

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
FLOW RESTRICTOR, ITEM 113B ----- SV778873-15 (1)	2/1R	113BFM01 No flow, clogs. Contamination. Adjusting screw rotates and orifice slides out of position.	END ITEM: Reduction and/or loss of primary oxygen flow to the regulators. GFE INTERFACE: Drop in suit and water reservoir pressure. The SOP will automatically deliver emergency oxygen when the suit drops below 3.33 psia minimum during EVA. MISSION: Terminate EVA. Loss of use of one EMU. CREW/VEHICLE: None for single failure. Possible loss of crewman with loss of SOP. TIME TO EFFECT /ACTIONS: Immediate. TIME AVAILABLE: Minutes. TIME REQUIRED: Immediate REDUNDANCY SCREENS:	A. Design - The inlet from the tanks is protected by a 25 micron filter. Inlet from the check valve is protected by 25 micron filters. The adjusting screw is safety wired against rotation in two directions and has a KEL-F locking plug. B. Test - Component Acceptance Test (Vendor) - The manufacturer, CTI, tests the maximum flow at 1035-1040 psig, to assure that the flow is equal to or less than 7.5 lb/hr. The regulator performance and stability tests require a 5.2 lb/hr flow. PDA Test - SEMU-60-010 contains a test of the flow restrictor. With the bottles pressurized to 850-950 psia the orifice is required to maintain a maximum flow of 5.5-6.78 maximum lbs/hr oxygen. A clogged orifice would fail this test. To prevent the orifice from becoming contaminated, all rig lines, gases, and test fixtures are cleaned to HS3150 EM50A. Certification Test - Certified for a useful life of 20 years (Ref. EMUM-0083). C. Inspection - The running and final torque of the adjusting screw is verified by the vendor and DCAS inspection. A trial assembly is performed and then the details are visually inspected. The safety wire is inspected after assembly. D. Failure History - None. E. Ground Turnaround - Tested for non-EET processing per FEMU-R-001, IV1103 Performance Data and Item 113 Regulator Check. FEMU-R-001 Para 8.2 EMU Preflight KSC Checkout for EET processing. F. Operational Use - Crew Response - PreEVA: Trouble shoot problem, if no success consider EMU 3 if available. EMU no go for EVA. EVA: When CWS data confirms loss of suit and feedwater pressure regulation, terminate EVA. Training - Standard EMU training covers this failure mode. Operational Considerations - Flight rules define go/no go criteria related to EMU suit pressure regulation. Flight rules require termination of EVA if SOP activated. EVA checklist procedures verify hardware integrity and operational status prior to EVA. Real Time Data System allows ground monitoring of EMU systems.

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113BFM01

A-PASS
B-PASS
C-PASS

EXTRAVEHICULAR MOBILITY UNIT
SYSTEMS SAFETY REVIEW PANEL REVIEW
FOR THE
I-113 PRIMARY PRESSURE CONTROL MODULE
CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

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