

GENERAL

WARNING

NO SMOKING WHEN OXYGEN IS IN USE.

The oxygen system provides oxygen as required for up to 19 passengers and 2 cockpit crew members. Therapeutic oxygen outlets are also available in the cabin.

OXYGEN STORAGE

Gaseous oxygen is stored in a 77 cu. ft (115 cu. ft with Mod 7253), high pressure (1850 psi at 21°C) cylinder. The oxygen cylinder is installed in the forward part of the nose, enclosed and separated in a rigid composite protective cover, vented outboard, to protect against oxygen leak. This is the standard cylinder for all configurations. A second cylinder of 50 cu. ft capacity can be added. Cylinder pressure is transmitted by a pressure transducer to the EICAS.

The cylinder includes a pressure reducer, supplying oxygen at low (70 psi) pressure. An overpressure outlet in the cylinder, blocked by a blowout metal disc is for overboard discharge of excessive (2500-2775 psi) pressure.

Oxygen cylinder refill is done through a filling port, protected by a check valve so that oxygen cannot escape. The cylinder can be removed by disconnecting the two band clamps attaching it to the structure, and the attached tubing.

CREW OXYGEN

A pressure demand type Oxygen system is provided for the flight crew, with provisions for protective breathing. Low pressure (70 psi) oxygen is available to each pilot mask regulator. The masks are EROS quick-donning type, permitting one hand operation within 5 seconds.

Crew mask includes a comfort harness, adjustable to allow a selected pressure.

The masks are stowed in stowage boxes located in the side consoles within easy reach of the crew. The box include a flow indicator.

Smoke goggles can be used when wearing the mask.

PASSENGER OXYGEN

The passenger oxygen system is a continuous flow, mask-actuated, activated automatically or by crew selection.

The passenger oxygen regulator includes three main components: Altitude controlled regulator, solenoid valve and surge Valve.

Oxygen is available at the solenoid valve inlet. The valve is normally closed.

Oxygen may also be supplied by the bypass valve, on the passenger control panel, enabling bypass of a stuck solenoid, or in case of electrical power failure.

When the solenoid valve is activated, or the bypass valve is open, oxygen reaches the surge valve, which opens (within 2 seconds) and delivers the full supply pressure (70 psi). This opens passenger dropout box door. After 15 seconds the surge valve closes, and oxygen is supplied to the passenger masks through the altitude controlled regulator at a regulated pressure, depending on cabin altitude.

The altitude regulator can supply oxygen for up to 12 passengers.

A second regulator may be installed in parallel for more masks.

Passenger masks are stored in boxes, each housing three masks (corporate configuration) or four mask (commuter configuration). this arrangement supplies occupants of each row, and also includes a spare mask.

A two-mask box is installed in the lavatory.

Gulfstream G200 - Oxygen

Passenger mask is a constant flow type with a rebreather bag. Each mask has a 48 inch long flexible tube to assure easy reach for all occupants.

On activation, the mask drop down and remains hanging on a lanyard (flow-initiation cord). By pulling the lanyard the mask supply valve is opened and starts oxygen.

THERAPEUTIC OXYGEN

Two therapeutic outlets (wall plug-in type) in the passenger cabin, equally spaced so that the therapeutic mask will reach all seats in the cabin.

Oxygen flow is controlled by the therapeutic valve supplying 70 psi oxygen. Connection of the mask plug coupling into the outlet starts oxygen flow (7.5 liter per minute).

OXYGEN SYSTEM CONTROLS AND INDICATORS

Crew Oxygen Masks Controls

Touch Plate - When gripping the oxygen mask regulator, pressing the red touch plate causes the masks harness to inflate, permitting single hand mask-donning. As the touch plate is released, the harness deflates and fits securely on the head.

N/100% Diluter switch - A sliding switch which sets the regulator mode as follows:

NORMAL - The regulator functions in the normal demand mode. (Diluted oxygen as a function of cabin altitude).

