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**AIRWORTHINESS DIRECTIVE**

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For the reasons set out in the background section, the CASA delegate whose signature appears below issues the following Airworthiness Directive (AD) under subregulation 39.001(1) of CASR 1998. The AD requires that the action set out in the requirement section (being action that the delegate considers necessary to correct the unsafe condition) be taken in relation to the aircraft or aeronautical product mentioned in the applicability section: (a) in the circumstances mentioned in the requirement section; and (b) in accordance with the instructions set out in the requirement section; and (c) at the time mentioned in the compliance section.

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**Bombardier (Boeing Canada/De Havilland) DHC-8 Series Aeroplanes****AD/DHC-8/104      Elevator Trim and Gust Lock Chain Failure      13/2005**

**Applicability:** Bombardier Inc. DHC-8 aircraft, Models 102, 103, 106, 201, 202, 301, 311, 314 and 315, Serial Numbers 003 through 610.

**Requirement:** 1. Insert a copy of the appropriate Temporary Amendment listed below in the Dash 8 aircraft flight manual (AFM) and brief flight crew on the requirement to conduct elevator trim checks.

<b>Model</b>	<b>PSM</b>	<b>Temporary Amendment</b>
102,103,and 106	1-81-1A	No. 9
102NS, 103NS and 106NS	1-81-1A	No. 8
201	1-82-1A	No. 11
202	1-82-1A	No. 10
201S and 202S	1-82-1A	No. 9
202HT	1-82-1A	No. 8
301	1-83-1A	No. 8
311	1-83-1A	No. 15
314 and 315	1-83-1A	No. 9

2. In accordance with Bombardier SB 8-27-105, Revision A, dated 13 September 2005, or later Transport Canada approved revisions, carry out the following:
- (a) Visually inspect the elevator gust lock/ trim chains for the identifier RC 25; and
  - (b) Replace any chains and/or chain cable assemblies that do not have the RC 25 identifier.
3. Chains and chain cable assemblies, which do not have the identifier RC 25, shall not be used as a replacement on any aircraft.

**Bombardier (Boeing Canada/De Havilland) DHC-8 Series Aeroplanes**

AD/DHC-8/104 (continued)

**Terminating action for Requirement 1.**

The temporary amendment inserted in the AFM in accordance with requirement 1 of this AD, may be removed after completing the inspection and replacing the chains that do not have the RC 25 identifier.

*Note: Transport Canada AD CF-2005-38 refers.*

- Compliance:
1. Within 30 days of the effective date of this AD.
  2. Before accumulating 6 000 hours flight time, from the effective date of this AD; or within 36 months of the effective date of this AD, whichever occurs earlier.
  3. From the effective date of this AD.

This Airworthiness Directive becomes effective on 22 December 2005.

Background: Several elevator trim chain failures have been reported. The trim chain failures have resulted from hydrogen embrittlement cracking of the link plates. Failures of a trim chain are not annunciated to the flight crew. If a trim chain were to fail when the trim was set in an extreme NOSE DOWN, or extreme NOSE UP position, an undetected failure could result in control difficulties during aircraft rotation for takeoff.



James Coyne  
Delegate of the Civil Aviation Safety Authority

10 November 2005