NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
VOLUME CONTROL ITEM 560 SV767784-1 (1) B256-1 B	2/2	360FM07: ELECTRICAL SHORT IN LOWER VOLUME CONTROL. CAUSE: INTERNALLY GENERATED DEBRIS.	END ITEM: INCREASE IN VOLUME. AMOUNT OF INCREASE DEPENDING ON LOCATION OF SHORT. GFE INTERFACE: LOSS OF USE OF BOTH OF THE REDUNDANT COMMUNICATION R.F. SETS. 259.7 AND 279.0 FREQUENCIES. MISSION: TERMINATE EVA. CREW/VEHICLE: NONE.	A. DESIGN - THE WIPER/RESISTIVE ELEMENT ASSEMBLIES ARE ENCASED WITHIN AN ENVIRONMENTALLY SEALED HOUSING. THE SEALS AROUND THE CONCENTRIC SHAFTS ARE PROVIDED BY DUAL O-SEALS. THE SEAL AT THE BACK OF THE ITEM IS PROVIDED BY POTTING AROUND THE SOLDER TERMINALS. THIS ARRANGEMENT PREVENTS CONTAMINATION FROM ENTERING THE CASING AND CAUSING EXCESSIVE WEAR OR CORROSION. THE EXTERNAL WIRES USED ARE #22 AND PER M22759/11 (TEFLON). THE SOLDERING IS PER NHB5300.4 (3A-1) AND THEN POTTED TO PROVIDE STRAIN RELIEF. THE WIRE BUNDLE IS DESIGNED TO WITHSTAND A PULL FORCE OF 5 LBS. WITHOUT DEGRADATION. B. TEST - COMPONENT ACCEPTANCE TEST - VENDOR TESTS INCLUDE RESISTANCE, OPERATING TORQUE, FUNCTIONAL, DIELECTRIC WITHSTANDING, AND INSULATION RESISTANCE TESTS. IN-PROCESS TEST - ITEM OPERATION AND RESISTANCE IS VERIFIED DURING ELECTRICAL TESTS PERFORMED DURING DCM ASSEMBLY. PDA TEST - ITEM OPERATION IS VERIFIED DURING DCM PDA PER SEMU-60-015. TESTS INCLUDE VIBRATION, THERMAL CYCLES (EACH FOLLOWED BY ELECTRICAL TESTING), AND OPERATION TORQUE. CERTIFICATION TEST - THE ITEM COMPLETED THE 15 YEAR STRUCTURAL VIBRATION AND SHOCK CERTIFICATION DURING 10/81 AND FOUR HOUR THERMAL VACUUM CERTIFICATION DURING 2/82, BOTH AS PART OF THE DCM. THE ITEM IS CYCLE CERTIFIED BY SIMILARITY TO THE BOHLAR/TIC POT WHICH WAS CERTIFIED DURING THE SKYLAB PROGRAM. THE BOHLAR/TIC PART COMPLETED 5,000 CYCLES WHICH IS 2.5 TIMES THE CERTIFICATION REQUIREMENT OF 1537 CYCLES FOR THIS ITEM. NO CLASS I ENGINEERING CHANGES HAVE BEEN INCORPORATED SINCE THIS CONFIGURATION WAS TESTED.

NAME P/N QTY	CREW	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
VOLUME CONTROL WITH 360 SV767784-1 1EA	2/2	360TH07: ELECTRICAL SHORT IN LOWER VOLUME CONTROL.		B. TEST (CONTINUED) - CHECKOUT TEST - VOLUME CONTROL OPERATION IS VERIFIED DURING PIA PER FEMU-R-001, PARA. 4.10, SEMU COMMUNICATION AND BIOMED CHECK. C. INSPECTION - THE LEAD WIRES ARE INSPECTED DURING SOURCE INSPECTION OF THE PART, AND AGAIN DURING DCM ASSEMBLY FOR DAMAGE AND WEAR TO THE INSULATION. AN OPEN CIRCUIT IS ALSO PRECLUDED VIA INSPECTION OF SOLDERING AT THE SWITCH TERMINALS (PRIOR TO POTTING) PER NHB5300.4 (3A-1). ALL SWITCH LEAD WIRES ARE PULL TESTED AFTER INSERTION INTO CONNECTORS DURING DCM ASSEMBLY TO INSURE PROPER LOCKING OF THE CRIMP CONTACTS. D. FAILURE HISTORY - NONE. E. GROUND TURNAROUND - VOLUME CONTROL OPERATION IS VERIFIED DURING GROUND TURNAROUND PER FEMU-R-001, SEMU COMMUNICATION AND BIOMED CHECK. F. OPERATIONAL USE - CREW RESPONSE - PREEVA: TROUBLESHOOT PROBLEM. IF NO SUCCESS, CONSIDER USING EMU IF AVAILABLE. EMU GO FOR EVA IF VOLUME IS ACCEPTABLE TO EV CREWMEMBER. EVA: EMU GO FOR EVA IF VOLUME IS ACCEPTABLE TO EV CREWMEMBER, OTHERWISE TERMINATE EVA. POSTEVA: DOFF EMU NOMINALLY. SPECIAL TRAINING - NO TRAINING SPECIFICALLY COVERS THIS FAILURE MODE. OPERATIONAL CONSIDERATIONS - EVA CHECKLIST PROCEDURES VERIFY HARDWARE INTEGRITY AND SYSTEMS OPERATIONAL STATUS PRIOR TO EVA. FLIGHT RULES REQUIRE THAT EVA BE TERMINATED IF TWO-WAY COMMUNICATION BETWEEN EACH EV CREWMEMBER AND ORBITER, EITHER DIRECT OR THROUGH RELAY, IS UNAVAILABLE.
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