

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
		106FM14		
4000 PALM RESTRAINT ASSY, ITEM 106 (1) LEFT (1) RIGHT ----- 0106-88936-09/10 (2)	2/2	Palm restraint bar deformed. Defective Material: Bent.	END ITEM: Palm bar bent. GFE INTERFACE: Hampered hand mobility. Difficulty interfacing with tools. Crewman discomfort due to pressure points. MISSION: Terminate EVA. CREW/VEHICLE: None.	A. Design - 4000: The palm bar is encased in polyester webbing. It is fabricated from 1/8" diameter cold drawn 302 stainless steel wire, stiff enough to retain its shape under pressure, but re-formable by the astronaut prior to EVA, to fit his hand. Palm bar deformation during EVA is extremely unlikely as it is protected by the Pressurized glove and TMG. Phase VI: The palm restraint system is composed of a strap stitched directly to the restraint to form a tunnel and a stainless steel bar that resides in the tunnel. The bar is annealed 17-4 SS that is heat treated after shaping. The palm restraint buckle is made entirely of 302/304 stainless steel. A knurled sliding bar retains the restraint strap in position. The restraint strap is further secured by mating with velcro attached to the strap with size "E" polyester thread. The glove restraint assembly is completely covered by a TMG which serves to protect the palm restraint assembly webbing and stitching from abrasion.
OR PHASE VI PALM BAR, ITEM 106 (1) LEFT (1) RIGHT ----- 0106-812162-01/02 (2)			TIME TO EFFECT /ACTIONS: Minutes. TIME AVAILABLE: N/A TIME REQUIRED: N/A REDUNDANCY SCREENS: A-N/A B-N/A C-N/A	B. Test - 4000/Phase VI: PDA: In accordance with ILC Document 0111-70028 for the 4000 Series gloves or 0111-710112 for Phase VI gloves, the glove assembly is subjected to a five minute 8.0 (+ 0.2 - 0.0) psig proof pressure test to verify no structural damage. Certification: 4000: The glove assembly was successfully tested (manned) during SSA certification to duplicate operational life. (Ref. ILC-EM-83-1083). The glove restraint assembly was successfully subjected to an ultimate pressure of 13.2 psig during SSA certification testing. This represents 1.5 times the BTA maximum operating pressure of 8.8 psig. Recertification to was by test and analysis (ref. ILC EM 84-1108). Phase VI: The glove restraint assembly was successfully tested (manned) during certification testing to duplicate operational usage (Ref. Certification Test Report for the Phase VI Glove, (ILC Doc. 0111-712701). The glove assembly was successfully subjected to an ultimate pressure of 13.2 psig during Certification Testing (Ref. ILC doc 0111-712701). This is 1.5 times the maximum BTA operating pressure based on 8.8 psig. C. Inspection - 4000/Phase VI: Components and material manufactured to ILC requirements at an approved supplier are documented from procurement through shipping by the supplier. ILC incoming receiving inspection verifies that the materials received are as identified in the procurement documents, that no damage has occurred during shipment and that

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EXTRAVEHICULAR MOBILITY UNIT
SYSTEMS SAFETY REVIEW PANEL REVIEW
FOR THE
I-106 GLOVE ASSEMBLY
CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

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