p>Model DHC-8-401 and DHC-8-402 aircraft, all serial numbers.</p> <p>Note: The TCCA AD applies also to Model DHC-8-400 aircraft; as this Model has not been validated in Europe at this time, no aircraft operated under EU regulations and/or registered in EU Member States are affected. For that reason, this AD cannot be applied to those aircraft.</p>	
Reason:	<p>Two recent cases of main landing gear collapse on Bombardier Model DHC-8-400 series aircraft have been reported, occurring shortly after touchdown. Main landing Gear collapse during landing can result in loss of control of the aircraft.</p> <p>To address and correct the unsafe condition described above, Transport Canada Civil Aviation (TCCA), the responsible authority of the State of Design for the affected type design, issued Emergency Airworthiness Directive (EAD) CF-2007-20 on 12 September 2007. That directive has now been revised to amend the time compliance in paragraph C.2 (3 months in addition to 500 flight hours), to add new paragraph C.3 to cater for retract actuator which has accumulated less than 4 000 landings or 2 years since new and to add new paragraphs B.2 and C.4 to require that the respective inspections be repetitively performed until terminating action becomes available.</p> <p>This EASA AD requires those same actions, except for ferry flights, where reference is made to Airplane Flight Manual (AFM) Supplement No.94. The provisions in that</p>	

	document take precedence over points 4 (the reference to AOM Section 4.8), 5 and 6 of paragraph E “Flight Crew Limitations and Procedures”. In all other aspects, this AD contains the same requirements as TCCA AD CF-2007-20R1, which is attached to this directive.
Effective Date:	25 October 2007
Compliance:	<p>Required as indicated, unless previously accomplished:</p> <p>In deviation from paragraph E “Flight Crew Limitations and Procedures” points 4, 5 and 6 of TCCA EAD CF-2007-20R1, ferry flights are permitted only in accordance with the instructions, procedures and limitations as specified in EASA-approved Supplement No.94 “Ferry Flight with Landing Gear Extended to DHC-8 Series 400 (Q400) AFM Document No. PSM 1-84-1A (JAA).</p> <p>All other aspects and requirements of TCCA EAD CF-2007-20R1 remain unchanged and can be considered as ‘adopted’ in accordance with EASA ED Decision 2/2003.</p> <p>Note: Any actions already accomplished in accordance with EASA Emergency AD 2007-0252-E after 13 September 2007 can be considered in compliance with the corresponding tasks as required by TCCA AD CF-2007-20R1.</p>
Ref. Publications:	<p>Bombardier Repair Drawing (RD) 8/4-32-059 issue 5 and</p> <p>Bombardier DHC-8 Series 400 Maintenance Requirements Manual (PSM 1-84-7), Part 1 (Maintenance Review Board Report), tasks Z700-03E (left hand) and Z700-04E (right hand).</p> <p>Bombardier All Operator Messages No. 235, 236A, 237, 238, 239, 240, 243, 245, 247 and 250 also pertain to this subject.</p>
Remarks :	<ol style="list-style-type: none"> 1. If requested and appropriately substantiated, EASA can accept Alternative Methods of Compliance for this AD. 2. Required actions and the risk assessment have warranted the immediate adoption of this Final AD with request for comments. 3. Enquiries regarding this AD should be referred to the AD Focal Point - Certification Directorate, EASA. E-mail: ADs@easa.europa.eu. <p>For any question concerning the technical content of the requirements in this AD, please contact: Bombardier, Inc. 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5 Canada; telephone +1-416-375 4000; facsimile +1-416375 4539; E-mail thd.qseries@aero.bombardier.com</p>

CAMERON



No.	CF-2007-20R1	1/3
Issue Date	11 October 2007	

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-2007-20 R1

Subject: DHC-8-400 Main Landing Gear

Effective: 25 October 2007

Revision: Supersede Airworthiness Directive CF-2007-20 issued on 12 September 2007.

Applicability: Bombardier Inc. DHC-8 aircraft, Models 400, 401 and 402, serial numbers 4001, 4003 and subsequent.

Compliance: When indicated, unless already accomplished.

Background: Two recent cases of main landing gear collapse have been reported. Main landing gear collapse may result in unsafe landing of the aircraft.

This directive has been revised to amend the compliance in paragraph C.2 (3 months in addition to 500 flight hours), to add new paragraph C.3 to cater for retract actuator which has accumulated less than 4,000 landings or 2 years since new and to add new paragraphs B.2 and C.4 to require that the respective inspections be repetitively performed until terminating action becomes available.

