

(4) If radio equipment is installed, the flightcrew oxygen dispensing units must be designed to allow the use of that equipment and to allow communication with any other required crew member while at their assigned duty station.

(b) If certification for operation up to and including 18,000 feet (MSL) is requested, each oxygen dispensing unit must:

(1) Cover the nose and mouth of the user; or

(2) Be a nasal cannula, in which case one oxygen dispensing unit covering both the nose and mouth of the user must be available. In addition, each nasal cannula or its connecting tubing must have permanently affixed—

(i) A visible warning against smoking while in use;

(ii) An illustration of the correct method of donning; and

(iii) A visible warning against use with nasal obstructions or head colds with resultant nasal congestion.

(c) If certification for operation above 18,000 feet (MSL) is requested, each oxygen dispensing unit must cover the nose and mouth of the user.

(d) For a pressurized airplane designed to operate at flight altitudes above 25,000 feet (MSL), the dispensing units must meet the following:

(1) The dispensing units for passengers must be connected to an oxygen supply terminal and be immediately available to each occupant wherever seated.

(2) The dispensing units for crewmembers must be automatically presented to each crewmember before the cabin pressure altitude exceeds 15,000 feet, or the units must be of the quick-donning type, connected to an oxygen supply terminal that is immediately available to crewmembers at their station.

(e) If certification for operation above 30,000 feet is requested, the dispensing units for passengers must be automatically presented to each occupant before the cabin pressure altitude exceeds 15,000 feet.

(f) If an automatic dispensing unit (hose and mask, or other unit) system is installed, the crew must be provided with a manual means to make the dispensing units immediately available in

the event of failure of the automatic system.

[Amdt. 23-9, 35 FR 6387, Apr. 21, 1970, as amended by Amdt. 23-20, 42 FR 36969, July 18, 1977; Amdt. 23-30, 49 FR 7340, Feb. 28, 1984; Amdt. 23-43, 58 FR 18978, Apr. 9, 1993; Amdt. 23-49, 61 FR 5170, Feb. 9, 1996]

§ 23.1449 Means for determining use of oxygen.

There must be a means to allow the crew to determine whether oxygen is being delivered to the dispensing equipment.

[Amdt. 23-9, 35 FR 6387, Apr. 21, 1970]

§ 23.1450 Chemical oxygen generators.

(a) For the purpose of this section, a chemical oxygen generator is defined as a device which produces oxygen by chemical reaction.

(b) Each chemical oxygen generator must be designed and installed in accordance with the following requirements:

(1) Surface temperature developed by the generator during operation may not create a hazard to the airplane or to its occupants.

(2) Means must be provided to relieve any internal pressure that may be hazardous.

(c) In addition to meeting the requirements in paragraph (b) of this section, each portable chemical oxygen generator that is capable of sustained operation by successive replacement of a generator element must be placarded to show—

(1) The rate of oxygen flow, in liters per minute;

(2) The duration of oxygen flow, in minutes, for the replaceable generator element; and

(3) A warning that the replaceable generator element may be hot, unless the element construction is such that the surface temperature cannot exceed 100 °F.

[Amdt. 23-20, 42 FR 36969, July 18, 1977]

§ 23.1451 Fire protection for oxygen equipment.

Oxygen equipment and lines must:

(a) Not be installed in any designed fire zones.