NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
POWER MODE SELECTOR SWITCH, ITEM 364 --- SV77B596-4 (1)	2/2	364FM19: Electrical short from vehicle power to ground. Terminal (14/T1).	END ITEM: Establishes a low resistance path between vehicle power and ground.	A. Design - Each of the three switches is sealed in a dry nitrogen filled hermetically sealed case. The switches are per Mil-S-8805/46 with the 10 amp contacts silver plated. Switch contacts rated for 10 ampere. Actual current flow is 3.8 amperes. The external solder terminals are designed to withstand an axial pull of 8 lbs without degradation. The ball socket of the toggle pivot is greased (Braycote 601) prior to assembly.
		CAUSE: Contamination, wire chafing.	OPE INTERFACE: Excessive vehicle supply current draw. Vehicle supply would shutdown.	B. Test - Testing - Component Acceptance Test - Acceptance Test is conducted during PDA to verify switch operating torque. Also, switch is cycled during in-process and PDA electrical tests. The switch is vibrated and exposed to thermal cycling and vacuum as part of the DCM. Vendor acceptance includes 500 run-in cycles and an axial pull test on the handle.
			MISSION: Terminate mission.	
			CREW/VEHICLE: None.	Certification Test - The item completed 5,464 inductive and 8,536 resistive cycles during 1/81 which fulfilled the cycle certification requirement of 5,464 and 8,536 repectively. Class I Engineering Change 42806-386 (Toggle handle pull test) has been incorporated since this configuration was certified.
				C. Inspection - To preclude failure due to internal contamination, the switches are assembled in an environmentally controlled room. Assembly and processing is per Mil-S-8805/46. The switches receive in-process cycling and leak checks. The item 364 is x-ray inspected for acceptability of brazing. The solder terminals on the switch are visually check as part of source inspection for the part. The terminals are also inspected after lead wires are soldered on during DCM assembly. Solder joints are inspected per NHB 5300.4 (3A-1).
				D. Failure History -

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	2/2	364FM19:		None.

E. Ground Turnaround -
Switches are tested per FEMU-R-001 EMU Checkout in Orbiter and Orbiter Power Interface verification per standard power-up.

F. Operational Use -
Crew Response - PreEVA: Troubleshoot problem, if no success, consider third EMU if available. Otherwise, EMU go for EVA prep on battery power. Consider use of spare battery for insuit battery swap prior to EVA.
PostEVA: Remain on battery power until EMU doffed.
Operational Considerations - EVA checklist procedures verify hardware integrity and systems operational status prior to EVA. Flight rules define go/no go criteria related to SOU power.