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PRINT DATE: 10/26/95

**FAILURE MODES EFFECTS ANALYSIS (FMEA) - NONCRITICAL HARDWARE  
NUMBER: M5-6MR-0021-X**

**SUBSYSTEM NAME: ORBITER DOCKING SYSTEM**

**REVISION: 1 SEP 30, 1995**

	<b>PART NAME VENDOR NAME</b>	<b>PART NUMBER VENDOR NUMBER</b>
LRU	: MPCA-1	V070-764400
LRU	: MPCA-2	V070-764430
SRU	: REMOTE POWER CONTROLLER	MC450-0017-X200

**PART DATA**

**EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:**  
REMOTE POWER CONTROLLER, TYPE III, CLASS B, 20 AMP - PSU POWER MN A AND  
MN B CONTROL CIRCUIT.

**REFERENCE DESIGNATORS:** 40V76A25RPC17  
40V76A26RPC17

**QUANTITY OF LIKE ITEM: 2**  
(TWO)

**FUNCTION:**

THE REMOTE POWER CONTROLLERS PROVIDE POWER DISTRIBUTION AND CIRCUIT  
PROTECTION ACTIVATION OF THE PSU POWER MN A AND MN B POWER CIRCUITS.

**REFERENCE DOCUMENTS:** 1) ECN 104-25012A. ODS ELECTRICAL CHANGE NOTICE.  
2) CRB>=468912=001 \_ J.P. SCHEMATIC DIAGRAM -  
ANDROGYNOUS PERIPHERAL DOCKING SYSTEM (APDS)  
CONTROL PANEL PU-APSS SCHEMATIC.  
3) 33Y.5212.005."3. APDS CONTROL UNIT ELECTRICAL  
SCHEMATIC.  
4) VS70-953104. ODS INTEGRATED SCHEMATIC.  
5) V828-733002. SCHEMATIC DIAGRAM - O&C PANEL A7A3  
AFT STATION



FAILURE MODES EFFECTS ANALYSIS (FMEA) - NONCRITICAL FAILURE MODE  
NUMBER: M5-6MR-0021-02

(D) CREW, VEHICLE, AND ELEMENT(S):  
FIRST FAILURE - NO EFFECT.

(E) FUNCTIONAL CRITICALITY EFFECTS:

POSSIBLE LOSS OF CREW OR VEHICLE AFTER EIGHT FAILURES. 1) ONE RPC FAILS ON (PSU MAIN BUS POWER.) NO EFFECT. 2) ONE APDS POWER ON SWITCH FAILS CLOSED. NO EFFECT. 3) INADVERTENT ACTIVATION OF ONE OF THREE HOOKS OPEN DSCU CONTROL SIGNALS - NO EFFECT. 4) INADVERTENT ACTIVATION OF SECOND ASSOCIATED DSCU MOTOR CONTROL SIGNAL. LATENT HOOKS OPEN COMMAND. 5, 6) TWO APDS POWER CIRCUIT BREAKERS IN THE A8A3 PANEL FAIL CLOSED. 7, 8) TWO APDS PANEL POWER CIRCUIT BREAKERS IN THE A8A3 PANEL FAIL CLOSED RESULTING IN INADVERTENT OPENING OF BOTH GANGS OF SIX HOOKS. POSSIBLE LOSS OF HABITABLE ENVIRONMENT.

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- TIME FRAME -

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TIME FROM FAILURE TO CRITICAL EFFECT: DAYS

TIME FROM FAILURE OCCURRENCE TO DETECTION: HOURS

TIME FROM DETECTION TO COMPLETED CORRECTIVE ACTION: MINUTES

TIME REQUIRED TO IMPLEMENT CORRECTIVE ACTION LESS THAN TIME TO EFFECT?  
YES

HAZARDS: DM2SHA02(F)008-7

LOSS OF PRESSURE IN ODS/DOCKING MODULE HABITABLE VOLUME.

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- APPROVALS -

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PRODUCT ASSURANCE ENGINEERING  
DESIGN ENGINEERING

:R. BLACKWELL  
:T. NGUYEN

*R. Blackwell*  
*T. Nguyen*