

**CRITICAL ITEMS LIST**

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

SYSTEM: ELECTRICAL SUBSYSTEM  
 ASS'Y P/N: 5155FT60-5

SHEET: 1

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
2055	0	MICRO-COMPUTER QTY. 1 CPU - SCHEMATIC 012806  RAM AND PARITY-SCHEMATIC 012804  EPROM-SCHEMATIC 013357	MODE: CORRUPT PROCESSING AND DATA TRANSFER TO/FROM CPU-- CPU NOT RE-INITIALIZED  CAUSE(S): 1) ONE OR MORE RAM ADDRESS LINES STUCK HIGH OR LOW	MCIU FAILURE WARNING. RAM ADDRESS CHECK WILL DETECT. AUTO BRAKES. ARM COMES TO REST. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF LIMPING DURING END EFFECTOR CAPTURE. EE AUTO DRIVE MODE MAY NOT FUNCTION CORRECTLY.  WORST CASE ----- UNEXPECTED MOTION. SIX JOINT RUNAWAY. AUTOBRAKES.  REDUNDANT PATHS REMAINING ----- 1) AUTOBRAKES (FOR SAFING THE SYSTEM). 2) DIRECT DRIVE AND EE MANUAL MODES. (FOR CONTINUING OPERATIONS).	DESIGN FEATURES ----- EEE PARTS HAVE BEEN SELECTED AND CONTROLLED IN ACCORDANCE WITH SPAR-RMS-PA.003. THIS DOCUMENT DEFINES THE PROGRAM REQUIREMENTS FOR MONITORING AND CONTROLLING EEE PARTS. THE REQUIREMENTS INCLUDE PART SELECTION TO AT LEAST "ESTABLISHED RELIABILITY" LEVELS, AND ADEQUATE DERATING OF PART STRESS LEVELS. PROCEDURES AND ACTIVITIES ARE SPECIFIED TO ENSURE AT LEAST EQUIVALENT QUALITY FOR NONSTANDARD AND IRREGULAR PARTS. RELIABILITY ANALYSIS HAS CONFIRMED NO PARTS WITH GENERICALLY HIGH FAILURE RATES. AEROSPACE DESIGN STANDARDS FOR DETAILING ELECTRONIC PARTS PACKAGING, MOUNTING AND STRUCTURAL/MECHANICAL/INTEGRITY OF ASSEMBLIES ARE APPLIED. SUCH DESIGN HAS BEEN REVIEWED AND FOUND SATISFACTORY THROUGH THE DESIGN AUDIT PROCESS, INCLUDING THE USE OF RELIABILITY, MAINTAINABILITY AND SAFETY CHECKLISTS. MATERIAL SELECTION AND USAGE CONFORMS TO SPAR-SG.368 WHICH IS EQUIVALENT TO THE NASA MATERIALS USAGE REQUIREMENTS. WORST CASE ANALYSIS HAS BEEN CONDUCTED TO ENSURE THAT PERFORMANCE CAN BE MET UNDER WORST CASE TEMPERATURE AND AGING EFFECTS. EEE PARTS STRESS ANALYSIS HAS BEEN COMPLETED AND CONFIRMS THAT THE PARTS MEET THE DERATING REQUIREMENTS.  PRINTED CIRCUIT BOARD DESIGNS HAVE BEEN REVIEWED TO ENSURE ADEQUATE CIRCUIT PATH WIDTH AND SEPARATION AND TO CONFIRM APPROPRIATE DIMENSIONS OF CIRCUIT SOLDER PADS AND OF COMPONENT HOLE PROVISIONS.  PARTS MOUNTING METHODS ARE CONTROLLED IN ACCORDANCE WITH NSFC-STD-136 WHICH DEFINES APPROVED-MOUNTING METHODS, STRESS RELIEF, AND COMPONENT SECURITY.  WHERE APPLICABLE, DESIGN DRAWINGS AND DOCUMENTATION GIVE CLEAR IDENTIFICATION OF HANDLING PRECAUTIONS FOR ESD SENSITIVE PARTS.  BOARD ASSEMBLY DRAWINGS INCLUDE THE REQUIREMENTS FOR SOLDERING STANDARDS IN ACCORDANCE WITH RHB 5300.4(3) AND JSC 08800.  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.  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.  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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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: 51155F160-5

