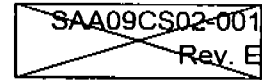


SEP 17 1998

EO 6-SAA09CS02-001



USA Ground Operations CIL Sheet

Critical Item: Relief Valve
NASA Part No: None
Mfg/Part No: Brunswick Valve & Control, Inc. / 5159T-2MP-250
System: ECLSS Ground Coolant System

Criticality Category: 1S
Total Quantity: 2

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
1-S0508RV1	1	Pad-A (Contingency)	S70-0508-02C	018.00	79K06010 / 4
1-S0508RV1	1	Pad-B (Contingency)	S70-0508-02C	018.00	79K06010 / 4

Function:

Provides overpressure protection for downstream components within the GN2 hazard purge system.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
09CS02-001.001 Fails open	Structural failure or contamination Continuous vent of GN2 hazard purge. Loss of GN2 hazard purge for electrical compartments in the ground coolant 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 operating pressure: 0 to 250 psig
 - Actual operating pressure: 200±20 psig
 - Rated temperature: -65°F to 275°F
 - Actual temperature: Ambient on pad surface
 - Burst pressure: over 5000 psig
 - Cracking pressure: 250 psig
 - Reseat pressure: 210 psig

Test:

- The manufacturer's non-destructive testing included the following tests:
 - Proof
 - Leak
 - Functional

Inspection:

- OMRSD File VI requires verification of current calibration annually 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 relief valve was found to be leaking constantly; it was replaced (P-V6-236338).

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.