

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - INSTRUMENTATION FMEA NO 05-6R -320600-1 REV: 8/15/88

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

PREPARED BY: W S MCKEE APPROVED BY: REDUNDANCY SCREEN: A-PASS B-FAIL C-PASS
 DES R GREGORIAN REL E GUTIERREZ DES *[Signature]* APPROVED BY (NASA):
 SSN *[Signature]*
 REL *[Signature]* 11-7-88
 QE *[Signature]* 8-29-88 QE *[Signature]*

ITEM:
 RESISTOR 1.2K 2W - DSC OL1, OL2

EPD&C REL TO *[Signature]* 9/88
 EPD&C GSM *[Signature]*

FUNCTION:
 PROVIDES OVERCURRENT PROTECTION OF CONTROL BUSES BC-2, CA-2 FOR SIGNAL
 CONDITIONERS OL1, OL2.
 REFERENCE DESIGNATORS: 33V73A17A1GR2, R3.

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 OL-1
 AND OL-2.
 (B,C) FIRST FAILURE : NO EFFECT.
 (D) FIRST FAILURE : NO EFFECT
 SECOND FAILURE : LOSS OF LIKE RESISTOR IN REDUNDANT PATH TO DSC OL1
 OR OL2, 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 THE FIRST RESISTOR FAILURE 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

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

(E) OPERATIONAL USE

NONE