NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
POWER MODE SELECTOR SWITCH, ITEM 364 --- SV778596-4 (1)	2/2	364FM17: Electrical open at power switch in battery position terminal (TB). CAUSE: Cold solder joint, severed lead wire, contamination on contact broken contact.	END ITEM: Loss of connection between battery and battery power discrete when switch is in battery position. GFE INTERFACE: Loss of consumables monitoring capabilities by CWS due to battery power discrete remaining off when switch is in battery position. Loss of warning from CWS for high battery current or low battery voltage. MISSION: Terminate EVA. CREW/VEHICLE: None.	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 ampere. 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. Microswitch actuator overtravel is adjusted to .007 inch minimum to ensure the common contact arm rotates completely over to the normally open contact. B. Test - Component Acceptance Test - Switch operation and continuity are verified during vendor acceptance tests. The switch is also subjected to 500 run-in cycles and an axial pull test on the handle to verify that it will not come loose during normal use. In-Process Test - Operation and integrity of the switch are verified during four separate in-process tests during initial Item 350 assembly. These tests include continuity and output voltage. The switch is cycled during these tests. PDA Test - The switch is subjected to Acceptance/PDA testing as part of Item 350. Tests include continuity operating torque, vibration, thermal cycling, and thermal vacuum. The switch is also cycled during Item 350 Acceptance/PDA electrical functional tests. 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 respectively. Class I Engineering Change 42606-384 (Toggle handle pull test) has been incorporated since this configuration was certified. C. Inspection -

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	2/2	364FM17:		To preclude failure due to internal contamination, the switches are assembled by the vendor in an environmentally controlled room. Assembly and processing is per MIL-S-8805/46. The switches receive in process cycling and leak checks. The entire item 364 is x-ray inspected for acceptability of brazing. The solder terminals on the switch are visually checked as part of the source inspection for the part. The terminals are also inspected after lead wires are soldered on during DCM assembly. Solder joints are inspected per NHB5300.4. (3A-1). D. Failure History - None. E. Ground Turnaround - Tested per the FEMU-R-001, EMU Vacuum Performance and DCM Display. F. Operational Use - Crew Response - PreEVA: Troubleshoot problem, if no success, consider third EMU if available. Otherwise, EMU go for EVA. EVA: Continue EVA. Training - Standard training covers this failure mode. Operational Considerations - EVA checklist procedures verify hardware integrity and systems operational status prior to EVA. Flight rules define go/no go criteria related to EMU EWS. Real Time Data System allows ground monitoring of EMU systems.