

Advisory Wire

REFERENCE NO:	AW700-21-0160, Rev 4	INFORMATION TYPE:	Maintenance Operational
ATA:	21-52	EFFECTIVITY:	Global Express / XRS (9002 - 9312, 9314 - 9380, 9384 - 9429) Global 5000 (9127 to 9383, 9389 to 9400, 9404 to 9431 and 9998) Global 5000 feat. Vision Flight Deck (9386, 9401, 9445 - 9834) Global 6000 (9313, 9381, 9432 -9831)
SUBJECT:	“PACK FAULT” CAS message while CAIMS / OMS is active		

1. REFERENCES:

- 1.1. AW700-45-0065 CAIMS Nuisance Fault Messages
- 1.2. AW700-45-0393 Onboard Maintenance System (OMS) nuisances
- 1.3. Advisory Council Top Issue # 21-31-M-964 (voted at meeting #31, April 28-29, 2015)
- 1.4. Service Bulletin 700-21-056, 700-1A11-21-030, 700-21-5008 and 700-21-6008 (April/2018)

2. INTRODUCTION:

This Advisory Wire is to inform Operators about a nuisance condition that may be present during air conditioning pack operation on the ground with active CAIMS (Central Aircraft Information Maintenance System) for Global Express, XRS and Global 5000 / active OMS (Onboard Maintenance System) for Global 5000 featuring Vision Flight Deck & Global 6000.

This Advisory Wire (AW) revision is to inform Operators of the release of Service Bulletin (ref1.4) which provides a solution to the condition described in this AW.

3. DESCRIPTION:

During normal troubleshooting of the Air Conditioning System (ACS), CAIMS / OMS provides information for fault isolation. In some cases, the ACS troubleshooting requires data monitoring using a CAIMS active mode such as System Diagnostic, Stored Fault or Bus Reader while the “faulty pack” is running (note: the OMS is in Maintenance Mode when MAINT MODE ACTIVE (cyan) advisory message is posted on the Engine Indication and Crew Alerting System (EICAS)). Unfortunately, none of the CAIMS / OMS active modes can be used to troubleshoot the ACS while the “faulty pack” is running.

When CAIMS / OMS maintenance mode is active, the rate of transmission of the labels sent by the Air Conditioning System Controller (ACSC) to the Data Acquisition Unit (DAU) / Data Concentration Module Cabinet (DMC) is increased, disturbing the reception protocol between channels and resulting in irregular pack operation causing nuisance CAIMS / OMS fault and “LH PACK FAULT” and / or “RH PACK FAULT” Crew Alerting System (CAS) message.

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The faults RH or LH Pack Discharge Temperature Sensor / WRG along with the loss of the RS-422 bus communication between ACSC channels (ACSC1/2 [NO DATA FROM CH A/B TO CH A/B]) are usually logged when the condition described above occurs. As a result, the loss of RS-422 forces the ACSC channels to constantly switch from one channel to the other, causing PDTS Out Of Range due to power interruptions. The same situation has also been observed following a PACK FAULT during flight and after analysis of the Non-Volatile Memory (NVM).

4. ACTION:

Operators should be aware that, when the conditions described above occur, some nuisance CAS messages may be posted with valid CAIMS / OMS fault messages. If a Pack Discharge Temperature Sensor / WRG fault is observed at the same time as ACSC1/2 [NO DATA FROM CH A/B TO CH A/B] while using CAIMS / OMS in maintenance mode, it shall be considered a nuisance. Following are the lists of OMS / CAIMS fault codes and the different associated reset procedures to ease the troubleshooting of these faults.

