

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - HYDRAULICS FMEA NO 05-6G -2088 -2 REV:02/19/68

ASSEMBLY : PANEL R2
 P/N RI : ME452-0102-7463
 P/N VENDOR:
 QUANTITY : 3
 : THREE
 :

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

CRIT. FUNC: 1R
 CRIT. HDW: 2

PREPARED BY: J HERMAN
 DES T KIMURA
 REL J COURSEN
 QE

REDUNDANCY SCREEN: A-PASS B-PASS C-PASS
 APPROVED BY: APPROVED BY (NASA):
 DES # *[Signature]* SSM *[Signature]*
 REL *[Signature]* REL *[Signature]* 3/2/88
 QE *[Signature]* QE *[Signature]* 3/4/88
 EPD&C REL *[Signature]* 3/3/88
 EPD&C SSM WS *[Signature]* 3-4-88

ITEM:
 SWITCH, TOGGLE, 4 POLE 2 POSITION, "HYD MAIN PUMP PRESS", "NORM/LOW"

FUNCTION:
 PROVIDES CONTROL OF REDUNDANT POWER TO EACH OF THREE HYDRAULIC MAIN PUMP DEPRESS SOLENOIDS FOR HYDRAULIC MAIN PUMP PRESS 1, 2, AND 3.
 12V73A2S26, S27, S28

FAILURE MODE:
 FAILS IN "NORM" POSITION, ALL CONTACTS FAIL OPEN, SHORTS TO GROUND

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

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

(A) LOSS OF POWER PATH TO MAIN PUMP DEPRESS SOLENOID

(B) INABILITY TO ENERGIZE DEPRESS SOLENOID (INABILITY TO RESTART APU ON AFFECTED SYSTEM). NOSEWHEEL STEERING AND HYDRAULIC LANDING GEAR DEPLOY CAPABILITY WOULD BE LOST IF HYDRAULIC SYSTEM 1 IS LOST.

(C) ABORT DECISION REQUIRED

(D) FIRST FAILURE - NO EFFECT

(E) POSSIBLE LOSS OF CREW/VEHICLE WITH TWO FAILURES (SWITCH FAILURE, LOSS OF SECOND HYDRAULIC SYSTEM)

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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

VSSAJ0.010, "MAIN PUMP EDV ELECTRICAL CHECK" (PERFORMED PRIOR TO EACH FLIGHT). VERIFY THAT SOLENOID RESPONDS TO SWITCH COMMANDS.

(E) OPERATIONAL USE

NONE. HOWEVER, APU START MAY BE ATTEMPTED IN AUTO-SHUTDOWN INHIBIT