

L11
CRITICAL ITEMS LIST
FILE: CIL7/1

| NAME P/N QTY | CRIT | FAILURE MODE & CAUSES | FAILURE EFFECT | RATIONALE FOR ACCEPTANCE |
|---|------|---|--|--|
| WATER RELIEF VALVE ITEM 142 SV719405-3 111 PC140-B " | 2/1R | 142PNO3A: EXTERNAL LEAKAGE. CAUSE: FAILURE, HOUSING SEAL BYPASS LEAKAGE. | END ITEM: WATER BEGINS TO MISSENT. CREW INTERFACE: DEPLETION OF THE PRIMARY WATER RESERVOIR. MISSION: TERMINATE EVA WHEN THE WATER SUPPLY DROPS BELOW CMS LIMITS. CREW/VEHICLE: NONE FOR SINGLE FAILURE. POSSIBLE LOSS OF CREW WITH LOSS OF SOP. | A. DESIGN - INTERNAL LEAKAGE IS PREVENTED BY THE USE OF O-RING SEALS PROVIDING SQUEEZE UNDER ALL LOADING CONDITIONS. B. TEST - COMPONENT ACCEPTANCE: WITH THE ITEM INLET PRESSURIZED TO 30.1 - 32.5 PSID AND THE OUTLET CAPPED. THE LEAKAGE AS MEASURED WITH THE ITEM SUBMERGED SHALL BE 0 BUBBLES/5 MINUTES. PDA: THE ITEM IS TESTED 2 TIMES IN THE PLS ON THE "COMBINED WATER CIRCUIT LEAKAGE TEST". WITH THE ITEM 172 IN THE OPEN POSITION AND THE CLOSED POSITION. WITH THE I-172 OPEN ON CLOSED AND THE I-142 INLET AND OUTLET PRESSURIZED TO 35.7 - 35.9 PSID. TOTAL SYSTEM EXTERNAL LEAKAGE SHALL BE 4 CC/YR MAX AS MEASURED WITH A VOLUMETRIC MICROMETER OVER A 60 MIN PERIOD. CERTIFICATION: THE ITEM COMPLETED THE 15 YEAR STRUCTURAL VIBRATION AND DESIGN SHOCK CERTIFICATION REQUIREMENT DURING 10/03. NO CLASS I ENGINEERING CHANGES HAVE BEEN INCORPORATED SINCE THIS CONFIGURATION WAS CERTIFIED. C. INSPECTION - THE "O" SEALS ARE INSPECTED FOR DIMENSIONAL REQUIREMENTS AND SURFACE DEFECTS PER 3.5 AQL SAMPLING. D. FAILURE HISTORY - NONE. E. CREWAD TURBOLABOR - TESTED PER FED-STD-1689, WATER SERVICING, LEAKAGE AND GAS REMOVAL. |

CIL
CRITICAL ITEMS LIST
FILE: CILP/1

| NAME P/N QTY | CRIT | FAILURE MODE & CAUSES | FAILURE EFFECT | RATIONALE FOR ACCEPTANCE |
|--|------|-----------------------------------|----------------|--|
| MATER RELIEF VALVE ITEM 142 SV749405-3 11 FC140-2 # | 2/1N | 142FH03A1 EXTERNAL LEAKAGE. | | F. OPERATIONAL USE - CREW RESPONSE EVA: WHEN CHS DATA CONFIRMS ACTIVATION OF RESERVE WATER TANK, TERMINATE EVA. CONSIDER VACUUM WATER RECHARGE. OPERATIONAL CONSIDERATIONS FLIGHT RULES REQUIRE TERMINATION OF EVA WHEN MINIMUM PRIMARY CONSULPABLES REMAIN. EVA CHECKLIST PROCEDURES VERIFY HARDWARE INTEGRITY AND SYSTEMS OPERATIONAL STATUS PRIOR TO EVA REAL TIME DATA SYSTEM ALLIUMS GROUND MONITORING OF EMU SYSTEMS. |