

SHUTTLE CRITICAL ITEMS LIST - ORBITER

SUBSYSTEM : EPD&C - OMS

FMEA NO 05-6L -2083A -1

REV: 03/14/8

(E) POSSIBLE LOSS OF CREW/VEHICLE DUE TO THE LOSS OF ELECTRICAL POW
NECESSARY FOR COMPLETION OF FUNCTION. REQUIRES ONE OTHER FAILU
(BELLOWS LEAK) BEFORE THE EFFECT IS MANIFESTED. CONTINUOUS POWER APPLI
TO THE AC MOTOR VALVE MAY RESULT IN VALVE OVERHEATING AND PROPELLA
DECOMPOSITION LEADING TO VALVE RUPTURE. FAILURE NOT DETECTABLE
FLIGHT DUE TO LACK OF MONITORING MEASUREMENTS. BELLOWS FAILURE N
DETECTABLE IN FLIGHT.

DISPOSITION & RATIONALE:

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

(A-D) FOR DISPOSITION AND RATIONALE

REFER TO APPENDIX E, ITEMS NO. 1 - RESISTOR, FILM AND NO. 3 - RESISTOR
WIRE WOUND.

(B) GROUND TURNAROUND TEST

V43CAO.070 - REDONDANT CIRCUIT VERIFICATION (PERIODIC) - ORB/PO
PERFORMED FOR FIRST FLIGHT AND AT FIVE FLIGHT INTERVALS OR FOR LRU RETE.
PER FIGURE V43200.000 OR FOR ORBITER DISRUPTED COPPER PATHS. FUNCTION.
CHECKOUT OF AC MOTOR VALVE CONTROL CIRCUITS PER FIGURE V43CAO.070-2.

V43CAO.072 - REDONDANT CIRCUIT VERIFICATION; PERFORMED EACH FLIG
(AFTER FIRST FLIGHT). FUNCTIONAL CHECKOUT OF AC MOTOR CONTROL CIRCUIT
PER FIGURE V43CAO.070-2.

V43CBO.165 - AC MOTOR VALVE ACTUATOR SNIFF CHECK; PERFORMED EACH FLIGH
ALL AC MOTOR VALVE ACTUATORS CHECKED FOR PRESENCE OF PROPELLANT VAPORS.

V43CFO.010 - PROPELLANT SERVICING TO FLIGHT LOAD; PERFORMED EACH FLIGH
ALL AC MOTOR VALVES CYCLED DURING LOADING OPERATION.

(E) OPERATIONAL USE

PLACE SWITCH IN GENERAL PURPOSE COMPUTER (GPC) POSITION TO REMO
CONTINUOUS POWER FROM VALVE RELAY.