

FMEA  
EMU FAILURE MODE, EFFECT ANALYSIS

01/02/90 SUPERSEDES / /

ANALYST:

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Date: 04/19/90

NAME P/N QTY	FUNCTION	FAILURE MODE & CAUSES	MISSION PHASE	FAILURE EFFECT	FAILURE DETECTION FLIGHT/GROUND	TIME TO EFFECT/ ACTIONS	CRIT	REMARKS/ HAZARD	REF
FAN SWITCH, ITEM 366 SV71007-1 (1)	Provides a manual means of activating/deactivating the 123 Fan/Separator/Pump Motor and opening or closing the 171 Coolant Loop Isolation Valve (CLIV).	<p>S&amp;P/MSA: CLIV switch fails to valve open position.</p> <p>CAUSE: Contact weld caused by arcing or a failure of the hermetic seal and exposure to vacuum, jamming, shorting due to contamination. CLIV "Close" contact fails open.</p>	EVA	<p>END ITEM: CLIV valve seat remains in open position.</p> <p>GFE INTERFACE: None for single failure. If an LCVG leak also occurred, the water reservoir would leak into the suit, possibly causing loss of CCC or Fan or causing helmet fogging.</p> <p>MISSION: None for single failure. Terminates EVA with subsequent water leak into suit. Shut off fan (CLIV) and activate SOP.</p> <p>CREW/VEHICLE: None for single or double failure. Possible loss of crewman with loss of SOP.</p>	<p>FLIGHT: Fan. Water in suit or helmet fogging.</p> <p>GROUND: Yes. FEMUR-001, Para. 7.3.3.2.1.1. 6. Coolant Isolation System Performance (Item 171/172) and Item 123 Leakage Test.</p>	<p>None.</p> <p>TIME AVAILABLE: N/A</p> <p>TIME REQUIRED: N/A</p>	3/10 A-PASS B-PASS C-PASS	The redundant paths are the CLIV and the SOP. The valve is normally open during the EVA mission. If an LCVG leak should occur, the 171 valve could not be closed to prevent the entire water reservoir from leaking into the suit.	None.

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