

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - SMK DET/FIRE SUPPMEA NO 05-6VF-2203 -1 REV: 01/29/88

ASSEMBLY : FLCA 1,2&3				CRIT. FUNC: 1R	
P/N RI : MC477-0261-0002				CRIT. HDW: 2	
P/N VENDOR:		VEHICLE	102	103	104
QUANTITY : 3		EFFECTIVITY:	X	X	X
: ONE PER FIRE		PHASE(S):	PL X LO	OO	OO LS
: SUPPRESSANT CONTAINER					

PREPARED BY:		REDUNDANCY SCREEN:	A-PASS	B-N/A	C-PASS
DES <i>[Signature]</i> J BROWN	APPROVED BY:				
REL M HOVE	DES <i>[Signature]</i>	APPROVED BY (NASA):			
QE <i>[Signature]</i> J COURSEN	REL <i>[Signature]</i>	SSM <i>[Signature]</i>			
	QE <i>[Signature]</i>	REL <i>[Signature]</i>			
		QE <i>[Signature]</i>			
		REL <i>[Signature]</i>			

ITEM:

CONTROLLER, HYBRID DRIVER TYPE I GROUND FIRE SUPPRESSANT 'FIRE' COMMAND.

FUNCTION:

PROVIDES THE LAUNCH PROCESS SYSTEM 'FIRE' COMMAND REQUIRED TO ACTIVATE THE FIRE SUPPRESSANT PYROTECHNIC INITIATOR CONTROLLER (PIC) (PRE-LAUNCH). 81V76A16, 82V76A17, 83V76A18 AR (TYPE I).

FAILURE MODE:

LOSS OF OUTPUT, FAILS TO CONDUCT, FAILS TO TURN "ON"

CAUSE(S):

PIECE PART FAILURE, CONTAMINATION, THERMAL STRESS, MECHANICAL SHOCK, VIBRATION, PROCESSING ANOMALY

EFFECT(S) ON:

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

(A,B) LOSS OF GROUND COMMAND TO 'FIRE' PIC FOR SUPPRESSANT RELEASE INTO THE ASSOCIATED AVIONICS BAY.

(C,D) NO EFFECT, FIRST FAILURE.

(E) FUNCTIONAL CRITICALITY EFFECT - POSSIBLE LOSS OF CREW/VEHICLE. LOSS OF THE ONBOARD AND GROUND "FIRE" COMMANDS WILL RESULT IN LOSS OF THE CAPABILITY TO DISCHARGE FIRE SUPPRESSANT IN ASSOCIATED AVIONICS BAY. SCREEN B IS "N/A" BECAUSE GROUND "FIRE" CIRCUIT IS IN STANDBY.

DISPOSITION & RATIONALE:

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

(A-D) DISPOSITION AND RATIONALE

REFER TO APPENDIX B, ITEM NO. 1 - HYBRID DRIVER.

(B) GROUND TURNAROUND TEST

PIC CIRCUIT TESTS PERFORMED PRIOR TO EACH FLIGHT.

(E) OPERATIONAL USE

CREW SHOULD USE ONBOARD 'ARM' AND 'FIRE' COMMANDS TO ACTIVATE FIRE SUPPRESSANT FOR THE ASSOCIATED AVIONICS BAY.