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PRINT DATE: 09/07/94

FAILURE MODES EFFECTS ANALYSIS (FMEA) - NONCRITICAL HARDWARE
NUMBER: 05-6WA-2086HB-X

SUBSYSTEM NAME: EPD&C-WATER SPRAY BOILER

REVISION: 0 07/26/94

	PART NAME VENDOR NAME	PART NUMBER VENDOR NUMBER
LRU	: PANEL R2	V070-730277
SRU	: RESISTOR	RWR80S1211FR

PART DATA

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:

RESISTOR IS 1.2K OHMS, 2 W, BETWEEN LOGIC POWER BUS AND PANEL TOGGLE SWITCH FOR WSB CONTROLLER "B" LOGIC CIRCUIT.

REFERENCE DESIGNATORS: 32V73A2A20R2

32V73A2A17R2

32V73A2A21R2

32V73A2A18R2

32V73A2A22R2

32V73A2A19R2

QUANTITY OF LIKE ITEMS: 6

SIX, TWO PER WATER SPRAY BOILER SYSTEM

FUNCTION:

LIMITS LOGIC CIRCUIT CURRENT FOR THE REMOTE POWER CONTROLLER'S (RPC) POWERING CONTROLLER "B" OF WATER SPRAY BOILER SYSTEMS 1, 2, AND 3.

FAILURE MODES EFFECTS ANALYSIS (FMEA) - NONCRITICAL FAILURE MODE

NUMBER: 05-6WA-2086HB- 01

REVISION# 0 07/26/94

SUBSYSTEM NAME: EPD&C-WATER SPRAY BOILER

LRU: PANEL R2

ITEM NAME: RESISTOR

CRITICALITY OF THIS

FAILURE MODE: 1R3

FAILURE MODE:

OPEN

MISSION PHASE:

LO LIFT-OFF

DO DE-ORBIT

VEHICLE/PAYLOAD/KIT EFFECTIVITY: 102 COLUMBIA
103 DISCOVERY
104 ATLANTIS
105 ENDEAVOUR
EFFECTIVE FOR WSB INLET LINE ELECTRICAL
HEATER MOD ONLY

CAUSE:

STRUCTURAL FAILURE (MECHANICAL STRESS, VIBRATION), ELECTRICAL STRESS,
THERMAL STRESS, PROCESSING ANOMALY

CRITICALITY 1/1 DURING INTACT ABORT ONLY? NO

REDUNDANCY SCREEN A) PASS
B) PASS
C) PASS

PASS/FAIL RATIONALE:

A)

B)

C)

- FAILURE EFFECTS -

(A) SUBSYSTEM:

LOSS OF POWER TO CONTROLLER 'B.

(B) INTERFACING SUBSYSTEM(S):

LOSS OF CONTROL REDUNDANCY FOR AFFECTED WSB.

(C) MISSION:

NO EFFECT - FIRST FAILURE.

(D) CREW, VEHICLE, AND ELEMENT(S):

NO EFFECT - FIRST FAILURE.

**FAILURE MODES EFFECTS ANALYSIS (FMEA) – NONCRITICAL FAILURE MODE
NUMBER: 05-6WA-2086HB-01**

(E) FUNCTIONAL CRITICALITY EFFECTS:

FUNCTIONAL CRITICALITY EFFECTS FOR OPEN RESISTOR: LOSS OF CONTROLLER "B".
SECOND FAILURE: LOSS OF REDUNDANT CONTROLLER "A" IN SAME WSB WILL CAUSE
LOSS OF WSB. THIRD FAILURE: LOSS OF CREW/VEHICLE WITH LOSS OF SECOND
APU/HYD SYSTEM.

- APPROVALS -

PRODUCT ASSURANCE ENGR : C. RESSIA
DESIGN ENGINEERING : G. SCHWARTZ

Carlton R. Ressa
Gary J. Schwartz 9-29-94