

FAILURE MODES EFFECTS ANALYSIS (FMEA) -- CIL HARDWARE
NUMBER: 05-6BA-2244 -X

SUBSYSTEM NAME: EPD&C - LANDING GEAR CONTROL

REVISION: 5 05/30/91

PART DATA

PART NAME	PART NUMBER
VENDOR NAME	VENDOR NUMBER
LRU : D&C PANEL R15	V070-730328
SRU : CIRCUIT BREAKER	MC454-0026-2030

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
CIRCUIT BREAKER (3 AMPS), LANDING GEAR ARM/DOWN RESET

REFERENCE DESIGNATORS: 32V73A15CB60

QUANTITY OF LIKE ITEMS: 1
ONE

FUNCTION:
PROVIDES POWER TO THE LANDING GEAR ARM/DOWN RESET TOGGLE SWITCH.
NORMALLY OPEN DURING FLIGHT.

FAILURE MODES EFFECTS ANALYSIS FMEA -- CIL FAILURE MODE

NUMBER: 05-6BA-2244-02

REVISION#: 6 07/01/99

SUBSYSTEM NAME: EPD&C - LANDING GEAR CONTROL

LRU: D&C PANEL R15

ITEM NAME: CIRCUIT BREAKER

CRITICALITY OF THIS
FAILURE MODE: 1R2

FAILURE MODE:

FAILS CLOSED (FAILS TO OPEN MECHANICALLY)

MISSION PHASE: DO DE-ORBIT

VEHICLE/PAYLOAD/KIT EFFECTIVITY:

102	COLUMBIA
103	DISCOVERY
104	ATLANTIS
105	ENDEAVOUR

CAUSE:

STRUCTURAL FAILURE, MECHANICAL SHOCK, VIBRATION, CONTAMINATION,
PROCESSING ANOMALY

CRITICALITY 1/1 DURING INTACT ABORT ONLY? NO

REDUNDANCY SCREEN

A) PASS
B) PASS
C) PASS

PASS/FAIL RATIONALE:

A)

B)

C)

- FAILURE EFFECTS -

(A) SUBSYSTEM:

FIRST FAILURE - NO EFFECT

(B) INTERFACING SUBSYSTEM(S):

FIRST FAILURE - NO EFFECT

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(C) MISSION:
FIRST FAILURE - NO EFFECT

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

(E) FUNCTIONAL CRITICALITY EFFECTS:
POSSIBLE LOSS OF CREW/VEHICLE AFTER SECOND FAILURE (LANDING GEAR
ARM/DOWN RESET SWITCH FAILS "ON") DUE TO INABILITY TO SET LANDING GEAR
ARM/DOWN RELAYS FOR LANDING GEAR DEPLOYMENT.

-DISPOSITION RATIONALE-

(A) DESIGN:
REFER TO APPENDIX D, ITEM NO. 1 - CIRCUIT BREAKER

(B) TEST:
REFER TO APPENDIX D, ITEM NO. 1 - CIRCUIT BREAKER

GROUND TURNAROUND TEST
ANY TURNAROUND CHECKOUT TESTING IS ACCOMPLISHED IN ACCORDANCE WITH
OMRSD.

(C) INSPECTION:
REFER TO APPENDIX D, ITEM NO. 1 - CIRCUIT BREAKER

(D) FAILURE HISTORY:
CURRENT DATA ON TEST FAILURES, FLIGHT FAILURES, UNEXPLAINED ANOMALIES, AND
OTHER FAILURES EXPERIENCED DURING GROUND PROCESSING ACTIVITY CAN BE
FOUND IN THE PRACA DATA BASE.

(E) OPERATIONAL USE:
NONE

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- APPROVALS -

EDITORIALLY APPROVED	: BNA	: <u>J. Kemura 7/6/99</u>
TECHNICAL APPROVAL	: VIA APPROVAL FORM	: <u>96-CIL-011_05-6BA(2)</u>