

FAILURE MODES EFFECTS ANALYSIS (FMEA) - CIL HARDWARE

NUMBER: 05-6N-2036 -X

SUBSYSTEM NAME: EPD&C - AUXILIARY POWER UNIT (04-2)

REVISION: 0 11/21/87

PART DATA

	PART NAME VENDOR NAME	PART NUMBER VENDOR NUMBER
LRU	: AFT LCA 1	MC450-0057-0001
LRU	: AFT LCA 2	MC450-0058-0001
LRU	: AFT LCA 3	MC450-0059-0001
SRU	: DIODE	JANTXV1N5551

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:

DIODE, SWITCH SCAN ISOLATION (3 AMP) - AUXILIARY POWER UNIT (APU) START/ RUN CONTROL CIRCUIT

REFERENCE DESIGNATORS: 54V76A121(J3-7)
 54V76A121(J7-35)
 54V76A121(J7-6)
 54V76A121(J7-33)
 55V76A122(J3-7)
 55V76A122(J7-35)
 55V76A122(J7-6)
 55V76A122(J7-33)
 56V76A123(J7-33)
 56V76A123(J7-6)
 56V76A123(J3-7)
 56V76A123(J7-35)

QUANTITY OF LIKE ITEMS: 12
 TWELVE

FUNCTION:
 PROVIDES START/RUN COMMAND INDICATION.

{ FAILURE MODES EFFECTS ANALYSIS (FMEA) - NON-CIL FAILURE MODE

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FIRST FAILURE - LOSS OF CONTROL BUS ISOLATION

{B) INTERFACING SUBSYSTEM(S):

FIRST FAILURE - LOSS OF CONTROL BUS ISOLATION

{C) MISSION:

FIRST FAILURE - NO EFFECT. ABORT DECISION REQUIRED AFTER LOSS OF APU.

{D) CREW, VEHICLE, AND ELEMENT(S):

FIRST FAILURE - NO EFFECT

{E) FUNCTIONAL CRITICALITY EFFECTS:

POSSIBLE LOSS OF CREW/VEHICLE AFTER TWO ADDITIONAL FAILURES (CONTROL BUS SHORTED TO GROUND, LOSS OF SECOND APU).

-DISPOSITION RATIONALE-

{A) DESIGN:

REFER TO APPENDIX F, ITEM NO. 4 - DIODE

{B) TEST:

REFER TO APPENDIX F, ITEM NO. 4 - DIODE

GROUND TURNAROUND TEST

APU 1/2/3 CONTROL CIRCUIT TESTS PERFORMED EVERY FLOW.

{C) INSPECTION:

REFER TO APPENDIX F, ITEM NO. 4 - DIODE

{D) FAILURE HISTORY:

REFER TO APPENDIX F, ITEM NO. 4 - DIODE

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(E) OPERATIONAL USE:

IF APU IS LOST, REMAINING APU'S COMMANDED TO HIGH SPEED AND AUTOMATIC SHUTDOWN IS INHIBITED TO PROTECT AGAINST NEXT FAILURE.

- APPROVALS -

EDITORIALLY APPROVED : RI
EDITORIALLY APPROVED : JSC
TECHNICAL APPROVAL : VIA JSC

: *Raymond J. Brown 8/10/96*
: *Sam Henry 8-27-96*
: 96-CIL-010