

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM :ELECT POWER DIST & CONT FMEA NO 05-6 -2289 -1 REV:05/03/88

ASSEMBLY :MAIN DC DISTR ASSY 243 CRIT.FUNC: 2
 P/N RI :ME451-0016-0200 CRIT. HDW: 2
 P/N VENDOR: VEHICLE 102 103 104
 QUANTITY :4 EFFECTIVITY: X X X
 :FOUR PHASE(S): PL LO OO X DO LS
 :

REDUNDANCY SCREEN: A-N/A B-N/A C-N/A
 PREPARED BY: APPROVED BY: APPROVED BY (NASA):
 DES R PHILLIPS DES [Signature] SSM [Signature]
 REL M HOVE REL [Signature] REL [Signature]
 QE J COURSEN QE [Signature] QE [Signature]

ITEM:
 FUSE, HIGH CURRENT, 200 AMP - ORBITER/PAYLOAD POWER INTERFACE

FUNCTION:
 PROVIDES CIRCUIT PROTECTION BETWEEN ORBITER POWER SOURCES AND THE PAYLOAD PRIMARY POWER INTERFACE. 40V76A33F34, F35, F39, F40

FAILURE MODE:
 FAILS OPEN, FAILS TO CONDUCT

CAUSE(S):
 CONTAMINATION, THERMAL STRESS, MECHANICAL SHOCK, VIBRATION, STRUCTURAL FAILURE, PROCESSING ANOMALY

EFFECT(S) ON:
 (A)SUBSYSTEM (B)INTERFACES (C)MISSION (D)CREW/VEHICLE (E)FUNCTIONAL CRITICALITY EFFECT:
 (A,B) LOSS OF ONE PAYLOAD PRIMARY POWER FEEDER.
 (C) POSSIBLE LOSS OF MISSION OBJECTIVES IF A PAYLOAD IS CONNECTED TO A SINGLE FEEDER.
 (D) FIRST FAILURE - NO EFFECT. LOSS OF ALL FOUR PAYLOAD PRIMARY POWER FEEDERS RESULTS IN LOSS OF MISSION ONLY.

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DISPOSITION & RATIONALE:

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

(A,B,C,D) DISPOSITION AND RATIONALE

REFER TO APPENDIX D, ITEM NO. 3 - FUSE, HIGH CURRENT

1) GROUND TURNAROUND TEST

VERIFY PAYLOAD PRIMARY POWER INTERFACE PARALLEL CIRCUIT INTEGRITY.
VERIFY CURRENT IN EACH PATH IS WITHIN +/- 10 PERCENT OF AVERAGE
CURRENT. TEST IS PERFORMED DEPENDENT ON MISSION PAYLOAD REQUIREMENTS.

2) OPERATIONAL USE

NONE