CIL 199901

SEP 17 1998

EO 6-SAA09CS02-001

~~SAA09CS02-001 Rev. E~~

USA Ground Operations CIL Sheet

Critical Item: Pressure regulator
Criticality Category: 1S
NASA Part No: None
Total Quantity: 2
Mfg/Part No: Fisher Control Co., Inc. / 1301F
System: ECLSS Ground Coolant System

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
1-S0508PR1	1	Pad-A (Contingency)	S70-0508-02C	018.00	79K06010 / 4
1-S0508PR1	1	Pad-B (Contingency)	S70-0508-02C	018.00	79K06010 / 4

Function:

Regulates 750 psig facility GN2 down to 200 psig.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
09CS02-001.003 Regulates low	Structural failure Insufficient GN2 hazard purge pressure for electrical compartments in the ground cooling units circulation and refrigeration modules. Possible fire and/or explosion if hazardous gases are present. Possible loss of life and/or vehicle in the event of a hazardous condition.	The purge loss is detectable on downstream pressure gages or on the LPS console via a pressure switch and function designator. Seconds	1S

ACCEPTANCE RATIONALE

Design:

- Component specifications:
  - Rated inlet pressure: 6000 psig
  - Actual inlet pressure: 750 psig
  - Rated outlet pressure: 100 to 250 psig
  - Actual outlet pressure: 200±20 psig
  - Rated temperature: -20°F to 180°F
  - Actual temperature: Ambient on pad surface

Test:

- The manufacturer performs the following certification tests:
  - Functional
  - Hydrostatic

Inspection:

- OMRSD File VI requires verification of proper output pressure (200±20 psig) before use at the Pads and at component replacement.

Failure History:

- Current data on test failures, unexplained anomalies, and other failures experienced during ground processing activities can be found in the PRACA database. The PRACA database was researched and the following data was found on this component in the critical failure mode.
  - One pressure regulator was regulating low; it was readjusted to provide the proper range (P-V6-315231).

Operational Use:

Correcting Action	Timeframe
There is no action which can be taken to mitigate the failure effect.	Since no correcting action is available, timeframe does not apply.