

Critical Item: Hydraulic Cylinder (4 Items Total)
Find Number: A128438, A128439 (1 ea HB 1 and HB 2)
Criticality Category: 2

SAA No: 09FY093-007	System/Area: Orbiter Main Access Platform HB 1 and 2
NASA Part No: None	PMN/Name: A70-0668 Orbiter Main Access Platform
Mfg/Part No: Miller Fluid Power Corp. J66B	Drawing/Sheet No: 79K08118 EQ-9

Function: Extend and retract platforms 11A-3 and 11A-4

Critical Failure Mode/Failure Mode No: External leakage/09FY093-007.006

Failure Cause: Seal failure

Failure Effect: Contamination of wing and aft section of Orbiter with hydraulic oil. The failure would be visually detected and the time would be immediate.

ACCEPTANCE RATIONALE

Design:

- Teflon seal is mechanically locked in place to prevent roll, extruding and blowout.
- Seal is energized with pressure.

	Pressure	
	Rated	Actual
	500 - 2500 psi	975 - 1000 psi

Test:

- Cylinder was tested by the manufacturer for zero leakage past the seal at 2000 psi which is twice the actual working pressure.

Inspection:

- Per OMI V8C48 visual inspections are performed annually on each hydraulic platform to check for leaking hydraulic fluid.

*Attachment
505023483
Sheet 19 of 21*

JAN 21 1994

Failure History:

- The PRACA database was researched and no failure data was found on this component in the critical failure mode.
- The GIDEP failure data interchange system was researched and no failure data was found on this component in the critical failure mode.

Operational Use:

- **Correcting Action:**
Operator closes valve to release pressure in cylinder.
- **Timeframe:**
Seconds.

WORKSHEET 5312-013
831020mg P50185*Attachment
5050234BJ
Sheet 20 of 21*