CRITICAL ITEMS LIST

ASSY NOMENCLATURE: *OXYGEN HOSES*

ASSY P/N: *A11200-11, 12*

SYSTEM: *CREW ESCAPE SYSTEM*

SUBSYSTEM: *EMERGENCY OXYGEN SYSTEM*

REVISION

FMEA REF	FMEA REV	NAME, QTY & DRAWING REF DESIGNATION	CRIT'Y	FAILURE MODE AND CAUSE	FAILURE EFFECT ON END ITEM	RATIONALE FOR ACCEPTANCE
5 2 2		OXYGEN (O_2) HOSES (2) --- 0725036	I/1	5.2.2 Mode: External leakage Cause: • Defective material • Defective connections	Loss of half or all available oxygen	1. DESIGN FEATURES TO MINIMIZE FAILURE MODE a. The hoses are designed and fabricated in accordance with applicable portions of Mil-H-81581/3 b. The material is: the hose is flame resistant silicon with wire wrap reinforcement, the cover is flame resistant braided PBI, and the molded ends are flame resistant silicone c. Hoses are designed and are burst pressure tested to 450 psig d. Safety factor of 8.5. e. Proof pressure is 150 psig f. Wall thickness is equal to .125 inches 2. TEST OR ANALYSIS TO DETECT FAILURE MODE a. Acceptance Testing (1) The Silicone material is certified by the supplier, PBI material is Government-furnished equipment to the vendor (2) All hoses are proof tested by the vendor to 150 psi (3) All hoses are leak tested to 150 psi b. Certification (1) EOS is live jumped and activated 16 times (2) Hoses are certified by similarity. Hoses or like hoses have flown on space flights since Gemini Program and have utilized crew oxygen hoses on all STS flights (3) The system is live jumped at the Naval Weapons Center 12 jumps from 25,000 feet, 4 jumps from 12,000 feet, 12 jumps from 10,000 feet, and 8 water drop jumps. c. Turnaround Testing (In accordance with PIA 23029) Hoses are leakage tested to 150 psi prior to each flight

EARLIER PROCESSING

PREPARED BY: *R. L. Allison & W. Sauter*

SUPERSEDING DATE

APPROVED BY: CEB/EOS-10

DATE: 10/24/88

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5.2.2		OXYGEN (O_2) HOSES [3] a225036	1/3	5.2.2 Mode: External leakage Cause: • Defective material • Defective connections	Loss of half or all available oxygen	3. INSPECTION a DCAS and company inspection prior to delivery b DCAS verify marking, cleanliness, and packaging c Visual inspection prior to every flight Turnaround inspection (In accordance with PIA 23029) a. Visually inspected for damage. b Verify O_2 hoses are internally cleaned to level 100A. 4. FAILURE HISTORY No failure recorded. Similar hoses have flown on previous STS flights. 5. OPERATIONAL USE a Operational effect of failure: Possible loss of crewmember. b. Crew action: None. c. Crew training: The crew is trained to make the proper connections between the EOS, hoses, and launch/entry suit. d Mission constraints: None e In flight checkout: The crew could inspect hoses during flight but are not trained or equipped to repair defective hoses

DATE: 10/24/88