

NAME P/N QTY	CR#	FAILURE MODE & CAUSES	FAILURE EFFECT	REQUIREMENTS FOR ACCEPTANCE
CONTAMINANT CONTROL CARTRIDGE, ITEM 480 20792608-00 (1)	2/18	480/MDA: Overheating. CAUSE: Entrained water into the cartridge caused by leakage in a coolant loop component which interfaces with the vent loop.	EMU ITEM: Excessive heat generated as a result of exothermic reaction of LiOH and water. G/E INTERFACE: Loss of CO2 removal capability. Drop in ventilation flow due to clogging of filter material and/or expansion of cartridge, hot vent gas delivered to helmet. MISSION: Parade EVA. CREW/VEHICLE: None for single failure, crew discomfort (hot). Possible loss of craunch with loss of SOP.	A. Test - Water in cartridge would be due to leakage in a coolant loop component. For design rationale preventing water leakage into the item, see reference CIL's concerning water components in PLS, HUT, DCN, LEVC, TDB, UCD. B. Test - Certification: The EMU completed post structural vibration and shock leakage cycles during M/DJ. No Class I engineering changes have been incorporated since this configuration was certified. C. Inspection - See applicable coolant loop component leakage. Reference CILs concerning PLS, HUT, DCN, LEVC, TDB, UCD. H. Failure History - None. E. Ground Turnaround - See applicable ground turnaround testing for leakage in coolant loop components. Reference CILs concerning PLS, HUT, DCN, LEVC, TDB, UCD. F. Operational Use - Crew Response - PreEVA: Troubleshoot problem. Swap LiOH using spare cartridge. Continue prep if coolant loop leakage can be repaired, otherwise abort as far EVA. EVA: When CIL data confirms loss of vent flow and/or CO2 scrubbing, open the helmet purge valve and terminate EVA. When hot gas and/or significant fluids detected exiting the helmet vent, deactivate the fan, open the helmet purge valve and terminate EVA. Special Training - No training 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