

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : COMMUNICATION & TRACKING FMEA NO 05-2J -21309 -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-P/L INTERG #1 & #2		PHASE(S):	PL	LO	OO X DO LS
: REDUNDANT CONT CIRCUITS					

		REDUNDANCY SCREEN:	A-	B-	C-
PREPARED BY:		APPROVED BY:			APPROVED BY (NASA):
DES <i>M. Zelon</i> M ZELON		DES <i>Shahid</i> 1/7/88			SSM <i>P. E. Smith</i> 2/3/88
REL <i>M. Alvarez</i> ALVAREZ		REL <i>Shahid</i> 1-12-88			REL <i>Shahid</i> 1-12-88
QE DUM 1/28/88 COURSEN		QE <i>Shahid</i>			QE <i>Shahid</i>

ITEM:

SWITCH, PAYLOAD MOD TOGGLE SWITCH, 2P2T, PAYLOAD INTERROGATOR MODULATION.

FUNCTION:

PROVIDES CAPABILITY TO ENABLE OR DISABLE THE MODULATION PROCESS IN THE PAYLOAD INTERROGATOR FROM THE PANEL. THE PURPOSE IS TO ALLOW A PAYLOAD WITH A SWEEPING RECEIVER TO ACQUIRE THE INTERROGATOR'S UNMODULATED RF CARRIER TO AVOID FALSE LOCK. 36V73A1A2S9.

FAILURE MODE:

SHORT TO CASE (GROUND) WORST CASE - A CONTAMINANT OR BROKEN 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 ALL CONTROL CAPABILITY (BOTH PANEL AND GROUND COMMAND) FOR BOTH P/L INTERROGATORS BECAUSE THE CONTROL CIRCUIT FUSE IN BOTH LCA'S IS SHORTED TO GROUND.

(C) POSSIBLE LOSS OF PRIME MISSION OBJECTIVE FOR THOSE MISSIONS WHICH REQUIRE RF COMM WITH PAYLOAD.

(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.

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(B) TEST

GROUND TURNAROUND TEST - VERIFY PAYLOAD INTERROGATOR TRANSMITTED
COMMANDS; PERFORMED TO SUPPORT FLIGHT MANIFEST.

(E) OPERATIONAL USE

NO CREW CORRECTIVE ACTION AVAILABLE.