

CIC  
CRITICAL ITEMS LIST  
FILE: CIC-50P/2

NAME P/N QTY	CMT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
NON PRESSURE FILL CONNECTION ITEM 113P AND TWO SYNTHETIC- DS Q11	Z/IN	DISFORMED, EXTERNAL GAS LEAKAGE.  GALNE; FAILURE OF SEAL; CAP SEALING SURFACE DAMAGED.	END ITEM; LEAKAGE OF EMERGENCY OR SUPPLY TO AMBENT.  O/R INTERFACE; LEAK OF BACKUP OR SUPPLY.  MISSION; TERMINATE EVA WHEN GAS ISSUES LOW O/R BOTTLE PRESSURE WARNING. LOSS OF USE OF ONE O/R.  CREW/VEHICLE; NONE FOR SINGLE FAILURE. POSSIBLE LOSS OF CANNON WITH LOSS OF THE PLAN.	A. DESIGN - CAP IS SOFT STEEL/GOLD ALLOY AND IS NON-REACTIVE. SEAL HAS VEEDER BACK-UP RING ON ONE SIDE AND SILVA HEL-Y BACK-UP RING ON THE OTHER. A METAL INTERFACE IS LOCATED BENEATH. THE O-RING DIMENSIONS AND THE RIGIDNESS OF THE PARTS PROVIDE SEALING UNDER ALL LOAD CONDITIONS. THE SEALING AREA IS A HAPPHING BALL ON A VEEPEA SEAT.  B. TEST - VEHICLE COMPONENT ACCEPTANCE TEST - THE REGULATOR MANUFACTURER, CTE, PERFORMS AN EXTERNAL LEAKAGE TEST TO ASSURE SEAL INTEGRITY.  PSI TESTS - THE ITEM IS EXTERNAL LEAKAGE TESTED ON THE SECONDARY OXYGEN PACKAGE (SOP), THE SOP BOTTLES ARE PRESSURIZED TO 5000-6000 PSIG WITH A 1/2 OUNCE AND ONE OUNCE MEASURE. THE FILL VALVE, THE TEST POINT VALVE, AND TWO ARE CAPPED WITH THE APPROPRIATE FLIGHT CAP AND TORQUED TO 30-40 IN-LOBS. THE ITEM IS TESTED IN CHAMBER VACUUM AND LEAKAGE MUST NOT EXCEED 5.05 X 10 <sup>-5</sup> SCC/SEC IN. 5.05 X 10 <sup>-5</sup> SCC/SEC OR REPRESENTS TOTAL SAP LEAKAGE.  CERTIFICATION TEST - THE ITEM COMPLETED 904 HO HOUR BURNING @/R WHICH IS 50 TIMES THE CERTIFICATION REQUIREMENT OF 30 HOURS. THE ITEM COMPLETED 112 BURNING CYCLES DURING @/R WHICH IS 3 TIMES THE CYCLE CERTIFICATION REQUIREMENT OF 30. THE ITEM COMPLETED ONE 15 HOUR STRUCTURAL VIBRATION AND SHOCK CERTIFICATION REQUIREMENT DURING @/R. NO CLASS 3 ENGINEERING CHANGES HAVE BEEN INCORPORATED SINCE THIS CONFIGURATION WAS CERTIFIED.  C. INSPECTION - ALL DETAILS, BASES AND TEST FACILITIES ARE CLEANED AND INSPECTED TO REMOVE DUST/SA TO PRECLUDE CONTAMINATION CLOSING. DETAILS, INCLUDING THE O-RING, O-RING GROOVES, AND SEALING SURFACES, ARE LOOK INSPECTED FOR DRIVING DIMENSIONS AND SURFACE FINISH CHARACTERISTICS. DETAILS ARE MANUFACTURED FROM MATERIAL WITH CERTIFIED PHYSICAL AND CHEMICAL PROPERTIES. THE MARKING AND TORQUE OF ALL THEADED CONNECTIONS ARE VERIFIED BY VENDOR AND DEAD INSPECTION.

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