

FAILURE MODES EFFECTS ANALYSIS (FMEA) - CIL HARDWARE
NUMBER: 05-6BA-2301 -X

SUBSYSTEM NAME: EPD&C - LANDING GEAR CONTROL
REVISION: 5 05/30/91

PART DATA

	PART NAME	PART NUMBER
	VENDOR NAME	VENDOR NUMBER
LRU	: PANEL F6A5	V070-730257
LRU	: PANEL F8A5	V070-730265
SRU	: FUSE	ME451-0018-0100

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
FUSE, GENERAL PURPOSE, LANDING DOWN ARM CIRCUIT (1 AMP)

REFERENCE DESIGNATORS: 34V73A6A5F1
34V73A6A5F2
34V73A6A5F3
34V73A6A5F4
34V73A8A5F1
34V73A8A5F2
34V73A8A5F3
34V73A8A5F4

QUANTITY OF LIKE ITEMS: 8
FOUR PER PANEL F6A5 & F8A5

FUNCTION:
PROVIDES OVERLOAD PROTECTION IN THE LANDING GEAR ARM CIRCUIT.

FAILURE MODES EFFECTS ANALYSIS FMEA - CIL FAILURE MODE

NUMBER: 05-6BA-2301-01

REVISION#: 6 06/28/99

SUBSYSTEM NAME: EPD&C - LANDING GEAR CONTROL

LRU: PANEL F6A5

CRITICALITY OF THIS

ITEM NAME: FUSE

FAILURE MODE: 1R3

FAILURE MODE:

FAILS OPEN. FAILS TO CONDUCT

MISSION PHASE: DO DE-ORBIT

VEHICLE/PAYLOAD/KIT EFFECTIVITY:

102	COLUMBIA
103	DISCOVERY
104	ATLANTIS
105	ENDEAVOUR

CAUSE:

**STRUCTURAL FAILURE, CONTAMINATION, VIBRATION, MECHANICAL SHOCK,
PROCESSING ANOMALY, THERMAL STRESS**

CRITICALITY 1/1 DURING INTACT ABORT ONLY? NO

REDUNDANCY SCREEN

A) PASS
B) FAIL
C) PASS

PASS/FAIL RATIONALE:

A)

B)

**FAILS "B" SCREEN BECAUSE FUSE FAILURE IS MASKED BY PARALLEL INDICATION
CIRCUIT.**

C)

- FAILURE EFFECTS -

(A) SUBSYSTEM:

FIRST FAILURE - NO EFFECT

(B) INTERFACING SUBSYSTEM(S):

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FIRST FAILURE - NO EFFECT

(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 DUE TO LOSS OF ELECTRICAL POWER TO LANDING GEAR ARM RELAYS. REQUIRES THREE MORE FAILURES (TWO ADDITIONAL FUSES FAILS OPEN AND REDUNDANT ARM SWITCH FAILS OPEN) BEFORE LANDING GEAR DEPLOYMENT IS LOST.

-DISPOSITION RATIONALE-

(A) DESIGN:
REFER TO APPENDIX D, ITEM NO. 4 - FUSE

(B) TEST:
REFER TO APPENDIX D, ITEM NO. 4 - FUSE

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

(C) INSPECTION:
REFER TO APPENDIX D, ITEM NO. 4 - FUSE

(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. Kumura 7/6/99</u>
TECHNICAL APPROVAL	: VIA APPROVAL FORM	: 98-CIL-011_05-6BA(2)