100% - Undiluted, 100% oxygen is continuously supplied at any altitude.

EMERGENCY/test button - When rotated counterclockwise, supplies a slight positive pressure at any cabin altitude (EMERGENCY mode). When depressed, supplies pressurized oxygen for checking the pressure breathing performance on ground (TEST mode).

Vent valve - Alleviates vapor formation in the smoke goggles when smoke protection is required. Activation is achieved by pulling the valve on the face cone down, after selecting 100% and EMERGENCY modes of operation.

Head Harness NORM/MAX/COMF toggle adjustment - rotating the roller down, after initial inflation, allows reduction of harness residual pressure to a comfortable level.

It is possible to periodically adjust the pressure by pressing the inflation control to recover a comfortable setting

PASSENGER OXYGEN Control Panel

Before Mod 20195

Oxygen Control Switch has three positions as follows:

ON - Activates passenger oxygen manually.

AUTO - Normal switch position, passenger oxygen automatic activation (mask drop) is controlled by the cabin pressure control system (CPCS). The CPCS, through two parallel, independent channels (Auto and Monitor controllers), constantly monitors the cabin altitude, and if it reaches the preset altitude, it activates passenger oxygen.

There are two cabin altitude settings for automatic activation:

Landing field elevation 8500 ft and below: $13,500 \pm 250$ ft

Landing field elevation above 8500 ft: $14,750 \pm 250$ ft.

OFF - Passenger oxygen system is off. To be used when no passengers are on board.

BYPASS VALVE - Normally on OFF position. ON position enables passenger oxygen activation in case of electrical failure or solenoid valve malfunction

PASS OXYGEN ON light - Comes on when the solenoid valve is energized

THERAPEUTIC OXYGEN switch (before Mod 20195) has two positions as follows:

ON - Enables oxygen flow to the passenger cabin if necessary.

OFF - Disables oxygen flow to the passenger cabin

After Mod 20195

PASSENGER OXYGEN selector - Mechanical knob for system mode selection:

OFF - Electrical solenoid is not energized at any altitude.

AUTO - Normal operating position. System activation by the CPCS at 13,500 feet cabin altitude.

BYPASS - Override position. Activates the passenger system mechanically, regardless of electrical power.

Green **OXYGEN ON** Light - Provides visual indication of passenger system activation and positive flow of passenger oxygen.

THERAPEUTIC OXYGEN switch - Controls valve for special therapeutic oxygen supply.

ON - Valve is open.

OFF - Valves is closed.

Caution Messages

OXY MASKS PRESS LOW - Oxygen pressure to crew or passenger oxygen masks below 55 psi

