

Basic Detail Report

SPACE SUIT/LIFE SUPPORT SYSTEM OR EXTRAVEHICULAR MOBILITY UNIT



1. LIQUID COOLING AND VENTILATION GARMENT Located under the pressure and gas garment. Consists of liquid cooling tubes that maintain desired body temperature.



2. SERVICE AND COOLING UMBILICAL Provides cooling and water and oxygen recharge externally to the helmet. Contains hoses which are manually adjusted to shield the astronaut's eyes.

3. EMU ELECTRICAL HARNESS Provides the power and communications connections to the portable life support system.



4. DISPLAY AND CONTROL MODULE Chest mounted computer module which contains all electronic and electrical interfaces, controls and displays.

5. EXTRAVEHICULAR ARM ASSEMBLY Attaches externally to the helmet. Contains hoses which are manually adjusted to shield the astronaut's eyes.

6. HELMET Consists of a clear polycarbonate bubble, neck disconnect and ventilation pad.

7. ARM ASSEMBLY Contains the shoulder joint and upper arm bearings that permit shoulder mobility as well as the elbow joint and wrist bearing.

8. LOWER TORSO Consists of the pants, boots and the hip, knee and ankle joints.

9. GLOVES Contain the wrist disconnect, wrist joint and insulation padding for palms and fingers.

10. HARD UPPER TORSO Provides the structural framework for the rest of the EMU. Attaches to the lower torso, primary life support subsystem, display and control module, and electrical harness.

11. PRIMARY LIFE SUPPORT SUBSYSTEM This is the core of the life support subsystem and expenditures.

12. SECONDARY OXYGEN PACK Mounted in the base of the primary life support subsystem. It contains a 30 minute emergency oxygen supply and a valve and regulator assembly.

13. CONTAMINANT CARRIER CARRIER Consists of lime, hydroxide, charcoal and filters which remove carbon dioxide from the air that the astronaut breathes. It can be replaced in flight.

14. BATTERY Provides all electrical power to the portable life support system. It is filled with electrolyte and charged prior to flight. The battery is rechargeable.

15. AIRLOCK ADAPTER PLATE An EMU storage fixture which is also used as a donning and doffing station.

16. COMMUNICATIONS CARRIER ASSEMBLY Consists of microphone and headset. Allows the astronaut to talk to the other crewmen in the orbiter or other space surface support systems.

17. INFLATABLE DRINK BAG Sock is located in the hard upper torso and has a tube projecting up into the helmet to permit the astronaut to drink while suited.

18. URINE COLLECTION DEVICE Consists of the adapter tubing, storage bag and disconnect hardware for emptying liquid.



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Title Space Suit / Life Support System

Date 1994

Description Informational drawings of the 1994 United Technologies Hamilton

Standard Extravehicular Mobility Suit by United Technologies Hamilton

Standard. The information sheet illustrates and describes the various layers and

systems of the space suit.

Dimensions Primary Dimensions: 17 × 11in. (43.2 × 27.9cm)