

CIC
CRITICAL ITEMS LIST
FILE: CIL7/1

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
CHECK VALVE ITEM 147 SV76904-2 E11 FC144-1 "	2/10	240PPH1A EXTERNAL LEAKAGE, PRIMARY FRESHWATER SIDE. CAUSE: FAILURE, HOUSING SEAL BYPASS LEAKAGE.	END ITEM: WATER LEAKAGE TO AMBIENT. C/E INTERFACE: DILUTION OF THE PRIMARY AND RESERVE WATER TANKS 1131/142/1401. POSSIBLE HELMET POGGING. MISSION: TERMINATE EVA WHEN THE WATER SUPPLY DROPS BELOW CMS LIMITS. CREW/VEHICLE: NONE FOR SINGLE FAILURE. POSSIBLE LOSS OF CREW WITH LOSS OF SBP.	A. DESIGN - EXTERNAL LEAKAGE IS PREVENTED BY THE USE OF O-RING SEALS CONSISTING OF AN ELASTOMERIC RING COMPRESSED BETWEEN PARALLEL SURFACES AND RETAINED FROM EXTRUSION. B. TEST - COMPONENT ACCEPTANCE: LEAKAGE ON THE PRIMARY FRESHWATER SIDE WOULD BE DETECTED WITH THE ITEM INLET PRESSURIZED TO 30.5 - 31.5 PSIG FOR 5 MINUTES MINIMUM. THE ITEM OUTLET IS CAPPED AND THE ITEM SUBMERGED IN H2O. NO LEAKAGE IS ALLOWED. FMA: THE ITEM IS TESTED 2 TIMES IN THE FLS IN THE "CORRODED WATER CONTACT LEAKAGE TEST". WITH THE 1-271 OPEN OR CLOSED AND THE 1-142 INLET AND OUTLET PRESSURIZED TO 18.7 - 18.9 PSIG TOTAL SYSTEM EXTERNAL LEAKAGE SHALL BE 4CC/HR MAX AS MEASURED WITH A VOLUMETRIC CHROMETER OVER A 60 MIN. PERIOD. CERTIFICATION: THE ITEM COMPLETED THE 15 YEAR STRUCTURAL VIBRATION AND SHOCK CERTIFICATION REQUIREMENT DURING 30/83. NO CLASS I ENGINEERING CHANGES HAVE BEEN INCORPORATED SINCE THIS CONFIGURATION WAS CERTIFIED. C. INSPECTION - THE INTERFACING SURFACES AND "O" SEALS BETWEEN THE VALVE HOUSING HOUSING AND THE VALVE HOUSING ARE 100% INSPECTED TO MEET DIMENSIONAL AND SURFACE FINISH REQUIREMENTS. D. FAILURE HISTORY - NONE. E. GROUND TURNING - TESTED PER FENU-R-801, WATER SERVICING, LEAKAGE AND GAS REMOVAL. F. OPERATIONAL USE - CREW RESPONSE. EVA: INJEN CMS DATA CONFIRMS DEPLETION OF PRIMARY WATER, TERMINATE EVA. CONSIDER VACUUM WATER RECHARGE TO RECOVER END OPERATION. TRAINING CREWMEN ARE TRAINED ON VACUUM WATER RECHARGE PROCEDURES CREWMEN ARE TRAINED FOR ONE MAN EVA SCENARIO