

SUBSYSTEM CCTV  
 UNIT Pan/Tilt Unit (PTU)  
 ASSY. DWG. 229022-502, 503, 504  
 QUANTITY/LOCATION 1/MULTIPLE (CARGO BAY STACK)

SHUTTLE CCTV FAILURE MODE  
 & EFFECTS ANALYSIS

PREPARED BY H. Krawitz  
 DATE 8-20-86  
 REVISED 7-17-87

FUNCTION: The PTU will move in the Tilt up or down direction in response to a command.

ITEM	FAILURE MODE	FAILURE CAUSE	FAILURE EFFECT ON END ITEM	FAILURE DETECT FLIGHT/GROUND	CORRECT ACTION TIME AVAIL/REQ	CRIT'Y	HAZARDS/REMARKS
2.4.2.1	Loss of Tilt up or down electrical function.	PTU A1 Tilt Stopper Drive A2 Power Supply. Command/Clock Receivers.	Loss of travel in the tilt up or down direction.  Worst Case: Loss of mission critical video.	FLT- (1) Scene information from camera mounted on PTU, as observed on TWT, appears stationary in response to tilt commands. (2) May observe lack of movement of PTU through the screen cabin window. (3) May use TWT in conjunction with another camera to observe suspect PTU. GND- Scene information from camera mounted on PTU as observed on TWT appears stationary in response to tilt commands.	None	2/2	
			Worst Case (if video is not mission critical, for D & E cameras only): Unable to verify PIB door all bulkheadatches are closed.	Same as above	None. (Usage of EVA Tools is available.)	1/18	