

FMEA
EMU FAILURE MODE, EFFECT ANALYSIS

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Date: 11/15/95

12/24/95 SUPERSEDES 12/24/94

ANALYST:

NAME P/N QTY	FUNCTION	FAILURE MODE & CAUSES	MISSION PHASE	FAILURE EFFECT	FAILURE DETECTION FLIGHT/GROUND	TIME TO EFFECT/ ACTIONS	CRIT	REMARKS/ HAZARD	REF
DISPLAY AND CONTROLS ELECTRONICS, ITEM 350 ----- SV792291-27 (1)	Provides current limiting for EVC, feedwater solenoid and CLIV solenoid power. Provides optical isolation and discrete signal conditioning for CVS input discretes and EVC tone discretes. Contains battery current and voltage sense circuits, DCM display, and provides secondary power to DCM display, EVC, and sensors.	J50FM06: Battery power "OH" discrete fails off. CAUSE: Broken connection, open, or electrical component failure.	PREEVA EVA	END ITEM: Lack of indication that battery is providing EMU power. GFE INTERFACE: False CVS indication of EMU battery configuration. Loss of battery and all consumables monitoring capability by the CVS. During EVA, the CVS fails to enable the low voltage and high battery current limit check, and the consumables management function. MISSION: None for single failure. Terminate EVA for second failure which prematurely depletes battery, primary oxygen or primary water supply. CREW/VEHICLE: None for single or double failure. Possible loss of crewman with loss	FLIGHT: Yes. During periodic status checks the following status messages would be bypassed when on battery power: 1. TIME EV: KK 2. XXX 02 (OR PWB) LF TIME LF:KK (limiting consumable). GROUND: Yes. FEMU-R-001, Para. 7.3.3.2.4.5 EMU Vacuum Performance Matrix, DCM Display. Improper message during vacuum chamber run.	None. TIME AVAILABLE: N/A TIME REQUIRED: N/A	3/1R A-PASS B-PASS C-PASS	Redundant paths are the battery power circuits and the SOP. Loss of IVA battery use warning capability.	None.

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		350FMO6:		of SOP.			3/1R		