

**CRITICAL ITEMS LIST**

PROJECT: SRMS  
ASS'Y NOMENCLATURE: EEEU

SYSTEM: ELECTRICAL SUBSYSTEM  
ASS'Y P/N: 51140F1174-38-5 SHEET: 1

FMEA REF.	FMEA REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HRUR / FUNC. 2/IR CRITICALITY	RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
3580	2	POWER CONDITIONER QTY-1 SCHEMATIC 2559002	<p>MODE: LOSS OF REGULATED VOLTAGE EITHER 5.1 OR 10V.</p> <p>CAUSE(S): (1) OUTPUT FILTER S/C. (2) TRANSFORMER FAILURE. (3) DIODE FAILURE. (4) FAILURE IN AUTOMATIC SHUT DOWN CIRCUIT.</p>	<p>EE WILL BE INOPERATIVE. THE POWER CONDITIONER WILL AUTOMATICALLY SHUTDOWN FOR AN OVER CURRENT OR OVER-VOLTAGE. IF ONE RAIL LOST EITHER LOGIC (10V) OR COMMUTATION (5.1V) WILL BE LOST AND EE COMMANDS CANNOT BE PRODUCED. MOTOR AND BRAKE CLUTCHES WILL NOT BE OPERATED. ARM WILL LIMP DURING CAPTURE SEQ.</p> <p>WORST CASE ----- UNEXPECTED PAYLOAD MOTION. INCOMPLETE CAPTURE/RELEASE SEQUENCE. UNABLE TO RELEASE PAYLOAD. CREW ACTION REQ.</p> <p>REDUNDANT PATHS REMAINING ----- BACKUP EE RELEASE.</p>	<p>DESIGN FEATURES -----</p> <p>TRANSFORMERS AND INDUCTORS ARE DESIGNED SPECIFICALLY FOR THE APPLICATION. THESE ARE TOROID - WOUND AND UTILIZE A FERRITE CORE MATERIAL. CHOICE OF WIRE SIZE AND OF INSULATION MATERIALS ENSURE THAT THE DERATING REQUIREMENTS OF SPAR-RMS-PA.003 ARE MET.</p> <p>DISCRETE SEMICONDUCTOR DEVICES SPECIFIED TO AT LEAST THE TX LEVEL OF MIL-S-19500. ALL DEVICES ARE SUBJECTED TO RE-SCREENING BY AN INDEPENDANT TEST HOUSE. SAMPLES OF ALL PROCURED LOTS/DATE CODES ARE SUBJECTED TO DESTRUCTIVE PHYSICAL ANALYSIS (DPA) TO VERIFY THE INTEGRITY OF THE MANUFACTURING PROCESSES. DEVICE STRESS LEVELS ARE, DERATED IN ACCORDANCE WITH SPAR-RMS-PA.003 AND VERIFIED BY DESIGN REVIEW.</p> <p>COMPARATORS AND OPERATIONAL AMPLIFIERS ARE STANDARD LINEAR INTEGRATED CIRCUITS WITH MATURE MANUFACTURING TECHNOLOGY. APPLICATION CONSTRAINTS ARE IN ACCORDANCE WITH SPAR-RMS-PA.003.</p> <p>ALL RESISTORS AND CAPACITORS USED IN THE DESIGN ARE SELECTED FROM ESTABLISHED RELIABILITY (ER) TYPES. LIFE EXPECTANCY IS INCREASED BY ENSURING THAT ALL ALLOWABLE STRESS LEVELS ARE DERATED IN ACCORDANCE WITH SPAR-RMS-PA.003. ALL CERAMIC AND ELECTROLYTIC CAPACITORS ARE ROUTINELY SUBJECTED TO RADIOGRAPHIC INSPECTION.</p> <p>THIS IS A SELF ENCLOSED ASSEMBLY FOR EMC AND THERMAL CONSIDERATIONS.</p>	

