

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - MAN ARM S&RL JETT FMEA NO 05-6ID-2026 -1 REV:06/17/88

ASSEMBLY : PANEL A14	CRIT. FUNC: 1
P/N RI : ME452-0102-7254	CRIT. HDW: 1
P/N VENDOR:	VEHICLE 102 103 104
QUANTITY : 1	EFFECTIVITY: X X X
: ONE	PHASE(S): PL LO OO X DO LS
:	

PREPARED BY:	REDUNDANCY SCREEN: A- N/A B- N/A C- N/A
DES C STRONG	APPROVED BY: APPROVED BY (NASA): 9-12-88
REL T KIMURA	SSM <u>Paul Thomas J. Evans</u>
QE J COURSEN	REL <u>John M. Chilton</u>
	QE <u>John J. Courson</u>

Epix item of the Shuttle for up to 1000
 50 ... 2/10/88

ITEM:
 SWITCH, TOGGLE, HERMETICAL SEAL, 2 POLE 3 POSITION, CENTER OFF (SAFE) -
 RMS JETTISON/DEADFACE

FUNCTION:
 EMERGENCY SYSTEM - PROVIDES THE CREW WITH THE MANUAL CAPABILITY TO
 REMOTELY COMMAND DEADFACING OF MOTOR LOGIC AND INDICATING CIRCUITRY FOR
 THE MANIPULATOR RETENTION FORWARD, MID, AND AFT LATCH ACTUATORS, SYSTEMS
 A AND B. GROUND RESET PERFORMED PRIOR TO FLIGHT - UTILIZES PREFLIGHT
 BUS. NOTE: THE SWITCH IS LEVER LOCKED IN THE CENTER (SAFE) POSITION.
 36V73A14S33

FAILURE MODE:
 FAILS OPEN, SHORT-TO-CASE (GROUND)

CAUSE(S):
 PIECE PART STRUCTURAL FAILURE, CONTAMINATION, VIBRATION, MECHANICAL
 SHOCK, PROCESSING ANOMALY

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

(A) LOSS OF ABILITY TO ENERGIZE THE DEADFACE RELAYS

(B) LOSS OF INTERFACE FUNCTION - PRECLUDES THE DEADFACING OF THE MOTOR
 LOGIC, MEASUREMENT, POSITION INDICATION, AND AC POWER CIRCUITS TO THE RMS
 IN THE EVENT THAT THE RMS MUST BE JETTISONED. POSSIBLE SHORTING OF AC
 BUSES TO EACH OTHER OR TO GROUND IF THE RMS IS JETTISONED WITHOUT THE
 PROPER DEADFACING OF ITS ASSOCIATED CIRCUITS.

(C,D) POSSIBLE LOSS OF CREW/VEHICLE IF TWO AC MECHANICAL BUSES BECOME
 DISABLED DUE TO THE JETTISON OF THE RMS WITHOUT PROPER DEADFACING.

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SUBSYSTEM :EPD&C - MAN ARM S&RL JETT FMEA NO 05-610-2026 -1 REV:08/17/88

DISPOSITION & RATIONALE:

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

(A-D) DISPOSITION AND RATIONALE:

REFER TO APPENDIX A, ITEM NO. 1 - TOGGLE SWITCH

(B) GROUND TURNAROUND TEST

"PORT RMS JETT RESET/DEADFACE VERIF", VERIFIES OPERATION OF THE PORT RMS RETENTION FORWARD, MID, AND AFT LATCH ACTUATOR DEADFACE RELAY CIRCUITS.

TESTS ARE PERFORMED PRIOR TO EACH FLIGHT WITH PYRO SIMULATORS INSTALLED- CONNECTION TO PORT RMS JETTISON PYRO CONNECTORS WILL BE MADE ACCORDING TO THE TEST PERFORMED.

(E) OPERATIONAL USE

NONE