NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
		800FM01Z		
SEMU HARNESS, 12 VOLT (1) LEFT (1) RIGHT ---------- 0800-112418 (2)	2/2	Loss of heating ability. Open wiring, damaged LEMO plug connector.	END ITEM: Loss of electrical power to thermofoil heaters. GFE INTERFACE: Loss of active heating in glove fingertip area. MISSION: Terminate EVA. CREW/VEHICLE: None. TIME TO EFFECT /ACTIONS: Minutes. TIME AVAILABLE: N/A TIME REQUIRED: N/A REDUNDANCY SCREENS: A-N/A B-N/A C-N/A	A. Design - The cable is constructed of 3 insulated high strength 24 gauge copper alloy wires P/N M27500-24TN3S06, which are then bound in Teflon tape. Attachment to the TMG is achieved by whipstitching the cables, limiting relative motion between the cable and the TMG to resist abrasion. The connectors are LEMO series K connectors which are environmental connectors with triple wall construction to provide water and dust resistance. The LEMO connectors utilize a "QuickLok" feature that assures connection when the lock is engaged. The locking mechanism is protected By a rugged outer shell, eliminating accidental disconnections and damage to the locking mechanism, cable, or contacts. The connectors have a contact arrangement of five pins and are mechanically keyed with an alignment key on the shell which prevents errors in alignment. The contact terminations are crimps, performed per NHB 5300.4 3(H). A crafted metal collet type strain relief is provided to secure the cable around its circumference preventing accidental damage to the connection if the cable is stressed. In addition, a shrink tubing strain relief is placed over the end of the LEMO connector at the junction of the cable to the connector to provide additional strain relief. The connectors meet the electrical requirements for both voltage and current derating per MIL-STD-975. B. Test - Acceptance: See Inspection. PDA: The connectors undergo 100% visual inspection when received from the vendor. Crimp joints are visually inspected by Government Quality Assurance Inspectors when fabricated. In addition, the cable assemblies are visually inspected and electrical continuity, insulation verification and electrical bond testing are performed during PDA. Certification: The system was successfully tested (manned) during certification testing to duplicate operational usage (Ref. Planar HUT/PLSS/DCM ORU TMG Cert. Test Report, ILC Doc. 0111-712768). The following usage reflecting requirements of significance to the glove assembly was documented during certification testing. Requirements: S/AD Actual Shoulder Adduction/Abduction 8484 17200 Shoulder Lateral/Medial 4092 8400 Shoulder Flexion/Extension 7430 15200 Shoulder Rotation 29348 58800 Electrical verification tests conducted at each of seven Interim Test points determined that the cable was functional throughout certification testing. C. Inspection - The connectors undergo 100% visual inspection when received from vendor. In addition, the cable assemblies are visually inspected and electrical continuity, insulation verification and electrical bond testing are performed during PDA.

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
		800FM01Z		

D. Failure History -
J-EMU-800--001 (7/11/00)
Pin (#4) recessed in connector. Found during inspection of EMU Power Harness connectors prior to fitcheck with the Rechargeable EVA Battery Assembly (REBA). Improper use of extraction tool during intended pin removal at assembly caused anomaly. Proper use of extraction tool not contained in NASA-STD-8739.4 or CTSD/ ILC fabrication procedures. CTSD procedures revised (ref. EPSP-0-288 PD # 190-00H). ILC work instructions revised (ref. EC 002-251, 002-252, 002-253). YTN issued to screen inventory.

E. Ground Turnaround -
Heater functional test and heater circuit quantitative resistance test.

F. Operational Use -
1. Crew Response -
Pre-EVA/Post EVA: Troubleshoot problem. Use third EMU, if available. If no success, EMU no-go for EVA.

EVA: If loss of fingertip heating occurs in one glove, turn off power to the glove, terminate EVA. If loss of fingertip heating occurs in both gloves, turn off power from battery, terminate EVA.

2. Special Training -
None.

3. Operational Considerations -
Not Applicable.

EXTRAVEHICULAR MOBILITY UNIT

SYSTEMS SAFETY REVIEW PANEL REVIEW

FOR THE

I-106 GLOVE ASSEMBLY

CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

Prepared by: _____
HS - Project Engineering

_____
HS - Reliability

_____ 4/24/02
HS - Engineering Manager

Approved by: _____
NASA – SSA/SSM

_____ 5/23/02
NASA – EMU/SSM

_____ 6/3/02
NASA - S & MA

_____ 6/3/02
NASA - MOD

_____ 6/05/02
NASA - Crew

_____ 6/3/02
NASA - Program Manager