RMS/ELEC - 1095

**CRITICAL ITEMS LIST**

PROJECT: SRMS  
ASS'Y NOMENCLATURE: EEEU

SYSTEM: ELECTRICAL SUBSYSTEM  
ASS'Y P/N: 51140F1174-38-5

SHEET: 2

FMEA REF.	FMEA REV.	NAME, QTY & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HOWR / FUNC. 2/1R CRITICALITY	RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
3580	2	POWER CONDITIONER QTY-1 SCHEMATIC 2559082	<p>MODE: LOSS OF REGULATED VOLTAGE EITHER 5.1 OR 10V.</p> <p>CAUSE(S): (1) OUTPUT FILTER S/C. (2) TRANSFORMER FAILURE. (3) DIODE FAILURE. (4) FAILURE IN AUTOMATIC SHUT DOWN CIRCUIT.</p>	<p>EE WILL BE INOPERATIVE. THE POWER CONDITIONER WILL AUTOMATICALLY SHUTDOWN FOR AN OVER CURRENT OR OVER-VOLTAGE. IF ONE RAIL LOST EITHER LOGIC (10V) OR COMPUTATION (5.1V) WILL BE LOST AND EE COMMANDS CANNOT BE PRODUCED. MOTOR AND BRAKE CLUTCHES WILL NOT BE OPERATED. ARM WILL LIMP DURING CAPTURE SEQ.</p> <p>WORST CASE ----- UNEXPECTED PAYLOAD MOTION. INCOMPLETE CAPTURE/RELEASE SEQUENCE. UNABLE TO RELEASE PAYLOAD. CREW ACTION REQ.</p> <p>REDUNDANT PATHS REMAINING ----- BACKUP EE RELEASE.</p>		<p>ACCEPTANCE TESTS ----- THE EEEU IS SUBJECTED TO THE FOLLOWING ACCEPTANCE ENVIRONMENTAL TESTING AS AN SRU.</p> <p>O VIBRATION: LEVEL AND DURATION REFERENCE TABLE 6</p> <p>O THERMAL: +70 DEGREES C TO -25 DEGREES C (1 1/2 CYCLES)</p> <p>THE EEEU IS INTEGRATED INTO THE END EFFECTOR AND IS FURTHER EXPOSED TO THE END EFFECTOR ACCEPTANCE TEST ENVIRONMENTS (VIBRATION AND THERMAL VACUUM).</p> <p>THE END EFFECTOR ASSEMBLY IS PART OF THE INTEGRATED RMS SYSTEM TESTS (TP510 RMS STRONGBACK TEST AND TP552 FLAT FLOOR TEST) WHICH VERIFIES THE ABSENCE OF THE FAILURE MODE.</p> <p>QUALIFICATION TESTS ----- THE EEEU IS SUBJECTED TO THE FOLLOWING SRU QUALIFICATION TEST ENVIRONMENTS.</p> <p>O VIBRATION: LEVEL AND DURATION - REFERENCE TABLE 6</p> <p>O SHOCK: 20G/11MS - 3 AXES (6 DIRECTIONS)</p> <p>O THERMAL: +81 DEGREES C TO -36 DEGREES C (6 CYCLES) 1 X 10<sup>-6</sup> TORR</p> <p>O HUMIDITY: TESTED IN THE END EFFECTOR HUMIDITY TEST.</p> <p>O EMC: MIL-STD-461 AS MODIFIED BY SL-E-0002 (TESTS CED1, CED3, CS01, CS02, CS06, RE01, RE02 (W/B) RS01).</p> <p>FLIGHT CHECKOUT ----- PDOS OPS CHECKLIST (ALL VEHICLES) JSC 16987</p>

RMS/ELEC - 1096

PREPARED BY:

