

Advisory Wire

REFERENCE NO:	AW700-24-0728 Rev 1	INFORMATION TYPE:	Maintenance Operational
ATA:	24-26	EFFECTIVITY:	Global 7500 aircraft (70006 – 70071)
SUBJECT:	Dual Frequency Converter Unit (DFCU) Nuisance Messages		

1. REFERENCES:

- 1.1. Service Information Letter (SIL) [SIL0027](#) Cabin Outlets Off-DFCU False Failure Reporting to CMS.
- 1.2. Astronics AES Vendor Service Bulletin (VSB) [SB1429-1-24-001](#)

2. INTRODUCTION:

This Advisory Wire (AW) revision 3 is to inform operators of the release of the Astronics Vendor Service Bulletin (VSB) SB1429-1-24-001 (Ref. 1.2) addressing the DFCU nuisance fault message during Operation.

3. DESCRIPTION:

Per design, the DFCU Electronic Circuit Breakers (ECB) can be shut off by pressing the CABIN OUTLET PBA on the cockpit overhead panel. When the cabin outlets are off, the DFCU sends a discrete signal to control the CABIN OUTLET PBA OFF annunciation.

The DFCU communicates with the Cabin Management System (CMS) to control the DFCU outputs and obtains status information from the CMS. The information is visible through the GCP (Fig 1) when faults are detected.

