

CRITICAL ITEMS LIST

PROJECT: SRMS (-5 MCIU INSTALLED)
 ASS'Y NOMENCLATURE: MCIU

SYSTEM: ELECTRICAL SUBSYSTEM
 ASS'Y P/N: 51155F160-5

SHEET: 1

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
2065	0	MICRO COMPUTER QTY. 1. CPU-SCHEMATIC 812806 RAM & PARITY SCHEMATIC 812804 EPROM-SCHEMATIC 813357	MODE: MCIU FAILS TO RESET ON POWER UP CAUSE(S): 1) LOSS OF RESET SIGNAL 2) VOLTAGE MONITOR CIRCUIT OUTPUT ON RAM BOARD FAILS HIGH.	MCIU WILL NOT INITIALIZE PROPERLY ON POWER UP. MMI. MCIU FAILURE WARNING. COMMUNICATION CAN NEVER BE ESTABLISHED WITH ABE, GPC AND D&C. AUTOBRAKES. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF EE AUTO DRIVE MODE. WORST CASE UNABLE TO RELEASE BRAKES. LOSS OF ARM DRIVE CAPABILITY. REDUNDANT PATHS REMAINING TO CONTINUE OPERATIONS: 1) DIRECT DRIVE AND EE MANUAL MODES. 2) BACK-UP DRIVE. 3) JETTISON (TO SECURE ORBITER).	DESIGN FEATURES 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. DISCRETE SEMICONDUCTOR DEVICES SPECIFIED TO AT LEAST THE 1X 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. THE INTEL 8086 MICROPROCESSOR IS USED IN THIS DESIGN. THIS DEVICE, DESIGNED FOR USE IN CONJUNCTION WITH ITS CORRESPONDING HIGH RELIABILITY SUPPORT DEVICES, COMPRISES A PROCESSOR KERNEL PROVEN IN MANY HIGH RELIABILITY APPLICATIONS. DESIGN, CONSTRUCTION, AND PHYSICAL DIMENSIONS ARE AS SPECIFIED IN MIL-M-38510 B. SAMPLING INSPECTION AND SCREENING ARE CONDUCTED ACCORDING TO MIL-STD-883 METHODS 5005 AND 5004. TTL LOGIC DEVICES HAVE GOOD NOISE IMMUNITY. MANUFACTURING TECHNOLOGY, AND RELIABILITY HISTORY, ARE WELL ESTABLISHED AND DOCUMENTED. LIFE EXPECTANCY IS INCREASED BY ENSURING THAT ALL ALLOWABLE STRESS LEVELS ARE DERATED IN ACCORDANCE WITH SPAR-RMS-PA.003. THE DESIGN UTILIZES PROVEN CIRCUIT TECHNIQUES AND IS IMPLEMENTED USING TTL LOGIC DEVICES. READ ONLY MEMORY HAS BEEN IMPLEMENTED USING A 32K X 8 ARCHITECTURE NMOS EPROM; WHEREAS RANDOM ACCESS MEMORY HAS BEEN IMPLEMENTED USING A 16K X 1 ARCHITECTURE STATIC RAM.	

