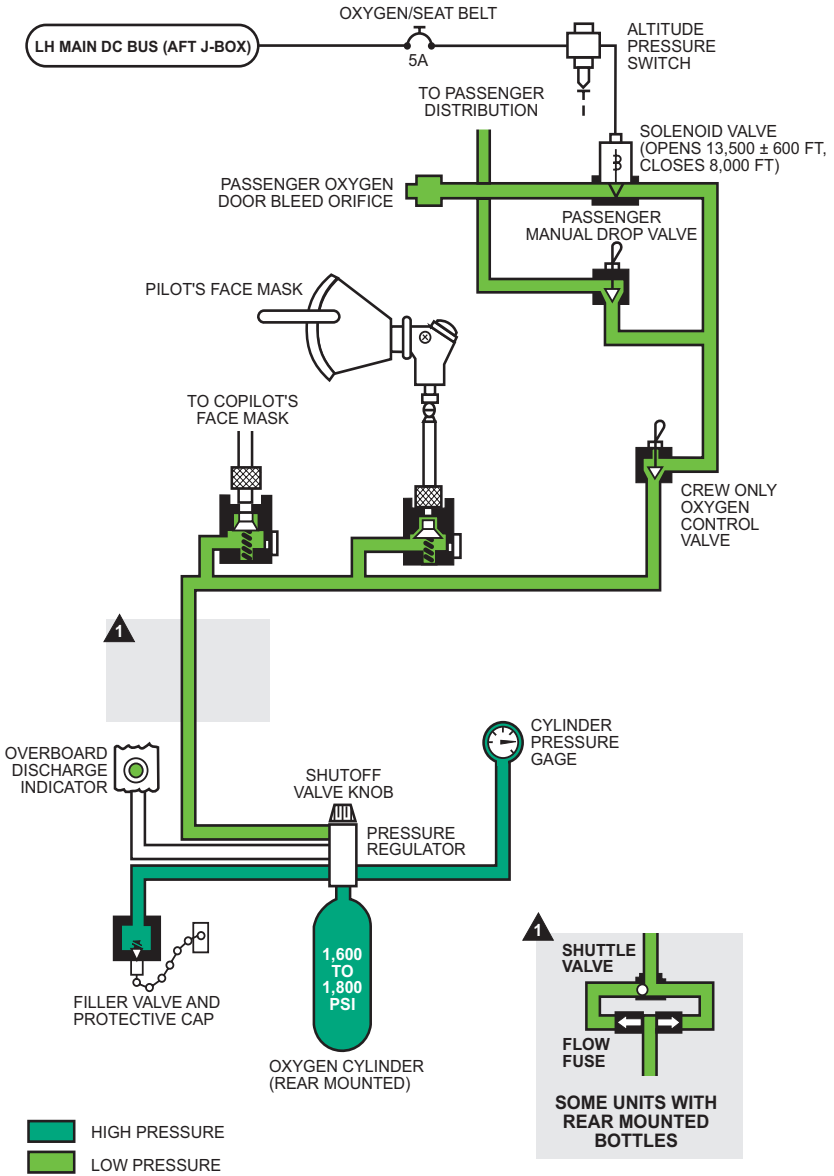


Oxygen System

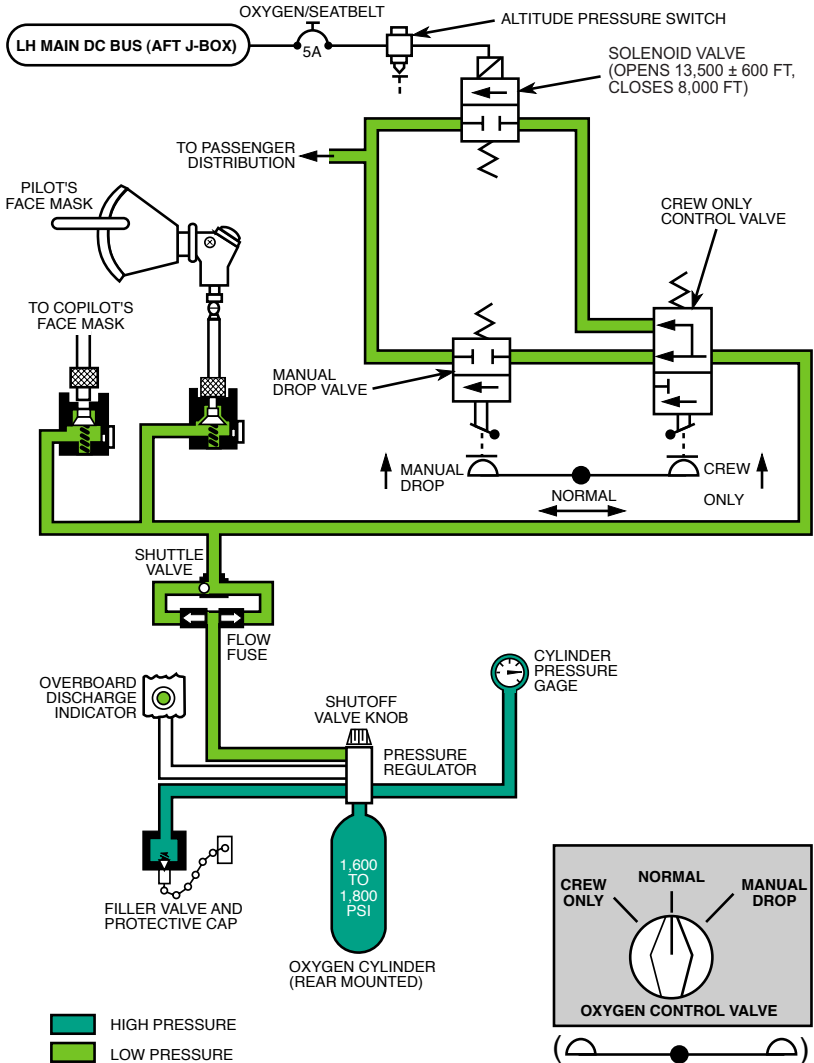
Citation; Citation I; Citation II 001 to 549



HIGH PRESSURE
 LOW PRESSURE

Oxygen System

Citation II 550 and subsequent; SII



Oxygen Supply System

Oxygen is available to the crew at all times and to the passengers either manually through cockpit control or automatically if cabin altitude exceeds 13,500 \pm 600 ft.

Oxygen flows from the bottle mounted in the nose baggage compartment (**C0, C1**) or in the tailcone compartment (**CII, SII**) through a regulator assembly before it reaches the crew and passenger oxygen distribution systems. The regulator assembly has a shutoff valve, pressure regulator, and separate lines for an oxygen pressure gage, filler valve, and an overpressure relief valve.

The bottle supplies oxygen between 1,600 and 1,800 PSI, and the pressure regulator reduces bottle pressure to approximately 70 PSI. If bottle pressure reaches 2,850 \pm 150 PSI at 70°F or 2,600 \pm 100 PSI at 160°F, the overpressure relief valve opens moving a pin against the green blowout disc dislodging it outward to alert the crew that the bottle has discharged. The green blowout disc is normally held in place by a snap ring. The filler valve and pressure gage allows normal servicing of the bottle without removal.

On **all aircraft**, standard bottle capacity is 22 cubic feet. This is sufficient to provide approximately 15 minutes of oxygen to the passengers and crew. An optional 60 cubic foot bottle is available. On **Citation I units 334 and subsequent with SB 35-4, Citation II with SB 550-32-2, and Citation SII aircraft**, an optional 64 cubic foot bottle is available.

Normally, the oxygen bottle is under the right nose baggage compartment floor. Filler valve and pressure gage access is through the right nose baggage compartment door. The burst disc indicator is on the right lower nose.

