

ADVISORY WIRE

AW700-24-0303, Rev. 1

DATE: July 21, 2010

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FROM: BOMBARDIER CUSTOMER SERVICES BUSINESS AIRCRAFT

ADVISORY WIRE

REFERENCE NO: AW700-24-0303, Rev. 1

SUBJECT: Variable Frequency Generator (VFG) – Rotor Diode Failure

EFFECTIVITY: BD700-1A10 (9001 to 9999)
BD700-1A11 (9127 to 9999)

ATA: 24-25

This Advisory Wire contains Operational and Maintenance Information

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1.0 REFERENCE:

- 1.1 Global Express, XRS, G5000 VFG Oil Filter Element P/N 81705805-1 AIPC 24-25-01 Fig 20 item 15.
- 1.2 Bombardier Service Bulletin 700-24-076 / 700-1A11-24-015; Modification- Main Generator Oil System- Flush Oil System and Replace With Lower Viscosity Oil.
- 1.3 Discard of Oil Filter TLMC 5-21-10 Chapter 5 Task No. 24-25-00-201
- 1.4 Goodrich Power System Vendor Service Bulletin BA05801-24-18
- 1.5 TR24-10(XRS,G5000) and TR24-35(GX) AMM Task 24-25-00-680-801 Draining of the Main Generator Oil Supply
- 1.6 TR24-9(XRS,G5000) and TR24-34(GX) AMM Task 24-25-00-612-801 Filling of the Main Generator Oil Supply

2.0 INTRODUCTION:

This Advisory Wire is to inform Operators of a potential rotor diode failure condition with Variable Frequency Generators (VFG).

3.0 INFORMATION:

Recently, there has been an increase in reported cases of VFG failures in production and in service.

Failure investigation has revealed that under cold conditions in flight, where the VFG oil viscosity is high, the cooling oil flow is reduced leading to rotor diode failure. The investigation has linked a recent change in filter material used in the manufacture of the filter elements (Ref 1.1) with low oil flow at low temperatures.

In order to alleviate the current condition, Bombardier has issued a Recommended Service Bulletin. (Ref. 1.2) with specified time compliance. This service bulletin (Ref 1.2) will be a Continued Airworthiness (CAW) fleet

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campaign requiring 100% compliance from the aircraft effectivity listed in the SB. In order to distinguish this SB from other standard service bulletins, the acronym ICA will be included ahead of its title. For more information related to ICA SBs reference the Customer Forum and Newsletter issued April 20th 2010/ vol 7/ issue 8 on the CIC website. The ICA SB will provide instructions to inspect current VFGs that are suspected of having the affected filter elements installed and replace the oil type by Type I oil (Mil-L-7808), which has a lower viscosity. The Bombardier service bulletin has a Goodrich Power Systems Vendor Service Bulletin (Ref 1.4) attached with instructions to strike off the Mil-L-23699 (Type II oil) reference from the VFG data plate.

It has been established that newly manufactured VFGs and field units that have had their filter serviced per the current TLMC discard task (Ref. 1.3) or were subjected to unscheduled removals as of May/2009 are affected by the new batch of filter element. Those units will be required to utilize the lower viscosity oil.

Thereafter, Bombardier will continue evaluating the VFG oil cooling system with the respective suppliers to determine the need for further corrective action, if any.

The Aircraft Maintenance Manual (AMM) (Ref. 1.6) has been amended to ensure that future servicing of the VFG oil system will be restricted to Type I oil for all operators. Type I oil will restore the required oil flow and provide sufficient cooling even with the suspected batch of filter elements.

It should be noted that VFGs that were not required to have “Part A” or “Part B” of the Service Bulletin (Ref 1.2) accomplished and were affected by “Part C” only, may remain filled with type II oil as indicated in the Service Bulletin. This is an acceptable scenario, even though the name plate had the type II crossed out as per “Part C” of the Service Bulletin. These VFGs can be topped up with Type I oil as long as it has been established, as per the Service Bulletin, that the VFG has the old filter element installed.

A temporary revision (Ref. 1.5) has been issued for the AMM task “Draining of the Main Generator Oil Supply” to include a flushing procedure. This procedure will ensure that oil trapped in the oil coolers will be removed.

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4.0 ACTION:

Operators are required to comply with the Bombardier Service Bulletin (Ref.1.2) which outlines the actions that operators should take.