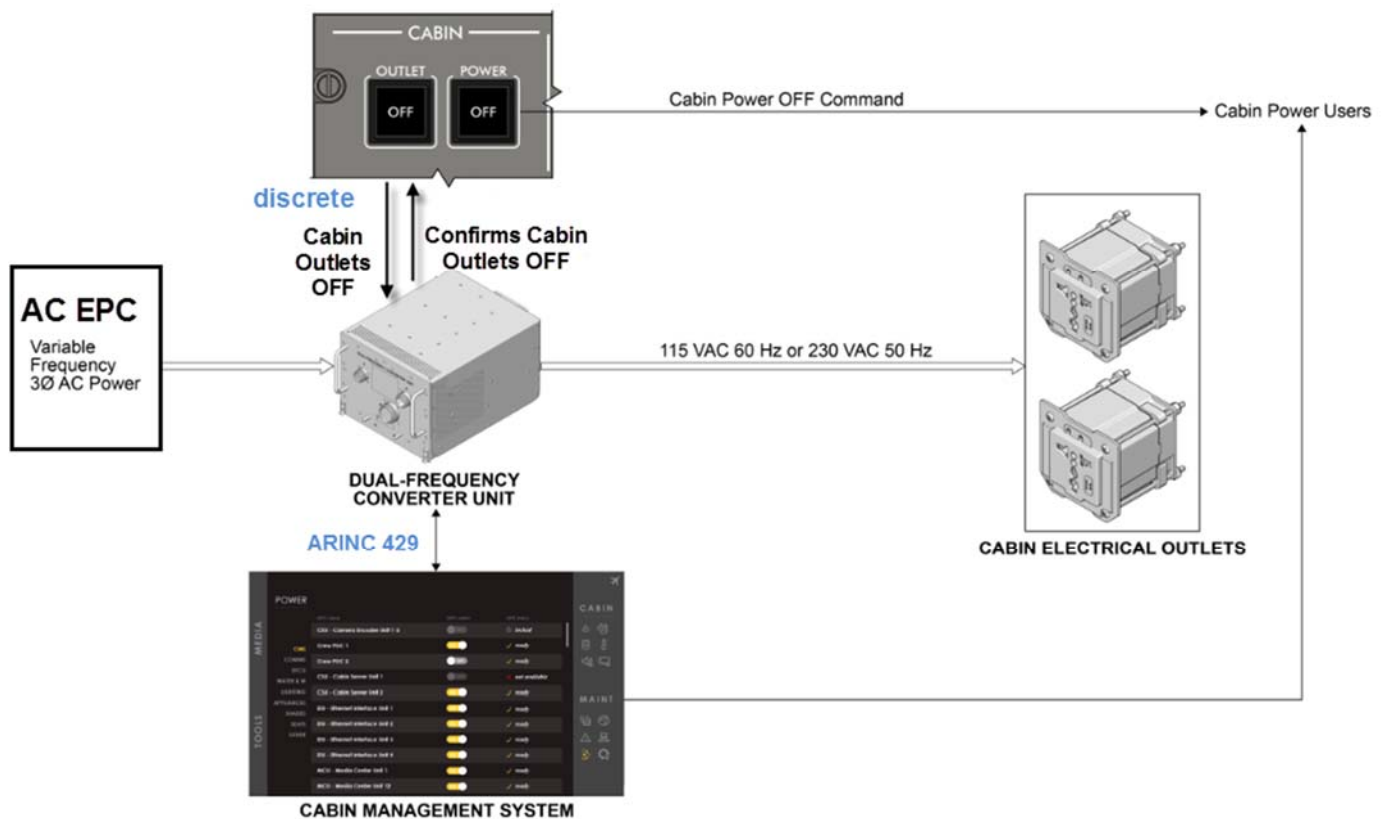


Figure 1

The CABIN panel, located overhead in the cockpit includes two (2) PBA's:

- The CABIN POWER PBA controls power to all cabin electrical loads. When it is pressed a white OFF light comes on in the PBA and the CABIN POWER OFF Crew Alerting System (CAS) message comes on. All electrical power to cockpit and cabin outlets is removed
- The CABIN OUTLET PBA controls power to the cabin electrical outlets only. When it is pressed, a white OFF light comes on in the PBA and power to the electrical outlets in the cabin is removed.

Aircrew and Maintenance personnel should be aware that when the CABIN OUTLET PBA is pushed in, some DFCU may report a nuisance fault to the CMS.

In that case, an active fault "*DFCU # X fault*" (X being "1" or "2") will be posted in the Fault Message Center (FMC) on GCP (Fig 2).

On a dual-DFCU installation, both DFCUs are not powered at the same time. An interlock function manages the usage of the DFCUs using the alternating flight leg logic.

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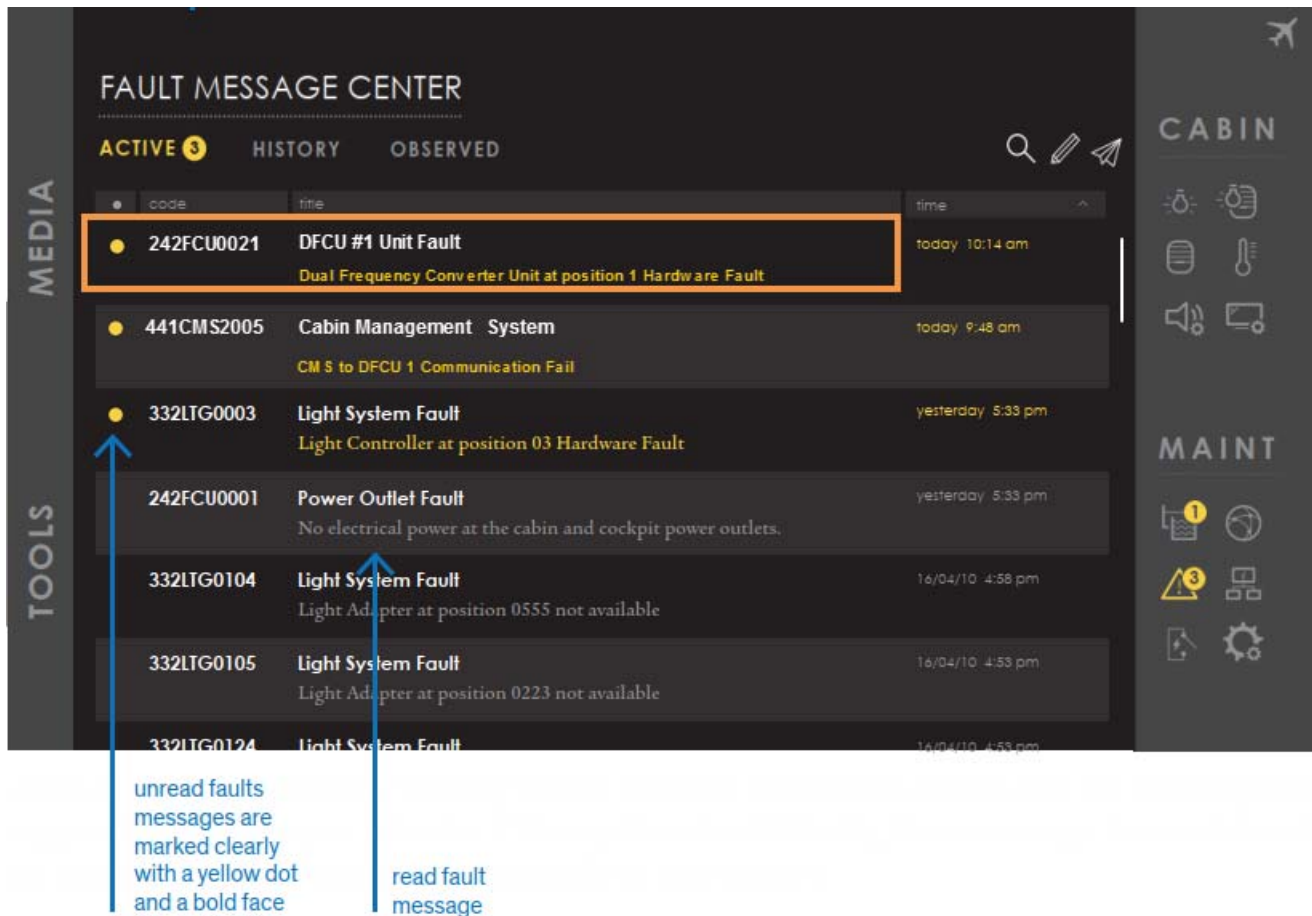


