NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
COMMON MULTIPLE CONNECTOR, ITEM 410 SV778872-18 (1)	2/2	4NOFH06A: External leakage, coupled, water supply. CAUSE: Failure, coupling O-seal bypass leakage, defective interfacing dynatube line or line fitting leakage.	END ITEM: Water leakage to ambient. OPE INTERFACE: Depletion of the EMU water reservoir. The airlock fill valve would be closed preventing the leakage of vehicle water. MISSION: Loss of use of one SCU. CREW/VEHICLE: None.	A. Design - In the coupled condition there are four external leakage paths. Two of these involve single static radial O-Seals. The third leakage path consists of three radial O-Seals which slide axially along sealing surfaces during coupling and uncoupling. Two of these seals must leak before an external leak path develops. The O-Seal design configuration dimensions and rigidity/geometry of assembly provide squeeze under all loading conditions. The fourth leakage path consists of a dynatube fitting between the SCU common connector potable water elbow and the flex hose. Surface finish and configuration are controlled to prevent leakage. B. Test - Component Acceptance: Airlock, Inc. ATP 9982-03 requires that at a cooling water inlet pressure of 22.5 + 0.5 psig leakage shall not exceed 0.15 ecc/hr. At a cooling water outlet pressure of 22.5 + 0.5 psig, leakage shall not exceed 0.15 ecc/hr. IPT: An in-process testing performed at H.S following the oxygen compatibility cycling test. No leakage is allowed when the water circuit is pressurized. PDA: An external leakage test is performed per SEMU-60-005. With the multiple connector mated, the potable water line is pressurized with water at 38.5 - 41.5 psig. No visible water leakage is permissible in a 60 minute period. Certification: The item completed 4,600 mate/demate cycles to the 1-330 multiple connector during 8/85 which fulfills the cycle certification requirement of 1,495. The item completed proof pressure testing to 60 psig and was analyzed for the acceptability to burst pressures during 1/82. Class I Engineering Change 42606-691 (elimination of the possibility of SCU Handle Setscrews loosening) has been incorporated and certified by analysis/similarity since this configuration was certified.

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	2/2	410FM06A:		C. Inspection - The "O" Seals and metal sealing surfaces are 100% inspected by Airlock Inc. for surface characteristics. D. Failure History - None. E. Ground Turnaround - Tested per FEMU-R-001, V1103-02 EMU Checkout in Orbiter. F. Operational Use - Crew Response - Pre/PostEVA: Troubleshoot problem. If no success, discontinue use of SCU. Operate EMU on battery power. Consider sharing other SCU for cooling and O2 if battery constraints permit. Consider in-suit battery swap using spare battery(s). Special Training - Standard EMU training covers this failure mode. Operational Considerations - At least one spare EMU battery is manifested for each flight. EVA checklist procedures verify hardware integrity and systems operational status prior to EVA.