Status Messages

OXY QTY LOW - Oxygen pressure is less than 800 psi

Gulfstream G200 - Oxygen

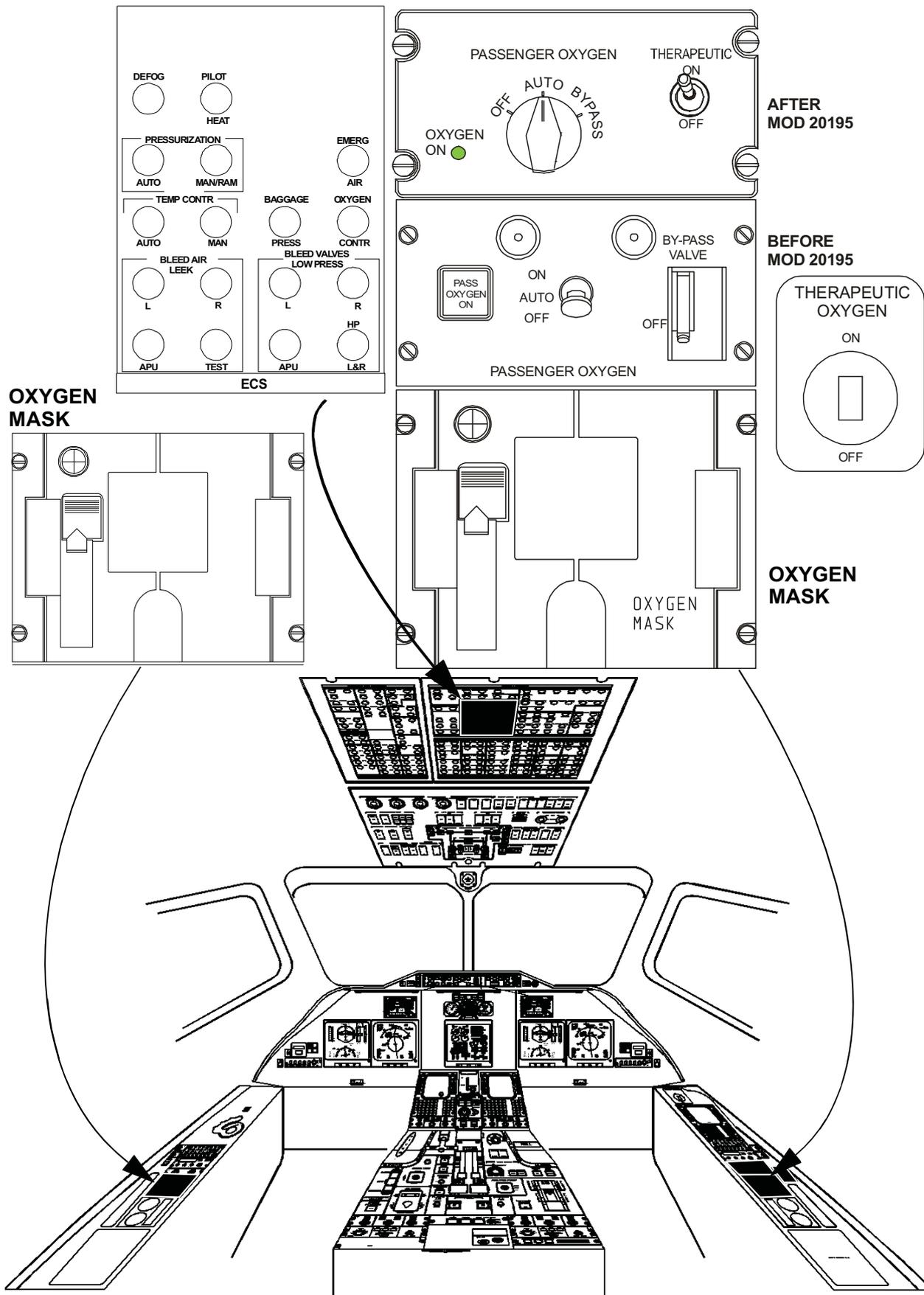


Figure 5-24. Oxygen System Controls and Indicators

Gulfstream G200 - Oxygen

