OXYGEN SYSTEM - DESCRIPTION AND OPERATION

1. General

A. There are seven oxygen systems that are available for the 208 Caravan: A seventeen-port system with two pressure compensated regulators, a fourteen-port system with two pressure compensated regulators, a thirteen-port system with two compensated regulators, a ten-port system with two pressure compensated regulators, a ten-port system with a single pressure compensated regulator, an eight-port system with two pressure compensated regulators, and a two-port system with a non-pressure compensated regulator.

2. Description and Operation

A. The two-port system uses a 50.67 cubic-foot capacity oxygen cylinder. The eight-port, ten-port, thirteen-port, fourteen-port and seventeen-port systems use a 116.95 cubic-foot capacity oxygen cylinder. Both oxygen cylinders are composite construction and include a shutoff valve. All 116.95 cubic-foot capacity oxygen cylinders have an altitude compensated regulator which changes oxygen pressure with altitude. On airplanes equipped with the ten-port system, (Airplanes 208000208 thru 208000395), there is a single pressure compensated regulator to change the oxygen output with altitude. On airplanes that have the eight-port system (Airplanes 208000396 and On), ten-port system (Airplanes 208B000466 thru 208B1170) and seventeen-port system (Airplanes 208B000466 and On), there are two altitude compensated regulators to change the oxygen output with altitude. The 50.67 cubic-foot oxygen cylinders without an altitude compensated regulator keep an operating pressure of 70 psi and must have quick-don oxygen masks with a mounted diluter demand regulator.

(1) On Models 208 and 208 Cargomaster the oxygen cylinder is attached to brackets that are installed in the upper part of the tailcone, aft of Fuselage Station 308.00. On Models 208B, and 208B Passenger the oxygen cylinder is attached to brackets that are installed aft of Fuselage Station 356.00. On Models 208 and 208 Cargomaster, there is an oxygen cylinder filler valve that is installed below a cover plate on the right side of the tailcone, aft of Fuselage Station 308.00. On Model 208B and 208B Passenger, there is an oxygen cylinder filler valve that is installed below a cover plate on the right side of the tailcone, aft of Fuselage Station 356.00.

(2) A remote shutoff valve control with an ON/OFF label, is installed in the overhead console above pilot's and front passenger's seats. The remote shutoff valve control is used to turn the oxygen supply on or off as necessary. The shutoff valve control is mechanically connected to a cable that connects to the shutoff valve at the oxygen cylinder.

(3) The oxygen outlets for the pilots and front passengers are attached in the cabin ceiling directly overhead and immediately outboard of each seat. On the Model 208 there are passenger oxygen outlets that are attached directly overhead and adjacent to the air vent outlets. The oxygen outlets on the Model 208 are attached in the same locations on the Model 208B Passenger.

(4) One permanent microphone-equipped oxygen mask is provided for the pilot, and all other masks are partial rebreathing type, equipped with vinyl plastic flow indicators. (Refer to Figure 1).

(5) All hoses provided for the pilot and passengers are the high-flow type and are color-coded with a blue band adjacent to the plug-in fitting.

(a) An adapter cord is furnished with the pilot's microphone-equipped mask to mate the mask microphone lead to the auxiliary microphone jack located on the lower left outer portion of the instrument panel.

(b) To connect the oxygen mask microphone, connect mask lead to the adapter cord and plug cord into the auxiliary microphone jack. (If an optional microphone-headset combination has been in use, the microphone lead from this equipment is already plugged into the auxiliary microphone jack. It will be necessary to disconnect this lead from the auxiliary microphone jack so that the adapter cord from the oxygen mask microphone can be plugged into the jack.)

NOTE: Airplanes equipped with only a partial oxygen system will incorporate the complete system less masks, oxygen cylinder, regulator, outlets, gage, control, filler, and some connecting plumbing

B. The oxygen flow to the outlet ports is provided when the oxygen control valve knob, located in the overhead console, is placed in the ON position and mask hoses are plugged into the overhead oxygen ports.

NOTE: Each oxygen port contains a spring-loaded valve which prevents flow of oxygen until a mask hose is plugged in. Each mask hose contains an oxygen flow indicator for visual proof of oxygen flow.