ATA	Fault Name	Fault Code	Fault Type	LRU	Reset Procedure
21-60-21	ACSC1 [NO DATA FROM CH A TO CH B]	2162316ECS	Internal Fault	ACSC 1-B	Both messages are to be considered nuisance when posted simultaneously
	[ACSC1-B] LH PCK DIS TEMP SENS /WRG	2162422ECS	Probe/Sensor Fault		
	ACSC1 [NO DATA FROM CH B TO CH A]	2161316ECS	Internal Fault	ACSC 1-A	Both messages are to be considered nuisance when posted simultaneously
	[ACSC1-A] LH PCK DIS TEMP SENS /WRG	2161422ECS	Probe/Sensor Fault		
	ACSC2 [NO DATA FROM CH A TO CH B]	2164316ECS	Internal Fault	ACSC 2-B	Both messages are to be considered nuisance when posted simultaneously
	[ACSC2-B] RH PCK DIS TEMP SENS /WRG	2164422ECS	Probe/Sensor Fault		
	ACSC2 [NO DATA FROM CH B TO CH A]	2163316ECS	Internal Fault	ACSC 2-A	Both messages are to be considered nuisance when posted simultaneously
	[ACSC2-A] RH PCK DIS TEMP SENS /WRG	2163422ECS	Probe/Sensor Fault		
	[ACSC1-B] LH PCK DIS TEMP SENS /WRG	2162422ECS	Probe/Sensor Fault	ACSC 1	If this message is posted, requires troubleshooting
	[ACSC1-A] LH PCK DIS TEMP SENS /WRG	2161422ECS			
	[ACSC2-B] RH PCK DIS TEMP SENS /WRG	2164422ECS	Probe/Sensor Fault	ACSC 2	
	[ACSC2-A] RH PCK DIS TEMP SENS /WRG	2163422ECS			

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ATA	Fault Name	Fault Code	Fault Type	LRU	Reset Procedure
21-60-21	ACSC1 [NO DATA FROM CH A TO CH B]	2162316ECS	Internal Fault	ACSC 1-B	Both messages are to be considered nuisance when posted simultaneously
	LH PACK DISCHARGE TEMP SENSOR /WRG	2162422ECS	Probe/Sensor Fault		
	ACSC1 [NO DATA FROM CH B TO CH A]	2161316ECS	Internal Fault	ACSC 1-A	Both messages are to be considered nuisance when posted simultaneously
	LH PACK DISCHARGE TEMP SENSOR /WRG	2161422ECS	Probe/Sensor Fault		
	ACSC2 [NO DATA FROM CH A TO CH B]	2164316ECS	Internal Fault	ACSC 2-B	Both messages are to be considered nuisance when posted simultaneously
	RH PACK DISCHARGE TEMP SENSOR /WRG	2164422ECS	Probe/Sensor Fault		
	ACSC2 [NO DATA FROM CH B TO CH A]	2163316ECS	Internal Fault	ACSC 2-A	Both messages are to be considered nuisance when posted simultaneously
	RH PACK DISCHARGE TEMP SENSOR /WRG	2163422ECS	Probe/Sensor Fault		
	LH PACK DISCHARGE TEMP SENSOR /WRG	2162422ECS	Probe/Sensor Fault	ACSC 1	If this message is posted, requires troubleshooting
	LH PACK DISCHARGE TEMP SENSOR /WRG	2161422ECS			
	RH PACK DISCHARGE TEMP SENSOR /WRG	2164422ECS	Probe/Sensor Fault	ACSC 2	
	RH PACK DISCHARGE TEMP SENSOR /WRG	2163422ECS			

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Bombardier has recently released the Service Bulletin (ref 1.4) which introduces an upgrade to the ACSC software. This software will adapt the RS422 transmission to the ARINC bus in order to smooth the CPU load. This will prevent CAS/CAIMS-OMS nuisances messages. The SB (ref 1.4) is a dedicated campaign managed by ISIT. Operators are encouraged to schedule the incorporation of SB (ref 1.4) at the next opportunity.

Should you have any technical queries pertaining to this Advisory Wire, please contact your local [Field Service Representative](#) (FSR) or [Customer Response Center](#) (CRC).