

CIL
 CRITICAL ITEMS LIST
 FILE: CIL-60P/2

NAME P/N QTY	CHRY	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
ELECTRICAL HARNESS ASSEMBLY ITEM 425 SV771763-1 (1)	2/2	42511061 ELECTRICAL OPEN, BATTERY CHARGE LINE. CAUSE: CABLE CHAFING AGAINST CONNECTOR AND THE LEAD WIRES. IMPROPER CONNECTOR STRAIN RELIEF.	END ITEM UNABLE TO RECHARGE BATTERY. AIRLOCK POWER SUPPLY WILL SHUT DOWN. GPE INTERFACE UNABLE TO RECHARGE BATTERY. MESSAGE: LOSS OF EMU. CREW/VEHICLE: NONE.	<p>A. DESIGN - THE CABLE/CONNECTOR INTERFACES ARE STRAIN RELIEVED TO PREVENT EXCESSIVE CONDUCTION LOADS AND POSSIBLE OPEN CIRCUITS DUE TO FATIGUE. THE MULTIPLE CONNECTION END IS POTTED WITH RTV AND IS CAPTURED WITHIN A METAL MOUNTING FOR STRENGTH. THE VEHICLE CONNECTOR UTILIZES A METAL STRAIN RELIEF TYPE BACKSHELL. THE WIRE IS #20 AWG TO PROVIDE THE ELECTRICAL AND MECHANICAL PROPERTIES TO PREVENT CRACKING. CONDUCTORS ARE TIED TOGETHER AT 1-2 INCH INTERVALS AND SHIMMED IN A CLOTH COVER LAYER TO HOLD CABLES TOGETHER SO THEY SHARE ANY LOADING AND TO PREVENT IMPACT OR ABRASION OF CONDUCTORS. CRIMPING PER HVSM4909 (BASED ON HQFC SPEC-Q-2A).</p> <p>B. TEST - COMPONENT ACCEPTANCE TEST - AN ELECTRICAL CONTINUITY TEST IS PERFORMED PER OP. 74 OF SV771763-1 OPERATION STATUS. THE ELECTRICAL RESISTANCE OF EACH CURRENT CARRYING CONDUCTOR IN THE ELECTRICAL HARNESS MUST NOT EXCEED 0.2 OHMS.</p> <p>PDA TEST - AN ELECTRICAL CONTINUITY TEST IS PERFORMED PER SEMI-80-D10, TEST 22.6.</p> <p>CERTIFICATION TEST - THE ITEM COMPLETED THE 15 YEAR STRUCTURAL VIBRATION AND SHOCK CERTIFICATION REQUIREMENT DURING 10/05. ENGINEERING CHANGE 42806-124 (DEFINITION OF MECHANICALLY LOCKED BACKSHELL) HAS BEEN INCORPORATED AND DEEMED TO HAVE NO IMPACT ON CERTIFICATION SINCE THIS CONFIGURATION WAS CERTIFIED.</p> <p>C. INSPECTION - CRIMPING AND ASSEMBLY IS DONE PER SVH3498 WITH CALIBRATED CRIMPING TOOLS. VISUAL AND ELECTRICAL INSPECTION OF CONDUCTORS PRIOR TO POTTING TO ENSURE THERE ARE NO HANGING CONDUCTORS AND THAT THE CONDUCTORS ARE ROUTED PROPERLY. ELECTRICAL TESTING IS ALSO CONDUCTED AFTER POTTING TO ENSURE THERE ARE NO OPEN CIRCUITS.</p> <p>D. FAILURE HISTORY - NONE.</p>
B300-1				

CTL
 CRITICAL ITEMS LIST
 FILE: CTL-SOP/2

NAME P/N QTY	UNIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
ELECTRICAL WIRELESS ASSEMBLY ITEM 420 5V771263-3 111	2/2	6207104; ELECTRICAL OPEN, BATTERY CHARGE LINE.		<p>G. CHARGE TUMBAROUND - DESIGNED PER FORM-R-001, OMITTED POWER INTERFACE AND OPERATIONS PER STANDARD POWER UP 1V1000-001.</p> <p>F. OPERATIONAL USE - CDMR RESPONSE - PRE/POSTEVA: TROUBLESHOOT PROBLEM. IF NO SUCCESS, DISCONTINUE USE OF SCM RECHARGE FUNCTION, RECHARGE BATTERY USING OTHER SCM OR USE SPARE BATTERY IF AVAILABLE. TRAINING - STANDARD EIU TRAINING COVERS THIS FAILURE MODE.</p> <p>OPERATIONAL CONSIDERATIONS - AT LEAST ONE SPARE EIU BATTERY IS MAINTAINED FOR EACH FLIGHT. EVA CHECKLIST PROCEDURES VERIFY HARDWARE INTEGRITY AND SYSTEM OPERATIONAL STATUS PRIOR TO EVA.</p>

8100-2
 2