

7.10 - EMERGENCY OXYGEN SYSTEM (Figure 7.10.1)

The gaseous oxygen system will be used by the crew and the passengers, when the cabin altitude is greater than 10000 ft following a loss of pressurization or in case of cabin air contamination.

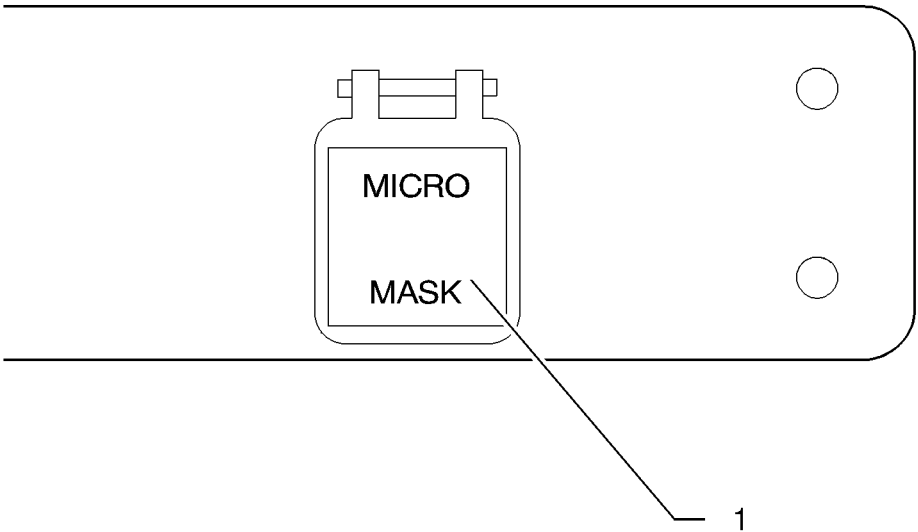
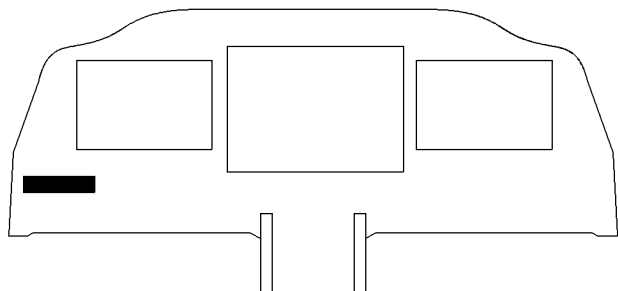
The oxygen reserve is contained in an oxygen cylinder made of composite material and located outside of the pressurized cabin into the R.H. karman. Its capacity is 50.3 cu.ft (1425 litres) "STPD" (Standard Temperature Pressure Dry) and use limit pressures are :

- maximum pressure 1850 PSIG (127 bars) at 70° F (21° C).
Evolution of this pressure according to the outside temperature is given in Section 8, Figure 8.7.1, as well as on a placard on the inside of the cylinder service door,
- minimum pressure 217 PSIG (15 bars).

The oxygen cylinder head is equipped with :

- a hand-controlled isolation valve to permit cylinder installation and removal,
- a microswitch causing the **"OXYGEN"** CAS message to light on. This message lights on, when the isolation valve is closed,
- a graduated pressure gage,
- a charging valve - refer to the replenishment procedure in Section 8,
- an overpressure system consisting of a safety disc. This disc is designed to rupture between 2500 and 2775 PSIG (172 and 191 bars) discharging the cylinder contents outboard,
- a pressure reducing valve adjusting utilization pressure to a value comprised between 64 and 85 PSIG (4.4 and 5.9 bars),
- a low pressure safety valve calibrated to 116 PSIG (8 bars).

1) Microphone switch



I4231204AAAEMA8000

Figure 7.10.1 - EMERGENCY OXYGEN SYSTEM

A control panel located in the cockpit overhead panel at the disposal of the pilot includes :

- a two-position valve ON/OFF ("OXYGEN" switch) to permit the supply of the front seats occupiers masks,
- a two-position valve ON/OFF ("PASSENGERS OXYGEN" switch) with guard to permit the supply of the passengers four masks, when the first valve is open.

Oxygen pressure is displayed on the GDU 1500 MFD.

An altimetric valve provides an automatic passengers masks actuation function at a cabin altitude between 13000 and 14000 ft when "OXYGEN" switch is set to ON.

Two pressure-demand type masks allowing quick donning with only one hand, covering the nose and the mouth, as well as two pairs of smoke goggles are at disposal of the pilot and of the R.H. front seat occupier. Masks are installed in cups on the cabin walls aft of the front seats. Permanently connected to the oxygen system, they are equipped with a micro controlled by the switch ("MICRO/MASK" micro inverter) under cover located on the instrument panel near the pilot's control wheel. The cockpit masks are equipped with a microphone, a three-position selector NORMAL, 100 % and EMERGENCY and with a push-button "PRESS TO TEST". The proper flow is signaled by a flow indicator (blinker) into the oxygen tubing.

