

CIL
CRITICAL SYSTEM TEST
FILE: CIL-80P/2

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
ELECTRICAL HARNES ASSEMBLY ITEM 428 SV772763-3 111	R/E	425PPOB: ELECTRICAL OPEN, BATTERY VOLTAGE SENSE.	END ITEM; AN REWARD SENSING SIGNAL WILL BE AVAILABLE.	A. DESIGN - THE CABLE/CONNECTOR INTERFACES ARE STRAIN RELIEVED TO PREVENT EXCESSIVE CONDUCTOR LOADS AND POSSIBLE OPEN CIRCUITS DUE TO FATIGUE. THE MULTIPLE CONNECTOR END IS DOTTED WITH RTV AND IS CAPTURED WITHIN A METAL HOUSING FOR STRENGTH. THE VEHICLE CONNECTOR UTILIZES A METAL STRAIN RELIEF TYPE BACKSHELL.
8194-1 0		CAUSE: CABLE CHIPPING ADVERSE CONNECTION SHELL OR SHIELD. IMPROPER CONNECTION STRAIN RELIEF. FAULTY CONNECTION BETWEEN THE CONNECTION AND THE LEAD WIRES.	ONE INTERFACE; VEHICLE BATTERY CHARGER WILL NOT RECEIVE A REWARD SENSING SIGNAL AND WILL SHUT DOWN. MISSION: LOSS OF ENV. CABIN/VEHICLE; NONE.	THE WIRE IS 210 AND, TO PROVIDE THE ELECTRICAL AND MECHANICAL PROPERTIES TO PREVENT CHIPPING. CONDUCTORS ARE TIED TOGETHER AT 2-2 INCH INTERVALS AND SHEATHED IN A KLOYM OUTER LAYER TO HOLD CABLES TOGETHER SO THEY SHARE ANY LOADING AND TO PREVENT IMPACT OR ABRASION OF CONDUCTORS. CHIPPING PER SUS304V9 (BASED ON MIL-C SPEC-B-181).
				B. TEST - COMPONENT ACCEPTANCE TEST - AN ELECTRICAL CONTINUITY TEST IS PERFORMED PER OP. 10 OF SV772763-3 OPERATIONAL STATUS. THE ELECTRICAL RESISTANCE OF EACH CURRENT CARRYING CONDUCTOR IN THE ELECTRICAL HARNES MUST NOT EXCEED 0.2 OHM.
				PCA TEST - AN ELECTRICAL CONTINUITY TEST IS PERFORMED PER SEM-10-008, TEST 22.0.
				CERTIFICATION TEST - THE ITEM COMPLETED THE 30 YEAR STRUCTURAL VIBRATION AND SHOCK CERTIFICATION REQUIREMENT DURING 10/81. ENGINEERED CHANGE 42804-124 IDENTIFICATION OF MECHANICALLY LOCKED BACKSHELLS HAS BEEN INCORPORATED AND DEEMED TO HAVE NO IMPACT ON CERTIFICATION SINCE THIS CONFIGURATION WAS CERTIFIED.

SV772763-3
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CIL
 CRITICAL ITEMS RESP
 FILE: CIL-SOP/2

NAME P/N QTY	CRIF	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
ELECTRICAL HARNES ASSEMBLY ITEM 425 SV771761-3 111	2/2	975FND01 ELECTRICAL OPEN, BATTERY VOLTAGE SENSE LINE.		<p>C. INSPECTION - CRIMPING AND ASSEMBLY IS DONE PER SVMS4009 WITH CALIBRATED CRIMPING TOOLS, VISUAL AND ELECTRICAL INSPECTION OF CONDUCTORS PRIOR TO POTTING TO INSURE THERE ARE NO DAMAGED CONDUCTORS AND THAT THE CONDUCTORS ARE ROUTED PROPERLY. ELECTRICAL TESTING IS ALSO CONDUCTED AFTER POTTING TO INSURE THERE ARE NO OPEN CIRCUITS.</p> <p>D. FAILURE HISTORY - NONE.</p> <p>E. GROUND BURNING - TESTED PER FEMU-R-001, ORBITER POWER INTERFACE AND OPERATION PER STANDARD POWER UP (VIBOS-02).</p> <p>F. OPERATIONAL USE - CREW RESPONSE - PRE/POSTEVA; TROUBLESHOOT PROBLEM, IF NO SUCCESS, DISCONTINUE USE OF SCU RECHARGE FUNCTION. RECHARGE BATTERY USING OTHER SCU OR LINE SPARE BATTERY IF AVAILABLE. TRAINING - STANDARD EMI TRAINING COVERS THIS FAILURE MODE. OPERATIONAL CONSIDERATIONS - AT LEAST ONE SPARE EMU BATTERY IS MANIFESTED FOR EACH FLIGHT. EVA CHECKLIST PROCEDURES VERIFY HARDWARE INTEGRITY AND SYSTEMS OPERATIONAL STATUS PRIOR TO EVA.</p>
B304-2				