

# Advisory Wire

REFERENCE NO:	AW300-27-0123, Rev 02	INFORMATION TYPE:	Maintenance Operational
ATA:	27-61	EFFECTIVITY:	Challenger 300 (20003 – 20499) Challenger 350 (20500 – 20999)
<b>SUBJECT:</b>	<b>No Fault Found Reduction Initiative and Trouble Shooting information – Spoiler Fault Cyan Message</b>		

## 1. REFERENCES:

- 1.1. Advisory Wire AW300-27-0077 – Troubleshooting Guide for SECU & HSTECU (Released December 6, 2007)
- 1.2. Advisory Wire AW300-27-0096 – Spoiler Electronic Control Unit (SECU) Troubleshooting (Released April 13, 2009)

## 2. INTRODUCTION:

In an effort to reduce the high rate of No Fault Found (NFF) seen on Spoiler Electronic Control Units (SECU), this Advisory Wire (AW) provides Operators with a manual Latency Check procedure that can be performed following a cyan SPOILERS FAULT messages on the Engine Indication and Crew Alerting System (EICAS).

This AW revision introduces an improved test sequence for the manual Latency Check procedure.

## 3. DESCRIPTION:

Operators have reported cases where the SPOILERS FAULT advisory message appears. In several cases, the SECU was removed but when returned to the vendor for testing, it was NFF. Our investigation into this issue revealed that often, the cause of the message was because the SECU had failed, or did not complete, the post flight automatic latency test.

The spoiler system performs a latency test automatically to ensure Ground Spoiler Selector Valve (GSSV) command solenoid valves are not failed in an open position. If one valve is failed open, the spoilers may not operate correctly.

The following conditions are required to perform the latency test. If the latency test has not been performed within 100 flight cycles or if the latency test fails, the SPOILER FAULT message will appear.

- Aircraft has been weight on wheels for 40 seconds and wheel speed has been lower than 45 kts for 10 seconds
- All spoilers have completed a deploy and retract cycle
- Left and right throttle levers valid and less than maximum take-off
- Ground Spoiler (GS) switch at AUTO or MAN
- No GS failure messages
- Left and right hydraulic greater than 1,500 psi
- Control Wheel centered

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The test duration is 17 seconds. If any of the above conditions change during the test sequence, the test will abort. If the test is run and a failure is detected, or if the test conditions were not met for 100 consecutive flight cycles, the SPOILERS FAULT – CYAN EICAS message is displayed.

#### 4. ACTION:

If you experience a SPOILERS FAULT – Cyan CAS message, combined with a B3-006823 and/or B3-006824 Maintenance Diagnostic Computer (MDC) fault in the CURRENT FAULTS and/or FAULT HISTORY, in order to prevent an unnecessary removal, perform the following steps on the ground to run the test and clear the fault message:

- 4.1. Apply hydraulic power using aircraft Engine Driven Pumps or a mule
- 4.2. Pull Circuit Breaker (C/B) of one of the SECU
- 4.3. Center control wheels
- 4.4. Confirm Flight Spoiler Control Lever is at 0
- 4.5. Set Ground Spoilers Select Switch (GSSS) to MANUAL/ARM. Wait 5 seconds and verify that all spoiler surfaces deploy
- 4.6. Set GSSS to Auto and verify that all spoiler surfaces retract
- 4.7. Wait at least 15 seconds. A series of clicks should be heard from spoilers during the 15 seconds test.
- 4.8. Select GSSS to OFF
- 4.9. Wait 6 seconds
- 4.10. Pull and reset the CB for this SECU
- 4.11. Repeat steps 4.2 to 4.10 for the other SECU

If the failure cannot be reset on the ground per the above procedure, proceed with troubleshooting using documents in reference 1.1 and 1.2, as well as SMARTFIX Plus.