- Corrective Actions:**
- A. General Visual Inspection of the Main Landing Gear System:**
- For all aircraft, before further flight after the effective date of the original issue of this directive (12 September 2007), perform a general visual inspection of the left hand and right hand main landing gear system in accordance with Bombardier DHC-8 Series 400 Maintenance Requirements Manual (PSM 1-84-7), Part 1 (Maintenance Review Board Report), tasks Z700-03E (left hand) and Z700-04E (right hand). Rectify any discrepancy found prior to further flight.
- B. General Visual Inspection of the Main Landing Gear Retract Actuator Jam Nut:**
1. For all aircraft, before further flight after the effective date of the original issue of this directive (12 September 2007), perform a general visual inspection of the left hand and right hand main landing gear retract actuator jam nut to ensure the wire lock is in place and the nut is secured. If the wire lock is not in place or the jam nut is not secured, prior to further flight, accomplish Bombardier Repair Drawing (RD) 8/4-32-059, Issue 5, or later approved revision.
 2. Subsequently, at intervals not to exceed 250 landings, or one month from the effective date of this directive, whichever occurs first, repeat the general visual inspection of the left hand and right hand main landing gear retract actuator jam nut to ensure the wire lock is in place and the nut is secured. If the wire lock is not in place or the jam nut is not secured, prior to further flight, re-torque the jam nut and safety lockwire in accordance with Bombardier Repair Drawing (RD) 8/4-32-059, Issue 5, or later approved revision.

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



C. Detailed Visual Inspection of the Main Landing Gear Retract Actuator:

1. For aircraft main landing gear retract actuator (p/n 46550-7 or 46550-9) that have accumulated 8,000 or more landings, or more than 4 years in service since new, at the effective date of the original issue of this directive (12 September 2007), perform a detailed visual inspection and any required action(s) in accordance with Bombardier RD 8/4-32-059, Issue 5, or later approved revision, before further flight after the effective date of the original issue of this directive (12 September 2007).
2. For aircraft main landing gear retract actuator (p/n 46550-7 or 46550-9) that have accumulated between 4,000 to 7,999 landings, or between 2 to 4 years in service since new, at the effective date of the original issue of this directive (12 September 2007), perform a detailed visual inspection and any required action(s) in accordance with RD 8/4-32-059, Issue 5 or later approved revision within 500 flight hours, or 3 months, whichever occurs first, after the effective date of the original issue of this directive (12 September 2007).
3. For aircraft main landing gear retract actuator (p/n 46550-7 or 46550-9) that have accumulated less than 4,000 landings, or less than 2 years in service since new, at the effective date of the original issue of this directive (12 September 2007), prior to retract actuator reaching 4,500 landings or 27 months in service since new, whichever occurs first, perform a detailed visual inspection and any required action(s) in accordance with RD 8/4-32-059, Issue 5 or later approved revision.
4. Subsequently, at intervals not to exceed 2,000 landings, or one calendar year from the effective date of this directive, whichever occurs first, repeat the detailed visual inspection and any required action(s) in accordance with RD 8/4-32-059, Issue 5 or later approved revision.

Note: 1) Respective inspections performed in accordance with earlier issues of RD 8/4-32-059 satisfy the requirements of this directive, paragraphs B and C.

2) In the visual inspection of the piston (p/n 46570-1/-3) threads and thread relief area for evidence of corrosion in accordance with RD 8/4-32-059 Rev. NC was performed without using borescope or 10X magnification mirror, a one time deferral for up to 500 landings is permissible to complete the inspection of the piston using borescope or 10X magnification mirror.

D. Reporting Requirement:

Within 7 days after each inspection, report any discrepancies found during any of the above inspections to Bombardier Technical Help Desk.

E. Ferry Flight:

To permit the ferry of an aircraft to a location where the inspection requirements of this directive can be accomplished, adhere to the following procedures and limitations:

Flight Crew Limitations and Procedures:

1. Ferry Flight with gear extended and pinned.
2. Landing to be conducted at a minimum descent rate.
3. Minimize braking on landing.
4. Flight to be conducted per Aircraft Operating Manual (AOM) Section 4.8.
5. Essential crew only on board.
6. Flight in known or forecast icing condition is prohibited.

Maintenance Procedures:

1. Inspect the left hand and right hand main landing gear retract actuator jam nut to ensure the wire lock is in place and the nut is secure.
2. Perform the general visual inspections as defined in accordance with Bombardier All Operators Message No. 236 Rev A or later revisions.
3. If items 1 and 2 results are satisfactory, insert main landing gear ground lock pins and lockwire in place.
4. Ensure the nose landing gear ground lock is engaged.

Authorization: For Minister of Transport, Infrastructure and Communities

B. Goyaniuk
Chief, Continuing Airworthiness

Contact: Mr. Anthony Wan, Continuing Airworthiness, Ottawa, telephone 613-952-4410, facsimile 613-996-9178 or e-mail wana@tc.gc.ca or any Transport Canada Centre.

CANCELLED