

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
RELIEF VALVE, CONDENSATE WATER, ITEM 134 ----- SV769403-6 (1)	2/1R	134FM03A External water leakage, reservoir side. Housing seal failure.	END ITEM: Water leakage to ambient. GFE INTERFACE: Depletion of the water reservoir. Loss of cooling/defog. MISSION: Terminate EVA when the water supply drops below CWS limits. CREW/VEHICLE: None for single failure. Possible loss of crewman with loss of SOP. TIME TO EFFECT /ACTIONS: Minutes. If there is insufficient water to provide cooling/ defog, open purge valve to activate the SOP. TIME AVAILABLE: Minutes. TIME REQUIRED: Seconds.	A. Design - External leakage is prevented by the use of O-ring seals providing squeeze under all loading conditions. B. Test - Component Acceptance Test - An external leakage is performed per AT-E-134. The valve is pressurized with nitrogen to 29-31 psig and submerged in water. No evidence of external leakage is allowed during a 5 minute test period. PDA Test - A combined water circuits leakage test is run per SEMU-60-010. In this test the water circuits are pressurized to 15.7-15.9 psig with water for 60 minutes minimum. Leakage must not exceed 6 scc/hr. Certification Test - Certified for a useful life of 20 years (ref. EMUM-1430). C. Inspection - The interfacing surfaces between the valve housing and the valve module housing are 100% inspected to meet dimensional and surface finish requirements. The O-seals are inspected for surface characteristics per SVHS3432; 100% for Classes I and II, at least a 1.5 AQL for Class III. D. Failure History - None. E. Ground Turnaround - Tested for non-EET processing per FEMU-R-001 water servicing, leakage and gas removal. None for EET processing. F. Operational Use - Crew Response - PreEVA: Trouble shoot problem, if no success consider, EMU 3 if available. Otherwise EMU go for EVA. EVA: When CWS data confirms activation of reserve water tank, terminate EVA. Training - Standard EMU training covers this failure mode. Operational Considerations - Flight rules require termination of EVA when minimum primary consumables remain. EVA checklist procedures verify hardware integrity and systems operational status prior to EVA. Real Time Data System allows ground monitoring of EMU systems.

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134FM03A

REDUNDANCY
SCREENS:
A-PASS
B-PASS
C-PASS

EXTRAVEHICULAR MOBILITY UNIT
SYSTEMS SAFETY REVIEW PANEL REVIEW
FOR THE
I-134 CONDENSATE WATER RELIEF VALVE
CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

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