

CIL  
 CRITICAL ITEMS LIST  
 FILE: CILB/1

NAME P/N QTY	UNIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
SCU O2 INLET FILTER AND ORFICE ITEM 420 SV778504-E 111	1/2	420FHQ2A: EXTERNAL LEAKAGE; EMI ATTACHED.  CAUSE: FAILURE OF SEAL ON THE HOUSING OR FAILURE OF HOSE FITTING.	EMI ITEM: LEAKAGE OF VEHICLE OXYGEN SUPPLY TO WRIGHT THROUGH SCU.  OPE INTERFACE: EXCESSIVE CONSUMPTION OF VEHICLE OXYGEN, UNABLE TO CHARGE THE PLSS PRIMARY O2 BOTTLES IF THE LEAKAGE IS EXCESSIVE.  MISSION: UNABLE TO SUPPLY OXYGEN FOR DEHYDROGEN- IZATION PRIOR TO AIRLOCK DEPRESSURIZATION UNABLE TO USE ONE EMI.  CREW/VEHICLE: NONE.	A. DESIGN - EXTERNAL LEAKAGE IS PREVENTED BY: O-RING SEAL (FLUOROSILICONE ELASTOMER RUBBER) DESIGN CONFIGURATION AND RIGIDNESS OF ASSEMBLY PROVIDING SQUEEZE UNDER ALL LOADING CONDITIONS. FITTINGS ARE OF RESISTOFLEX DESIGN UTILIZING METAL SEALING BETWEEN CONED SURFACES OF VENDOR PROPRIETARY DESIGN FEATURES. FITTING AND HOUSING ARE FABRICATED FROM INCONEL 718 HAVING SEALING SURFACES OF FINE FINISH PROVIDING RELIABLE SEALING.  D. TEST -  PDA: THE OXYGEN LINE UNDERGOES TWO LEAKAGE TESTS PER SEM-60-005, BEFORE AND AFTER THE OXYGEN COMPATIBILITY CYCLE TEST. THE OXYGEN LINE IS PRESSURIZED WITH OXYGEN TO 850-950 PSIA WHILE HEATED. LEAKAGE IS OBSERVED FOR 10 MINUTES AND IS NOT TO EXCEED 50 SCC/MINUTE.  CERTIFICATION: THE ITEM COMPLETED LEAKAGE TESTING TO 900 PSIG, AND PROOF PRESSURE TESTING TO 1700 PSIG DURING 10/85. NO APPLICABLE ENGINEERING CHANGES HAVE BEEN INCORPORATED SINCE THAT TIME.  C. INSPECTION - THE SEALING INTERFACES BETWEEN THE INLET AND OUTLET FITTINGS AND HOSES ARE 100% INSPECTED TO MEET DIMENSIONAL AND SURFACE FINISH REQUIREMENTS. THE SEALING INTERFACE BETWEEN THE HOUSING COVER AND THE FILTER HOUSING ARE 100% INSPECTED TO MEET DIMENSIONAL AND SURFACE FINISH REQUIREMENTS.  D. FAILURE HISTORY - NONE.  E. DOWND TURNAROUND - TESTED PER SEM-11-001, TMO TO ORDER CIRCUIT (V1101) OXYGEN SYSTEM FUNCTIONAL CHECK.  F. OPERATIONAL USE - CREW RESPONSE - PRE/POSTEVA: USE AIRLOCK PANEL O2 VALVE TO ISOLATE LEAK BETWEEN O2 RECHARGE OPERATIONS. USE OTHER SCU FOR O2 RECHARGE OPERATIONS. SPECIAL TRAINING - STANDARD EMI TRAINING COVERS THIS FAILURE MODE. OPERATIONAL CONSIDERATIONS - EVA CHECKLIST PROCEDURES VERIFY HARDWARE INTEGRITY AND SYSTEMS OPERATIONAL STATUS PRIOR TO EVA.

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