

FAILURE MODES EFFECTS ANALYSIS (FMEA) - CIL HARDWARE
 NUMBER: 05-6S-BFUS5 -X

SUBSYSTEM NAME: EPD&C - DPS&C

REVISION: 0

12/02/87

 PART DATA

	PART NAME	PART NUMBER
	VENDOR NAME	VENDOR NUMBER
LRU	: FWD PCA 1	V070-763320
LRU	: FWD PCA 2	V070-763340
LRU	: FWD PCA 3	V070-763360
SRU	: FUSE	ME451-001B-0500

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
 FUSE, CIRCUIT PROTECT, 5 AMP

REFERENCE DESIGNATORS: 81V76A22F25
 81V76A22F26
 81V76A23F27
 81V76A23F28
 81V76A24F7

QUANTITY OF LIKE ITEMS: 5
 FIVE

FUNCTION:
 PROVIDES SHORT CIRCUIT PROTECTION FOR THE BFC LOGIC POWER SOURCES.

FAILURE MODES EFFECTS ANALYSIS FMEA - CIL FAILURE MODE

NUMBER: 05-6S-BFUS5-01

REVISION#: 0 04/11/96

SUBSYSTEM NAME: EPD&C - DPS&C

LRL: FWD PCA 1, 2 & 3

ITEM NAME: FUSE

CRITICALITY OF THIS
FAILURE MODE: 1R2

FAILURE MODE:

FAILS OPEN, FAILS TO CONDUCT, FAILS TO CLOSE

MISSION PHASE:

- LO LIFT-OFF
- OO ON-ORBIT
- 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) PASS
- C) PASS

PASS/FAIL RATIONALE:

A)

B)

C)

- FAILURE EFFECTS -

(A) SUBSYSTEM:

LOSS OF FUNCTION.

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(B) INTERFACING SUBSYSTEM(S):
BFS (PRE-ENGAGE) - LOSS OF BFS ENGAGE CAPABILITY.

(C) MISSION:
NO EFFECT FIRST FAILURE.

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

(E) FUNCTIONAL CRITICALITY EFFECTS:
CRITICALITY 1R2 DUE TO THE FOLLOWING REASON:

FAILURE OF THIS FUSE COUPLED WITH A GENERIC HARDWARE/SOFTWARE ERROR IN THE PRIMARY SYSTEM LEADS TO INABILITY TO CONTROL THE VEHICLE AND RESULTS IN LOSS OF CREW/VEHICLE.

-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: ALL TURNAROUND CHECKOUT TESTING IS ACCOMPLISHED IN ACCORDANCE WITH OMRSD.

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

(D) FAILURE HISTORY:
REFER TO APPENDIX D, ITEM NO. 4 - FUSE.

CURRENT DATA ON TEST FAILURES, FLIGHT FAILURES, UNEXPLAINED ANOMALIES, AND OTHER FAILURES EXPERIENCED DURING GROUND PROCESSING ACTIVITY CAN BE FOUND IN THE PRACA DATABASE

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(E) OPERATIONAL USE:
NONE.

- APPROVALS -

EDITORIALLY APPROVED	: RI	<i>[Signature]</i>
EDITORIALLY APPROVED	: JSC	<i>[Signature]</i>
TECHNICAL APPROVAL	: VIA APPROVAL FORM	06-CIL-013_05-6S