

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
COMMON MULTIPLE CONNECTOR, ITEM 330 ----- SV778872-26 (1)	2/2	330FM17 Shorted battery recharge sense line. Contamination, chafing causing shorted wire or connector.	END ITEM: Battery will discharge through battery current shunt. GFE INTERFACE: Battery discharged until the DCM current shunt/PC board traces fuse open. MISSION: Terminate EVA. Loss of use of one EMU. CREW/VEHICLE: None. TIME TO EFFECT /ACTIONS: Seconds. TIME AVAILABLE: N/A TIME REQUIRED: N/A REDUNDANCY SCREENS: A-N/A B-N/A C-N/A	A. Design - Electrical connections are conformal coated to minimize the probability of contamination bridging conductors and causing an electrical short. The electrical leads are protected from mechanical damage by a cover and are bundled together and laced. Short line lengths and bundling of the electrical lines prevent mutual chafing. B. Test - In-Process Test - Continuity testing between J1-16 and J1-11 is performed per Operation 130 of the DCM External Wiring Assembly (SV77416-1) Operational Sheets. Resistance specification is 0.160 ohm max. Acceptance (O2/H2O Manifold) - Electrical open of the Battery Recharge Sense line is tested for at H.S. by performing a continuity test per AT-E-385. The resistance from the Battery Recharge Sense Line to the Battery Recharge Line (J1-16 and J1-11) must not exceed 0.120 ohm. PDA Test - Electrical open of the Battery Recharge Sense Line is tested by performing a continuity test per SEMU-60-015. The Battery Recharge Sense Line resistance must be less than 1.0 ohm. Certification Test - Certified for a useful life of 15 years. C. Inspection - The DCM External Wiring Assembly (SV774161-1) conformal coating is visually inspected for uniformity and completeness of coverage per step 10 of Operation 150. The DCM External Wiring Assembly is visually inspected at final inspection per Operation 170. D. Failure History - None. E. Ground Turnaround - Tested for non-EET processing per FEMU-R-001, V1103.02 Orbiter Checkout. FEMU-R- 001 Para 8.2 EMU Preflight KSC Checkout for EET processing. F. Operational Use - Crew Response - Pre/PostEVA: Troubleshoot problem, if no success consider use of third EMU if available. EMU no go for EVA. Training - Standard EMU 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 battery power.

EXTRAVEHICULAR MOBILITY UNIT
SYSTEMS SAFETY REVIEW PANEL REVIEW
FOR THE
I-330 COMMON MULTIPLE CONNECTOR
CRITICAL ITEM LIST (CIL)
EMU CONTRACT NO. NAS 9-97150

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