SHU T CRITICAL ITEMS LIST - TIER

SUBSYSTEM :EPD&C - AUXILIARY PWR FMEA NO 05-6N -2064 -1 REV:10/11/90

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

CRIT. FUNC: 1
CRIT. HDW: 1

VEHICLE EFFECTIVITY:	102	103	104
	X	X	X

PHASE(S): PL LO OO X DO LS

REDUNDANCY SCREEN: A- N/A B- N/A C- N/A

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

APPROVED BY:
DES
REL
QE

APPROVED BY (NASA):
SSM
REL
QE

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 MANUAL CONTROL OF THE GAS GENERATOR/FUEL PUMP 1, 2, AND 3 HEATERS.
36V73A12S1, S2, S3

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) NOT ABLE TO ENERGIZE GAS GENERATOR/FUEL PUMP POWER AND CONTROL CIRCUITS FOR ONE APU.

(B) GAS GENERATOR/FUEL PUMP HEATERS FAILED "OFF" FOR ONE APU - THERMAL MANAGEMENT TECHNIQUES USED TO PREVENT FUEL (HYDRAZINE) FROM FREEZING.

(C) ABORT DECISION REQUIRED.

(D) POSSIBLE LOSS OF CREW/VEHICLE DUE TO LOSS OF BOTH HEATERS TO ONE APU RESULTING IN FUEL (HYDRAZINE) FREEZING AND LINE RUPTURE, UPON THAWING.

SHUTTLE CRITICAL ITEMS LIST - CRITER

SUBSYSTEM :EPD&C - AUXILIARY PWR FMEA NO 05-6N -2064 -1 REV:10/11/90

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) TEST
APU 1/2/3 HEATER TEST BY COCKPIT COMMAND PERFORMED IN FLIGHT EVERY FLOW OR AFTER CIG RETEST.

(E) OPERATIONAL USE
PERFORM THERMAL CONDITION ON ORBIT AND/OR OPERATE APU TO MAINTAIN SYSTEM TEMPERATURE.