On **Citation II units 2 to 254 with SB 550-35-2, units 255 and subsequent, and Citation SII units 038 and subsequent**, the oxygen bottle is in the tailcone compartment. Access to the filler valve and pressure gage is through the tailcone access door. The burst disc indicator is on the left rear fuselage aft of the tailcone access door. This installation has a redundant supply system consisting of two supply lines and a shuttle valve that prevents oxygen loss if a line ruptures.

Distribution

Oxygen flows directly to the pilot and copilot oxygen outlets through the regulator assembly. The passenger supply flows through a manually operated crew oxygen priority valve, passenger manual shutoff valve, and an altitude pressure switch controlled solenoid valve.

Crew System

The standard crew oxygen mask is a diluter-demand type that allows selection of normal or 100% oxygen flow. This mask qualifies as a quick donning mask when positioned around the neck. In the normal position, the mask provides oxygen diluted with cabin air. In the 100% position, the mask provides 100% oxygen at positive pressure to assist breathing. Above 20,000 ft, the mask should be in the 100% position.

The optional quick-donning diluter-demand crew oxygen mask has a built-in regulator and microphone. With the mask regulator in the NORM position, the regulator dilutes oxygen with cabin air according to cabin altitude. As cabin altitude increases, the regulator increases the oxygen to cabin air ratio until it provides 100% oxygen. Placing the regulator in the 100% position provides 100% oxygen regardless of cabin altitude. Finally, placing the regulator in the EMER position supplies 100% oxygen at positive pressure. When not required, the masks stow beside the pilot's and copilot's seat.

The optional EROS mask operates similarly. The difference is the EROS mask's inflatable harness. Donning the harness inflates to assist in placement over the head, then deflates to make it snug against the user's face. Headsets, eyeglasses, or hats worn by the crew may interfere with the quick-donning capabilities of this optional mask. When not required, the mask stows in a compartment on the cabin divider behind each crewmember's head.

With the regulator set to N (normal), the regulator dilutes oxygen with cabin air according to cabin altitude. In the 100% position, it supplies 100% oxygen. The mask regulator automatically supplies oxygen under pressure depending on cabin altitude or if manually selected by the pilot.

Passenger System

With the passenger oxygen control switch in the NORMAL position, oxygen does not flow to the passenger oxygen distribution system at normal cabin altitudes. If cabin altitude exceeds 13,500 ±600 ft, the altitude pressure switch closes to energize the passenger solenoid valve. The valve opens and oxygen flows through the passenger distribution system. The initial pressure surge actuates door release mechanisms that deploy the passenger oxygen masks. The masks fall and hang by their lanyards. Pulling on the lanyard releases a pin to allow oxygen flow.

When cabin altitude drops to approximately 8,000 ft, the altitude pressure switch opens, the solenoid valve closes, and oxygen flow to the passenger distribution system stops.

Placing the control switch in the MANUAL DROP or ON position opens the manual drop valve; oxygen flows to the passenger masks regardless of cabin altitude.

Selecting the CREW ONLY or PASS OFF position isolates the passenger oxygen system from the oxygen supply. Oxygen does not flow to the passenger masks regardless of cabin altitude or passenger oxygen control switch position.

Oxygen System

Power Source	LH Main DC bus
Control	Oxygen pressure/regulator OXYGEN PRIORITY VALVE (CII 001 to 549) OXYGEN CONTROL VALVE (CII 550 and subsequent) PASSENGER MASK/MANUAL DROP/ NORMAL switch MIC OXY MASK selector switch Mask oxygen selector Oxygen cylinder shutoff valve Altitude pressure switch/solenoid valve
Monitor	Oxygen pressure gage Overboard discharge indicator (green disc) Passengers/masks visual scan Crew oxygen flow indicator (sweep-on masks) CAB ALT 10,000 FT annunciator
Protection	Circuit breaker (on "J" box) Overpressure vent: overboard discharge at 2,500 PSI