NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
		131FM04		
PRIMARY WATER TANK ASSEMBLY #1, #2 ITEM 131, ITEM 162 --- SV769592-30 (1)	3/1RB	Lever latch assembly fails, CCC. Springs fracture.	END ITEM: None. Dual lock provided on latch. GFE INTERFACE: None for single failure. Loss of CCC if both springs in both CCC latches fail; and CCC rotates out allowing it to be blown off. MISSION: None for single spring failure; failure of second spring has no effect. CREW/VEHICLE: None for single failure. Possible loss of crewman with loss of CCC sealing/retention if both springs in both latches fail. TIME TO EFFECT /ACTIONS: Immediate. TIME AVAILABLE: Immediate. TIME REQUIRED:	A. Design - The springs are made of 17-7 PH material. The latch material is aluminum 7075 (AMS 4078). The retainer lock spring is designed for 10E+6 operating cycles for a 5138 cycle requirement. The torsion spring is highly stressed; (in excess of yield stress 243,570 psi VS 218,000 psi), however, testing has shown this spring does not yield and has been certified to meet its cycle requirement. B. Test - PDA Test - A fit check with a CCC is performed per SEMU-60-010. A CCC is installed in the CCC receptacle area to verify proper fit when installed. At that point, proper latch operation is verified. Certification Test - Certified for a useful life of 25 years (ref. EMUM1-0106). C. Inspection - The one helical compression spring is 100% inspected to meet dimensional and force-displacement requirements. The one torsion spring is 100% inspected to meet dimensional requirements. D. Failure History - None. E. Ground Turnaround - Checked for non-EET processing per FEMU-R-001, Pre-Flight Inspections and Final Structural and Leakage. FEMU-R-001 Para 8.2 EMU Preflight KSC Checkout for EET processing. F. Operational Use - Crew Response - PreEVA and EVA: No response, single failure undetectable by crew or ground. Training - Standard EMU training covers this mode. Operational Considerations - Flight rules define go/no go criteria related to EMU ventilation and C02 control. Flight rules define go/no go criteria related to EMU suit pressure regulation. EVA checklist procedures verify hardware integrity and systems operational status prior to EVA. Real Time Data system allows ground monitoring of EMU systems.

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
		131FM04	Immediate. REDUNDANCY SCREENS: A-PASS B-FAIL C-PASS	

EXTRAVEHICULAR MOBILITY UNIT

SYSTEMS SAFETY REVIEW PANEL REVIEW

FOR THE

I-131 PRIMARY WATER TANK ASSEMBLY

CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

Prepared by: _____ 3/27/02
HS - Project Engineering

Approved by: _____ 4/11/02
NASA - CSA/SSM

_____
HS - Reliability

_____ 4/16/02
NASA - EMU/SSM

_____
HS - Engineering Manager

_____ 5/2/02
NASA - S & MA

_____ 5-3-02
NASA - MOD

_____ 5/7/02
NASA - Crew

_____ 5-10-02
NASA - Program Manager