Operators continue to report incidents in which the Spoiler Servo Actuator housing cracks, which causes a loss of the associated hydraulic system and its services. The cracks, which are caused by fatigue, are occurring at the thread root (figure A) and propagating throughout the unit.

**THE SOLUTION**

The Engineering team at 3 Points Aviation has designed a replacement spoiler servo actuator housing & assembly that is now available!

- No Life Cycle Limit -
- No Restriction on use of Ground Spoiler Mode -
- Applicable to Dash 8 100/200/300 -

This unit is available to you during the OH or Repair of your current BER unit at a fraction of the cost of the OEM!
This approval is issued to:

3 Points Machining & Aerospace
91 Watts Ave.
Charlottetown, Prince Edward Island,
Canada, C1E 2B7.

Number: SA14-36
Issue No.: 1
Approval Date: July 23, 2014
Issue Date: July 23, 2014

Responsible Office: Atlantic
Aircraft/Engine Type or Model: Bombardier DHC-8-101, DHC-8-102, DHC-8-103,
DHC-8-106, DHC-8-201, DHC-8-202, DHC-8-301,
DHC-8-311, DHC-8-314, DHC-8-315

Canadian Type Certificate or Equivalent: A-142
Description of Type Design Change: Replacement Spoiler Servo Actuator Housing and Assembly
(AA4700-009-3PMA).

Installation/Operating Data,
Required Equipment and Limitations:

Manufacturing Data:
Manufacture of the replacement parts must be in accordance with Transport Canada approved 3
Points Machining & Aerospace document 3PMA-ENG13-254-MDL, Issue 2, dated 23 July, 2014 (or
later TCCA approved revisions).

Installation Data:
Installation of the Spoiler Servo Actuator Housing and Assembly must be in accordance with with
Transport Canada accepted 3 Points Machining & Aerospace Instructions for Continued Airworthiness
3PMA-ENG13-255-ICA, Issue 1, dated 22 July, 2014, or later TCCA accepted revisions.

— See continuation sheet —

Conditions: This approval is only applicable to the type/model of aeronautical product specified therein.
Prior to incorporating this modification, the installer shall establish that the interrelationship between this
change and any other modification(s) incorporated will not adversely affect the airworthiness of the
modified product.

Paul Garner
For Minister of Transport
Required Operating Data:
No change.

Required Maintenance Data:
Maintenance of the Spoiler Servo Actuator Housing and Assembly must be in accordance with Transport Canada accepted 3 Points Machining & Aerospace Instructions for Continued Airworthiness 3PMA-ENG13-255-ICA, Issue 1, dated 22 July, 2014, or later TCCA accepted revisions.

Basis of Certification:

- End -
DOCUMENT NO. 3PMA-ENG13-255-ICA

DHC-8 Spoiler Servo Actuator Assembly STC
PN A44700-009-3PMA

STC # SA 14-36

Instructions for Continued Airworthiness

Issue 1  July 22, 2014

Prepared By: ____________________________
Name (print): Nassrin Vayani
Title: Senior Engineer, 3PMA

Checked By: ____________________________
Name (print): M. F. Clark
Title: 3PMA Director of Engineering

Approved By: ____________________________
Name (print): M. F. Clark
Title: 3PMA Director of Engineering

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Contents

INTRODUCTION............................................................................................................................................. 3

SECTION 1 - Weight and Balance ...................................................................................................................... 4

SECTION 2 - Illustrated Parts Catalogue Supplement .......................................................................................... 5

SECTION 3 - Maintenance Instructions ................................................................................................................ 6

SECTION 4 - Airworthiness Limitations ............................................................................................................. 8

Manual Distribution

This document, and any revisions to it, will be distributed to authorized users of the STC data. The manual will be distributed by courier, in electronic format, or paper format, as appropriate.

RECORD OF REVISIONS

<table>
<thead>
<tr>
<th>ISSUE</th>
<th>DESCRIPTION OF CHANGE</th>
<th>DATE</th>
<th>APPROVED BY</th>
<th>PAGES AFFECTED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Initial Release</td>
<td>July 22, 2014</td>
<td>See Cover</td>
<td>All</td>
</tr>
</tbody>
</table>
INTRODUCTION

DHC-8 Spoiler Servo Actuator STC

This STC design provides an improved spoiler servo actuator, PN A44700-009-3PMA, to replace the original flight spoiler actuators.

The modified actuator assembly is completely interchangeable with the original equipment actuator assembly for both the inboard and outboard flight spoilers, both left and right sides.

It uses the same mounting provisions and hardware as the original actuator. The STC actuator has a strengthened housing and gland end cap, as indicated in the figure below.

The replacement STC actuator has the same weight as the original equipment part. Removal and installation tasks for the STC actuator assembly are the same as for the original actuator and system maintenance practices are also unchanged.

The strengthened and improved housing and end gland of the STC actuator assembly enables it to function on any of the Dash 8 aircraft Series 100, 200, or 300 models without any mandatory discard life (no life limit).
INTRODUCTION - Continued

DHC-8 Spoiler Servo Actuator STC

This replacement actuator assembly is functionally identical to existing original equipment actuator units but is NOT to be overhauled and repaired the same as the original equipment units (CMM 27-60-02 is not applicable to the 3 Points STC actuator assembly, A44700-009-3PMA).