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EXPEDITE
 PROCESSING

PREPARED BY: MFWG

SUPERCEDING DATE: NONE

DATE: 11 JUL 91

CEL REV: 0

CRITICAL ITEMS LIST

PROJECT: SRMS (-5 MCIU INSTALLED)
 ASS'Y NOMENCLATURE: MCIU

SYSTEM: ELECTRICAL SUBSYSTEM
 ASS'Y P/N: 51155F160-5

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
2065	0	MICRO COMPUTER QTY. 1. CPU- SCHEMATIC 812806 RAM & PARITY SCHEMATIC 812804 EPROM- SCHEMATIC 813357	MODE: MCIU FAILS TO RESET ON POWER UP CAUSE(S): 1) LOSS OF RESET SIGNAL 2) VOLTAGE MONITOR CIRCUIT OUTPUT ON RAM BOARD FAILS HIGH.	MCIU WILL NOT INITIALIZE PROPERLY ON POWER UP. HMI. MCIU FAILURE WARNING. COMMUNICATION CAN NEVER BE ESTABLISHED WITH ABE, GPC AND D&C. AUTOBRAKES. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF EE AUTO DRIVE MODE. WORST CASE UNABLE TO RELEASE BRAKES. LOSS OF ARM DRIVE CAPABILITY. REDUNDANT PATHS REMAINING TO CONTINUE OPERATIONS: 1) DIRECT DRIVE AND EE MANUAL MODES. 2) BACK-UP DRIVE. 3) JETTISON (TO SECURE ORBITER).		ACCEPTANCE TESTS ----- THE MCIU IS SUBJECTED TO THE FOLLOWING ACCEPTANCE ENVIRONMENTAL TESTING AS AN LRU. O VIBRATION: LEVEL AND DURATION - REFERENCE TABLE 3.2 O THERMAL: +40 DEGREES C TO -16 DEGREES C (2 CYCLES) QUALIFICATION TESTS ----- THE MCIU IS SUBJECTED TO THE FOLLOWING LRU QUALIFICATION ENVIRONMENTS: O VIBRATION: LEVEL AND DURATION - REFERENCE TABLE 3.2 O SHOCK: BY SIMILARITY TO -3 MCIU O THERMAL: +51 DEGREES C TO -27 DEGREES C (10 CYCLES) O HUMIDITY: BY SIMILARITY TO -3 MCIU O EMC: MIL-STD-461 AS MODIFIED BY SL-E-0002 (TESTS CE01, CE03, CS01, CS02, CS06, RE02 (N/B), RS01, RS02) O LIFE: 630 OPERATING HOURS 1000 POWER ON/OFF CYCLES FLIGHT CHECKOUT ----- PDRS OPS CHECKLIST (ALL VEHICLES) JSC 16987

