

**Bombardier Q100/200/300**  
**All Operator Message No. 1071**

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ATTN: Director/Manager of: Maintenance  
Engineering  
Quality Control  
Flight Operations  
Procurement/Spares

DATE: 15 October 2014

ATA: 2700 MODEL: Q100/200/300

SUBJECT: Spoiler Actuator Housings Restoration and Replacement

REFERENCE: /A/ Service Bulletin 8-27-116 Rev B, Flight Controls – Ground Spoilers and Roll Spoilers – Ground Mode Disabled to Mitigate Cracking Actuator Housing – Modsum 8Q902418

/B/ ISAR 2004-07-2760 Roll Spoiler Actuator Housing Fracture

/C/ All Operator Message No. 1037 Cracking of Roll Spoiler Actuator Housings

/D/ Temporary Revision MRB – 156

/E/ Temporary Revision MRB 2 – 35

The following message is being sent to all Bombardier Aerospace Commercial Aircraft Q100/200/300 Operators and Bombardier Aerospace Commercial Aircraft Field Service Representatives.

This message contains information requiring attention and/or action. Please ensure timely and appropriate distribution within maintenance and flight operations departments.

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**DISCUSSION:**

As discussed in All Operators Message (AOM) 1037 (Ref. C), it has been determined that the Roll Spoiler Actuator Housing is susceptible to fatigue cracking when Spoiler Ground Mode is active.

To mitigate this issue, Bombardier has incorporated Maintenance Review Board Report (MRBR) Tasks for the Restoration of the Roll Spoiler Actuator. The tasks require the replacement of the Spoiler Actuator housing on aircraft with ground mode active at 50,000 Flight Cycles. The restoration tasks were accepted at the Industry Steering Committee November 13-14, 2013,

and are detailed in Maintenance Review Board Temporary Revisions, TR MRB – 156 and TR MRB 2 – 35 (Ref D and E). The Temporary Revisions will be released on or before October 30, 2014.

There are four spoiler actuators installed on each aircraft. To date, all housing failures have occurred on aircraft with the spoiler ground mode function, therefore, the following strategy is proposed (See Figure 1):

- For Operators that do not require the ground spoiler mode, Service Bulletin 8-27-116 Rev B (Modsum 8Q902418) (Ref. A) will be issued end of October 2014 to deactivate the Spoiler Ground Mode. This modification disconnects and stows the wires to the lift dump valve.

Once the ground mode is deactivated, actuators will be subject to condition monitoring for a period of 2 years. Data will be collected by Bombardier and if the fleet failure rate decreases post deactivation, it is expected that no further action will be necessary.

- For Operators that require the ground spoiler mode, the Spoiler Actuators are subject to a restoration task to replace the actuator housing at 50,000 flight cycles. For aircraft with Spoiler Actuators already beyond 50,000 flight cycles, the affected actuators will need to be restored, or the ground mode deactivated, within 6,000 flight hours

The Spoiler Actuator currently available, Nabtesco, P/N 1556000-1 has also experienced premature cracking in qualification testing at similar cycles as P/N A44700 did in testing and therefore, is subject to the same limitations.

A redesigned Spoiler Actuator, Nabtesco, P/N 1556000-3 is now available, which is not subject to the restoration tasks at 50,000 Flight Cycles. The P/N 1556000-3 is qualified to full life, therefore, any operators planning on applying the Extended Service Program will benefit from replacing the units at 50,000 Flight Cycles.

Bombardier has secured, through Nabtesco Aerospace, special pricing on the redesigned Spoiler Actuators, P/N 1556000-3. . This special reduced pricing is being offered from December 1, 2014 to December 31, 2019. Please contact Nabtesco Aerospace directly (at either of the two locations below) for information regarding the pricing and ordering of these Spoiler Actuators:

| Nabtesco Aerospace, Inc. (OFRZ6)   | Nabtesco Corporation (S4980)  |
|--|---|
| Matthew Glugla<br>Product Support Manager<br><br>Email: <a href="mailto:m.glugla@nabtescoaero.com">m.glugla@nabtescoaero.com</a><br>Phone: +1-425-602-8420<br>Fax: +1-425-602-8420 | Koji Miyata<br>Customer Support<br><br>Email: <a href="mailto:Koji_Miyata@nabtesco.com">Koji_Miyata@nabtesco.com</a><br>Phone: +81-584-23-0001<br>(Ext. After beep, please push 2170)<br>Fax: +81-584-23-1961 |

Please direct responses and inquiries regarding the content of this AOM to your Bombardier Commercial Aircraft Field Service Representative or the Technical Help Desk in Toronto at telephone (416) 375-4000 or facsimile (416) 375-4539 or e-mail: [thd.gseries@aero.bombardier.com](mailto:thd.gseries@aero.bombardier.com).

Peter Osborne, Manager, Maintenance Engineering Programs and Planning, and Robert Duffield, Director, Maintenance Engineering, Bombardier Commercial Aircraft

**Figure 1**