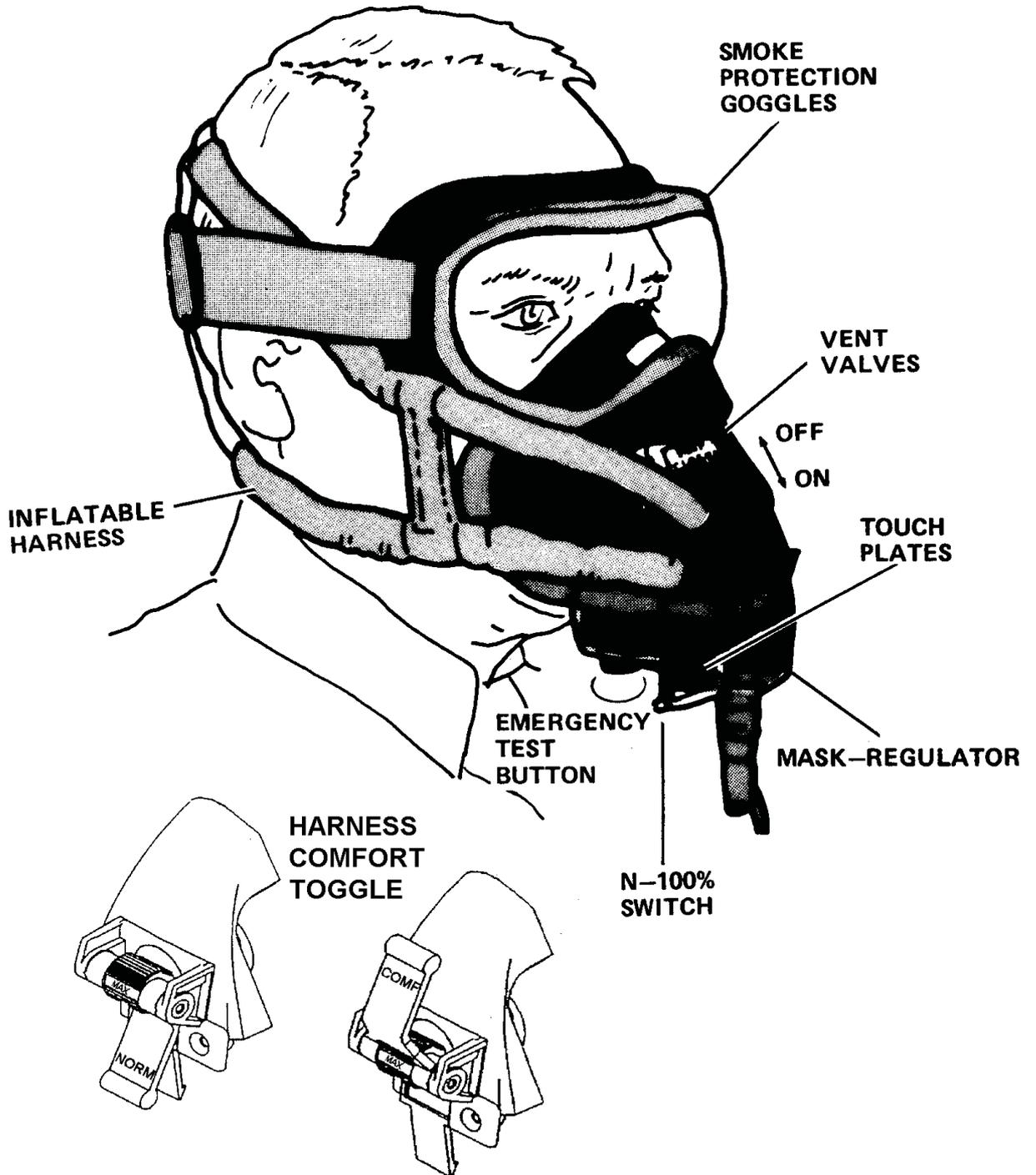


Figure 5-25. Crew Oxygen Mask

Gulfstream G200 - Oxygen

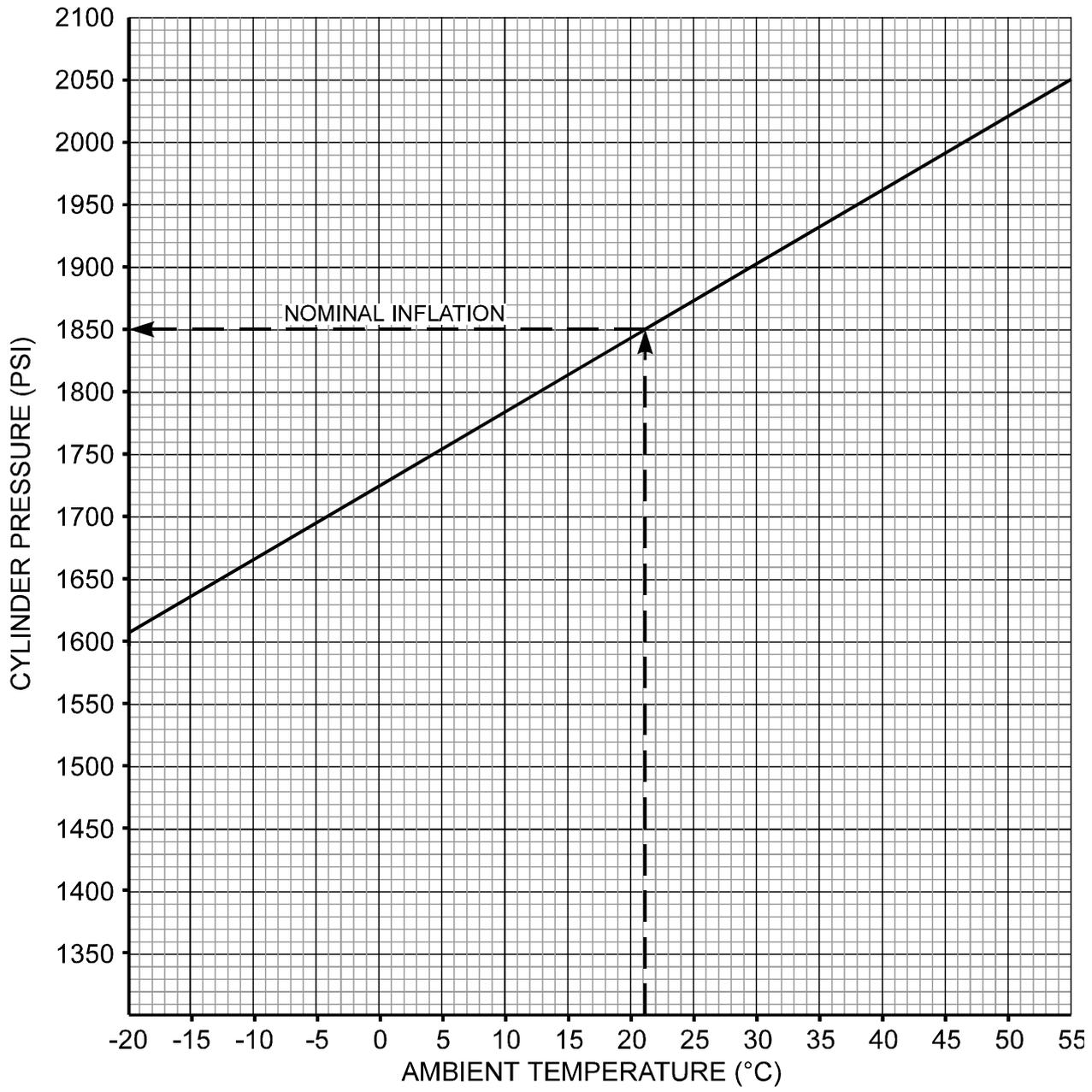


Figure 5-26. Oxygen Pressure Versus Temperature (Full Cylinder)

Gulfstream G200 - Oxygen

NOTE

THIS CHART IS BASED UPON A DECOMPRESSION INCIDENT AT 45,000 FT, DESCENT TO 20,000 FT (OR 15,000 FT WHERE NOTED) WITHIN 5 OR 6 MINUTES RESPECTIVELY, AND TIMING THE OXYGEN DURATION AFTER COMPLETING THE DESCENT AT THE STABILIZED CRUISE ALTITUDE