C. The following information is permanently stamped on the shoulder, neck, or top head of the oxygen cylinder to aid in proper identification.

(1) Cylinder specification followed by service pressure such as ICC or DOT-E8162.

NOTE: Effective 1 January 1970, all newly-manufactured cylinders are stamped DOT (Department of Transportation), rather than ICC (Interstate Commerce Commission). An example of the new designation would be: DOT-E8162.

(2) Cylinder serial number is stamped below or directly following cylinder specification. The symbol of the purchaser, user, or maker, if registered with the Bureau of Explosives, may be located directly below or following the serial number. The cylinder serial number may be stamped in an alternate location on the cylinder top head.

(3) Inspectors official mark near serial number.

(4) Date of manufacture: This is the date of the first hydrostatic test (such as 6-84 for June 1984). The dash between the month and the year figures may be replaced with the mark of the testing or inspection agency (e.g., 6L84).

(5) Hydrostatic test date: Dates of subsequent hydrostatic tests shall be steel-stamped (month and year) directly below the original manufacturer date. the dash between month and year figures can be replaced with the mark of the testing agency.

(6) A Cessna identification placard is located near the center of cylinder body.

(7) Halogen test stamp: Halogen Tested, date of test (month, day, and year) inspector’s mark appears directly underneath the Cessna identification placard.

