NAME P/N QTY	CRIT	FAILURE MODE & CAUSES	FAILURE EFFECT	RATIONALE FOR ACCEPTANCE
CHECK VALVE/VENT FLOW SENSOR, ITEM 121 --- SV771836-29 (1)	2/1R	121FM03: Flapper fails to open (check valve fails closed). CAUSE: Contamination (corrosion) causes flapper bearing seizure.	END ITEM: Blockage of ventilation flow path to helmet. SFE INTERFACE: Loss of helmet ventilation flow. CO2 level buildup in helmet. MISSION: Terminate EVA. CREW/VEHICLE: None for single failure. Possible loss of crewman with loss of SOP.	A. Design - The moving force balance mechanism is protected from vent flow contamination by the CCC filter. Also, the mechanism is located in an isolated compartment for further protection. The materials of construction are selected to prevent corrosion. The design utilizes bearing shields to prevent an increase in bearing friction. B. Test - Component Acceptance Test - Special installation and removal procedures have been incorporated in acceptance test to insure no damage is incurred to the flapper, or counterweight assembly. A flow - P test is performed in the normal flow direction. With an inlet flow of 6.41-6.51 ACFM N2 at an inlet pressure of 4.25 - 4.25 psia the differential pressure across the valve shall not exceed 0.315" H20. CEI FQA Test - With the item installed in the PLSS it is performance tested at an inlet pressure of 4.0 - 4.6 psig. The flapper is verified to open and close in the flow ranges of 3.7 - 5.1 ACFM N2 through an electrical signal. The test fixtures and interfacing hoses are cleaned to MS3150 EH50A. Certification Test - The item completed 3,655 flow and 1,983 check cycles which fulfilled the 15 year life requirement during 3/85. No engineering changes have been incorporated since this item was certified. C. Inspection - Flapper Bearings Due to Corrosion - Switch roller and flapper bearings are vendor supplied lubricated ball bearings monitored by N.S. source inspection. Cleanliness level of switch roller and flapper bearings are maintained to MS 1550 CL2. To minimize particulate contamination, all other details are maintained to MS 3150 EH150. D. Failure History - None.

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E. Ground Turnaround -
Ground tested per FEMU-R-001, SEMU Reduced Preinstallation Acceptance Testing, Para. 7.3.3.2.1.1.2, Water Servicing, Leakage and Gas Removal.

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 ventilation flow, terminate EVA. Open helmet purge valve to purge CO2 from helmet.
Training -
Standard EMU training covers this failure mode.
Operational Considerations -
Flight rules define EMU no go for loss of CO2 control.
EVA checklist and FDF procedures verify hardware integrity and systems operational status prior to EVA. Real time Data Systems allows ground monitoring of EMU systems.