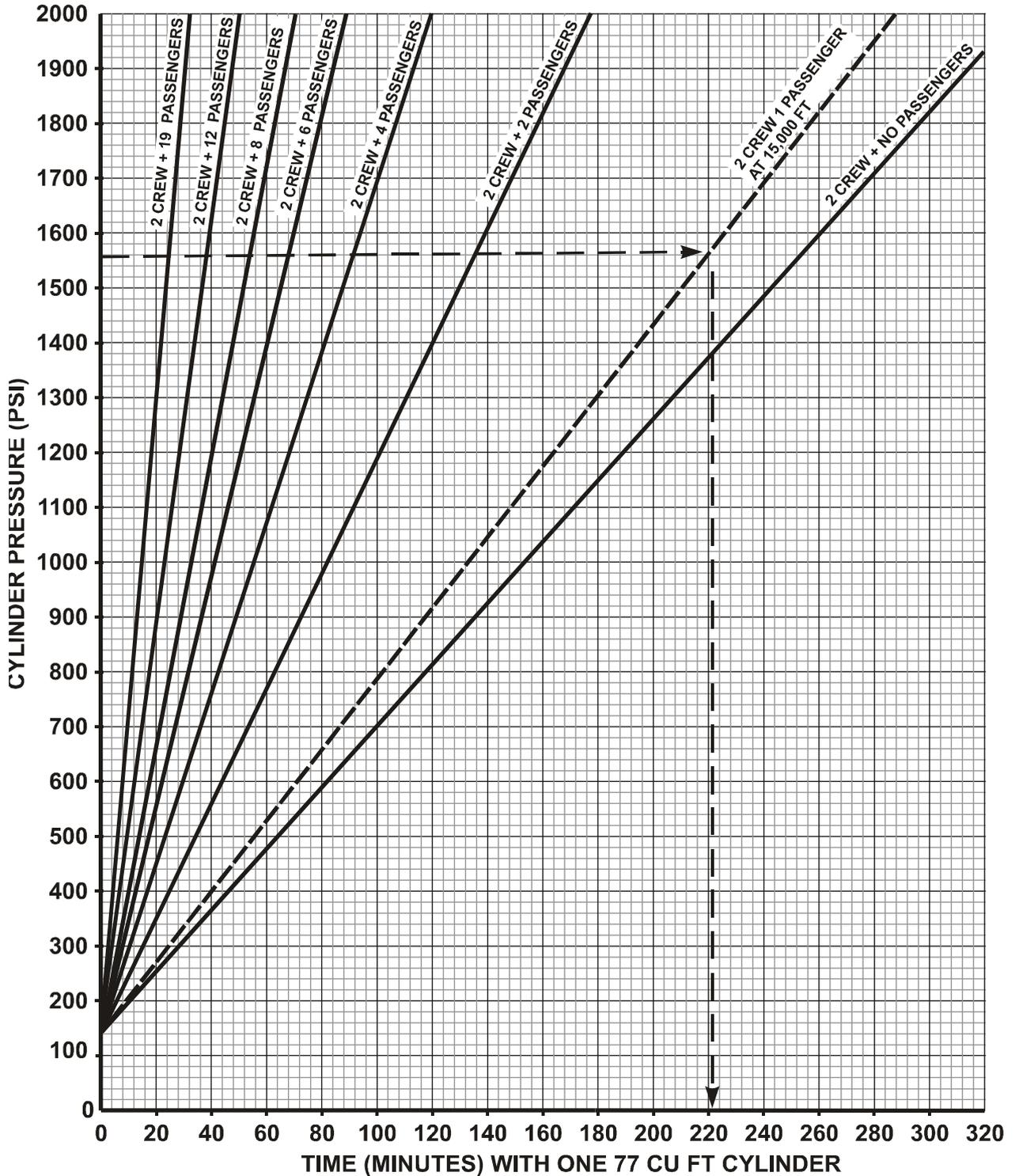


Figure 5-27. Oxygen Duration Chart

Gulfstream G200 - Oxygen

NOTE