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PREPARED BY: MFUG

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RMS/ELEC - 104

DATE: 11 JUL 91

CIL REV: 0

CRITICAL ITEMS LIST

PROJECT: SRMS (-5 MCIU INSTALLED)
 ASS'Y NOMENCLATURE: MCIU

SYSTEM: ELECTRICAL SUBSYSTEM
 ASS'Y P/N: 51155F160-5

SHEET: 3

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
2065	0	MICRO COMPUTER QTY. 1. CPU- SCHEMATIC 812806 RAM & PARITY SCHEMATIC 812804 EPROM- SCHEMATIC 813357	MODE: MCIU FAILS TO RESET ON POWER UP CAUSE(S): 1) LOSS OF RESET SIGNAL 2) VOLTAGE MONITOR CIRCUIT OUTPUT ON RAM BOARD FAILS HIGH.	MCIU WILL NOT INITIALIZE PROPERLY ON POWER UP. NMI. MCIU FAILURE WARNING. COMMUNICATION CAN NEVER BE ESTABLISHED WITH ABE, GPC AND DBC. AUTOBRAKES. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF EE AUTO DRIVE MODE. WORST CASE ----- UNABLE TO RELEASE BRAKES. LOSS OF ARM DRIVE CAPABILITY. REDUNDANT PATHS REMAINING ----- TO CONTINUE OPERATIONS: 1) DIRECT DRIVE AND EE MANUAL MODES. 2) BACK-UP DRIVE. 3) JETTISON (TO SECURE ORBITER).	QA/INSPECTIONS ----- DOCUMENTED QUALITY CONTROLS ARE EXERCISED THROUGHOUT DESIGN PROCUREMENT, PLANNING, RECEIVING, PROCESSING FABRICATION, ASSEMBLY, TESTING AND SHIPPING OF THE MCIU. GOVERNMENT SOURCE INSPECTION IS INVOKED AT VARIOUS LEVELS OF COMPONENT ASSEMBLY AND TEST OPERATIONS. MANDATORY INSPECTION POINTS ARE EMPLOYED AT VARIOUS LEVELS OF ASSEMBLY AND TEST. 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. WIRE IS PROCURED, INSPECTED, AND TESTED TO SPAR-RMS-PA.003. 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. PARTS ARE INSPECTED THROUGHOUT MANUFACTURE AND ASSEMBLY AS APPROPRIATE TO THE MANUFACTURING STAGE COMPLETED. THESE INSPECTIONS INCLUDE, PRINTED CIRCUIT BOARD INSPECTION FOR TRACK SEPARATION, DAMAGE AND ADEQUACY OF PLATED THROUGH HOLES, COMPONENT MOUNTING INSPECTION FOR CORRECT SOLDERING, WIRE LOOPING, STRAPPING, ETC. OPERATORS AND INSPECTORS ARE TRAINED AND CERTIFIED TO NASA NHB 5300.4(3A-1) STANDARD. CONFORMAL COATING INSPECTION FOR ADEQUATE PROCESSING IS PERFORMED USING ULTRAVIOLET LIGHT TECHNIQUES. POST P.C. BD. INSTALLATION INSPECTION, CLEANLINESS AND WORKMANSHIP (SPAR/GOVERNMENT REP. MANDATORY INSPECTION POINT) P.C. BD. INSTALLATION INSPECTION, CHECK FOR CORRECT BOARD INSTALLATION, ALIGNMENT OF BOARDS, PROPER CONNECTOR CONTACT MATING, WIRE ROUTING, STRAPPING OF WIRES ETC., PRE-CLOSURE INSPECTION, WORKMANSHIP AND CLEANLINESS (SPAR/GOVERNMENT REP. - MANDATORY INSPECTION POINT) PRE-ACCEPTANCE TEST INSPECTION, WHICH INCLUDES AN AUDIT OF LOWER TIER INSPECTION COMPLETION, AS BUILT CONFIGURATION VERIFICATION TO AS DESIGN ETC., (MANDATORY INSPECTION POINT). A TEST READINESS REVIEW (TRR) WHICH INCLUDES VERIFICATION OF TEST PERSONNEL, TEST DOCUMENTS, TEST EQUIPMENT CALIBRATION/ VALIDATION STATUS AND HARDWARE CONFIGURATION IS CONVENED BY	

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MFWG

SUPERCEDING DATE: NONE

DATE: 11 JUL 91

CIL REV: 0

CRITICAL ITEMS LIST

PROJECT: SRMS (-5 MCIU INSTALLED)
 ASS'Y NOMENCLATURE: MCIU

SYSTEM: ELECTRICAL SUBSYSTEM
 ASS'Y P/N: 51155FT60-5

SHEET: 4

FMEA REF.	FMEA REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HDMR / FUNC. 2/1R CRITICALITY RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
2065	0	MICRO COMPUTER QTY. 1. CPU-SCHEMATIC 812806 RAM & PARITY SCHEMATIC 812804 EPROM-SCHEMATIC 813357	MODE: MCIU FAILS TO RESET ON POWER UP CAUSE(S): 1) LOSS OF RESET SIGNAL 2) VOLTAGE MONITOR CIRCUIT OUTPUT ON RAM BOARD FAILS HIGH.	MCIU WILL NOT INITIALIZE PROPERLY ON POWER UP. NM1. MCIU FAILURE WARNING. COMMUNICATION CAN NEVER BE ESTABLISHED WITH ABE, GPC AND DEC. AUTOBRAKES. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF EE AUTO DRIVE MODE. WORST CASE ----- UNABLE TO RELEASE BRAKES. LOSS OF ARM DRIVE CAPABILITY. REDUNDANT PATHS REMAINING ----- TO CONTINUE OPERATIONS: 1) DIRECT DRIVE AND EE MANUAL MODES. 2) BACK-UP DRIVE. 3) JETTISON (TO SECURE ORBITER).	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). ACCEPTANCE TESTING (ATP) INCLUDES AMBIENT, VIBRATION, AND THERMAL TESTING (SPAR/GOVERNMENT REP. - MANDATORY INSPECTION POINT).