HFMG

SUPERCEDING DATE: 12 OCT 89

DATE: 24 JUL 91

CIL REV: 3

**CRITICAL ITEMS LIST**

PROJECT: SRMS  
ASS'Y NOMENCLATURE: EEEU

SYSTEM: ELECTRICAL SUBSYSTEM  
ASS'Y P/N: 51140F1174-3E-5 SHEET: 3

FMEA REF.	FMEA REV.	NAME, QTY & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HOWR / FUNC. 2/TR CRITICALITY	RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
3580	2	POWER CONDITIONER QTY-1 SCHEMATIC 2559002	<p>MODE: LOSS OF REGULATED VOLTAGE EITHER 5.1 OR 10V.</p> <p>CAUSE(S): (1) OUTPUT FILTER S/C. (2) TRANSFORMER FAILURE. (3) DIODE FAILURE. (4) FAILURE IN AUTOMATIC SHUT DOWN CIRCUIT.</p>	<p>EE WILL BE INOPERATIVE. THE POWER CONDITIONER WILL AUTOMATICALLY SHUTDOWN FOR AN OVER CURRENT OR OVER VOLTAGE. IF ONE RAIL LOST EITHER LOGIC (10V) OR COMMUTATION (5.1V) WILL BE LOST AND EE COMMANDS CANNOT BE PRODUCED. MOTOR AND BRAKE CLUTCHES WILL NOT BE OPERATED. ARM WILL LIMP DURING CAPTURE SEQ.</p> <p>WORST CASE ----- UNEXPECTED PAYLOAD MOTION. INCOMPLETE CAPTURE/RELEASE SEQUENCE. UNABLE TO RELEASE PAYLOAD. CREW ACTION REQ.</p> <p>REDUNDANT PATHS REMAINING ----- BACKUP EE RELEASE.</p>	<p>QA/INSPECTIONS -----</p> <p>UNITS ARE MANUFACTURED UNDER DOCUMENTED QUALITY CONTROLS. THESE CONTROLS ARE EXERCISED THROUGHOUT DESIGN PROCUREMENT, PLANNING, RECEIVING, PROCESSING, FABRICATION, ASSEMBLY, TESTING AND SHIPPING OF THE UNITS. MANDATORY INSPECTION POINTS ARE EMPLOYED AT VARIOUS STAGES OF FABRICATION ASSEMBLY AND TEST. GOVERNMENT SOURCE INSPECTION IS INVOKED AT VARIOUS CONTROL LEVELS.</p> <p>EEE PARTS INSPECTION IS PERFORMED AS REQUIRED BY SPAR-RMS-PA.003. EACH EEE PART IS QUALIFIED AT THE PART LEVEL TO THE REQUIREMENTS OF THE APPLICABLE SPECIFICATION. ALL EEE PARTS ARE 100% SCREENED AND BURNED IN, AS A MINIMUM, AS REQUIRED BY SPAR-RMS-PA.003, BY THE SUPPLIER. ADDITIONALLY, EEE PARTS ARE 100% RE-SCREENED IN ACCORDANCE WITH REQUIREMENTS, BY AN INDEPENDENT SPAR APPROVED TESTING FACILITY. DPA IS PERFORMED AS REQUIRED BY PA.003 ON A RANDOMLY SELECTED 5% OF PARTS, MAXIMUM 5 PIECES, MINIMUM 3 PIECES FOR EACH LOT NUMBER/DATE CODE OF PARTS RECEIVED.</p> <p>WIRE IS PROCURED TO SPECIFICATION MIL-W-22759 OR MIL-W-B1301 AND INSPECTED AND TESTED TO NASA JSC0000 STANDARD NUMBER 95A.</p> <p>RECEIVING INSPECTION VERIFIES THAT ALL PARTS RECEIVED ARE AS IDENTIFIED IN THE PROCUREMENT DOCUMENTS, THAT NO PHYSICAL DAMAGE HAS OCCURRED TO PARTS DURING SHIPMENT THAT THE RECEIVING DOCUMENTS PROVIDE ADEQUATE TRACEABILITY INFORMATION AND SCREENING DATA CLEARLY IDENTIFIES ACCEPTABLE PARTS.</p> <p>PARTS ARE INSPECTED THROUGHOUT MANUFACTURE AND ASSEMBLY AS APPROPRIATE TO THE MANUFACTURING STAGE COMPLETED. THESE INSPECTIONS INCLUDE,</p> <p>PRINTED CIRCUIT BOARD INSPECTION FOR TRACK SEPARATION, DAMAGE AND ADEQUACY OF PLATED THROUGH HOLES,</p> <p>COMPONENT MOUNTING INSPECTION FOR CORRECT SOLDERING, WIRE LOOPING, STRAPPING, ETC. OPERATORS AND INSPECTORS ARE TRAINED AND CERTIFIED TO NASA NHB 5300.4(3-1) STANDARD.</p> <p>CONFORMAL COATING INSPECTION FOR ADEQUATE PROCESSING IS PERFORMED USING ULTRAVIOLET LIGHT TECHNIQUES.</p> <p>POST P.C. BD. INSTALLATION INSPECTION, CLEANLINESS AND WORKMANSHIP (SPAR/GOVERNMENT REP. MANDATORY INSPECTION POINT)</p> <p>P.C. BD. INSTALLATION INSPECTION, CHECK FOR CORRECT BOARD INSTALLATION, ALIGNMENT OF BOARDS, PROPER CONNECTOR CONTACT MATING, WIRE ROUTING, STRAPPING OF WIRES ETC.,</p> <p>PRE-CLOSURE INSPECTION, WORKMANSHIP AND CLEANLINESS (SPAR/GOVERNMENT REP. - MANDATORY INSPECTION POINT)</p> <p>PRE-ACCEPTANCE TEST INSPECTION, WHICH INCLUDES AN AUDIT OF LOWER TIER INSPECTION COMPLETION, AS BUILT CONFIGURATION VERIFICATION TO AS DESIGN ETC., (MANDATORY INSPECTION POINT).</p>	

