

NAME P/N QTY	CR#	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
CONTAMINANT CONTROL CARTRIDGE, ITEM 488 84792408-00 (1)	2/18	<p>SYMPTOM: Hydrogen generation.</p> <p>CAUSE: Leaching of LiOH in solution due to entrained water.</p>	<p>EMU ITEM: The reaction of LiOH solution in contact with base aluminum could result in hydrogen generation.</p> <p>O2 INTERFACE: Loss of CO2 removal capability.</p> <p>MISSION: Terminate EVA.</p> <p>CREW/VEHICLE: Risk for single failure, possible crew hazard (trauma, discomfort). Possible loss of crewmembers with loss of COP.</p>	<p>A. Design - Water in cartridge would be due to leakage in a coolant loop component. For design rationale preventing water leakage into the tank, see reference CIL's concerning P133, M11, D24, L2V6, I2B, L2C.</p> <p>B. Test - Certification: The EMU completed post structural vibration and shock leakage cycles during 10/83. No Class I engineering changes have been incorporated since this configuration was certified.</p> <p>C. Inspection - See applicable coolant loop component leakage. Reference CIL's concerning P133, M11, D24, L2V6, I2B, L2C.</p> <p>D. Failure History - None.</p> <p>E. Ground Turnaround - See applicable ground turnaround testing for leakage in coolant loop components. Reference CIL's concerning P133, M11, D24, L2V6, I2B, L2C.</p> <p>F. Operational Use - Crew Response - Preflight: Troubleshoot problem, swap LiOH using spare cartridge. Continue prep if coolant loop leakage can be repaired. Otherwise EMU no go for EVA. EVA: When CWS data confirms loss of CO2 scrubbing, open the helmet purge valve and terminate EVA. When crew's physiological discomfort dictates, deactivate the fan, open the helmet purge valve and terminate EVA. Special Training - No training specifically covers this failure mode. EV crew is trained to recognize the symptoms of high CO2. Operational Considerations - Flight rules define go/no go criteria related to EMU ventilation flow and CO2 control. EVA checklist procedures verify hardware integrity and</p>