

IMEA  
EMU FAILURE MODE, EFFECT ANALYSIS

01/02/90 SUPERSEDES / /

ANALYST:

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Date: 04/02/90

NAME P/N QTY	FUNCTION	FAILURE MODE & CAUSES	MISSION PHASE	FAILURE EFFECT	FAILURE DETECTION FLIGHT/GROUND	TIME TO EFFECT/ ACTIONS	CRIT	REMARKS/ HAZARD	REF
WATER CHECK VALVE, ITEM 143 ----- SV740406-2 (1)	Prevents the use of the reserve water tank (Item 148) feedwater during normal EVA operations, and allows charging of reserve tank.	143/FWD1: Internal leakage, fails to close. ↓ CAUSE: Contamination, diaphragm, leakage, seat, failure, spring fractures, plunger jam, O-ring seal bypass leakage (1).	PRE-EVA  EVA	EMU ITEM: Internal water flow path through valve seat. Use of reserve water tank feedwater during normal EVA.  GFE INTERFACE: Unable to provide a 30 minute feedwater supply upon depletion of the primary water tank. Possible helmet fogging.  MISSION: None for single or double failure. No warning that 30 minute reserve water is being consumed.  CREW/VEHICLE: None for single or double failure. Possible loss of crewman with loss of SOP.	FLIGHT: No.  GROUND: Yes. FEMU-R-001, Para. 7.3.3.2.1.1. 16 Reserve to Primary Water Tank leakage Verification by discharge.	None. If feedwater is not available for cooling, the SOP can be activated by opening the purge valve to obtain cooling/ defog.  TIME AVAILABLE: N/A  TIME REQUIRED: N/A	3/IR  A-PASS B-N/A C-PASS	Redundant path is the rest of the water system and the SOP. The "B" screen is N/A as valve is standby redundancy.	FEMU-R-001 Para. 4.22

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ATTACHMENT  
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