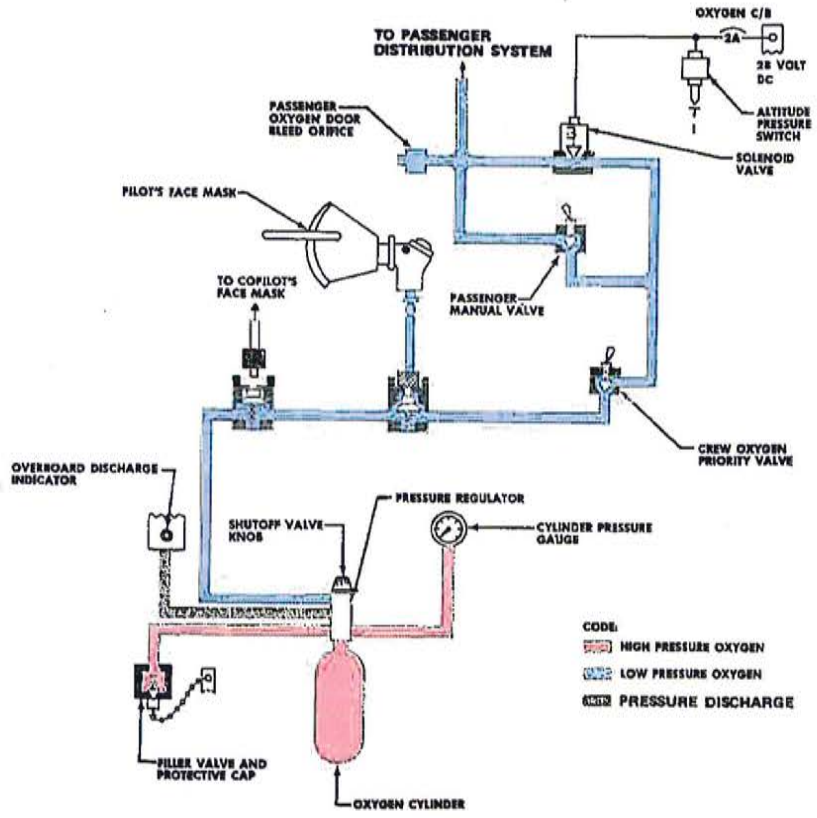
OXYGEN

The oxygen system provides supplementary oxygen for the cockpit diluter demand masks and the passengers' continuous flow masks. It is not normally used since a cabin altitude of 8,000 feet can be maintained at the maximum certified aircraft altitude with normal pressurization system operation.

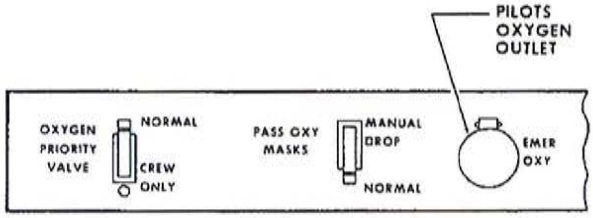


Oxygen Bottle

In the unlikely event supplementary oxygen is required, a fully-charged 22.0 cubic foot bottle located under the right nose baggage compartment floor provides approximately 15 minutes oxygen for crew and six passengers. Duration for actual personnel aboard can be computed by assuming consumption at a rate of 4 liters per minute per occupant, and a usable full bottle output of 500 liters. An optional 60/64 cubic foot bottle is also available. Normal pressure for the system is 1,600-1,800 p.s.i. The bottle assembly contains a pressure reducing valve, shutoff valve and provisions for external servicing. A green disc is installed in the end of the bottle overpressure vent line which is flush mounted below the right nose baggage door. This disc, when ruptured, indicates bottle pressure has exceeded 2,500 p.s.i. and is empty. This overpressure system will actuate under only the most adverse circumstances;

therefore, if the disc is ruptured, determine the cause of the overpressure before flight. The oxygen bottle pressure is displayed on the right instrument panel. A locking connector has been provided on the right and left flight deck consoles to supply the flight compartment occupants with 70 p.s.i. oxygen for diluter demand mask use. The diluter demand masks have an integrally-mounted microphone and oxygen regulator. Each oxygen regulator has a lever allowing manual selection of diluter demand (normal) or demand (100% oxygen) flows. The lever is normally placed in the 100% position so it is ready for emergency use at high altitudes. If oxygen is used below 20,000 feet, the lever can be repositioned to normal to conserve oxygen.

Oxygen Control Panel



PILOTS SIDE CONSOLE OXYGEN VALVES
AND OXYGEN OUTLET

The left console contains the oxygen controls regulating flow to the passenger compartment. The OXYGEN PRIORITY VALVE can be closed if the situation warrants oxygen flow to the flight deck only. A switch marked PASS OXY MASKS can be used to manually drop the passenger oxygen masks if therapeutic oxygen is required or if oxygen is needed during an electrical power failure. A switch on both control panels labeled MIC OXY MASK/MIC, HEADSET, selects which mike will be used.

OXYGEN

Should cabin altitude exceed 13,500 $\pm$ 600 feet, an altitude sensing switch will electrically actuate the passenger solenoid valve, supplying 70 p.s.i. oxygen pressure to the passenger manifold. This pressure is sufficient to operate the passenger mask actuators, deploying the doors and dropping the continuous flow masks at each passenger seat. Oxygen will not flow from these masks until the lanyard on the respective mask has been pulled removing the pintle pin. This conserves oxygen in the event all masks are not to be used. When the cabin altitude has reached approximately 8,000 feet with electrical power available, the passenger solenoid valve will close, allowing passenger manifold oxygen pressure to bleed off. If electrical power is not available the passenger manifold pressure can be shut off by closing the OXYGEN PRIORITY VALVE. As the oxygen pressure dissipates, the door actuators will retract allowing mask stowage to be accomplished. Reinstall all removed pintle pins before stowing masks.