FAILURE MODES EFFECTS ANALYSIS (FMEA) – CIL HARDWARE
NUMBER: 05-6S-BSW5 -X

SUBSYSTEM NAME: EPD&C - DPS&C

REVISION: 0 12/02/87

PART DATA

	PART NAME VENDOR NAME	PART NUMBER VENDOR NUMBER
LRU	: PANEL O17	V070-730302
SRU	: SWITCH, TOGGLE	ME452-0102-7301

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
SWITCH, TOGGLE, 3P2P MULTIPLEXER DEMULTIPLEXER (MDM)

REFERENCE DESIGNATORS: 33V73A17S19

QUANTITY OF LIKE ITEMS: 1
ONE

FUNCTION:
PROVIDES MANUAL CONTROL TO TURN ON THE REMOTE POWER CONTROLLER'S (RPC), WHICH SUPPLY POWER TO MDM'S (OPERATIONAL AFT) OA1, OA2, & OA3.

FAILURE MODES EFFECTS ANALYSIS FMEA – CIL FAILURE MODE
NUMBER: 05-6S-BSW5- 01

REVISION#: 0 04/12/96

SUBSYSTEM NAME: EPD&C - DPS&C
LRU: PANEL O17
ITEM NAME: SWITCH, TOGGLE

CRITICALITY OF THIS FAILURE MODE: 1R2

FAILURE MODE:
FAILS OPEN, PREMATURE OPEN OR SHORTS TO CASE (GROUND). (ALL THREE CONTACTS).

MISSION PHASE:
PL PRE-LAUNCH
LO LIFT-OFF
OO ON-ORBIT
DO DE-ORBIT
LS LANDING/SAFING

VEHICLE/PAYLOAD/KIT EFFECTIVITY:
102 COLUMBIA
103 DISCOVERY
104 ATLANTIS
105 ENDEAVOUR

CAUSE:
PIECE-PART STRUCTURAL FAILURE, CONTAMINATION, VIBRATION, MECHANICAL SHOCK, 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:

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POSSIBLE LOSS OF ONE OR MORE OA MDM'S.

(B) INTERFACING SUBSYSTEM(S):
LOSS OF ABILITY TO DETECT FAILURES IN CRITICAL VEHICLE FUNCTIONS (TEMPERATURE, PRESSURE, SPEED). NUMEROUS MASTER ALARMS AND SYSTEM MANAGEMENT (SM) ALERTS.

(C) MISSION:
POSSIBLE EARLY MISSION TERMINATION.

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

(E) FUNCTIONAL CRITICALITY EFFECTS:
CRITICALITY 1R2 BECAUSE OF THE FOLLOWING REASONS:

LOSS OF SWITCH IN COMBINATION WITH SUBSEQUENT FAILURE TO THE CRITICAL VEHICLE FUNCTIONS MAY RESULT IN LOSS OF CREW/VEHICLE DUE TO INABILITY TO MONITOR CRITICAL FUNCTIONS (E.G. FUEL CELL MONITORING) AND TO TAKE APPROPRIATE CORRECTIVE ACTION. REFERENCE FMEA 05-S-B03-7-1 & 2.

-DISPOSITION RATIONALE-

(A) DESIGN:
FOR DISPOSITION AND RATIONALE, REFER TO APPENDIX A, ITEM NO. 1-TOGGLE SWITCH.

(B) TEST:
FOR DISPOSITION AND RATIONALE, REFER TO APPENDIX A, ITEM NO. 1-TOGGLE SWITCH.

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

(C) INSPECTION:
FOR DISPOSITION AND RATIONALE, REFER TO APPENDIX A, ITEM NO. 1-TOGGLE SWITCH.

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(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 DATABASE

FOR DISPOSITION AND RATIONALE, REFER TO APPENDIX A, ITEM NO. 1-TOGGLE SWITCH.

(E) OPERATIONAL USE:
NONE.

- APPROVALS -

EDITORIALLY APPROVED	: RI	
EDITORIALLY APPROVED	: JSC	Sam Scott 5-3-96
TECHNICAL APPROVAL	: VIA APPROVAL FORM	: 96-CIL-013_05-6S