

E01-SAA29PP129-001 ~~SAA29PP129-001~~

Sheet 4 of 8

B/L: 72.06  
72.63  
SYS: Fuel Cell  
Deservicing

MAY 19 1992

Critical Item: Check Valve (1 Item Total)

Find Number: A113051

Criticality Category: 1S

SAA No: 29PP129-001

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

NASA  
Part No: 79K80132-1

PMN/ 570-1225-04  
Name: GN2/GHe Supply/Purge Pnl

Mfg/ James. Pond and Clark  
Part No: H249T-488

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

Function: Prevent reverse flow from scupper into the GHe supply system.

Critical Failure Mode/Failure Mode No: Fail Closed/29PP129-001.003

Failure Causes: Contamination/Corrosion

Failure Effect: Loss of scupper purge supply. Loss of purge coupled with a system leak could result in a fire or explosion with loss of life and/or vehicle. There is no method to detect loss.

Time to Effect: Immediate

Acceptance Rationale

<u>Design:</u>	<u>Rated:</u>	<u>Actual:</u>
Operating Pressure	- 6000 PSI	50±5 PSI
Proof Pressure	- 9000 PSI	-
Burst Pressure	- 24000 PSI	-
Operating Temp	- 40°F to +250°F	Ambient
Body Material	- 300 Series SST	-
Spring Material	- 302 SST	-
Seal Material	- Buna N and Teflon	-

All material in this Check Valve is compatible for use with dry air, helium, hydrogen and nitrogen.

This Check Valve is designed to allow flow to occur with a maximum cracking pressure of 4 PSI and to remain bubble tight in the reverse flow direction over the entire range of inlet and outlet pressures.

*WAT SAV23AAL  
R. # 22*

SAA29PP129-001  
B/L: 72.06  
72.63  
SYS: Fuel Cell  
Deservicing  
MAY 19 1992

A113051 (Continued)

Test: Per Dwg 79K80132, the manufacturer performs the following tests:

- o Proof pressure test
- o 4 PSI max. cracking pressure test
- o Leakage test

Inspection:

- o OMRS 79K16224, requires this Check Valve to be leak checked at component replacement.
- o File VI requires the Scupper Purge Flow to be verified audibly, prior to starting H2 drain operations.

Failure History:

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

Operational Use:

- o Corrective Action:  
There is no action which can be taken to mitigate the failure effect.
- o Timeframe:  
Since no corrective action is available, timeframe does not apply.