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PREPARED BY: MFWG

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RMS/ELEC - 106

DATE: 11 JUL 91

CIL REV: 0

CRITICAL ITEMS LIST

PROJECT: SRMS (-5 MCIU INSTALLED)
 ASS'Y NOMENCLATURE: MCIU

SYSTEM: ELECTRICAL SUBSYSTEM
 ASS'Y P/N: 51155F160-5

SHEET: 5

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
2065	0	MICRO COMPUTER QTY. 1. CPU- SCHEMATIC 812806 RAM & PARITY SCHEMATIC 812804 EPROM- SCHEMATIC 813357	MODE: MCIU FAILS TO RESET ON POWER UP CAUSE(S): 1) LOSS OF RESET SIGNAL 2) VOLTAGE MONITOR CIRCUIT OUTPUT ON RAM BOARD FAILS HIGH.	MCIU WILL NOT INITIALIZE PROPERLY ON POWER UP. NMI. MCIU FAILURE WARNING. COMMUNICATION CAN NEVER BE ESTABLISHED WITH ABE, GPC AND D&C. AUTOBRAKES. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF EE AUTO DRIVE MODE. WORST CASE ----- UNABLE TO RELEASE BRAKES. LOSS OF ARM DRIVE CAPABILITY. REDUNDANT PATHS REMAINING ----- TO CONTINUE OPERATIONS: 1) DIRECT DRIVE AND EE MANUAL MODES. 2) BACK-UP DRIVE. 3) JETTISON (TO SECURE ORBETER).		FAILURE HISTORY ----- THERE HAVE BEEN NO FAILURES ASSOCIATED WITH THIS FAILURE MODE ON THE SRMS PROGRAM.

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DATE: 11 JUL 91

PREPARED BY: MFVG

SUPERCEDING DATE: NONE

DATE: 11 JUL 91

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CRITICAL ITEMS LIST

PROJECT: SRMS (-5 MCIU INSTALLED)
 ASS'Y NOMENCLATURE: MCIU

SYSTEM: ELECTRICAL SUBSYSTEM
 ASS'Y P/N: 51555F160-5

SHEET: 6

FMEA REF.	FMEA REV.	NAME, QTY. & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HWWR / FUNC. 2/1R CRITICALITY	RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
2065	0	MICRO COMPUTER QTY. 1, CPU- SCHEMATIC 812806 RAM & PARITY SCHEMATIC 812804 EPROM- SCHEMATIC 813357	MODE: MCIU FAILS TO RESEI ON POWER UP CAUSE(S): 1) LOSS OF RESEI SIGNAL 2) VOLTAGE MONITOR CIRCUIT OUTPUT ON RAM BOARD FAILS HIGH.	MCIU WILL NOT INITIALIZE PROPERLY ON POWER UP. NMI. MCIU FAILURE WARNING. COMMUNICATION CAN NEVER BE ESTABLISHED WITH ABE, GPC AND O&C. AUTOBRAKES. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF EE AUTO DRIVE MODE. WORST CASE UNABLE TO RELEASE BRAKES. LOSS OF ARM DRIVE CAPABILITY. REDUNDANT PATHS REMAINING ----- TO CONTINUE OPERATIONS: 1) DIRECT DRIVE AND EE MANUAL MODES. 2) BACK-UP DRIVE. 3) JETTISON (TO SECURE ORBITER).	2/1R	OPERATIONAL EFFECT ----- LOSS OF DATA. AUTOBRAKES. LOSS OF COMPUTER SUPPORTED MODES. LOSS OF LIMPING. LOSS OF EE AUTO MODES. D&C DATA WILL BE INVALID. DIRECT DRIVE AND BACKUP AVAILABLE. EE MODE MANUAL AVAILABLE WITHOUT TALKBACKS. CREW ACTION ----- SELECT DIRECT DRIVE. USE EE MODE MANUAL. SINGLE/DIRECT DRIVE SWITCN SHOULD BE PULSED TO MAINTAIN PROPER RATES. CREW TRAINING ----- CREW IS TRAINED TO ALWAYS OBSERVE WHETHER THE ARM IS RESPONDING PROPERLY TO COMANDS. MISSION CONSTRAINT ----- OPERATE UNDER VERMIER RATES WITHIN 10 FT OF THE STRUCIURE. THE OPERATOR MUST BE ABLE TO DETECT THAT THE ARM/PAYLOAD IS RESPONDING PROPERLY TO COMMANDS VIA WINDOW AND/OR CCTV VIEWS DURING ALL ARM OPERATIONS.

