

Advisory Wire

REFERENCE NO:	AW700-27-0873	INFORMATION TYPE:	Maintenance
ATA:	27-04	EFFECTIVITY:	Global 7500
SUBJECT:	27 FLT CTRL – PRIM REU INOP (INFO) message at power up		

1. REFERENCES:

- 1.1 Aircraft Maintenance Publication (AMP), [Electronic flight-control-system - PBIT - BD700-A-J27-04-00-00AAA-343A-A](#)

2. INTRODUCTION:

Bombardier has observed occurrences in production and in-service where the 27 FLT CTRL – PRIM REU INOP (INFO) EICAS message has been posted at power up.

The reported occurrences were in the following conditions; the aircraft was powered by the batteries as a single source and the battery voltage drops to about 17 V DC.

3. DESCRIPTION:

The Investigation revealed that the Remote Electronic Units (REUs) are susceptible to reset at an input voltage window around 17 V DC.

While on battery power only, prior to applying AC power, the aircraft battery voltage may drop / hover around the 17 V DC threshold, causing on-off oscillations on the REU input power. If a REU resets 10 times due to on-off oscillations, it will enter into a latched REU Integrity failed state. As a result, the affected REU(s) become inoperative and require a special reset procedure.

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The REUs below are powered by DC ESS BUS 1 (batteries) and are particularly susceptible to this condition:

- AFT 1 REU
- AFT 2 REU
- AFT 3 REU
- LOB AIL REU
- ROB AIL REU
- MFS 3 REU

The condition can be identified in the Onboard Maintenance System (OMS) active fault messages by having REU internal faults and TTP data faults posted simultaneously for all of the affected REUs.

The Alternate Flight Control Unit (AFCU) related OMS fault messages below will also show as follows:

- AFCU engagement discrete disagree faults (for the affected surfaces)
- Power Control Unit (PCU) to AFCU Electrical Faults (for the affected surfaces)
- AFCU Motor Control Electronic (MCE) Enable discrete disagree faults
- AFCU internal faults
- AFCU alternate flight engage faults

It is important to note that the AFT 4 REU internal fault and power up test fault will also be active due to AFT1, AFT2 and AFT3 REU units being latched in integrity fail state.

4. ACTION:

If the 27 FLT CTRL – PRIM REU INOP (INFO) EICAS message is posted on power up, access the OMS active fault messages and confirm that the condition is associated to the above description.

Bombardier recommend to perform the SmartFix Plus procedure associated to the reported OMS active faults, should the condition is different from the above description.

Upon confirmation that the REU(s) are latched in integrity fail state, Bombardier recommend to cycle the Circuit Breakers (CBs) of the affected REUs 10 times with the following interval: 10 seconds with the CB in the OUT position followed by and 10 seconds with the CB in the IN position.

Once all affected REU CBs have been reset, carry out the Electronic flight-control-system – PBIT in accordance with the AMP task (Ref 1.1).

Note that for the AFT 1 REU and the MFS 3 REU have 2 Circuit Breakers each (primary and secondary).

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See the list of CBs below:

- | | |
|-------------------|-------------|
| • REU AIL L OUTBD | EMEREPC-A04 |
| • REU AIL R OUTBD | EMEREPC-B02 |
| • REU AFT 1 PRI | LFBW-CPD-04 |
| • REU AFT 1 SEC | SPDA5-1-9 |
| • REU AFT 2 | EMEREPC-A03 |
| • REU AFT 3 | EMEREPC-A02 |
| • REU MFS 3 PRI | LFBW-CPD-03 |
| • REU MFS 3 SEC | SPDA3-1-12 |

Should you have any questions pertaining to this AW or require additional information, please contact your Bombardier Field Service Representative (FSR) or the Customer Response Centre (CRC).