

CIL
CRITICAL ITEMS LIST
FILE: CIL7/3

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
COOLANT RELIEF VALVE ITEM 172 5V784985-1 11 FC148-1 44	2/1R	1721003A1 EXTERNAL LEAKAGE, RESERVOIR SIDE. CAUSE: HOUSING SEAL FAILURE.	END ITEM: WATER LEAKAGE FROM INTERNAL PASSAGEWAY TO AMBIENT. O/E INTERFACE: DEPLETION OF THE WATER IN RESERVOIR IN AMBIENT. MISSION: TERMINATE EVA WHEN THE WATER SUPPLY DROPS BELOW CMS LIMITS, LOSS OF USE OF ONE EMP. CREW/VEHICLE: NONE FOR SINGLE FAILURE. POSSIBLE LOSS OF CREWMAN WITH LOSS OF SDP.	A. DESIGN - EXTERNAL LEAKAGE IS PREVENTED BY A NITRAL O-RING SEAL MADE OF POLYDIMETHYLSILOXANE. SEAL DIMENSIONS AND RIGIDNESS OF ASSEMBLY PROVIDE SQUEEZE UNDER ALL LOADING CONDITIONS. FIXED TEMPERATURE AND PRESSURE ARE NOT EXTREME. WATER IS DEG. F TO 320 DEG. F AT 25 PSID. B. TEST - COMPONENT ACCEPTANCE TEST - THE ITEM INLET IS PRESSURIZED TO 16.0 - 17.0 PSID GND AND THE OUTLET CAPPED, FOR 30 MINUTES MINIMUM. LEAKAGE SHALL BE 0.0 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 14.0 - 17.0 PSID W2D WITH THE OUTLET CAPPED FOR 30 MINUTES. LEAKAGE SHALL NOT EXCEED 0.01 CC/HR MAX. MPRA TEST - THE ITEM IS TESTED IN THE PASS FOR EXTERNAL LEAKAGE. THE ITEM IS PRESSURIZED TO 15.7 - 15.9 PSID FOR 60 MINUTES. THE LEAKAGE AS MEASURED WITH A VOLUMETRIC MICROMETER SHALL BE 4.0 CC/HR MAX. THIS VALUE REPRESENTS TOTAL SYSTEM EXTERNAL LEAKAGE. CERTIFICATION TEST - THE ITEM COMPLETED THE 15 YEAR STRUCTURAL VIBRATION AND SHOCK CERTIFICATION REQUIREMENT DURING 10/81. 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 SWS3432 100% FOR CLASS I AND II, AND AT LEAST 1.5 AQL FOR CLASS III. D. FAILURE HISTORY - NONE.

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 CRITICAL ITEMS LIST
 FILE: C1A7/1

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
COOLANT RELIEF VALVE ITEM 172 SV784985-1 111 FC168-2 M	2/1R	372FH03A: EXTERNAL LEAKAGE RESERVOIR SIDE.		<p>E. GROUND TURNAROUND - TESTED PER TEMI-R-001, WATER SERVICING, LEAKAGE AND GAS REMOVAL.</p> <p>F. OPERATIONAL USE - CREW RESPONSE PREVA 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</p>