~~SAA09PPM134-001~~
B/L: 72.80
SYS: MLP SRB HYD SERVICE

NOV 2 0 1995

Critical Item: Filter (3 ea)

Find Number: A101276

Criticality Category: 1

Redundancy Screen: A- NA B- NA C- NA

SAA No: 09PPM134-001

System/Area: MLP SRB Hydrazine Service/LOA

NASA Part No: 22A01605

PMN/ S77-0150/
Name: Cart Assembly

Mfg/ Part No: Wintec 15241-713-1

Drawing/ 79K15500/1
Sheet No: 79K40090/1

Function: Provide final filtration to ensure ICD specified cleanliness level of hydrazine fuel before entering the SRB APU fuel service module.

Critical Failure Mode/FM No: Pass contaminants/09PPM134-001.002

Failure Causes: Structural failure of filter element.

Failure Effect: Possible contamination of the SRB APU system and possibly damaging the APU resulting in loss of life and/or vehicle. This failure is not detectable.

Acceptance Rationale

Design:

- This component was designed in accordance with NASA (MSFC) specification 22A01605.
- This filter is used within the design specification.

| | Specification | Operating |
|---|---|---|
| Operating pressure (PSIG) | 0-3000 | 12 (Nominal) |
| Flow rate (GPM) | 1 | .5 |
| Operating temperature (°F) | 35° to 250° | Ambient |
| Element Collapse Pressure (PSID) | 1200 | --- |

- This filter rating is 18 micron (absolute).
- The system has an 18 micron upstream filter.
- This filter element is constructed of type 304L stainless steel woven wire mesh, the filter jacket is type 304 stainless steel.

Filter A101276 (Continued)

Design: (Cont)

- o This filter is a final filter in the hydrazine input line which is used to fill the APU fuel service module. The filter as installed sees only fluid that is within the system that has been filtered through an upstream 18 micron filter.

Test:

- o Qualification and acceptance testing was in accordance with the requirements of NASA (MSFC) component specification 22A01605. Acceptance testing included the following:

  - Proof - Leak - Filtration

- o OMRS File VI requires recertification or replacement on an annual basis or when contamination is suspected.

- o Sampling requirements are performed in accordance with OMI-B2038.

Inspection:

Manufacture specific inspection points were:

1. Filter tested for zero leakage, testing agent was GN2.
2. Filter assembly tested by bubble point method of SAE ARP 901, to determine pore size.

Failure History:

- o The PRACA data base was queried and no failure data was retrieved against this component.
- o The GIDEP failure data interchange system has been researched and no failures of this component were found.

Operational Use:

- o Corrective Action: None
- o Time Frame: N/A