SFP Item: Pressure Regulator

Find Number: A103631

Criticality Category: 1S

SAA No:	09FT06-011	System/Area:	Fluid & Gas Subsystem P/L Canister Transporter
NASA Part No:	79K80002-9	PMN/ Name:	A70-0892
Mfg Part No:	Grove Valve & Regulator 10927EK3A	Drawing/ Sheet No:	79K08346/ 2

Function: Regulates 2000 psig GN_2 supply to 75±6 psig.

Critical Failure Mode: Regulates low (FMN 09FT06-011.002)

Cause: Internal part failure

Failure Effect: Loss of GN_2 to the ECS supply unit, ECS valve control panel and Interface Panels A thru E. Loss of GN_2 purge may result in damage to payload. Loss of canister vent control to smother in the event of fire. Potential loss of life or payload.

Acceptance Rationale

Design:

- Component Specification:

	Rated	Actual
Pressure (psig)	inlet 3000/300 outlet	2000/75±6
Temperature (°F)	-20 to 250°F	Ambient

- Materials: Body - 300 series SST
  Seats - 300 series SST
  Diaphragm - mylar
  Valves - nylon
- Required flow - 4 SCFH for 12 hrs at 0-30 psig. (Available flow - 13.8 SCFH for 11 hrs per "K" Bottle).
- Flow capacity at actual pressure differential - approx. 60 SCFH at 70°F.
- Failure is detectable by the I&CS.
- Qualified by previous usage in the Apollo program as 75M15235FPR-4, 75M18273FPR-4.

Test:

- The valve was procured and accepted in accordance with the requirements of NASA component specification 79K80002.

Inspection:

- Regulator pressure setting is checked prior to each operational use per OMI E2004.

Failure History:

- No MDAC PRACA failure history in the critical failure mode.

Operational Use:

- N/A