FAILURE MODES EFFECTS ANALYSIS (FMEA) -- NON-CIL HARDWARE
NUMBER:05-6PK-20310A -X

SUBSYSTEM NAME: EPD&C-COMMUNICATION & TRACKING:CLOSED CIRCUIT TV
REVISION: 0 05/31/00

PART DATA

	PART NAME **VENDOR NAME**	**PART NUMBER** **VENDOR NUMBER**
LRU	:PANEL A7A1	V070-730356
SRU	:RESISTOR,CURRENT LIMITING	RWR80S1211FR

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
RESISTOR, CURRENT LIMITING, ½ WATT, 1.2 K-OHMS.

REFERENCE DESIGNATORS: 36V73A7A1A8R1

QUANTITY OF LIKE ITEMS: 1

FUNCTION:
PROVIDE CURRENT LIMITING PROTECTION FROM SHORT IN SWITCH S57 OR THE CONNECTED WIRING.

REFERENCE DOCUMENTS: ECN 105-25016B DATED 2/25/99

FAILURE MODES EFFECTS ANALYSIS FMEA -- NON-CIL FAILURE MODE
NUMBER: 05-6PK-20310A-02

REVISION#: 0 05/31/00
SUBSYSTEM NAME: EPD&C-COMMUNICATION & TRACKING:CLOSED CIRCUIT TV
LRU: PANEL A7A1 **CRITICALITY OF THIS**
ITEM NAME: RESISTOR,CURRENT LIMITING **FAILURE MODE:** 1R3

FAILURE MODE:
SHORT END-TO-END

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) PASS
C) PASS

PASS/FAIL RATIONALE:
A)
SHORT END-TO-END FAILURE OF RESISTOR DETECTABLE DURING GROUND TURNAROUND USING BREAKOUT BOX.

B)
SHORT END-TO-END DETECTABLE IN ORBIT AS THIS FAILURE WOULD RESULT IN LOSS OF CONTROL BUS BC1.

C)

- FAILURE EFFECTS -

(A) SUBSYSTEM:
LOSS OF CURRENT LIMITING PROTECTION TO THE CONTROL BUS BC1.

FAILURE MODES EFFECTS ANALYSIS (FMEA) -- NON-CIL **FAILURE MODE NUMBER: 05-6PK-20310A-02**

(B) INTERFACING SUBSYSTEM(S):
POSSIBLE EFFECT ON ANY INTERFACING SYSTEMS CONTROLLED BY BUS BC1.

(C) MISSION:
POSSIBLE LOSS OF MISSION AFTER THREE FAILURES SEE (D) FOR SCENARIO.

(D) CREW, VEHICLE, AND ELEMENT(S):
POSSIBLE LOSS OF CREW/VEHICLE AFTER THREE FAILURES:
(1) RESISTOR R1 SHORTS END-TO-END
(2) TOGGLE SWITCH S57 SHORTS TO CASE RESULTING IN POSSIBLE DAMAGE TO CONTROL BUS BC1. ALL CRITICAL FUNCTIONS ON BUS BC1 HAVE BACKUP.
(3) LOSS OF NEXT CONTROL BUS MAY CAUSE LOSS OF CREW/VEHICLE.

(E) FUNCTIONAL CRITICALITY EFFECTS:
SHORT END TO END OF RESISTOR R1 MAY CAUSE LOSS OF CREW/VEHICLE.

- APPROVALS -

SSS&R ENGINEERING	: K.E.RYAN/C.S.PUTCHA	: K.E.Ryan Chandra Putcha
DESIGN ENGINEERING	: G.J.SCHWARTZ	: 6-6-00