

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - INSTRUMENTATION FMEA NO 05-6R -320700-1 REV:8/16/88

ASSEMBLY : PANEL 017 CRIT. FUNC: 1R  
 P/N RI : RWR80S1211FR CRIT. HDW: 3  
 P/N VENDOR: VEHICLE 102 103 104  
 QUANTITY : 2 EFFECTIVITY: X X X  
 : (TWO) PHASE(S): PL X LO X OO X DO X LS X

REDUNDANCY SCREEN: A-PASS B-FAIL C-PASS  
 PREPARED BY: DES W S MCKEE APPROVED BY: DES Lee C. ... APPROVED BY (NASA):  
 REL R GREGORIAN REL ... REL ...  
 QE E GUTIERREZ QE CM ... QE ...

ITEM:  
 RESISTOR 1.2K 2W - DSC OR1,OR2

FUNCTION:  
 PROVIDES OVERCURRENT PROTECTION OF CONTROL BUSES BC-3 AND CA-3 FOR SIGNAL CONDITIONERS OR1 AND OR2.  
 REFERENCE DESIGNATORS: 33V70A17A6R1,R2.

FAILURE MODE:  
 OPEN

CAUSE(S):  
 STRUCTURAL FAILURE (MECHANICAL STRESS, VIBRATION), ELECTRICAL STRESS  
 THERMAL STRESS, PROCESSING ANOMALY

EFFECT(S) ON:  
 (A) SUBSYSTEM (B) INTERFACES (C) MISSION (D) CREW/VEHICLE  
 (A) LOSS OF ONE OF TWO REDUNDANT POWER PATHS TO SIGNAL CONDITIONERS OR1 AND OR2.  
 (B,C) FIRST FAILURE : NO EFFECT.  
 (D) FIRST FAILURE : NO EFFECT  
 SECOND FAILURE : LOSS OF LIKE RESISTOR IN REDUNDANT PATH TO DSC OR1 OR OR2, CAUSES LOSS OF ASSOCIATED DSC.  
 THIRD FAILURE : LOSS OF DSC MEASUREMENTS MAY CONCEAL A CRITICAL SUBSYSTEM FAILURE WHICH MAY CAUSE LOSS OF CREW/VEHICLE.

FAILS SCREEN "B" BECAUSE FAILURE OF THE FIRST RESISTOR IS UNDETECTABLE.

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DISPOSITION & RATIONALE:

(A) DESIGN (B) TEST (C) INSPECTION (D) FAILURE HISTORY (E) OPERATIONAL USE

(A-D) DISPOSITION AND RATIONALE

REFER TO APPENDIX E, ITEM NO. 3 - RESISTOR.

(B) GROUND TURNAROUND TEST

POWER REDUNDANCY TESTS ON ALL DSC'S ARE PERFORMED DURING GROUND TURNAROUND.

(E) OPERATIONAL USE

NONE