

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - SMK DET/FIRE SUPPMEA NO 05-6VF-2203 -2 REV:03/08/88

ASSEMBLY : FLCA 1,2 & 3
P/N RI : MC477-0261-0002
P/N VENDOR:
QUANTITY : 3
: ONE PER FIRE
: SUPPRESSANT CONTAINER

VEHICLE	102	103	104
EFFECTIVITY:	X	X	X
PHASE(S):	PL X LO	OO	DO IS

CRIT. FUNC: 1
CRIT. HDW: 1

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

REDUNDANCY SCREEN: A- B- C-
APPROVED BY: *R.V. Brown* APPROVED BY (NASA):
DES *R.V. Brown* SSM *7/16/86*
REL *M. Hove* REL *D. Brown*
QE *J. Courson* QE *J. Courson*

PROCESSOR CAMPRI for W.C. Stagg
RE EPD&C REL 3/23/86

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). B1V76A16, B2V76A17, B3V76A18 AR (TYPE I).

FAILURE MODE:
FAILS 'ON', INADVERTENT OUTPUT

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) A CONTINUOUS "FIRE" SIGNAL TO THE PIC.

(B) THE "ARM" FUNCTION WILL BE INHIBITED AND SUPPRESSANT RELEASE CAPABILITY WILL BE LOST FOR BOTH REMOTE AND ONBOARD CONTROL MEANS.

(C) NO EFFECT. PRE-FLIGHT POWER IS REMOVED FROM CIRCUIT WHEN THE UMBILICAL IS DISCONNECTED.

(D) LOSS OF CREW/VEHICLE IN THE EVENT OF FIRE IN THE ASSOCIATED AVIONICS BAY (PORTABLE EXTINGUISHERS CANNOT BE USED BECAUSE THE CREW IS CONFINED TO THEIR SEATS DURING PRELAUNCH).

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.

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(B) GROUND TURNAROUND TEST

PIC CIRCUIT TESTS PERFORMED PRIOR TO EACH FLIGHT.

(E) OPERATIONAL USE

IN CASE OF A FIRE, CREW WILL PERFORM AN "EMERGENCY EGRESS" ON THE PAD.