RMS/ELEC - 1097

**CRITICAL ITEM LIST**

PROJECT: SRMS  
ASS'Y NOMENCLATURE: EEEU

SYSTEM: ELECTRICAL SUBSYSTEM  
ASS'Y P/N: 5114DF1174-3A-5 SHEET: 4

FMEA REF.	FMEA REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HDWR / FUNC. 2/1R CRITICALITY RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
3580	2	POWER CONDITIONER QTY-1 SCHEMATIC 2559082	<p>MODE: LOSS OF REGULATED VOLTAGE EITHER 5.1 OR 10V.</p> <p>CAUSE(S): (1) OUTPUT FILTER S/C. (2) TRANSFORMER FAILURE. (3) DIODE FAILURE. (4) FAILURE IN AUTOMATIC SHUT DOWN CIRCUIT.</p>	<p>EE WILL BE INOPERATIVE. THE POWER CONDITIONER WILL AUTOMATICALLY SHUTDOWN FOR AN OVER CURRENT OR OVER-VOLTAGE. IF ONE RATL LOST EITHER LOGIC (10V) OR COMPUTATION (5.1V) WILL BE LOST AND EE COMMANDS CANNOT BE PRODUCED. MOTOR AND BRAKE CLUTCHES WILL NOT BE OPERATED. ARM WILL LIMP DURING CAPTURE SEQ.</p> <p>WORST CASE ----- UNEXPECTED PAYLOAD MOTION. INCOMPLETE CAPTURE/RELEASE SEQUENCE. UNABLE TO RELEASE PAYLOAD. CREW ACTION REQ.</p> <p>REDUNDANT PATHS REMAINING ----- BACKUP EE RELEASE.</p>	<p>A TEST READINESS REVIEW (TRR) WHICH INCLUDES VERIFICATION OF TEST PERSONNEL, TEST DOCUMENTS, TEST EQUIPMENT CALIBRATION/ VALIDATION STATUS AND HARDWARE CONFIGURATION IS CONVENED BY QUALITY ASSURANCE IN CONJUNCTION WITH ENGINEERING, RELIABILITY, CONFIGURATION CONTROL, SUPPLIER AS APPLICABLE, AND THE GOVERNMENT REPRESENTATIVE, PRIOR TO THE START OF ANY FORMAL TESTING (ACCEPTANCE OR QUALIFICATION).</p> <p>ACCEPTANCE TESTING (ATP) INCLUDES AMBIENT PERFORMANCE, THERMAL AND VIBRATION TESTING, (SPAR/GOVERNMENT REP. - MANDATORY INSPECTION POINT).</p> <p>INTEGRATION OF UNIT TO END EFFECTOR ASSY - INSPECTIONS INCLUDE GROUNDING CHECKS, CONNECTORS FOR BENT OF PUSHBACK CONTACTS, VISUAL, CLEANLINESS, INTERCONNECT WIRING ETC. AND POWER-UP TEST TO SPAR INSPECTION TEST PROCEDURE 1TP-2510.</p> <p>PRE-ACCEPTANCE TEST INSPECTION, WHICH INCLUDES AN AUDIT OF LOWER TIER INSPECTION COMPLETION, AS BUILT CONFIGURATION VERIFICATION TO AS DESIGN ETC., (MANDATORY INSPECTION POINT).</p> <p>ACCEPTANCE TESTING (ATP) INCLUDES, AMBIENT, VIBRATION AND THERMAL-VAC TESTING, (SPAR/GOVERNMENT REP. - MANDATORY INSPECTION POINT)</p> <p>SRMS SYSTEMS INTEGRATION, THE INTEGRATION OF MECHANICAL ARM SUBASSEMBLIES AND THE FLIGHT CABIN EQUIPMENT TO FORM THE SRMS. INSPECTIONS ARE PERFORMED AT EACH PHASE OF INTEGRATION WHICH INCLUDES GROUNDING CHECKS, THRU WIRING CHECKS, WIRING ROUTING, INTERFACE CONNECTORS FOR BENT OR PUSH BACK CONTACTS ETC.</p> <p>SRMS SYSTEMS TESTING - STRONGBACK AND FLAT FLOOR AMBIENT PERFORMANCE TEST. (SPAR/GOVERNMENT REP. - MANDATORY INSPECTION POINT)</p>