Figure 1 : Sheet 1 : Oxygen System Schematic

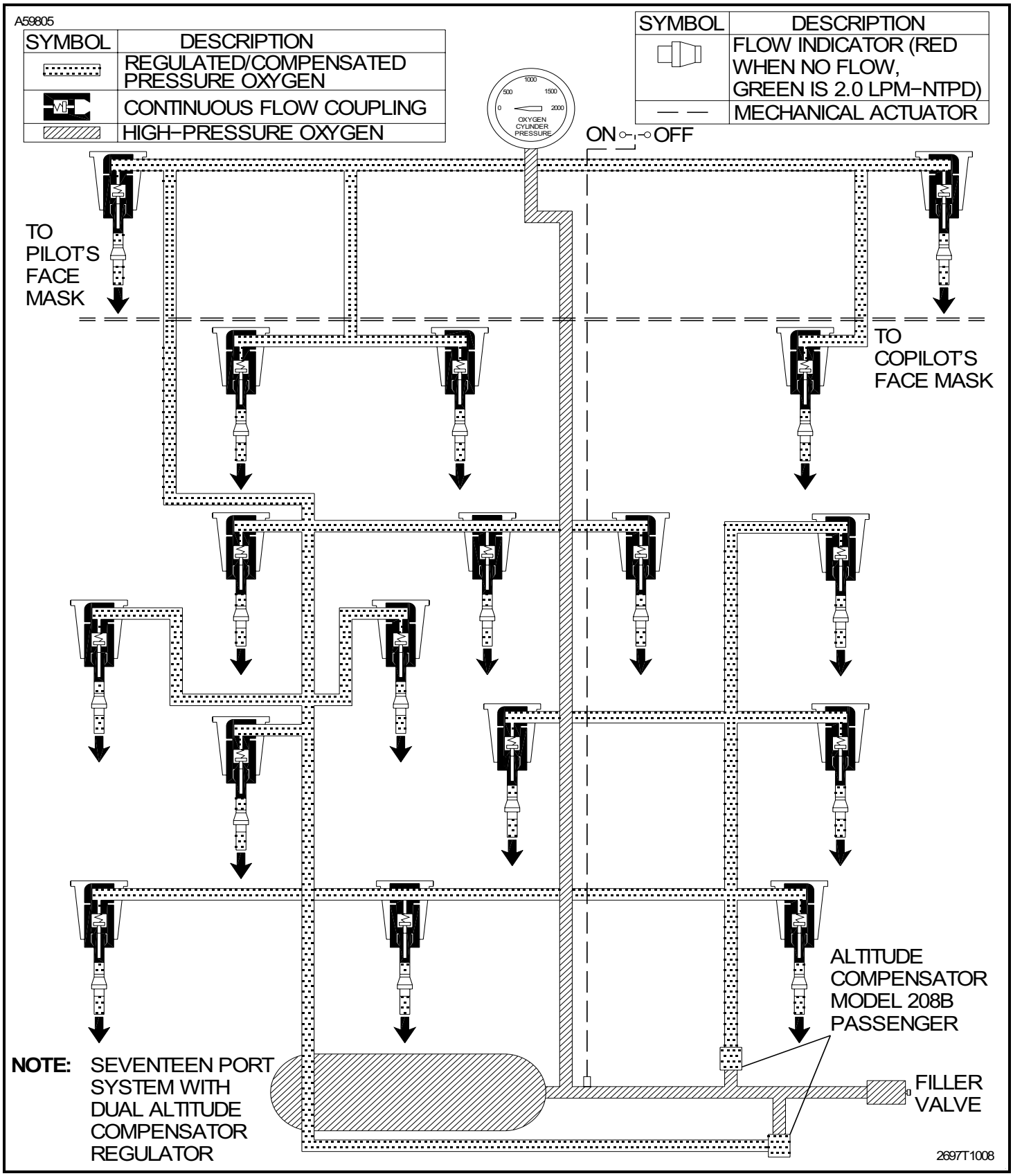

Figure 1 : Sheet 2 : Oxygen