

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - SMK DET/FIRE SUPFMEA NO 05-6VF-2204 -1 REV:01/29/86

ASSEMBLY : FLCA 1,2&3  
 P/N RI : MC477-0263-0002  
 P/N VENDOR:  
 QUANTITY : 3  
 : ONE PER FIRE  
 : SUPPRESSANT CONTAINER

	VEHICLE	102	103	104
EFFECTIVITY:		X	X	X
PHASE(S):	FL X LC	OO	DC	LS

CRIT. FUNC: 1R  
 CRIT. HDW: 2

PREPARED BY: *JWB* J BROWN  
 DES *JWB* J BROWN  
 REL M HOVE  
 QE *JC* J COURSEN

REDUNDANCY SCREEN: 'A-PASS B-N/A C-PASS  
 APPROVED BY: *[Signature]* APPROVED BY (NASA): *[Signature]*  
 DES *[Signature]* SSM *[Signature]*  
 REL *[Signature]* REL *[Signature]*  
 QE *[Signature]* QE *[Signature]*

ITEM:

CONTROLLER HYBRID DRIVER TYPE III GROUND FIRE SUPPRESSANT 'ARM' COMMAND

FUNCTION:

PROVIDES THE LAUNCH PROCESSOR "ARM" COMMAND REQUIRED FOR ARMING OF THE PYROTECHNIC INITIATOR CONTROLLER (PIC) WHEN FIRE SUPPRESSANT RELEASE IS REQUIRED ON THE GROUND (PRE-LAUNCH). 81V76A16, 82V76A17, 83V76A18 AR (TYPE III).

FAILURE MODE:

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

CAUSE(S):

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

EFFECT(S) ON:

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

(A,B) LOSS OF GROUND ARM COMMAND TO ARM 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 "ARM" COMMANDS WILL RESULT IN LOSS OF THE CAPABILITY TO DISCHARGE FIRE SUPPRESSANT IN ASSOCIATED AVIONICS BAY. SCREEN B IS "N/A" BECAUSE GROUND "ARM" 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" COMMAND TO ACTIVATE FIRE SUPPRESSANT FOR THE ASSOCIATED AVIONICS BAY.