Raytheon Aircraft Company

Beechcraft
Model B36TC
TURBOCHARGED
(Serials EA-320, EA-389 and After)
Pilot's Operating Handbook
and
FAA Approved Airplane Flight Manual

FAA Approved in the Utility Category based on CAR Part 3. This document must be carried in the airplane at all times, and be kept within reach of the pilot during all flight operations. This handbook includes the material required to be furnished to the pilot by CAR Part 3.

Airplane Serial Number: _____

Airplane Registration Number: _____

FAA Approved by: [redacted]
John Tigue
Raytheon Aircraft Company
DOA-230339-CE

P/N 36-590006-19 **P/N 36-590006-19B**
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SYSTEMS EMERGENCIES

LOSS OF BREATHING OXYGEN

In the event of oxygen loss at high altitude:

1. Descend to an altitude that does not require the use of supplemental oxygen. (Observe minimum safe altitudes.)
2. Conduct Emergency Descent if required. (See the following TUC Table.)

WARNING

The following table sets forth the average time of useful consciousness (time from onset of hypoxia until loss of effective performance) at various pressure altitudes.

TIME OF USEFUL CONSCIOUSNESS (TUC)

CABIN PRESSURE ALTITUDE	TUC
25,000 feet	3-5 minutes
22,000 feet	5-10 minutes
12-18,000 feet	30 minutes or more

ENVIRONMENTAL SYSTEMS

OXYGEN SYSTEM

WARNING

NO SMOKING when using oxygen.

PREFLIGHT

1. Plug in all masks that will be used during flight. (Verify plug has a green color code.)
2. Oxygen Control . . . . . PULL ON
3. Flow Indicator For Each Mask. . . . .CHECK FOR FLOW
4. All Occupants . . . . . .DON MASK, CHECK FOR PROPER FIT, STOW

WARNING

Beards and mustaches should be carefully trimmed so that they will not interfere with the proper sealing of an oxygen mask. The fit of the oxygen mask around the beard or mustache should be checked on the ground for proper sealing. Studies conducted by the military and the FAA conclude that oxygen masks do not seal over beards and mustaches.

CAUTION

Since 90% of the system efficiency is determined by the fit of the oxygen mask, make certain the masks fit properly and are in good condition.

5. Oxygen Control . . . . . .PUSH OFF
6. Oxygen Duration . . . . . DETERMINE

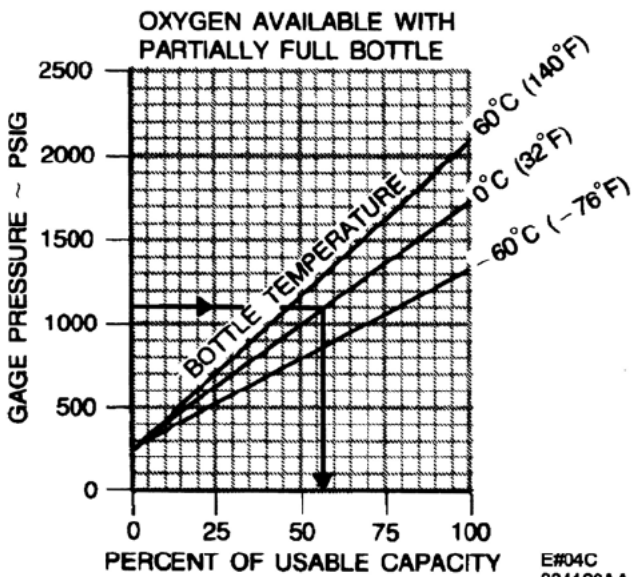
NOTE

A bottle at 1850 psig at 15°C is fully charged (100% capacity). Read duration directly from the table.

a. Read oxygen pressure from gage.

b. Read the IOAT (Assume IOAT to be equal to BOTTLE TEMPERATURE.)

c. Determine the percent of usable capacity from the following graph (e.g., 1100 psi at 0°C = 57%.)



d. Compute the oxygen duration in minutes from the following table by multiplying the full bottle duration by the percent of usable capacity. For example:

EXAMPLE:

Number of People On Board 5
Gage Pressure . . . . . 1100 psi
Bottle Temperature . . . . . 0°C
Percent Of Usable Capacity 57%
Planned Cruising Altitude . . . . . 15,000 ft
Duration (49 cu ft cylinder) . . . . . 0.57 x 149 = 85 minutes
Duration (76 cu ft cylinder) . . . . . 0.57 x 229 = 130 minutes
Duration (98 cu ft cylinder) . . . . . 0.57 x 298 = 170 minutes

Duration in minutes with full bottle at the following altitudes:

OXYGEN DURATION TABLE

CYL VOL	PERSONS USING	12,500 FT	15,000 FT	20,000 FT	25,000 FT
49 cu ft	1	1014	746	507	396
	2	507	373	253	198
	3	338	248	169	132
	4	253	186	126	99
	5	202	149	101	79
	6	169	124	84	66
76 cu ft (prior to EA-440 except EA-320)	1	1558	1146	779	608
	2	779	572	389	304
	3	519	381	259	202
	4	389	286	194	152
	5	311	229	155	121
	6	259	190	129	101
98 cu ft, (EA-320, EA-440 and after)	1	2028	1492	1014	792
	2	1014	746	507	396
	3	676	496	338	264
	4	506	373	253	198
	5	404	298	202	158
	6	338	248	169	132

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IN FLIGHT

Refer to the current 14 CFR for operating rules pertaining to the use of oxygen.

1. Oxygen Control . . . . . PULL ON SLOWLY
2. Mask . . . . . INSERT FITTING, DON MASK
   (adjust mask for proper fit)
3. Flow Indicator . . . . . CHECK FOR FLOW

NOTE

With the 98 cu ft system only, if one oxygen supply cylinder empties first, the correct oxygen flow will continue to be provided by the remaining cylinder to the pilot and passengers.

AFTER USING OXYGEN

1. Discontinue use by unplugging mask from outlet.

NOTE

Closing the oxygen control while in flight is not necessary due to automatic sealing of the outlet when the mask is unplugged. However, it is desirable to shut off supply when not in use.

2. Oxygen Control . . . . . PUSH OFF
   (must be accomplished prior to landing)

HEATING AND VENTILATION

Refer to Section 7, SYSTEMS DESCRIPTION, for operation of heating and ventilation controls.

Optional Fresh Air Vent Blower

An optional fresh air vent blower controlled by an ON-OFF switch on the subpanel is available. It provides ventilation through the individual overhead outlets during both ground and in-flight operations.

EXHAUST VENT

A fixed exhaust vent is located in the aft cabin.

OXYGEN SYSTEM

The oxygen system consists of: an oxygen supply cylinder, oxygen shut-off valves (one on the supply cylinder and one on the control console), a pressure gage (on the control console), an oxygen regulator mounted on the control console, a system of distribution tubing with oxygen outlets, and oxygen masks.

Oxygen supply cylinders are available in either 49 cu ft or 76 cu ft capacity. The cylinder is located under the spar cover beneath the front seats.

Supply of oxygen to the system is controlled by the shut-off valve on the oxygen console. The valve on the supply cylinder is normally open. A pressure gage on the console indicates the supply of oxygen available to the system. 1850 psig is nominal pressure for a full supply of oxygen.

The system regulator is altitude compensated to provide a varying flow of oxygen as altitude varies. Oxygen flow is varied automatically by the regulator from 0.5 liters per minute at 5,000 feet to 2.8 liters per minute at 25,000 feet.

Oxygen outlets are female fittings that the male fitting on the mask hose plug into. The outlets have a detent to prevent accidental disconnection of the oxygen masks.

An oxygen mask is provided for each oxygen outlet in the airplane. Masks are stored in placarded containers.

PITOT AND STATIC SYSTEMS

PITOT SYSTEM

The pitot system provides a source of impact air for operation of the airspeed indicator. The pitot mast is located on the leading edge of the left wing.

PITOT HEAT

The pitot mast is provided with an electric heating element which is turned on and off with a switch on the instrument panel. The switch should be ON when flying in visible moisture. It is not advisable to operate the pitot heating element on the ground except for testing or for short intervals of time to remove ice or snow.

NORMAL STATIC AIR SYSTEM

The normal static system provides a source of static air to the flight instruments through a flush static fitting on each side of the airplane fuselage.

A low point drain tube is provided for water that may condense in the system. It is accessible through the fuel selector valve drain access door. The access door is located in the lower fuselage adjacent to the left wing. The