System Schematic

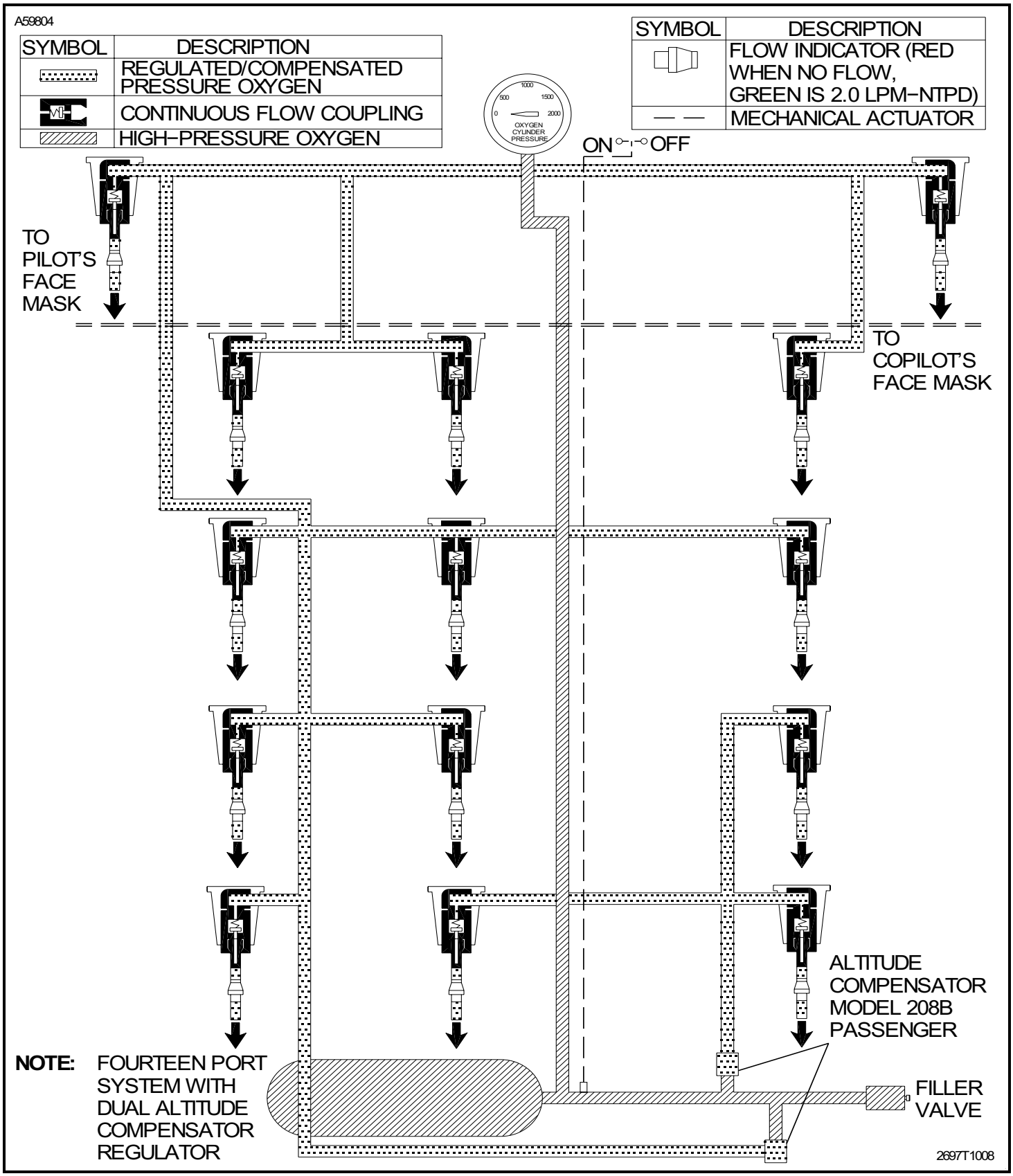

Figure 1 : Sheet 3 : Oxygen System Schematic