For approved maintenance and servicing of the STC actuator assembly, A44700-009-3PMA, contact and / or return the actuator assembly to 3 Points Aviation (91 Watts Ave., Charlottetown, PE, C1E 2B7, Canada).

SECTION 1 - Weight and Balance

1.1 Weight and Balance

The STC spoiler actuator assembly, A44700-009-3PMA, has the same weight as the original equipment actuator. No weight and balance change is required for the installation of the STC actuator assembly.
SECTION 2 - Illustrated Parts Catalogue Supplement

DHC-8 Spoiler Servo Actuator STC

Supplement to Dash 8-100 IPC PSM 1-8-4, Dash 8-200 IPC PSM 1-82-4, and Dash 8-300 IPC PSM 1-83-4

Chapter 27-14-00, Figure 15, Page 0 and 1
Controls Installation – Wing Flight Spoiler
Applicable to Inboard and Outboard Spoiler, Left and Right Sides

Item 110B  P/N  A44700-009-3PMA

<table>
<thead>
<tr>
<th>FIG</th>
<th>ITEM</th>
<th>PART NUMBER</th>
<th>AIRLINE STK NBR</th>
<th>NOMENCLATURE</th>
<th>EFFECTIVITY</th>
<th>UNITS PER A/C</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>110B</td>
<td>A44700-009-3PMA</td>
<td></td>
<td>ACTUATOR, SERVO (INCHG CODE 2: TWO WAY INTERCHANGEABLE WITH PN A44700-007, A44700-009, AND 1556000-1)</td>
<td>STC # SA 14-36</td>
<td>4</td>
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</tbody>
</table>
SECTION 3 - Maintenance Instructions

DHC-8 Spoiler Servo Actuator STC

1 – Description

See Page 3 of this document for a description of the spoiler actuator STC installation. These maintenance instructions apply to the aircraft and actuator installation on the aircraft; they are not overhaul and repair instructions for the STC actuator assembly.

201 – Maintenance Practices

All existing maintenance practices for the aircraft remain applicable with the STC actuator installed (reference Aircraft Maintenance Manual, PSM 1-8-2, 1-83-2, and 1-83-2, Chapter 27-14-00).

Detail parts of the STC actuator assembly, A44700-009-3PMA, are not to be intermixed with parts of the original equipment actuators.

For approved maintenance and servicing of the STC actuator assembly, A44700-009-3PMA, contact and / or return the actuator assembly to 3 Points Aviation (91 Watts Ave., Charlottetown, PE, C1E 2B7, Canada).

301 – Servicing

All existing servicing for the aircraft and spoiler system remain applicable with the STC actuator installed (reference Aircraft Maintenance Manual, PSM 1-8-2, 1-83-2, and 1-83-2, Chapter 27-14-00).

Detail parts of the STC actuator assembly, A44700-009-3PMA, are not to be intermixed with parts of the original equipment actuators.

For approved servicing of the STC actuator assembly, A44700-009-3PMA, contact and / or return the actuator assembly to 3 Points Aviation (91 Watts Ave., Charlottetown, PE, C1E 2B7, Canada).

401 – Removal / Installation

All existing removal and installation tasks for the spoiler actuators remain applicable for the STC actuator assembly (reference Aircraft Maintenance Manual, PSM 1-8-2, 1-83-2, and 1-83-2, Chapter 27-14-05).
SECTION 3 - Maintenance Instructions - Continued

DHC-8 Spoiler Servo Actuator STC

501 – Adjustment / Test

All existing adjustment and test tasks for the aircraft and spoiler actuator installation remain applicable with the STC actuator installed (reference Aircraft Maintenance Manual, PSM 1-8-2, 1-83-2, and 1-83-2, Chapter 27-14-00).

For adjustment and test of just the STC actuator assembly itself, A44700-009-3PMA, contact and / or return the actuator assembly to 3 Points Aviation (91 Watts Ave., Charlottetown, PE, C1E 2B7, Canada).

601 – Inspection / Checks

All existing inspection and check tasks and intervals for the aircraft and spoiler actuator installations remain applicable with the STC actuator installed (reference Aircraft Maintenance Program Manual, PSM 1-8-7, 1-82-7, and 1-83-7, Chapter 2-27).

701 – Cleaning / Painting

All existing procedures for the aircraft and actuator installations remain applicable with the STC actuator installed (reference Aircraft Maintenance Manual, PSM 1-8-2, 1-83-2, and 1-83-2, Chapter 27-14-00).

801 – Approved Repairs

For approved repairs to the STC actuator assembly, A44700-009-3PMA, contact and / or return the actuator assembly to 3 Points Aviation (91 Watts Ave., Charlottetown, PE, C1E 2B7, Canada).
SECTION 4 - Airworthiness Limitations

DHC-8 Spoiler Servo Actuator STC

General

The required Systems tasks and intervals of Chapter 2 of the Aircraft Maintenance Program Manual PSM 1-8-7, 1-82-7, and 1-83-7 remain in effect for the aircraft with the STC actuator assembly installed.

The 3 Points STC actuator assembly, A44700-009-3PMA, has no mandatory discard life (not a life limited item).

END-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------