OXYGEN SYSTEM - DESCRIPTION AND OPERATION

The oxygen cylinder and regulator, located behind the aft pressure bulkhead, provide oxygen for the crew and passengers and for the first aid oxygen outlet on airplanes with the auto deployment passenger oxygen system. The cylinder is serviced through a fill valve located in the oxygen service panel on the right side of the aft fuselage. The cylinder valve has fittings for high pressure and low pressure lines for oxygen service and delivery. The high pressure lines include the cylinder recharge line, the pressure gage line and the overpressure relief dump. Two pressure gages are installed in the airplane, one in the copilot's lower instrument panel for in-flight use and one in the oxygen service panel for checking oxygen pressure during the filling procedure. The regulator on the cylinder is a constant-flow type that supplies low pressure oxygen at 70 ± 10 psi through tubing to the crew and passenger oxygen outlets.

AUTO DEPLOYMENT PASSENGER OXYGEN SYSTEM

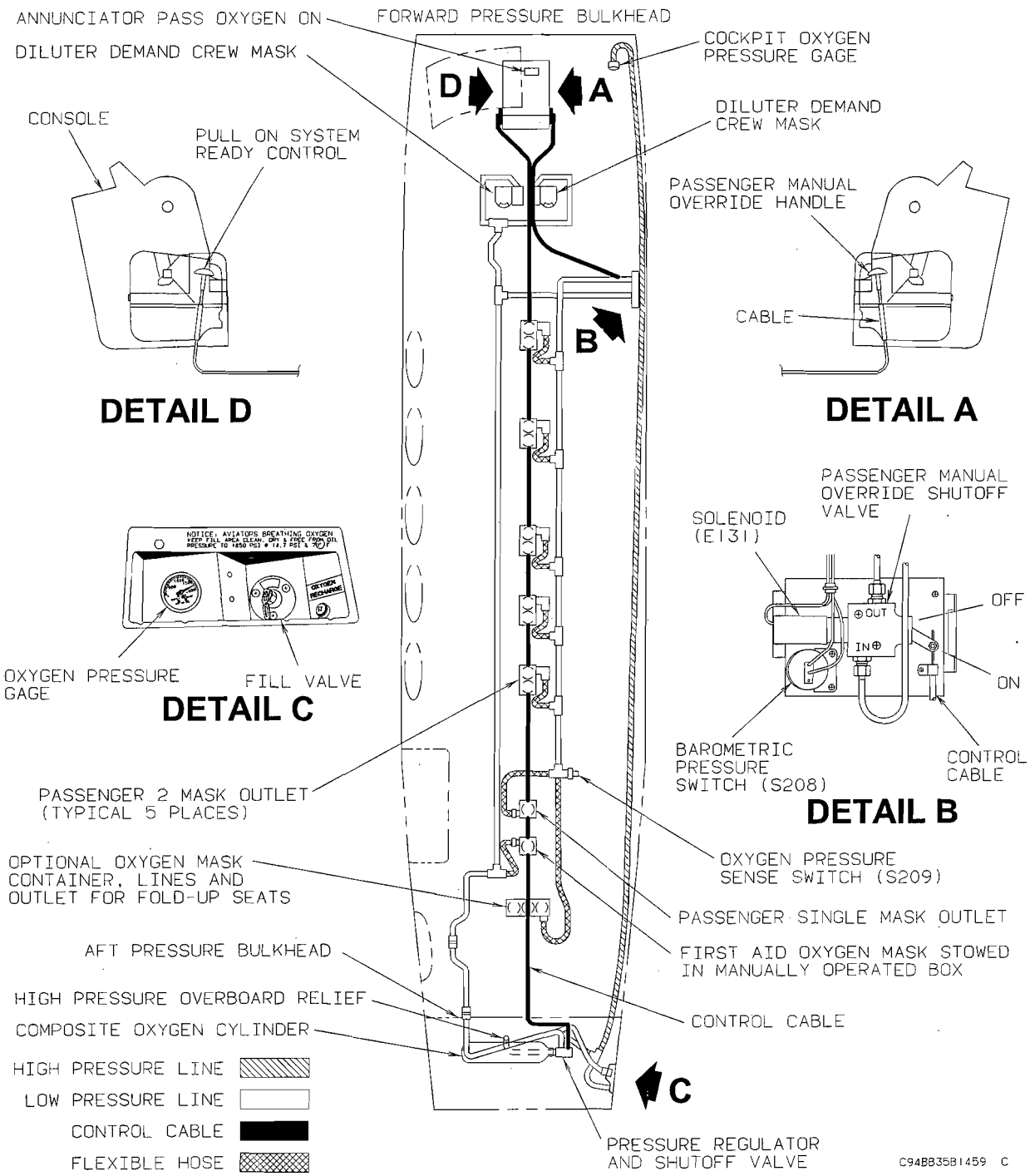
The auto deployment passenger oxygen system is operated by two push-pull control cables and a barometric pressure switch. On airplanes BB-1439, BB-1444 and after the push-pull control cables are located on the sides of the control pedestal. The left control cable operates the oxygen system shutoff valve and places the system in the ready mode when the knob is pulled; the right cable is the passenger manual-override control to the shutoff valve that manually turns the passenger oxygen on or off. This valve is normally in the OFF position and will not be used unless the barometric pressure switch fails to operate when the cabin depressurizes.

The barometric pressure switch automatically releases passenger oxygen and deploys the passenger oxygen masks when the cabin altitude reaches 12,500 feet. The released oxygen pressure actuates a plunger in each of the oxygen auto deployment boxes which causes the dispenser door to open and drop the oxygen masks. After the masks are deployed, the oxygen valve lanyard pin must be pulled for oxygen to flow to each mask. When the masks are no longer required, the lanyard pin is reinserted to stop the flow of oxygen.

After operation by the barometric pressure switch, the passenger oxygen can be shut off by pulling the oxygen control circuit breaker. This will limit the remaining oxygen to the crew and first aid outlets.

OXYGEN CYLINDERS (ALL AUTODEPLOYMENT OXYGEN SYSTEM INSTALLATIONS)

On airplanes BB-1439, BB-1444 and after composite cylinders are available in four sizes, the standard 22-cubic-foot cylinder and the optional 50-, 77- or the 115-cubic-foot cylinder. The regulator on these cylinders provides 200 LPM (NPTD) at a pressure of 70 ± 10 psi. The system shutoff valve is mounted on the end of the regulator and is operated by the PULL ON SYS READY control on the left side of the pedestal. The shutoff valve on the composite cylinder is vented in the OFF position.



Autodeployment Oxygen System Installation
(BB-1439, BB-1444 and After and BT-35 and After)