FAILURE MODES EFFECTS ANALYSIS (FMEA) – CIL HARDWARE
NUMBER: 05-6S-BRES3 -X

SUBSYSTEM NAME: EPD&C - DPS&C

REVISION: 0 04/11/96

PART DATA

	PART NAME VENDOR NAME	PART NUMBER VENDOR NUMBER
LRU	: PANEL O6	V070-730389
SRU	: RESISTOR	RWR80S1211FR

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
RESISTOR, CURRENT LIMITER, WIRE WOUND, 1.2K OHMS +/- 2%, 2 WATTS.

REFERENCE DESIGNATORS:
33V73A6A14R1
33V73A6A14R2
33V73A6A15R1
33V73A6A15R2
33V73A6A16R1
33V73A6A16R2
33V73A6A7R1
33V73A6A7R2
33V73A6A18R1
33V73A6A18R2
33V73A6A19R1
33V73A6A19R2
33V73A6A20R1
33V73A6A20R2
33V73A6A10R1
33V73A6A10R2
33V73A6A25R1
33V73A6A25R2
33V73A6A24R1
33V73A6A24R2
33V73A6A10R3
33V73A6A10R4

QUANTITY OF LIKE ITEMS: 22
TWENTY-TWO ON PANEL O6

FUNCTION:

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PROVIDES CURRENT LIMITING FOR THE MULTIPLEXER DEMULTIPLEXER (MDM) (FLIGHT FORWARD (FF), FLIGHT AFT (FA) & PAYLOAD (PL)) REMOTE POWER CONTROLLER (RPC) CONTROL CIRCUIT. IT ALSO FUNCTIONS AS A FUSIBLE LINK TO PROVIDE SHORT CIRCUIT PROTECTION TO THE CONTROL BUSES.

FAILURE MODES EFFECTS ANALYSIS FMEA – CIL FAILURE MODE
NUMBER: 05-6S-BRES3-01

REVISION#: D 04/11/96

SUBSYSTEM NAME: EPD&C - DPS&C
LRU: PANEL O6
ITEM NAME: RESISTOR

CRITICALITY OF THIS FAILURE MODE: 1R3

FAILURE MODE:
OPEN

MISSION PHASE:
PL PRE-LAUNCH
LO LIFT-OFF
OO ON-ORBIT
DO DE-ORBIT
LS LANDING/SAFING

VEHICLE/PAYLOAD/KIT EFFECTIVITY:
102 COLUMBIA
103 DISCOVERY
104 ATLANTIS
105 ENDEAVOUR

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

CRITICALITY 1/1 DURING INTACT ABORT ONLY? NO

REDUNDANCY SCREEN
A) PASS
B) FAIL
C) PASS

PASS/FAIL RATIONALE:
A)

B)
FAILS SCREEN "B" BECAUSE ONLY ONE OF TWO REDUNDANT ELEMENTS IS INSTRUMENTED.

C)

- FAILURE EFFECTS -

(A) SUBSYSTEM:

FAILURE MODES EFFECTS ANALYSIS (FMEA) CIL FAILURE MODE NUMBER: 05-6S-BRES3-01

LOSS OF ONE OF TWO REDUNDANT POWER CONTROL PATHS TO MDM.

(B) INTERFACING SUBSYSTEM(S):
LOSS OF REDUNDANT POWER INPUTS TO THE MDM (ONE REDUNDANT POWER CIRCUIT IS LOST). HOWEVER, POWER TO MDM IS NOT INTERRUPTED.

(C) MISSION:
NO EFFECT.

(D) CREW, VEHICLE, AND ELEMENT(S):
NO EFFECT FIRST FAILURE.

(E) FUNCTIONAL CRITICALITY EFFECTS:
CRITICALITY 1R3 BECAUSE OF POSSIBLE LOSS OF CREW/VEHICLE AFTER 3 FAILURES (TWO RESISTORS TO ONE MDM AND POWER SWITCH TO LIKE MDM) DUE TO LOSS OF TWO LIKE MDM'S (E.G., LOSS OF OUTPUT OF TWO FA MDM'S CAN RESULT IN A LOSS OF AEROSURFACE CONTROL (REFERENCE 05-5-B03-1-01)).

-DISPOSITION RATIONALE-

(A) DESIGN:
FOR DISPOSITION AND RATIONALE, REFER TO APPENDIX E, ITEM NO. 3 - RESISTOR.

(B) TEST:
FOR DISPOSITION AND RATIONALE, REFER TO APPENDIX E, ITEM NO. 3 - RESISTOR.

GROUND TURNAROUND TEST: ALL TURNAROUND CHECKOUT TESTING IS ACCOMPLISHED IN ACCORDANCE WITH OMRSD.

(C) INSPECTION:
FOR DISPOSITION AND RATIONALE, REFER TO APPENDIX E, ITEM NO. 3 - RESISTOR.

(D) FAILURE HISTORY:
CURRENT DATA ON TEST FAILURES, FLIGHT FAILURES, UNEXPLAINED ANOMALIES, AND OTHER FAILURES EXPERIENCED DURING GROUND PROCESSING ACTIVITY CAN BE FOUND IN THE PRACA DATABASE

FAILURE MODES EFFECTS ANALYSIS (FMEA) – CIL FAILURE MODE
NUMBER: 05-6S-BRES3- 01

(E) OPERATIONAL USE:
NONE.

- APPROVALS -

EDITORIALLY APPROVED	:RI	:
EDITORIALLY APPROVED	:JSC	: 5-2-96
TECHNICAL APPROVAL	: VIA APPROVAL FORM	: 96-CIL-013_05-6S