

E01-SAA096S05-011
SHEET 7 OF 8SAA096S05-011
REV.A
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ATTACHMENT
Page 58 of 61**CRITICAL ITEM:** Charcoal Filters (two assemblies, two filters in each assembly)**Find Number:** A145038, A145039**System:** VPF Payload ECS**Failure Category:** 2**SAA No.:** 096S05-011**NASA Part No.:** None**P/N/Name:** 572-1267**Mfr's:** Barnaby Cheney**Drawing/** Ellis & Watts**Part No.:** No. 127 FMD**Sheet No.:** 353JS; 79K22629**Function:** Filters hydrocarbons from inlet air**Critical Failure Mode:** Pass contaminants (FMM 096S05-011.001)**Cause:** Failure of filter media or leakage around gasket**Failure Effect:** Hydrocarbon contamination of payload**ACCEPTANCE RATIONALE:****Design:**

- o Rated capacity of 1000CFM. There are two filters in each assembly, for a total capacity of 2000 CFM. The vendor manual states that each air circuit supplies 150 lbs./min. of conditioned air, which is equivalent to 1804 CFM at 68 $\frac{1}{2}$ F. The unit is normally used below full capacity.
- o Resistance of 0.22 inches H₂O.
- o Carbon content of 4% lbs..
- o Size 23 5/8" x 23 3/8" x 7 7/8" (H x W x D).

Test:

File VI OMRSD, as implemented by OMI E3501, requires verification of particulate count and hydrocarbon content prior to initial connection to the payload and verification of satisfactory temperature, humidity, pressure and flow before and during use

Inspection:

- o The differential pressure across the filter is measured and shown on a gage.
- o During quarterly maintenance, it is verified that the charcoal filter differential pressure gage readings are within the 0-1.0 inches H₂O range.
- o The pressure gages are calibrated annually.

Failure History:

From 1981 to the present, no PRACA reports were written on charcoal filters in this system.

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Operational Use:

This system is used in accordance with DMI E3501. Out of tolerance readings will result in termination of payload testing.

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