

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : COMMUNICATION & TRACKING FMEA NO 05-2J -21615 -2 REV: 01/05/88

ASSEMBLY : PNL A1A2 CRIT. FUNC: 2
 P/N RI : ME452-0102-7201 CRIT. HDW: 2
 P/N VENDOR: VEHICLE 102 103 104
 QUANTITY : 1 EFFECTIVITY: X X X
 : ONE-PSP #1 & #2 PHASE(S): PL LO CO X DO LS
 : REDUNDANT CONT CIRCUITS

PREPARED BY: REDUNDANCY SCREEN: A- B- C-
 DES *M. Alvarez* G YATES APPROVED BY: APPROVED BY (NASA):
 REL *M. Alvarez* M ALVAREZ DES *Bladed 1/7/88* SSM *D.A. Vane 2/8/88*
 QE *Dum* 1/22/88 COURSEN REL *Bladed 1-19-88* REL *Bladed 1-19-88*
 QE *Bladed* QE *Bladed*

ITEM:

SWITCH, PSP CMD OUTPUT TOGGLE SWITCH, 2P2T, PAYLOAD SIGNAL PROCESSOR COMMAND OUTPUT.

FUNCTION:

PROVIDES PANEL SELECTION CAPABILITY FOR PAYLOAD COMMANDS ROUTING IN THE PSP - TO THE P/L INTERROGATOR FOR DETACHED PAYLOADS, OR TO THE PAYLOAD UMBILICAL FOR PAYLOADS IN THE ORBITER PAYLOAD BAY. 36V73A1A2S15.

FAILURE MODE:

SHORTS TO CASE (GROUND) WORST CASE A CONTAMINANT OR LOOSE PART MOVES AND SEQUENTIALLY SHORTS TO GROUND SEVERAL INPUT TERMINALS.

CAUSE(S):

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

EFFECT(S) ON:

(A) SUBSYSTEM (B) INTERFACES (C) MISSION (D) CREW/VEHICLE

(A,B) LOSS OF THE POWER CIRCUITS OF BOTH PSP'S.

(C) POSSIBLE LOSS OF PRIME MISSION OBJECTIVE FOR MISSIONS WHERE COMMUNICATION WITH A PAYLOAD IS OF PRIME IMPORTANCE.

(D) NO EFFECT.

DISPOSITION & RATIONALE:

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

(A,B,C,D) REFER TO APPENDIX A, ITEM #1, TOGGLE SWITCH.

(B) TEST

GROUND TURNAROUND TEST - VERIFY PROPER OPERATION OF EACH FUNCTIONAL PATH; PERFORMED TO SUPPORT FLIGHT MANIFEST.

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(E) OPERATIONAL USE

NO CREW CORRECTIVE ACTION IS AVAILABLE TO REGAIN PAYLOAD COMMAND AND DATA RECEPTION VIA THE PAYLOAD SIGNAL PROCESSOR.