

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - AUXILIARY PWR FMEA NO 05-6N -2064 -2 REV: 11/21/87

ASSEMBLY : PANEL A12
 P/N RI : ME452-0102-7403
 P/N VENDOR:
 QUANTITY : 3
 : THREE
 :

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

REUNDANCY SCREEN: A-PASS B-PASS C-PASS

PREPARED BY:	DES	A BAIZ	APPROVED BY:	DES	<u>R. V. [Signature]</u>	APPROVED BY (NASA):	SSM	<u>[Signature]</u>
	REL	T KIMURA		REL	<u>[Signature]</u>		REL	<u>[Signature]</u>
	QE	J T COURSEN		QE	<u>[Signature]</u>		QE	<u>[Signature]</u>

EPD&C SSM [Signature]

ITEM:
 SWITCH, TOGGLE, 4 POLE 3 POSITION - AUXILIARY POWER UNIT (APU) HEATERS
 GAS GENERATOR/FUEL PUMP 1, 2, AND 3 POWER CIRCUITS

FUNCTION:
 PROVIDES AUTO/OFF CONTROL OF THE GAS GENERATOR/FUEL PUMP 1, 2, 3 HEATERS.
 36V73A12S1, S2, S3

FAILURE MODE:
 FAILS CLOSED, CONTACT-TO-CONTACT AND POLE-TO-POLE SHORT

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

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

(A) LOSS OF MANUAL CONTROL OF HEATERS

(B, C, D) NO EFFECT - FIRST FAILURE

(E) AFTER SECOND FAILURE (THERMOSTAT FAILS ON), POSSIBLE LOSS OF
 MISSION, CREW/VEHICLE DUE TO HYDRAZINE DECOMPOSITION RESULTING FROM FUEL
 PUMP OVER TEMPERATURE.

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

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(B) GROUND TURNAROUND TEST

APU 1/2/3 FUEL PUMP AND GAS GENERATOR HEATER TEST PERFORMED EVERY FLOW.

(E) OPERATIONAL USE

NONE