NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
DISPLAY AND CONTROLS MODULE, ITEM 300 --- SV792294-05 (1)	2/2	300FM06: IV position switch fails on (closed). CAUSE: Internal switch failure due to contact welding, jamming, or contamination, fractured braze joint, switch activation drift.	END ITEM: Unable to display actuator position when actuator is in IV. GFE INTERFACE: Unable to perform leak check. MISSION: None. If IV, terminate mission for inability to complete suit leak check. Loss of one EMU. CREW/VEHICLE: None.	A. Design - The 3 micro switches are hermetically sealed units which meet the requirements of MIL-S-8805/8 (NS 27216-6). The internal contacts are gold plated to prevent corrosion. The external wiring to the switches is teflon insulated M22759/11. Soldering to the switch terminals is per NHB 5300.4 (3A-1) The switch is mounted to a stop plate, and actuation is via a slide arm on the shearplate which together prevents switch damage due to inadvertent or excessive mechanical force. The switches are rated at 0.5 amperes. Actual current is 0.5 milliamperes. B. Test - Component Acceptance Test: The unit is tested per MI-S-8805 by the vendor. In-Process Test - Proper operation of the switches is verified during the completion of assembly of the O2 Actuator Switch Assembly (kit SV26788-02). Certification Test - The microswitches are qualified to MIL-S-8805/8 (vendor is on QPL) which has a life requirement of 25,000 cycles minimum. The switches completed the 15 year structural vibration and shock certification during 10/83 and four hour thermal vacuum certification during 2/82, both as part of the DCM. The O2 Actuator Switch Assembly (kit SV26788-02) completed 15 year structural vibration and shock and thermal vacuum certification for the redesigned DCM during 7/86 and 8/86 as part of the DCM/308. In addition, the switch/slide arm assembly (DCM/Shearplate) was cycled for the following durations during 1/84: Position — Actual — Spec IV — 1,323 — 5,519 OFF — 3,969 — 10,040 PRESS — 2,646 — 6,069 The remainder of the cycle testing was completed during 6/87.

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	2/2	300PH06:		

C. Inspection -
At switch and stop (SV774113-3) assembly level, an inspection is done which cycles the switch while checking the distance for actuation. A broken switch would be detected at this point.
Soldering of lead wires is inspected for compliance to NHB5300.4 (3A-1) and the wires themselves are inspected for damage.

D. Failure History -
None.

E. Ground Turnaround -
Tested per FEMU-R-001, O2 Actuator Position Switch Check.

F. Operational Use -
Crew Response - PreEVA: Continue EVA operations. Perform all leak checks manually.
EVA: No response, single failure undetectable by crew or ground.
Training - Standard EMU training covers this failure mode.
Operational Considerations - For single failure, no constraints.