

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - COMM. & TRACK. FMEA NO 05-6PJ-213014-1 REV: 01/05/88

ASSEMBLY : PN A1A2				CRIT. FUNC:	2
P/N RI : ME452-0102-7406				CRIT. HDW:	2
P/N VENDOR:		VEHICLE	102	103	104
QUANTITY : 1		EFFECTIVITY:	X	X	X
: ONE		PHASE(S):	PL	LO	OO X DO LS

PREPARED BY: *11-88*  
 DES *M Zelon* M ZELON  
 REL *M Alvarez* M ALVAREZ  
 QE *D.A. COURSEN* COURSEN

REDUNDANCY SCREEN:  
 APPROVED BY: *C*  
 DES *14/88*  
 REL *1-12-88*  
 QE *L...*

APPROVED BY (NASA):  
 SSM *PESL 2/8/88*  
 REL *3/12/88*  
 QE *...*  
 EPDC SSM *...*  
 EPDC REL *...*

ITEM:  
 SWITCH, P/L SYS PWR SEL TOGGLE SWITCH, 4P3T, S-BAND PAYLOAD SYSTEM POWER SELECTION.

FUNCTION:  
 WHEN THE POWER SWITCH (S13) HAS ACTIVATED PAYLOAD SYSTEM 1 OR 2, THIS SWITCH SELECTS THE INTERROGATOR, THE SIGNAL PROCESSOR, OR BOTH FROM THAT SYSTEM. 3 POSITIONS ARE PSP-BOTH-INTERROGATOR. 36V73A1A2S14.

FAILURE MODE:  
 SHORTS TO CASE (GROUND) CONTAMINANT OR BROKEN PART MOVES AND SEQUENTIALLY SHORTS SEVERAL INPUTS TO GROUND.

CAUSE(S):  
 VIBRATION, MECHANICAL SHOCK, CONTAMINATION, MISHANDLING, PIECE-PART STRUCTURAL FAILURE.

EFFECT(S) ON:  
 (A) SUBSYSTEM (B) INTERFACES (C) MISSION (D) CREW/VEHICLE

(A) NO EFFECT ON EPDC.

(B) LOSS OF CAPABILITY TO ACTIVATE EITHER P/L INTERROGATOR OR EITHER P/L SIGNAL PROCESSOR BECAUSE THE MOVING PARTICLE SHORTS THE FOUR CONTROL CIRCUIT FUSES TO GROUND.

(C) POSSIBLE LOSS OF PRIME MISSION OBJECTIVE FOR THOSE MISSIONS ON WHICH RF COMMUNICATION WITH A PAYLOAD IS OF PRIME IMPORTANCE.

(D) NO EFFECT

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DISPOSITION & RATIONALE:

(A) DESIGN (B) TEST (C) INSPECTION (D) FAILURE HISTORY

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

(B) TEST

GROUND TURNAROUND TEST - VERIFY SELECTION OF PI/PSP VIA PANEL SWITCHES;  
PERFORMED TO SUPPORT PAYLOAD MANIFEST.

(E) OPERATIONAL USE

NO CREW CORRECTIVE ACTION AVAILABLE.