

NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
SHEAR PLATE ASSEMBLY, ITEM 115 (PIVOTED, PLANAR) ----- SV778540-56 (1) OR (ORU) ----- SV824133-8 (1)	2/1R	115FM16A Filter clogs (PLSS O2 manifold) Contamination.	END ITEM: Reduction and/or loss of primary oxygen flow to suit. GFE INTERFACE: Drop in suit and water reservoir pressure. The SOP will automatically deliver emergency oxygen when suit pressure 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: Minutes. TIME AVAILABLE: Minutes. TIME REQUIRED: Immediate. N/A	A. Design - This filter protects the flow limiting orifice in the 113 assembly from any random particles remaining in a system already cleaned by rigorous clean room handling procedures. Also the system (containing stationary parts and charged with filtered clean/dry oxygen) does not generate any particles or contaminants. B. Test - Component Acceptance Test - None. PDA Test - A clogged O2 filter would result in a failure to successfully perform O2 regulator performance tests per SEMU-60-010. Rig lines and test fixtures are cleaned to HS3150 EM50A to prevent contamination from entering the item. Certification Test - Certified for a useful life of 20 years from the date of manufacture. Successful refurbishment will extend useful life to 30 years max. (ref EMUM1-0491, EMUM1-0027). C. Inspection - Details are 100% inspected per drawing dimensions and surface finish characteristics. Details are manufactured from material with certified physical and chemical properties. All details, gases and facilities are cleaned and inspected to HS3150 EM50A to preclude contamination clogging. D. Failure History - None. E. Ground Turnaround - Tested for non-EET processing per FEMU-R-001, V1103 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 - EVA: No response if clogging is not severe enough to significantly reduce O2 flow (i.e. no activation of CWS, no noticeable drop in O2 pressure, no drop in feedwater O2 pressure). If these conditions exist, terminate EVA. Training - Standard training covers this failure mode. Operational Considerations - Flight rules define go/no go criteria relate to EMU pressure regulation. EVA checklist procedures verify hardware integrity, and systems operational status prior to EVA. Real Time Data System allows ground monitoring of EMU systems.
REDUNDANCY				

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115FM16A

SCREENS:
A-PASS
B-PASS
C-PASS

EXTRAVEHICULAR MOBILITY UNIT
SYSTEMS SAFETY REVIEW PANEL REVIEW
FOR THE
I-115 SHEAR PLATE ASSEMBLY
CRITICAL ITEM LIST (CIL)

EMU CONTRACT NO. NAS 9-97150

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