CEL
CRITICAL ITEMS LIST
FILE: CILS/1

NOMENCLATURE P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
CONDENSATE PRESSURE REGULATOR HEH 410 SV721717-7 (1) FC239-1	2/2	4)OPENS: MANUAL OVERRIDE FAILS CLOSED. CAUSE: JAMMING.	END ITEM: BLOCKAGE OF FLOW PATH THROUGH REGULATOR. OFF INTERFACE: UNABLE TO EMPTY THE PLSS WASTE BLADDERS. MISSION: TERMINATE MISSION. CREW/VEHICLE: NONE.	A. DESIGN - THE MANUAL OPEN MECHANISM CONSISTS OF A PULL ROD WHICH ALTERS THE OPERATING LENGTH OF THE VALVE SPRING. A CAM AND PIN ARE USED TO LIFT THE ROD. SLIDING OCCURS BETWEEN THE ROD AND HOUSING BORE, AT THE CAM AND CAM PIN AND BETWEEN THE ROD AND PIVOT PIN. THE ROD HAS A TEFLON GLIDE RING ON ONE END AND IT IS ELECTROFILMED FOR LUBRICATION WHERE IT SLIDES ON THE PIVOT PIN. THE CAM PIN IS ELECTROFILM LUBRICATED FOR SLIDING ON THE CAM. GALLING IS MINIMIZED SINCE THE CAM PIN AND PIVOT PIN ARE HARDER THAN THE MATING MATERIALS. B. TEST - COMPONENT ACCEPTANCE: DURING TESTING PER AT-E-410 A TORQUE TEST IS RUN TO VERIFY THAT THE MINIMUM TORQUE REQUIRED TO OPERATE THE MANUAL OVERRIDE HANDLE IS 30 IN-LBS. CRACK, RESEAT AND FLOW TESTS ARE ALSO PERFORMED WITH THE REGULATOR IN THE MANUAL OPEN POSITION. THE REGULATOR MUST CRACK AND RESEAT AT 7.0 PSID MINIMUM. CRACK AND RESEAT ARE DEFINED AS A FLOW OF 15-20 CC/MIN H2O. THE FLOW TEST VERIFIES THAT THE REGULATOR WILL FLOW 30-35 LBS/HR H2O AT 7.2 - 7.4 PSID. THESE TEST HOURS REVEAL IF A JAMMED REGULATOR CONDITION EXISTS. PDA: PERFORMANCE TESTING PER SEMU-40-005 REPEATS THE SAME TESTS PERFORMED AT THE COMPONENT LEVEL WITH THE SAME REQUIREMENTS.

CIL
CRITICAL ITEMS LIST
FILE: CILS/1

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
CONDENSATE PRESSURE REGULATOR ITEM 410 SV771717-7 (1) FC239-2	2/2	410FM05: MANUAL OVERRIDE FAILS CLOSED.		B. TEST - (CONTINUED) CERTIFICATION: THE ITEM COMPLETED 500 CYCLES DURING 11/85 WHICH FULFILLED THE CYCLE CERTIFICATION REQUIREMENT OF 152. THE ITEM COMPLETED THE 15 YEAR STRUCTURAL VIBRATION AND SHOCK CERTIFICATION REQUIREMENT DURING 10/85. NO CLASS 1 ENGINEERING CHANGES HAVE BEEN INCORPORATED SINCE THIS CONFIGURATION WAS CERTIFIED. C. INSPECTION - JAMMING IN THE HANDLE MECHANISM - THE DUMP HANDLE AND PIN ARE 100% INSPECTED TO MEET DIMENSIONAL AND SURFACE FINISH REQUIREMENTS. THE PULL ROD AND SPLIT TEFLON RING ARE 100% INSPECTED TO MEET DIMENSIONAL AND SURFACE FINISH REQUIREMENTS. THE SURFACES OF THE DUMP HANDLE AND PULL ROD THAT INTERFACE WITH THE TWO CAM PINS ARE 100% INSPECTED FOR BEING PROPERLY COATED WITH ELECTROFILM. JAMMING BETWEEN THE PISTON AND THE SPACER- THE PISTON AND SPACER ARE 100% INSPECTED TO MEET DIMENSIONAL AND SURFACE FINISH REQUIREMENTS ALONG WITH THE INTERFACING SURFACES BEING PROPERLY COATED WITH TEFLON. D. FAILURE HISTORY - NONE. E. GROUND TURNAROUND - TESTED PER FEMU-R-001, ORBITER SCU CHECKOUT. F. OPERATIONAL USE - CREW RESPONSE - POSTEVA (RECHARGE): TROUBLESHOOT PROBLEM. IF NO SUCCESS, USE OTHER SCU TO PERFORM EMU WATER DUMP AND CHARGE. SPECIAL TRAINING - STANDARD EMU TRAINING COVERS THIS FAILURE MODE. OPERATIONAL CONSIDERATIONS - EVA CHECKLIST PROCEDURES VERIFY HARDWARE INTEGRITY AND SYSTEMS OPERATIONAL STATUS PRIOR TO EVA.