CIL
CRITICAL ITEMS LIST
FILE: CIL7/1

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
COOLANT RELIEF VALVE ITEM 172 SV784986-1 (1) FC140-1 HS	2/1R	172FM03A: EXTERNAL LEAKAGE, RESERVOIR SIDE. CAUSE: HOUSING SEAL FAILURE.	END ITEM: WATER LEAKAGE FROM INTERNAL PASSAGEWAY TO AMBIENT. GFE INTERFACE: DEPLETION OF THE WATER IN RESERVOIR TO AMBIENT. MISSION: TERMINATE EVA WHEN THE WATER SUPPLY DROPS BELOW CWS LIMITS. LOSS OF USE OF ONE EMU. CREW/VEHICLE: NONE FOR SINGLE FAILURE. POSSIBLE LOSS OF CREWMAN WITH LOSS OF SOP.	A. DESIGN - EXTERNAL LEAKAGE IS PREVENTED BY A RADIAL O-RING SEAL MADE OF FLUOROSILICONE, SEAL DIMENSIONS AND RIGIDNESS OF ASSEMBLY PROVIDE SQUEEZE UNDER ALL LOADING CONDITIONS. FLUID TEMPERATURE AND PRESSURE ARE NOT EXTREME. WATER 36 DEG. F TO 120 DEG. F AT 25 PSID. B. TEST - *COMPONENT ACCEPTANCE TEST - THE ITEM INLET IS PRESSURIZED TO 16.0 - 17.0 PSID GN2 AND THE OUTLET CAPPED, FOR 30 MINUTES MINIMUM. LEAKAGE SHALL BE 1.0 CC/HR MAX AS MEASURED WITH A WATER FILLED BEAKER INVERTED IN WATER. AN ALTERNATE WATER TEST IS DONE IF THE ABOVE TEST IS NOT MET. THE INLET IS PRESSURIZED TO 16.0 - 17.0 PSID H2O WITH THE OUTLET CAPPED FOR 30 MINUTES. LEAKAGE SHALL NOT EXCEED 0.01 CC/HR MAX. *PDA TEST - THE ITEM IS TESTED IN THE PLSS FOR EXTERNAL LEAKAGE. THE ITEM IS PRESSURIZED TO 15.7 - 15.9 PSID FOR 40 MINUTES. THE LEAKAGE AS MEASURED WITH A VOLUMETRIC MICROMETER SHALL BE 4 SCC/HR MAX. THIS VALUE REPRESENTS TOTAL SYSTEM EXTERNAL LEAKAGE. *CERTIFICATION TEST - THE ITEM COMPLETED THE 15 YEAR STRUCTURAL VIBRATION AND SHOCK CERTIFICATION REQUIREMENT DURING 10/83. NO ENGINEERING CHANGES HAVE BEEN INCORPORATED SINCE THIS CONFIGURATION WAS CERTIFIED. C. INSPECTION - SEAL FAILURE, O-RING GROOVES ARE 100% INSPECTED PER DRAWING DIMENSIONS AND SURFACE FINISH. O-RINGS ARE INSPECTED FOR SURFACE CHARACTERISTICS PER SVHS3432 100% FOR CLASS I AND II, AND AT LEAST 1.5 AQL FOR CLASS III. D. FAILURE HISTORY - NONE.

CIL
CRITICAL ITEMS LIST
FILE: CILT/1

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
COOLANT RELIEF VALVE ITEM 172 SV784185-1 (1) FC160-2 *	2/1R	172FM03A: EXTERNAL LEAKAGE RESERVOIR SIDE.		E. GROUND TURNAROUND - TESTED PER GEAU-R-001, WATER SERVICING, LEAKAGE AND GAS REMOVAL. F. OPERATIONAL USE - CREW RESPONSE PREEVA AND EVA: N/A POST EVA: NO RESPONSE, SINGLE FAILURE UNDETECTABLE BY CREW OR GROUND. TRAINING - STANDARD EMU TRAINING COVERS THIS FAILURE MODE. OPERATIONAL CONSIDERATIONS - NOT APPLICABLE