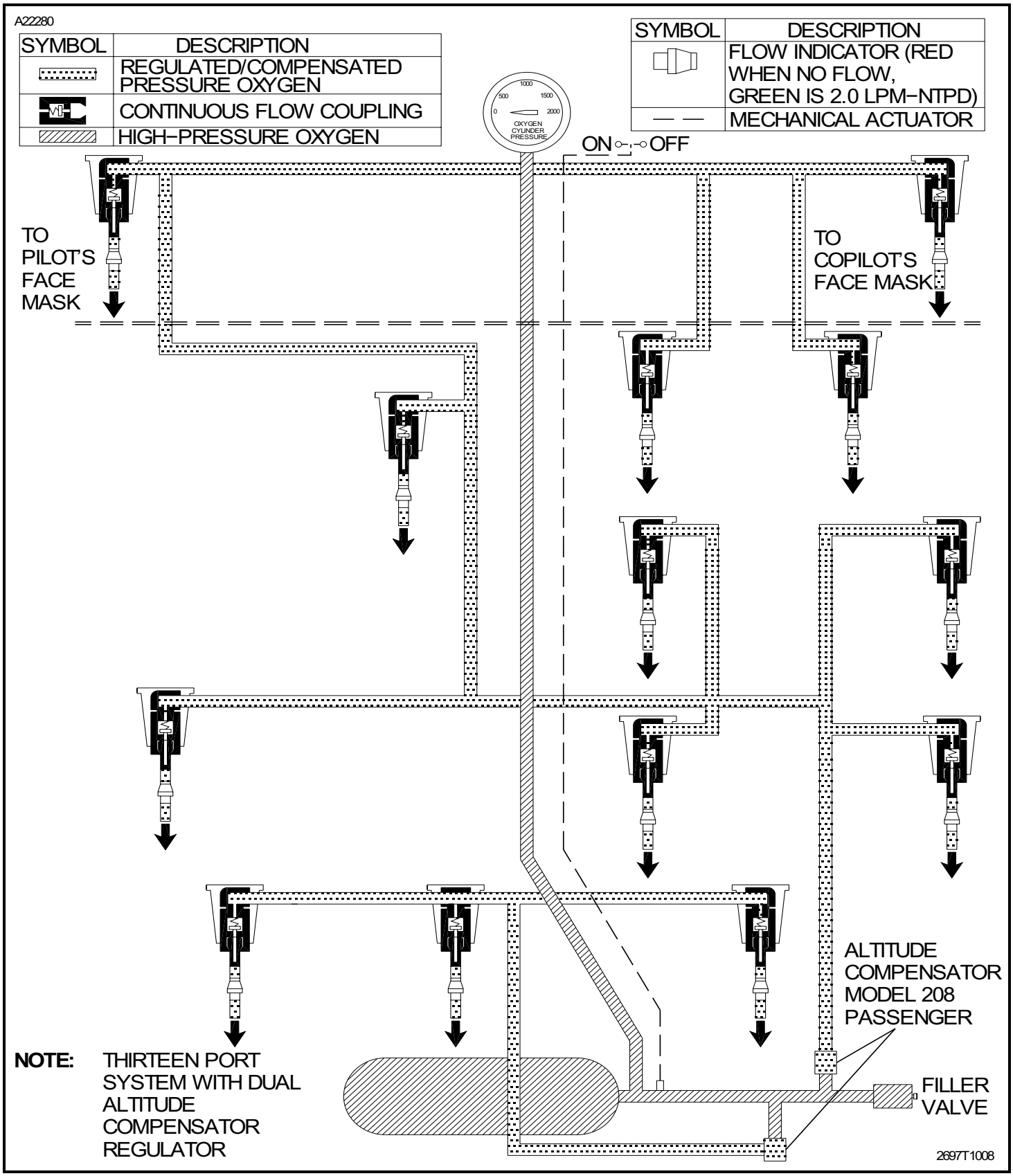

Figure 1 : Sheet 4 : Oxygen System Schematic

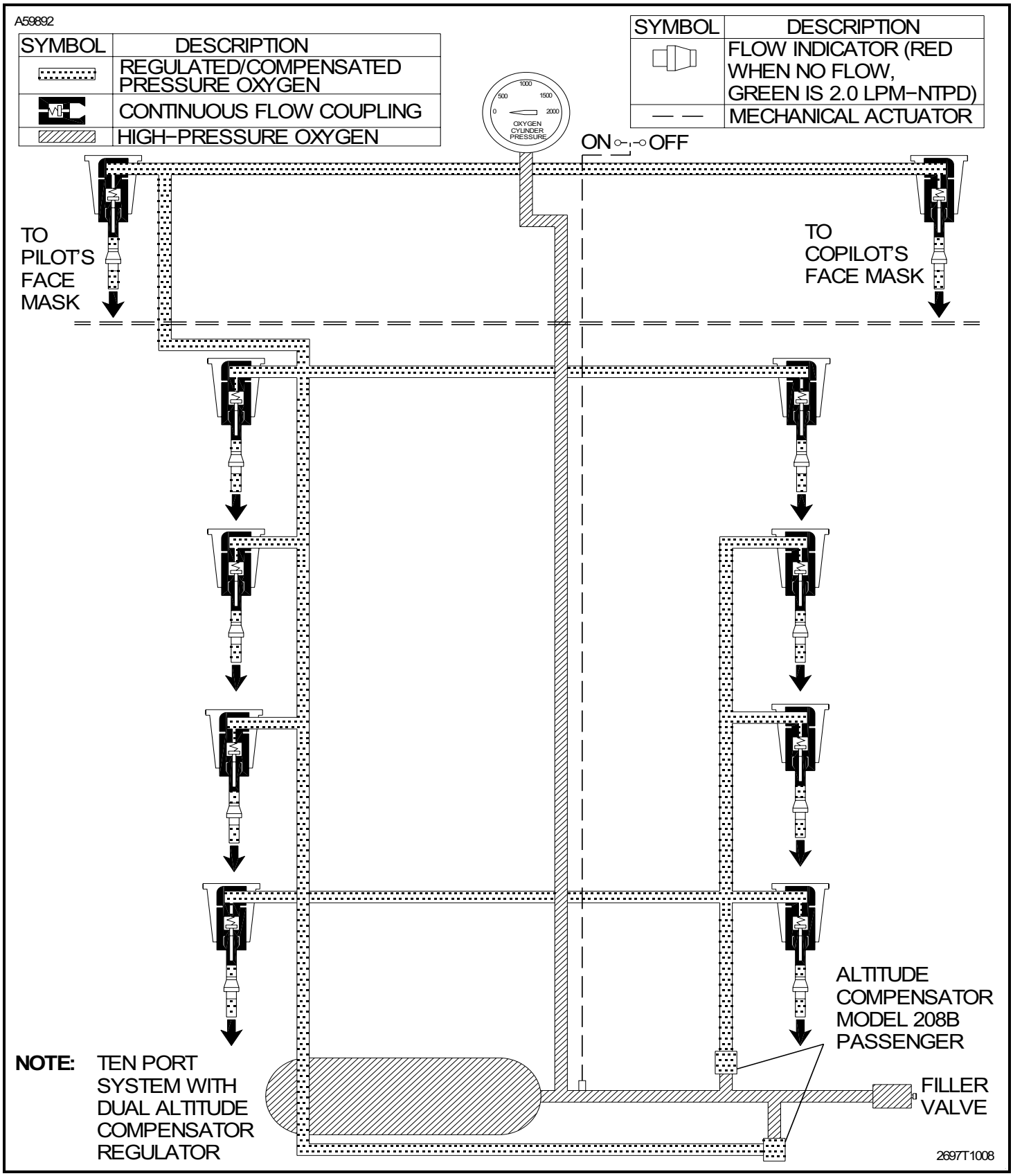

