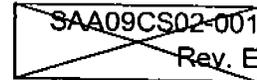


SEP 17 1998

EO 6-SAA09CS02-001



**USA Ground Operations CIL Sheet**

**Critical Item:** Relief Valve  
**NASA Part No:** None  
**Mfg/Part No:** Brunswick Valve & Control, Inc. / 559A-2MP-50  
**System:** ECLSS Ground Coolant System

**Criticality Category:** 1S  
**Total Quantity:** 2

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
1-S0508RV2	1	Pad-A (Contingency)	S70-0508-02C	018.00	79K06010 / 4
1-S0508RV2	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
09CS02-001.002  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 202 psig
  - Actual operating pressure: 40±5 psig
  - Rated temperature: -40°F to 250°F
  - Actual temperature: Ambient on pad surface
  - Cracking pressure: 50 psig
  - Reseat pressure: 46 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 cracking at normal operating pressure; it was replaced (P-V6-279114).

**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.