

## PORTABLE LIFE SUPPORT SYSTEM/OXYGEN PURGE SYSTEM DESCRIPTION

The Portable Life Support System (PLSS) is a self-contained life support system that provides life support, voice communications, and telemetry for an astronaut performing Apollo Mission extravehicular tasks.

The PLSS performs the following functions:

1. Provides breathing oxygen and controls the pressure of the astronaut's suit.
2. Provides thermal control by recirculating oxygen in the Pressure Garment Assembly (PGA) and water through the Liquid Cooling Garment (LCG).
3. Removes humidity, carbon dioxide, odors, and other contaminants from the recirculating oxygen.
4. Provides communication and telemetry between the astronaut and the Lunar Module (LM) or the Lunar Communications Relay Unit (LCRU).

The Oxygen Purge System (OPS) adds an independent backup life support capability. It provides oxygen for respiration, pressure control, and cooling.

The BSLSS is a portable backup system which supplies LCG cooling water to two astronauts from one PLSS.

Five main subsystems comprise the PLSS: the extravehicular communications system (EVCS), oxygen ventilating circuit, feedwater loop, liquid transport loop, and primary oxygen subsystem.