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PREPARED BY: MFWG

SUPERCEDING DATE: NONE

RMS/ELEC - 108

DATE: 11 JUL 91

CIL REV: 0

CRITICAL ITEMS LIST

PROJECT: SRMS (-5 MCIU INSTALLED)
 ASS'Y NOMENCLATURE: MCIU

SYSTEM: ELECTRICAL SUBSYSTEM
 ASS'Y P/N: 51555F160-5

SHEET: 7

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
2065	0	MICRO COMPUTER QTY. 1. CPU-SCHEMATIC 812806 RAM & PARITY SCHEMATIC 812804 EPROM-SCHEMATIC 813357	MODE: MCIU FAILS TO RESET ON POWER UP CAUSE(S): 1) LOSS OF RESET SIGNAL 2) VOLTAGE MONITOR CIRCUIT OUTPUT ON RAM BOARD FAILS HIGH.	MCIU WILL NOT INITIALIZE PROPERLY ON POWER UP. NMI. MCIU FAILURE WARNING. COMMUNICATION CAN NEVER BE ESTABLISHED WITH ABE, GPC AND DEC. AUTOBRAKES. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF EE AUTO DRIVE MODE. WORST CASE UNABLE TO RELEASE BRAKES. LOSS OF ARM DRIVE CAPABILITY. REDUNDANT PATHS REMAINING TO CONTINUE OPERATIONS: 1) DIRECT DRIVE AND EE MANUAL MODES. 2) BACK-UP DRIVE. 3) JETTISON (TO SECURE ORBITER).	SCREEN FAILURES ----- N/A	

PREPARED BY:

MFWG

SUPERCEDING DATE: NONE

DATE: 11 JUL 91

CIL REV: 0

CRITICAL ITEMS LIST

PROJECT: SRMS (-5 MCIU INSTALLED)
 ASS'Y NOMENCLATURE: MCIU

SYSTEM: ELECTRICAL SUBSYSTEM
 ASS'Y P/N: 51155F180-5

SHEET: 8

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
2065	0	MICRO COMPUTER QTY. 1. CPU-SCHEMATIC 812806 RAM & PARITY SCHEMATIC 812804 EPROM-SCHEMATIC 813357	MODE: MCIU FAILS TO RESET ON POWER UP CAUSE(S): 1) LOSS OF RESET SIGNAL 2) VOLTAGE MONITOR CIRCUIT OUTPUT ON RAM BOARD FAILS HIGH.	MCIU WILL NOT INITIALIZE PROPERLY ON POWER UP. NMT. MCIU FAILURE WARNING. COMMUNICATION CAN NEVER BE ESTABLISHED WITH ABE, GPC AND D&C. AUTOBRAKES. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF EE AUTO DRIVE MODE. WORST CASE UNABLE TO RELEASE BRAKES. LOSS OF ARM DRIVE CAPABILITY. REDUNDANT PATHS REMAINING TO CONTINUE OPERATIONS: 1) DIRECT DRIVE AND EE MANUAL MODES. 2) BACK-UP DRIVE. 3) JETTISON (TO SECURE ORBITER).		OMRSD OFFLINE ----- EXERCISE THE MCIU. VERIFY ABSENCE OF FAILURE WARNINGS. OMRSD ONLINE INSTALLATION ----- NONE OMRSD ONLINE TURNAROUND ----- EXERCISE THE MCIU. VERIFY THE ABSENCE OF FAILURE WARNINGS.

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SUPERCEDING DATE: NONE

DATE: 11 JUL 91

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