NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
		114FM04A		
SUIT PRESSURE TRANSDUCER ITEM 114 --- SV767788-1/-2 (1)	2/2	Loss of output, indicates zero pressure. Failure in electrical leads or connector which causes an open circuit. Mechanical shock loading causes a loosening of the bearing adjustment and prevents the wiper from contacting the element.	END ITEM: False indication of zero suit pressure. GFE INTERFACE: False CWS warning and indication of low suit pressure emergency. The crewman is erroneously directed to close the purge valve. MISSION: Terminate EVA. Loss of CWS warning for low suit pressure. CREW/VEHICLE: None. TIME TO EFFECT /ACTIONS: Seconds. TIME AVAILABLE: N/A TIME REQUIRED: N/A REDUNDANCY SCREENS: A-N/A B-N/A C-N/A	A. Design - -1 Conrac and -2 Gulton: All electrical joints are coated with epoxy and insulated leadwires are used to provide wire strain relief and prevent an open circuit. Electrical solder joints are designed and soldered per NHB-5300.4(3A-1). B. Test - Component Acceptance Test - The sensor is subjected to random vibration testing (6.1 grms) to insure there are no workmanship or material problems that would cause an open circuit. The sensor is subjected to calibration testing at high and low temperature (30 degrees to 120 degrees F) to insure there are no defects that thermal expansion/contraction would uncover. The sensor circuit continuity is measured to insure there are no open circuits. PDA Test - The sensor is calibration checked as assembled on the shear plate to insure the output voltage is within spec limits per SEMU-60-010, Test 27. Certification Test - Certified for a useful life of 20 years (Ref. EMUM1-0084). C. Inspection - The sensor is visually inspected prior to case assembly. D. Failure History - RDR H-EMU-114-C003 (8-24-84) was issued for Item 114 due to loss of output voltage: After 40,000 pressure cycles 0 to full scale the certification unit exhibited loss of output voltage at 65% of full scale output due to contamination of coil where wiper contacts it. The cycle life requirement was changed to 25,000 cycles to eliminate problem. This represents a factor of 12 over the actual est. life cycles use of 2500 over 15 year. E. Ground Turnaround - Tested for non-EET processing per FEMU-R-001, Transducer and DCM Gage Calibration Check. FEMU-R-001 Para 8.2 EMU Preflight KSC Checkout for EET processing. F. Operational Use - Crew Response - PreEVA: If failure can be determined to be sensor, continue with EVA prep. Perform manual leak checks. Training - Standard EMU training covers this failure mode. Operational Considerations - For single failure, no constraints. EVA checklist procedures verify hardware integrity and systems operational status prior to EVA. Real Time Data System allows ground monitoring of EMU systems.

EXTRAVEHICULAR MOBILITY UNIT

SYSTEMS SAFETY REVIEW PANEL REVIEW

FOR THE

I-114 PRESSURE SUIT SENSOR

CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

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