~~SAA29PP129-001~~
B/L: 72.06
72.63
SYS: Fuel Cell
Deservicing

MAY 1 9 1992

Critical Item: Regulator, Spring Loaded (1 Item Total)

Find Number: A113042

Criticality Category: 1S

SAA No: 29PP129-001

System/Area: Fuel Cell Detank and Safing SLS, SLF and CLS

NASA Part No: 79K80002-2

PMN/ Name: S70-1225-04 GN2/GHe Supply/Purge Pnl.

Mfg/ Part No: Grove Valve & Regulator 15L

Drawing/ Sheet No: 79K15491 - Pg 1-2 79K15493 - Pg 1-2

Function: Regulate GHe supply pressure for scupper purge at O-29 interface.

Critical Failure Mode/Failure Mode No: Regulate Low/No Output/29PP129-001.001

Failure Causes: Broken Spring

Failure Effect: Possible loss of scupper purge. Loss of purge if coupled with a system leak, could result in a fire and/or explosion with loss of life and/or vehicle. Loss detectable on Gage A113045.

Time to Effect: Immediate

Acceptance Rationale

Design:	Rated:	Actual:
Operating Pressure	- 3000 PSI	2250 PSI
Proof Pressure	- 4500 PSI	-
Burst Pressure	- 12000 PSI	-
Operating Temp	- 20°F to +250°F	Ambient
Body Material	- 300 Series SST	
Seat Material	- 300 Series SST	
Seal Material	- Conform to MIL, AMS or NAS Specs	
Diaphram Material	- Mylar	
Valve Material	- Nylon	
Spring Material	- 304 SST	

A113042 (Continued)

All materials in this Regulator are compatible for use with dry air, nitrogen & helium. This Regulator is designed to maintain a set pressure within ±1% with a fixed inlet pressure and flow. Creepage under cyclic flow conditions shall not exceed ±3% of set outlet pressure with no creep in outlet pressure after lockup. This Regulator also has a reverse flow relief feature, relief cracking pressure will be no more than 120% of set outlet pressure.

Test: Per Dwg. 79K80002, the manufacturer performs the following tests:

- Proof pressure test
- Pressure regulation test
- Leakage rate test

Inspection:

- OMRS 79K16224, requires this regulator to be tested for creepage at each panel use and component replacement.
- File VI requires the Scupper Purge Flow to be verified audibly, prior to starting H2 drain operations.

Failure History:

- The PRACA database was queried and no failures in the critical failure mode were found.
- The GIDEP failure data interchange system has been researched and no failures of this component were found.

Operational Use:

- Corrective Action:

  There is no action which can be taken to mitigate the failure effect.

- Timeframe:

  Since no corrective action is available, timeframe does not apply.