

FAILURE MODES EFFECTS ANALYSIS (FMEA) – NON-CIL HARDWARE
NUMBER:05-6PB-22107M -X

SUBSYSTEM NAME: EPD&C - C&T; UHF SPACE COMMUNICATION
REVISION: 0 11/14/95

PART DATA

	PART NAME	PART NUMBER
	VENDOR NAME	VENDOR NUMBER
LRU	: PANEL R15	VO70-730325
SRU	: CIRCUIT BREAKER	MC454-0026-2075

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
 CIRCUIT BREAKER, UHF - ATC, CB13

REFERENCE DESIGNATORS: 32V73A15CB13

QUANTITY OF LIKE ITEMS: 1
 ONE

FUNCTION:
 PROVIDES +28 VDC (MAIN A) POWER TO UHF - ATC TRANSCEIVER. MAIN A POWERS ALL UHF - ATC FUNCTIONS INCLUDING UHF POWER AMP.

REFERENCE DOCUMENTS: VS70-740119

FAILURE MODES EFFECTS ANALYSIS FMEA - NON-CIL FAILURE MODE

NUMBER: 05-6PB-22107M-01

REVISION#: 0 11/14/95

SUBSYSTEM NAME: EPD&C - C&T: UHF SPACE COMMUNICATION

LRU: PANEL R15

CRITICALITY OF THIS

ITEM NAME: CIRCUIT BREAKER

FAILURE MODE: 1R3

FUNCTIONAL CRITICALITY/

REQUIRED FAULT TOLERANCE/ACHIEVED FAULT TOLERANCE:1R/2/2

FAILURE MODE:

FAILS OPEN, FAILS TO CONDUCT, FAILS TO CLOSE

MISSION PHASE:

PL PRE-LAUNCH
 LO LIFT-OFF
 DO DE-ORBIT
 LS LANDING/SAFING

VEHICLE/PAYLOAD/KIT EFFECTIVITY:

102 COLUMBIA
 103 DISCOVERY
 104 ATLANTIS
 105 ENDEAVOUR
 AFTER SPACE COMM MODIFICATION

CAUSE:

VIBRATION, TEMPERATURE, MECHANICAL SHOCK, CONTAMINATION, MISHANDLING,
 PIECE-PART STRUCTURAL FAILURE.

CRITICALITY 1/1 DURING INTACT ABORT ONLY? NO

CRITICALITY 1R2 DURING INTACT ABORT ONLY (AVIONICS ONLY)? NO

REDUNDANCY SCREEN

A) PASS
 B) PASS
 C) PASS

PASS/FAIL RATIONALE:

A)

B)

C)

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CORRECTING ACTION: MANUAL

CORRECTING ACTION DESCRIPTION:
LOW POWER RECEPTION MAY BE POSSIBLE BY VEHICLE ORIENTATION.

- FAILURE EFFECTS -

(A) SUBSYSTEM:
UNABLE TO TRANSMIT HIGH POWER SIMPLEX

(B) INTERFACING SUBSYSTEM(S):
NO EFFECT FIRST FAILURE

(C) MISSION:
AIR/GROUND: RANGE TO GROUND STATION LIMITED.

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

(E) FUNCTIONAL CRITICALITY EFFECTS:
AFTER 3 FAILURES (CIRCUIT BREAKER CB13 AND 2 S-BAND) POSSIBLE LOSS OF
CREW/VEHICLE DUE TO LOSS OF STATE VECTOR UPDATE.

- TIME FRAME -

TIME FROM FAILURE TO CRITICAL EFFECT: MINUTES

- APPROVALS -

PRODUCT ASSURANCE ENGR : VAN D. NGUYEN
DESIGN ENGINEERING : G. J. SCHWARTZ

Van Nguyen 8-20-98
G. J. Schwartz 8-21-98