The airplane is equipped with two smoke goggles.

Four passengers constant-flow type masks, covering the nose and the mouth and permanently connected, are installed in two containers on the cabin ceiling. The opening of these containers and the descent of the masks are controlled by the pilot, when both switches at its disposal are set to ON, or automatically at a cabin altitude between 13000 and 14000 ft with the "OXYGEN" switch set to ON. The oxygen flow is obtained by pulling on the mask bounded by a lanyard cord to a pin. A proper flow is signaled by the filling of the green bag located on each passenger mask.

WARNING : DO NOT SMOKE DURING OXYGEN SYSTEM USE.
OIL, GREASE, SOAP, MAKE UP, LIPSTICK AND ANY OTHER GREASY SUBSTANCES
CONSTITUTE A SERIOUS FIRE OR BURNING HAZARD, WHEN ON CONTACT WITH
OXYGEN

FLIGHT ABOVE 15000 FT WITH EMERGENCY DESCENT

NUMBER OF OCCUPANTS		OUTSIDE TEMPERATURE						
COCKPIT	CABIN	110° F/ 43° C	90° F/ 32° C	70° F/ 21° C	50° F/ 10° C	30° F/ -1° C	10° F/ -12° C	-10° F/ -23° C
1	0	631	614	597	580	563	546	529
1	1	759	736	713	691	668	646	623
1	2	885	856	828	799	771	743	715
1	3	1010	976	941	907	873	839	806
1	4	1137	1096	1056	1015	975	935	897
2	0	1037	1001	965	930	894	859	825
2	1	1164	1122	1080	1038	997	956	916
2	2	1289	1241	1192	1144	1097	1050	1004
2	3	1416	1361	1306	1252	1198	1145	1093
2	4	1541	1480	1418	1357	1297	1238	1180

(Values in PSIG)

Conditions :

- 1 - 4 minutes from 31000 to 15000 ft. All equipment used from 31000 ft.
- 2 - Plus 30 minutes usage by each pilot and passenger at 15000 ft.
- 3 - Plus 86 minutes usage by each pilot at 10000 ft.

NOTE

*After a long parking time in the sunshine, increase pressures indicated in the table here
above by 8 %.*

WHEN REQUIRED TO REMAIN ABOVE 15000 FT DUE TO MINIMUM "EN ROUTE" ALTITUDE

NUMBER OF OCCUPANTS		OUTSIDE TEMPERATURE						
COCKPIT	CABIN	110° F/ 43° C	90° F/ 32° C	70° F/ 21° C	50° F/ 10° C	30° F/ -1° C	10° F/ -12° C	-10° F/ -23° C
1	0	618	602	585	569	552	536	520
1	1	842	816	789	763	736	710	685
1	2	1067	1029	992	955	918	882	846
1	3	1513	1240	1192	1144	1097	1050	1004
1	4	1513	1452	1392	1333	1275	1217	1161
2	0	992	958	925	891	858	825	793
2	1	1215	1170	1125	1081	1037	994	952
2	2	1439	1382	1326	1270	1215	1161	1108
2	3	1662	1593	1525	1457	1391	1326	1262
2	4	1888	1807	1725	1645	1567	1490	1415

(Values in PSIG)

Conditions :

- 1 - Flight above 15000 ft. All equipment used.
- 2 - 1 hour usage by each pilot and passenger.
- 3 - Plus 1 hour usage by each pilot under 15000 ft.

NOTE

After a long parking time in the sunshine, increase pressures indicated in the table here above by 8 %.

FLIGHT BETWEEN 15000 FT AND 10000 FT

NUMBER OF OCCUPANTS		OUTSIDE TEMPERATURE						
COCKPIT	CABIN	110° F/ 43° C	90° F/ 32° C	70° F/ 21° C	50° F/ 10° C	30° F/ -1° C	10° F/ -12° C	-10° F/ -23° C
1	0	618	602	585	569	552	536	520
1	1	961	929	896	864	833	801	770
1	2	961	929	896	864	833	801	770
1	3	961	929	896	864	833	801	770
1	4	961	929	896	864	833	801	770
2	0	992	958	925	891	858	825	793
2	1	1333	1282	1231	1181	1131	1083	1035
2	2	1333	1282	1231	1181	1131	1083	1035
2	3	1333	1282	1231	1181	1131	1083	1035
2	4	1333	1282	1231	1181	1131	1083	1035

(Values in PSIG)

Conditions :

- 1 - Flight under 15000 ft.
- 2 - 90 minutes usage by each pilot and one passenger.
- 3 - Plus 30 minutes usage by each pilot at 10000 ft.

NOTE

After a long parking time in the sunshine, increase pressures indicated in the table here above by 8 %.