NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
		106FM19		
ADJUSTABLE THERMAL MITTEN ASSEMBLY ITEM 106 (1) LEFT (1) RIGHT ---------- 0106-811540-03/04 (2)	2/2	Loss of adjustable thermal mitten assembly. Defective thread material. Retention strap separated from mitten; loose Velcro.	END ITEM: Adjustable thermal mitten damaged or loose from glove. GFE INTERFACE: Local heating or cooling of glove when grasping hot or cold objects, and local cooling when grasping cold objects. MISSION: Terminate EVA. 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 - The Adjustable Thermal Mitten Assembly is designed to provide additional thermal protection beyond that provided by the glove TMG. The assembly utilizes Fiberglass felt on the palmer surfaces of the mitten as an insulative material. The felt is sandwiched between two layers of Reinforced Aluminized Maylar on either side of the felt. This insulative ply-up is encased between nomex fabric externally and teflon fabric internally. Thermal protection for the back side of the hand is provided by utilizing four layers of Reinforced Aluminized Maylar; two layers with the face side positioned inward to the hand; two layers with the face side positioned outward from the hand. This insulative ply-up in encased between two layers of teflon fabric. The Adjustable Thermal Mitten Assembly is secured to the Glove Assembly by use of velcro adjustments straps at the wrist location and adjustment cords (Gortex) which are routed through the back of the assembly. All stitching is performed using a 301 stitch, 8-10 psi per federal standard 751, using nomex "E" thread. Thread ends are secured with a surgeons knot which is coated with urethane adhesive. The nomex fabric has a tensile strength of 225 lbs. in the Warp direction and 170 lbs. in the Fill direction. The teflon fabric has a tensile strength of 47 lbs/in in the Warp direction and 40 lbs/in in the Fill direction. B. Test - Certification - Adjustable Thermal Mitten Assembly: None. C. Inspection - 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 appropriate data have been received which provide traceability information. The following MIP's are performed during the glove assembly manufacturing process to assure that the failure causes are precluded from the fabricated item: 1. Visual Inspection to verify all stitching secure. 2. Visual Inspection to verify materials free of flaws. D. Failure History - None. E. Ground Turnaround - None. F. Operational Use - Crew Response - No response, adjustable thermal mitten assemblies not required for EVA. If adjustable thermal mitten assemblies required, troubleshoot problem. If no success, share second pair of adjustable thermal mitten assemblies. Continue EVA operations. Special Training -

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
		106FM19		No training specifically covers this failure mode. Operational Considerations - None.

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

_____
HS - Engineering Manager

Approved by: _____ 22 May 02
NASA – SSA/SSM

_____ 5/23/02
NASA – EMU/SSM

_____ 6/3/02
NASA – S&MA

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NASA – MOD

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NASA – Crew

_____ 6/3/02
NASA – Program Manager