SHEET: 2

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
2055	0	MICRO-COMPUTER QTY. 1 CPU - SCHEMATIC 812806  RAM AND PARITY-SCHEMATIC 812804  EPROM-SCHEMATIC 813357	MODE: CORRUPT PROCESSING AND DATA TRANSFER TO/FROM CPU-- CPU NOT RE-INITIALIZED  CAUSE(S): 1) ONE OR MORE RAM ADDRESS LINES STUCK HIGH OR LOW	MCIU FAILURE WARNING. RAM ADDRESS CHECK WILL DETECT. AUTO BRAKES. ARM COMES TO REST. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF LIMPING DURING END EFFECTOR CAPTURE. EE AUTO DRIVE MODE MAY NOT FUNCTION CORRECTLY.  WORST CASE ----- UNEXPECTED MOTION. SIX JOINT RUNAWAY. AUTOBRAKES.  REDUNDANT PATHS REMAINING ----- 1) AUTOBRAKES (FOR SAFING THE SYSTEM). 2) DIRECT DRIVE AND EE MANUAL MODES. (FOR CONTINUING OPERATIONS).	DESIGN, CONSTRUCTION, AND PHYSICAL DIMENSTIONS ARE AS SPECIFIED IN MIL-M-38510 B. SAMPLING INSPECTION AND SCREENING ARE CONDUCTED ACCORDING TO MIL-STD-883 METHODS 5005 AND 5004.

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EXPIRES  
 01/01/91

PREPARED BY: MFMG

SUPERCEDING DATE: NONE

RMS/ELEC - 97

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: 3

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
2055	0	MICRO-COMPUTER QTY. 1 CPU - SCHEMATIC 812806  RAM AND PARITY-SCHEMATIC 812804  EPROM-SCHEMATIC 813357	MODE: CORRUPT PROCESSING AND DATA TRANSFER TO/FROM CPU-- CPU NOT RE-INITIALIZED  CAUSE(S): 1) ONE OR MORE RAM ADDRESS LINES STUCK HIGH OR LOW	MCIU FAILURE WARNING. RAM ADDRESS CHECK WILL DETECT. AUTO BRAKES. ARM COMES TO REST. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF LIMPING DURING END EFFECTOR CAPTURE. EE AUTO DRIVE MODE MAY NOT FUNCTION CORRECTLY.  WORST CASE  UNEXPECTED MOTION. SIX JOINT RUNAWAY. AUTOBRAKES.  REDUNDANT PATHS REMAINING  1) AUTOBRAKES (FOR SAFING THE SYSTEM). 2) DIRECT DRIVE AND EE MANUAL MODES. (FOR CONTINUING OPERATIONS).		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 (W/B), RS01, RS02)  O LIFE: 630 OPERATING HOURS 1000 POWER ON/OFF CYCLES  FLIGHT CHECKOUT ----- PORS OPS CHECKLIST (ALL VEHICLES) JSC 16987

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PRECITE PROCESSING

PREPARED BY: MFWG

SUPERCEDING DATE: NONE

DATE: 11 JUL 91

CIL REV: 0

**CRITICAL ITEMS LIST**

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

SYSTEM: ELECTRICAL SUBSYSTEM  
 ASS'Y P/N: 51155160-5

SHEET: 4

FMEA REF.	FMEA REV.	NAME, QTY. & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT OR END ITEM	HOWR / FUNC. 2/1R CRITICALITY	RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
2055	0	MICRO-COMPUTER QTY. 1 CPU - SCHEMATIC 012006  RAM AND PARITY-SCHEMATIC 012004  EPRON-SCHEMATIC 013357	MODE: CORRUPT PROCESSING AND DATA TRANSFER TO/FROM CPU-- CPU NOT RE-INITIALIZED  CAUSE(S): 1) ONE OR MORE RAM ADDRESS LINES STUCK HIGH OR LOW	MCIU FAILURE WARNING. RAM ADDRESS CHECK WILL DETECT. AUTO BRAKES. ARM COMES TO REST. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF LIMPING DURING END EFFECTOR CAPTURE. EE AUTO DRIVE MODE MAY NOT FUNCTION CORRECTLY.  WORST CASE ----- UNEXPECTED MOTION, SIX JOINT RUNAWAY. AUTOBRAKES.  REDUNDANT PATHS REMAINING ----- 1) AUTOBRAKES (FOR SAFING THE SYSTEM). 2) DIRECT DRIVE AND EE MANUAL MODES. (FOR CONTINUING OPERATIONS).	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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PREPARED BY: MEWG

SUPERCEDING DATE: NONE

RMS/ELEC - 99 1

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	HOUR / FUNC. 2/1R CRITICALITY RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
2055	0	MICRO-COMPUTER QTY. 1 CPU - SCHEMATIC 812806  RAM AND PARITY- SCHEMATIC 812804  EPROM- SCHEMATIC 813357	MODE: CORRUPT PROCESSING AND DATA TRANSFER TO/FROM CPU - CPU NOT RE-INITIALIZED  CAUSE(S): 1) ONE OR MORE RAM ADDRESS LINES STUCK HIGH OR LOW	MCIU FAILURE WARNING. RAM ADDRESS CHECK WILL DETECT. AUTO BRAKES. ARM COMES TO REST. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF LIMPING DURING END EFFECTOR CAPTURE. EE AUTO DRIVE MODE MAY NOT FUNCTION CORRECTLY.  WORST CASE ----- UNEXPECTED MOTION. SIX JOINT RUNAWAY. AUTOBRAKES.  REDUNDANT PATHS REMAINING ----- 1) AUTOBRAKES (FOR SAFING THE SYSTEM). 2) DIRECT DRIVE AND EE MANUAL MODES. (FOR CONTINUING OPERATIONS).	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. - MANDITORY INSPECTION POINT).