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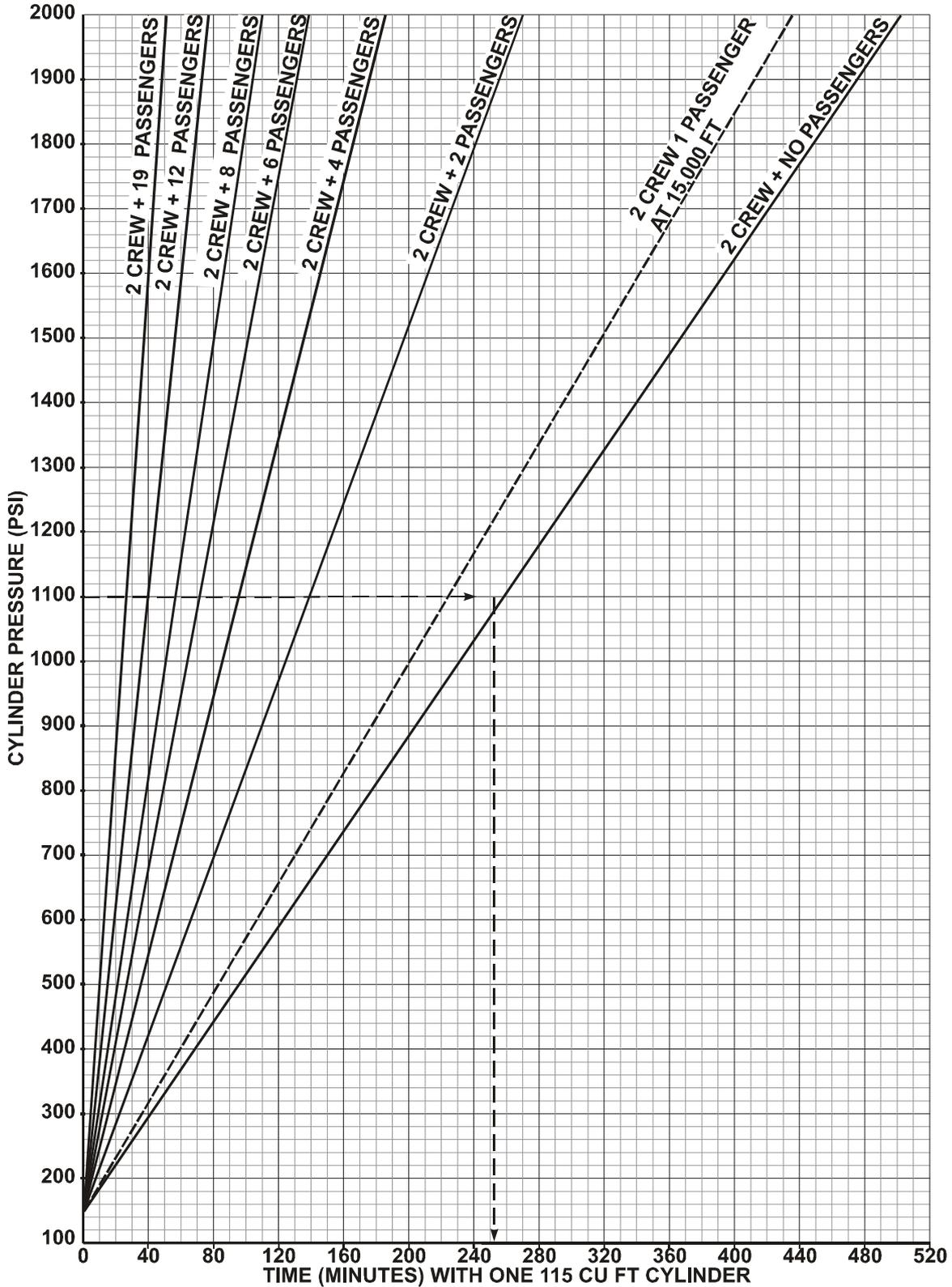


Figure 5-28. Oxygen Duration Chart (Mod 7253)