

CEL
 CRITICAL ITEMS LIST
 FILE: CILS/1

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
REGULATOR, SCU WATER SUPPLY ITEM 419 SV772190-4 111	1/2	48919021 FAILS TO OPEN, REGULATES LOW. CAUSE: PISTON BINDING PISTON SPRING RELEASES CONTAMINATION OF PASSENGER NOO.	END ITEM; RESTRICTED OR COMPLETELY BLOCKED FLOW PATH THROUGH REGULATOR. O/E INTERFACE: REGULATION AT LOWER SET POINT HAS NO EFFECT OTHER THAN A LONGER CHARGING TIME, UNABLE TO RECHARGE PASS WATER TANKS IF THE VALVE FAILS CLOSED. MISSION: DISCONTINUE USE OF FAILED SCU. CREW/VEHICLE: NONE.	A. DESIGN - THE PISTON IS TEFLON COATED AND HAS LOCAL GUIDANCE TO HELP PREVENT BINDING. IN ADDITION, THE PISTON VOLUME IS PROTECTED FROM CONTAMINATION BY A 140 MICRON FILTER ON THE SENSE PORT. THE PLUNGER ROD IS PROTECTED A 20 MICRON SYSTEM FILTER AS WELL AS BEING FLUTED WHICH MINIMIZES THE AREA THE CONTAMINATES WOULD AFFECT. THE SPRING HAS A CALCULATED LIFE IN EXCESS OF 1014 FULL STROKE CYCLES. B. TEST - COMMENT ACCEPTANCE: A PERFORMANCE TEST IS RUN DURING ATE 419. THE REGULATOR MUST REGULATE THE OUTLET PRESSURE BETWEEN 0.0 AND 15.0 PSIG FOR INLET PRESSURES OF 19.8 - 49.1 PSIG. THE REGULATOR MUST ALSO BE CAPABLE OF FLOWING 1.0 - 15 LBS/HR OF WATER DURING THIS TEST. PDA: REGULATOR PERFORMANCE IS CHECKED DURING SEMU-40-005. WITH AN INLET PRESSURE OF 40 - 41 PSIG AND FLOW SET AT 0.5 - 1.5 LBS/HR, THE REGULATOR OUTLET PRESSURE MUST BE MAINTAINED FROM 0 - 15 PSIG. WITH AN INLET PRESSURE OF 10.7 - 10.9 PSIG AND A FLOW OF 30 - 35 LBS/HR, THE REGULATOR OUTLET PRESSURE MUST BE 0 - 10.9 PSIG. CERTIFICATION: THE ITEM COMPLETED 450 PRESSURIZATION/FLOW CYCLES DURING TESTING IN 1/84 TO FULFILL THE FLIGHT REQUIREMENTS FOR 15 YEARS. NO CHANGES HAVE BEEN MADE TO THE CONFIGURATION SINCE THAT TIME.

CIL
 CRITICAL ITEMS LIST
 FILE: CILB/1

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
REGULATOR, SCU WATER SUPPLY ITEM 419 SV772190-6 111	2/2	419F4021 TAEI BU OPEN, REGULATES LOW.		<p>C. INSPECTION - THE PISTON AND HOUSING ARE 100% INSPECTED TO MEET DIMENSIONAL AND SURFACE FINISH REQUIREMENTS AND TEFLON COATING REQUIREMENTS ON INTERFACING SURFACES. THE SPRING IS 100% INSPECTED TO MEET DIMENSIONAL AND FORCE DISPLACEMENT REQUIREMENTS. THE PLUNGER ROD IS CAREFULLY CLEANED AND INSPECTED FOR CLEANLINESS TO H3150 CM150 WHICH IS MAINTAINED DURING ASSEMBLY & TESTING OF THE REGULATOR.</p> <p>D. FAILURE HISTORY - NONE.</p> <p>E. GROUND TURNAROUND - TESTED PER FEHM-R-001, ORBITER SCU CHECKOUT.</p> <p>F. OPERATIONAL USE - POSTEVA (RECHARGE); TROUBLESHOOT PROBLEM, IF NO SUCCESS, USE OTHER SCU TO PERFORM EMU WATER DUMP AND CIRCUMC. TRAINING - STANDARD EVA TRAINING COVERS THIS FAILURE MODE. OPERATIONAL CONSIDERATIONS - EVA CHECKLIST PROCEDURES VERIFY HARDWARE INTEGRITY AND SYSTEMS OPERATIONAL STATUS PRIOR TO EVA.</p>
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