Figure 1 : Sheet 5 : Oxygen System Schematic

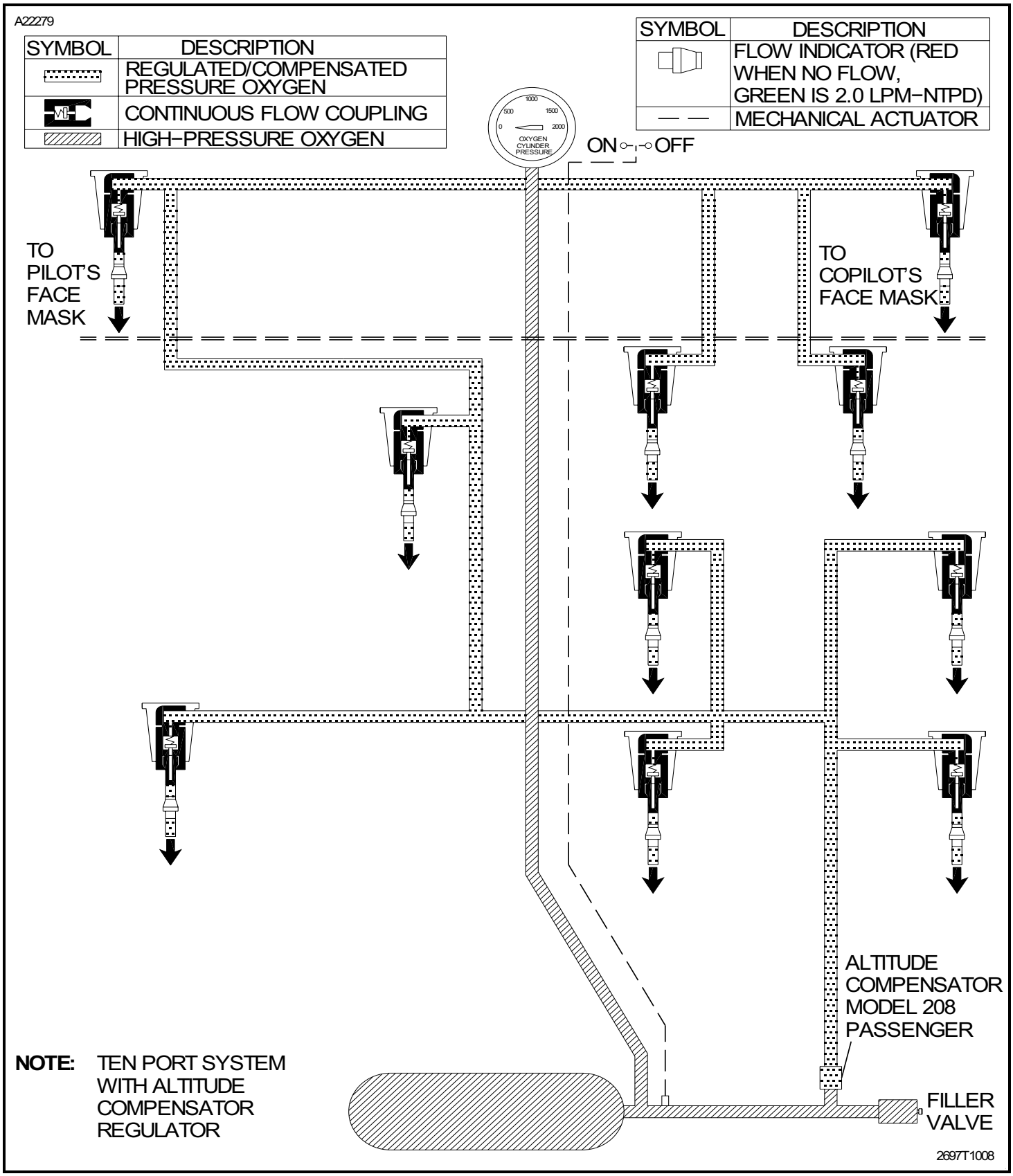

Figure 1 : Sheet 