RMS/ELEC - 1098

PREPARED BY: NING

SUPERSEDING DATE: 12 OCT 89

DATE: 24 JUL 91 CIL REV: 3

**CRITICAL ITEM 1.1BT**

PROJECT: SRMS  
ASS'Y NAME/TITLE: EEEU

SYSTEM: ELECTRICAL SUBSYSTEM  
ASS'Y P/N: 511201174-36-5

SHEET: 5

FMEA REF.	FMEA REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HOUR / FUNC. 2/1R CRITICALITY RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
3580	2	POWER CONDITIONER QTY-1 SCHEMATIC 2559082	<p>MODE: LOSS OF REGULATED VOLTAGE EITHER 5.1 OR 10V.</p> <p>CAUSE(S): (1) OUTPUT FILTER S/C. (2) TRANSFORMER FAILURE. (3) DIODE FAILURE. (4) FAILURE IN AUTOMATIC SHUT DOWN CIRCUIT.</p>	<p>EE WILL BE INOPERATIVE. THE POWER CONDITIONER WILL AUTOMATICALLY SHUTDOWN FOR AN OVER CURRENT OR OVER-VOLTAGE. IF ONE RAIL LOST EITHER LOGIC (10V) OR COMMUTATION (5.1V) WILL BE LOST AND EE COMMANDS CANNOT BE PRODUCED. MOTOR AND BRAKE CLUTCHES WILL NOT BE OPERATED. ARM WILL LIMP DURING CAPTURE SEQ.</p> <p>WORST CASE ----- UNEXPECTED PAYLOAD MOTION. INCOMPLETE CAPTURE/RELEASE SEQUENCE. UNABLE TO RELEASE PAYLOAD. CREW ACTION REQ.</p> <p>REDUNDANT PATHS REMAINING ----- BACKUP EE RELEASE.</p>	<p>FAILURE HISTORY ----- THE FOLLOWING FAILURE ANALYSIS REPORT(S) ARE RELEVANT:</p> <p>FAR 3331 EEEE S/N 301 AUG. 87</p> <p>DESCRIPTION ----- +10V VOLTAGE RAIL TOO HIGH DURING HOT THERMAL CYCLE CAUSED BY FAULTY RESISTOR A2R6.</p> <p>CORRECTIVE ACTION ----- REPLACED FAILED RESISTOR. PERFORMED A RECALIBRATION OF +10V LINE (RE-S.O.T.). INSTITUTED CURRENT TOLERANCE SPECIFICATION TO ATP (ECN 65101/1-1027)</p>

RMS/ELEC - 1099

PREPARED BY:

MEWG

SUPERCEDING DATE: 12 OCT 89

APPROVED BY:

DATE: 24 JUL 91

CIL REV: 3

**CRITICAL ITEMS LIST**

PROJECT: SAMS  
ASS'Y NOMENCLATURE: EEEU

SYSTEM: ELECTRICAL SUBSYSTEM  
ASS'Y P/N: 51140FT174-38-5

SHEET: 6

FMEA REF.	FMEA REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE OR END ITEM	HOUR / FUNC. 2/1R CRITICALITY	RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
3580	2	POWER CONDITIONER QTY-1 SCHEMATIC 2559082	<p>MODE: LOSS OF REGULATED VOLTAGE EITHER 5.1 OR 10V.</p> <p>CAUSE(S): (1) OUTPUT FILTER S/C. (2) TRANSFORMER FAILURE. (3) DIODE FAILURE. (4) FAILURE IN AUTOMATIC SHUT DOWN CIRCUIT.</p>	<p>EE WILL BE INOPERATIVE. THE POWER CONDITIONER WILL AUTOMATICALLY SHUTDOWN FOR AN OVER CURRENT OR OVER-VOLTAGE. IF ONE RAIL LOST EITHER LOGIC (10V) OR COMMUTATION (5.1V) WILL BE LOST AND EE COMMANDS CANNOT BE PRODUCED. MOTOR AND BRAKE CLUTCHES WILL NOT BE OPERATED. ARM WILL LIMP DURING CAPTURE SEQ.</p> <p>WORST CASE UNEXPECTED PAYLOAD MOTION. INCOMPLETE CAPTURE/RELEASE SEQUENCE. UNABLE TO RELEASE PAYLOAD. CREW ACTION REQ.</p> <p>REDUNDANT PATHS REMAINING BACKUP EE RELEASE.</p>		<p>OPERATIONAL EFFECTS ----- EE DOES NOT OPERATE NOMINALLY WHEN COMMANDED. ARM REMAINS LIMP UNTIL EE MODE SWITCH IS TURNED OFF DURING AN AUTO CAPTURE SEQUENCE.</p> <p>CREW ACTION ----- FOR ANY OFF NOMINAL OPERATION OF THE EE, THE EE MODE SWITCH SHOULD BE TURNED OFF. ATTEMPT TO CAPTURE IN THE ALTERNATE MODE. IF THE SHARES REMAIN OPEN, MANEUVER ARM AWAY FROM PAYLOAD. IF THE SHARES ARE PARTIALLY CLOSED, ATTEMPT RELEASE USING A PRIMARY EE MODE. IF SHARES OPEN, MANEUVER THE ARM AWAY FROM THE PAYLOAD. IF SHARES DON'T OPEN, ATTEMPT TO RELEASE IN BACKUP MODE. IF SHARES OPEN, MANEUVER ARM AWAY FROM THE PAYLOAD. MANEUVER ORBITER AWAY FROM PAYLOAD. IF SHARES CANNOT BE OPENED, IN ANY MODE, EVA CAN BE USED TO RELEASE THE PAYLOAD OR THE ARM/PAYLOAD COMBINATION CAN BE JETTISONED.</p> <p>CREW TRAINING ----- CREW WILL BE TRAINED TO RECOGNIZE OFF NOMINAL EE OPERATIONS AND TO MANEUVER THE ORBITER AWAY FROM A FREE FLYING PAYLOAD AT ANY TIME DURING ARM OPERATIONS.</p> <p>MISSION CONSTRAINT ----- WHEN CAPTURING A FREE FLYING PAYLOAD, THE EE MUST BE FAR ENOUGH AWAY FROM STRUCTURE TO PROHIBIT CONTACT REGARDLESS OF PAYLOAD ROTATIONS. THE EE MODE SWITCH SHOULD BE PLACED BACK IN THE OFF POSITION IMMEDIATELY AFTER THE SPEC DRIVE TIME HAS ELAPSED.</p> <p>OMRSD OFFLINE ----- VERIFY NOMINAL EE OPERATION. VERIFY EEEU BITE FLAG.</p> <p>OMRSD ONLINE INSTALLATION ----- NONE</p> <p>OMRSD ONLINE TURNAROUND ----- VERIFY NOMINAL EE OPERATION. VERIFY ABE DATA FOR EEEU BITE AND ABE FAILURE WARNING.</p>

RMS/ELEC - 1100

PREPARED BY: MFNG

SUPERCEDING DATE: 12 OCT 89

DATE: 24 JUL 91

CPL REV: 3

**CRITICAL ITEMS LIST**

PROJECT: SRMS  
ASS'Y NOMENCLATURE: EEEU

SYSTEM: ELECTRICAL SUBSYSTEM  
ASS'Y P/N: 511001174-36-5

SHEET: 7

FMEA REF.	FMEA REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HOWR / FUNC. 2/1R CRITICALITY	RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
3580	2	POWER CONDITIONER QTY-1 SCHEMATIC 2559082	<p>MODE: LOSS OF REGULATED VOLTAGE EITHER 5.1 OR 10V.</p> <p>CAUSE(S): (1) OUTPUT FILTER S/C. (2) TRANSFORMER FAILURE. (3) DIODE FAILURE. (4) FAILURE IN AUTOMATIC SHUT DOWN CIRCUIT.</p>	<p>EE WILL BE INOPERATIVE. THE POWER CONDITIONER WILL AUTOMATICALLY SHUTDOWN FOR AN OVER CURRENT OR OVER-VOLTAGE. IF ONE RAIL LOST EITHER LOGIC (10V) OR COMPUTATION (5.1V) WILL BE LOST AND EE COMMANDS CANNOT BE PRODUCED. MOTOR AND BRAKE CLUTCHES WILL NOT BE OPERATED. ARM WILL LIMP DURING CAPTURE SEQ.</p> <p>WORST CASE ----- UNEXPECTED PAYLOAD MOTION. INCOMPLETE CAPTURE/RELEASE SEQUENCE. UNABLE TO RELEASE PAYLOAD. CREW ACTION REQ.</p> <p>REDUNDANT PATHS REMAINING ----- BACKUP EE RELEASE.</p>		

RMS/ELEC - 1101