

OXYGEN GENERAL DESCRIPTION AND OPERATION

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The oxygen system for Bonanza series airplanes is optional.

The oxygen system on all Bonanza series airplanes prior to airplane serials EA-440 (except EA-320) has one 49 cu-ft oxygen cylinder. On airplane serials E-1241 and After; and EA-11 through EA-388, an optional 76.5 cu-ft oxygen cylinder was offered. The oxygen cylinder is located inside the fuselage and attached to the floor in front of the spar carry through. The filler valve is attached to the spar cover below the copilot's seat. The oxygen console is located to the left of the pilot and contains the pilot's outlet and cylinder pressure gage (Ref. [Figures 1](#) and [2](#)). On airplanes prior to airplane serials E-2111 (except E-1946 and E-2104); and prior to airplane serials EA-389 (except EA-320) the oxygen console also contains a shutoff valve with the pressure regulator mounted on the back of the console. These airplanes also have a shutoff valve mounted on the oxygen cylinder. On airplane serials E-1946, E-2104, E-2111 and After and EA-320, EA-389 and After, there is a cable operated shutoff valve mounted on the oxygen cylinder. The push-pull control knob for this shutoff valve is located in the subpanel below the pilot's control column.

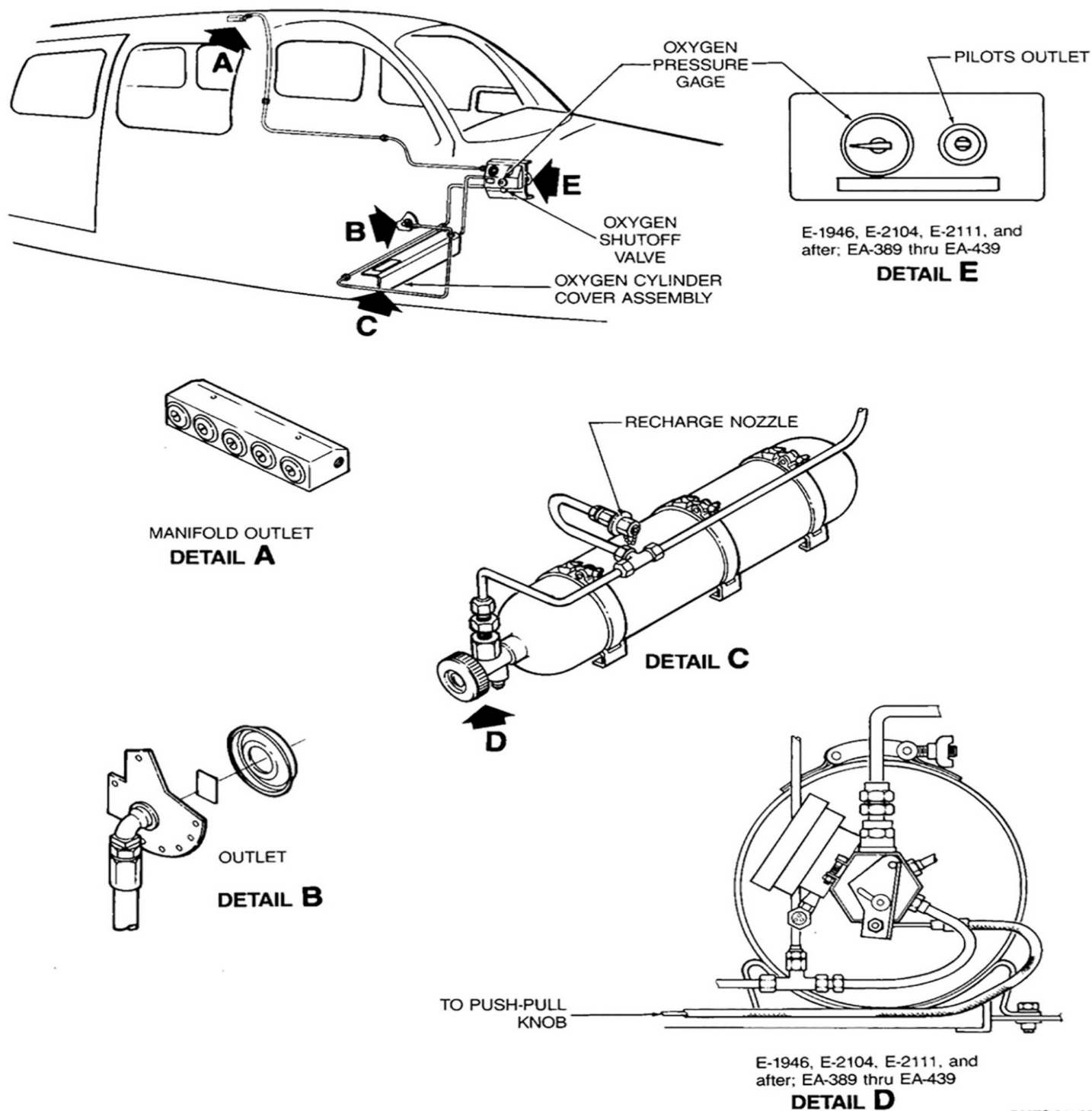
The oxygen system for airplane serials EA-320, EA-440 and After, has wing mounted oxygen cylinders (Ref. [Figure 3](#)). The 49 cu-ft system has one 49 cu-ft cylinder mounted in the left wing only. The 98 cu-ft system has two 49 cu-ft cylinders, one mounted in each wing. Mounted on the end of each cylinder is the altitude compensating regulator, overboard dump, and the shutoff valve. The cylinder(s) are mounted in the applicable wing aft of the main spar and outboard of Wing Station (WS) 66. The filler valve and a pressure gage are mounted in the top of the wing outboard of WS 66 and aft of the main spar. Access to the filler valve and pressure gage is gained by removing the access panel located on top of the left wing, aft of the main spar and outboard of WS 66. The access panel is held in place by six Dzus fasteners. There is an overboard dump system on each cylinder which will automatically dump the oxygen any time the cylinder pressure reaches between 2,500 and 2,775 psi. There is an indicator (placarded OXY, H.P. Relief) under each wing which will rupture any time in the dump system is activated. The shutoff valve for each oxygen cylinder is controlled by a single push-pull control knob located in the pilot's subpanel. There is only one control knob for either the one cylinder or two cylinder systems (Ref. [Figure 4](#)). An additional oxygen pressure gage for each oxygen cylinder and the pilot's outlet are located in the pilot's left side panel. The copilot's outlet is located in the right side panel.