Figure 2

Bombardier is also aware that on some rare occurrences the GCP is not reporting all the DFCU information like the serial, part and software numbers due to ARINC429 communication failure with the CMS (Fig 3).

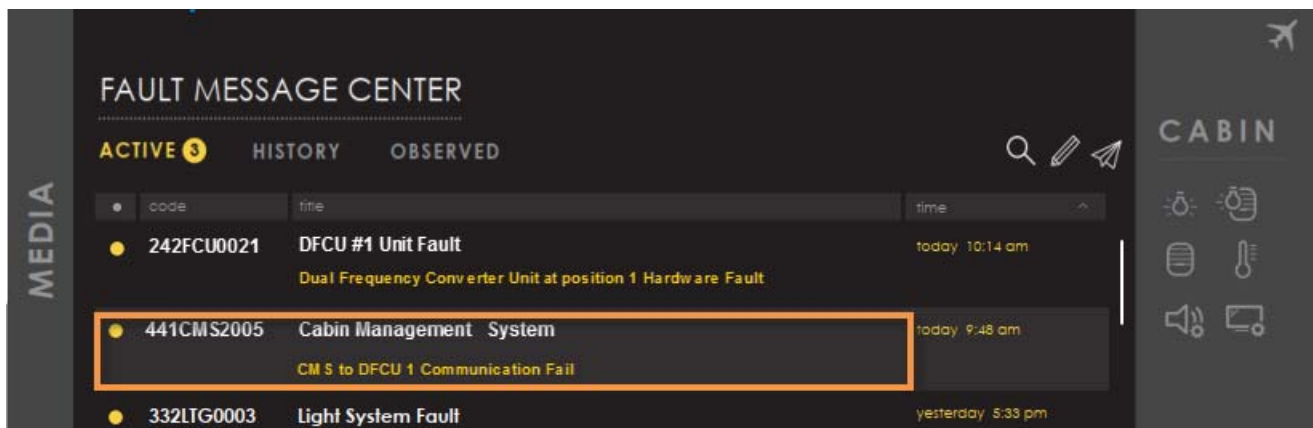


Figure 3

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It has been verified that both DFCU functionality and operation are not affected by this loss of information. (Fig 4)



Figure 4

4. ACTION:

As initially communicated in the SIL0027 (Ref 1.1) the system functionality is not affected. Indeed, to prevent unnecessary troubleshooting time or parts replacement, when the CABIN OUTLET PBA is latched in and a DFCU fault is posted, operator should verify that flight deck outlets are still energized and if so, should ignore this fault. The DFCU fault clears once the CABIN OUTLET PBA is latched out.

Bombardier is still working with Astronics and the CMS supplier Lufthansa Technik, to address the ARINC429 communication failure (Fig. 4), which does not affect DFCU operation and functionality. This AW will be updated as soon as the technical solution is available.

The Astronics VSB SB1429-1-24-001 (Ref 1.2) introduces DFCU modstatus A starting at aircraft serial number 70072 and in the pool of spares, by attrition, following replacement if unit fails.

Should you have any queries pertaining to this AW or require additional information please contact your Bombardier Field Service Representative (FSR) or the Customer Response Center (CRC) team 24/7.