6 : Oxygen System Schematic

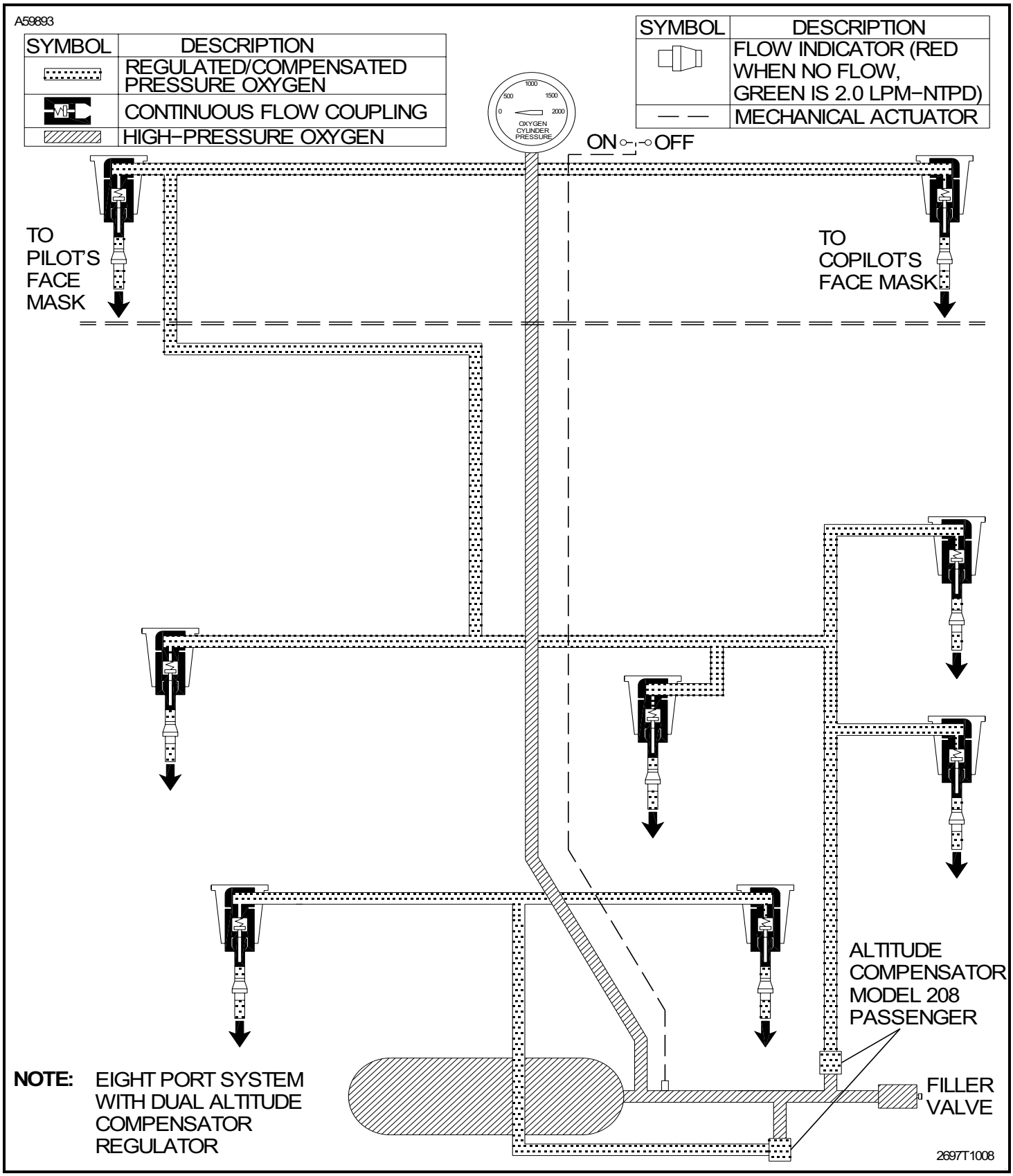

Figure 1 : Sheet 7 : Oxygen System Schematic