The oxygen system may be equipped with oxygen outlets for the pilot and copilot, and for the 3rd, 4th, 5th, or 6th cabin seats. On airplane serials prior to CE-929 (except CE-919, CE-923, CE-925, CE-927); prior to CJ-156; prior to D-10353 (except D-10348); prior to E-1594 (except E-1422, E-1551, E-1569, and E-1581); and prior to EA-33 (except EA-21 and EA-28), the oxygen outlets are all in the sidewalls of the airplane (Ref. [Figure 1](#)). On airplane serials CE-919, CE-923, CE-925, CE-927, CE-929 and After; CJ-156 and After; D-10348, D-10353 and After; E-1422, E-1551, E-1569, E-1581, E-1594 and After; and EA-21, EA-28, EA-33 and After, the oxygen outlets for the pilot and copilot are in the sidewall, while a five-outlet passenger manifold is located in the headliner near the center of the airplane (Ref. [Figure 2](#)). The oxygen masks for the pilot (except on airplane serials E-1946, E-2104, E-2111 and After) and the copilot are stowed in a box under their seats. On airplane serials E-1946, E-2104, E-2111 and After, the mask for the pilot may be stowed in a place the pilot considers convenient. On airplane serials EA-320, EA-440 and After, the pilot's and copilot's outlets are in the applicable side panels and the passenger outlets are located in the headliner near the center of the airplane (Ref. [Figure 3](#)). The mask for the pilot and copilot may be stowed in a box under their seats. On airplane serials EA-320, EA-389 and After, the mask for the pilot may be stowed in a place the pilot considers convenient. The third and fourth seat oxygen masks are stowed in a box attached either to the front or rear of the rear spar, depending upon the seating arrangement. The oxygen masks for the fifth and sixth seats are stowed in a box attached to the bottom of their seats.

Each oxygen cylinder should be filled to a pressure $1,850 \pm 50$ psi at a temperature of 70°F. This pressure may be increased 3.5 psi for each degree of temperature increase, or lowered 3.5 psi each degree of temperature decrease. A pressure gage is connected directly to each oxygen cylinder and indicates the oxygen supply (psi) available. The altitude compensating pressure regulator, airplane serials EA-320, EA-440 and After, limits system operation to above 8,000 ft, where its sensing element meets increases in altitude with increased oxygen flow. When the oxygen system is not in use, the push-pull control knob should be placed in the off position so that the shutoff valve on each oxygen cylinder is shut off to prevent oxygen loss. For oxygen system servicing, refer to Chapter 12.

Figure 002 : Sheet 1 : Fig 2 - Oxygen System (CE-919, CE-923, CE-925, CE-927, CE-929 and After; CJ-156 and After; D-10348, D-10353 and After; E-1422, E-1551, E-1569, E-1581, E-1594 and After; EA-21, EA-28, EA-33 thru EA-439 except EA-320)

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