PREPARED BY: MFG

SUPERCEDING DATE: NONE

DATE: 11 JUL 91

CIL REV: 0

RMS/ELEC - 100

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**CRITICAL ITEMS LIST**

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

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

SHEET: 6

FMEA REF.	FMEA REV.	NAME, QTY, & DRAWING REF. DESIGNATION	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	HWR / FUNC. 2/1R CRITICALITY	RATIONALE FOR ACCEPTANCE SCREENS: A-PASS, B-PASS, C-PASS
2055	0	MICRO-COMPUTER QTY. 1 CPU - SCHEMATIC 812806  RAM AND PARITY-SCHEMATIC 812804  EPROM-SCHEMATIC 813357	MODE: CORRUPT PROCESSING AND DATA TRANSFER TO/FROM CPU-- CPU NOT RE-INITIALIZED  CAUSE(S): 1) ONE OR MORE RAM ADDRESS LINES STUCK HIGH OR LOW	MCIU FAILURE WARNING. RAM ADDRESS CHECK WILL DETECT. AUTO BRAKES. ARM COMES TO REST. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF LIMPING DURING END EFFECTOR CAPTURE. EE AUTO DRIVE MODE MAY NOT FUNCTION CORRECTLY.  WORST CASE UNEXPECTED MOTION. SIX JOINT RUNAWAY. AUTOBRAKES.  REDUNDANT PATHS REMAINING 1) AUTOBRAKES (FOR SAFING THE SYSTEM). 2) DIRECT DRIVE AND EE MANUAL MODES. (FOR CONTINUING OPERATIONS).		FAILURE HISTORY ----- THERE HAVE BEEN NO FAILURES ASSOCIATED WITH THIS FAILURE MODE ON THE SRMS PROGRAM.

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EXPEDITE  
 PROCESSING

PREPARED BY: MFNG

SUPERCEDING DATE: NONE

RMS/ELEC - 101

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: 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
2055	0	MICRO-COMPUTER QTY. 1 CPU - SCHEMATIC 812806  RAM AND PARITY- SCHEMATIC 812804  EPROM- SCHEMATIC 813357	MODE: CORRUPT PROCESSING AND DATA TRANSFER TO/FROM CPU-- CPU NOT RE-INITIALIZED  CAUSE(S): 1) ONE OR MORE RAM ADDRESS LINES STUCK HIGH OR LOW	MCIU FAILURE WARNING. RAM ADDRESS CHECK WILL DETECT. AUTO BRAKES. ARM COMES TO REST. LOSS OF ALL COMPUTER SUPPORTED MODES. LOSS OF LIMPING DURING END EFFECTOR CAPTURE. EE AUTO DRIVE MODE MAY NOT FUNCTION CORRECTLY.  WORST CASE  UNEXPECTED MOTION. SIX JOINT RUNAWAY. AUTOBRAKES.  REDUNDANT PATHS REMAINING  1) AUTOBRAKES (FOR SAFING THE SYSTEM). 2) DIRECT DRIVE AND EE MANUAL MODES. (FOR CONTINUING OPERATIONS).	OPERATIONAL EFFECTS ----- LOSS OF DATA. AUTOBRAKES. LOSS OF COMPUTER SUPPORTED MODES. LOSS OF LIMPING. POSSIBLE LOSS OF EE AUTO MODES. O&C DATA MAY BE INVALID. DIRECT DRIVE AND BACKUP AVAILABLE. EE MODE MANUAL AVAILABLE POSSIBLY WITHOUT TALKBACKS.  CREW ACTION ----- SELECT DIRECT DRIVE. USE EE MODE MANUAL. SINGLE/DIRECT DRIVE SWITCH SHOULD BE PULSED TO MAINTAIN PROPER RATES.  CREW TRAINING ----- CREW IS TRAINED: TO ALWAYS OBSERVE WHETHER THE ARM IS RESPONDING PROPERLY TO COMMANDS. IF IT ISN'T, APPLY BRAKES. TO RECOGNIZE AND RESPOND TO ALL OFF-NOMINAL OPERATIONS OF THE END EFFECTOR.  MISSION CONSTRAINT ----- OPERATE UNDER VERNIER RATES WITHIN 10 FT OF STRUCTURE. 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.  SCREEN FAILURES ----- N/A  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.

PREPARED BY: MFMG

SUPERCEDING DATE: NONE

RMS/ELEC - 102

DATE: 11 JUL 91

CIL REV: 0

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