FAILURE MODES EFFECTS ANALYSIS (FMEA) – NON-CIL HARDWARE
NUMBER: 05-6Q-2214 -X

SUBSYSTEM NAME: EPD&C - DISPLAYS & CONTROLS
REVISION: 1 09/07/97

PART DATA

	PART NAME VENDOR NAME	PART NUMBER VENDOR NUMBER
LRU	: PANEL F3	V070-730401
SRU	: SWITCH, TOGGLE	ME452-0102-7101
SRU	:SWITCH, TOGGLE	ME452-0102-7601
SRU	:SWITCH, TOGGLE	ME452-0102-8101

EXTENDED DESCRIPTION OF PART UNDER ANALYSIS:
SWITCH, TOGGLE, SP2P, HUD POWER ON/OFF CONTROL.

REFERENCE DESIGNATORS: 34V73A3S1
34V73A3S6

QUANTITY OF LIKE ITEMS: 2
TWO, ONE PER HUD

FUNCTION:
ENABLES CREW TO TURN HEAD UP DISPLAY (HUD) NO. 1 & 2 "ON" OR "OFF."

FAILURE MODES EFFECTS ANALYSIS FMEA – NON-CIL FAILURE MODE
NUMBER: 05-6Q-2214- 01

REVISION#: 1 09/07/97

SUBSYSTEM NAME: EPD&C - DISPLAYS & CONTROLS
LRU: PANEL F3 CRITICALITY OF THIS
ITEM NAME: SWITCH, TOGGLE FAILURE MODE: 1R3

FAILURE MODE:
FAILS OPEN, SHORT TO CASE, PREMATURE OPEN

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:
CONTAMINATION, INTERNAL STRUCTURAL FAILURE, VIBRATION, SHOCK.

CRITICALITY 1/1 DURING INTACT ABORT ONLY? NO

REDUNDANCY SCREEN
A) PASS
B) PASS
C) PASS

PASS/FAIL RATIONALE:
A)

B)

C)

CORRECTING ACTION: MANUAL

CORRECTING ACTION DESCRIPTION:
CREW MAY UTILIZE REDUNDANT HUD AND OTHER DEDICATED DISPLAYS.

FAILURE MODES EFFECTS ANALYSIS (FMEA) – NON-CIL FAILURE MODE
NUMBER: 05-6Q-2214- 01

- FAILURE EFFECTS -

(A) SUBSYSTEM:
LOSS OF ABILITY TO TURN ON AFFECTED RPC.

(B) INTERFACING SUBSYSTEM(S):
LOSS OF ABILITY TO TURN ON AFFECTED HEAD UP DISPLAY.

(C) MISSION:
FIRST FAILURE - NO EFFECT.

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

(E) FUNCTIONAL CRITICALITY EFFECTS:
SUCCESS PATHS REMAINING AFTER FIRST FAILURE - REDUNDANT HUD AND OTHER DEDICATED DISPLAYS MAY BE USED. WHEN LOSS OF OUTPUT IS DETECTED, THE COMMANDER (OR PILOT) WILL TRANSITION TO THE DEDICATED DISPLAYS FOR CRITICAL LANDING DATA. LOSS OF ALL DISPLAYS COULD RESULT IN LOSS OF CREW AND VEHICLE DURING LANDING.

DESIGN CRITICALITY (PRIOR TO DOWNGRADE, DESCRIBED IN (F)): 1R2

(F) RATIONALE FOR CRITICALITY DOWNGRADE:
THE OTHER HUD OR DEDICATED DISPLAYS MAY BE USED FOR THIS SCENARIO SINCE IT IS THE FIRST FAILURE AND IS LOSS OF OUTPUT (I.E. EASILY RECOGNIZABLE).

- APPROVALS -

EDITORIALLY APPROVED	: BNA	: J Kambara 9/7/97
EDITORIALLY APPROVED	: JSC	: D Clancy 10/10/97
TECHNICAL APPROVAL	: VIA APPROVAL FORM	: 96-CIL-024_05-6Q