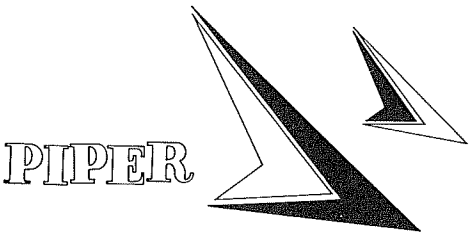
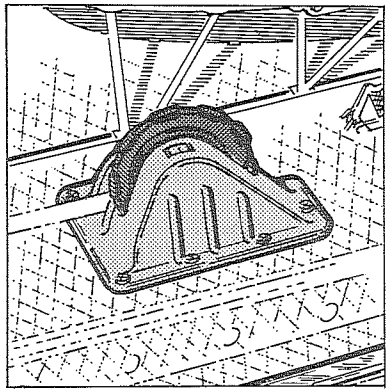
the

CHEROKEE SIX

Owner's Handbook



Piper Aircraft Corporation, Vero Beach, Florida
U. S. A.



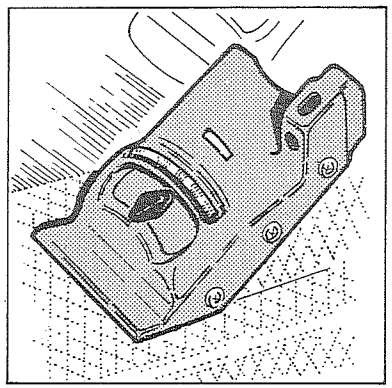
Stabilator Trim Control

amount of coordination required in normal turns.

The flaps are manually operated, balanced for light operating forces and spring loaded to return to the up position. A past-center lock incorporated in the actuating linkage holds the flap when it is in the up position so that it may be used as a step on the right side. Since the flap will not support a step load except when in the full up position, it should be completely retracted when the airplane is on the ground. The flaps have three extended positions, 10, 25, and 40 degrees.

FUEL SYSTEM

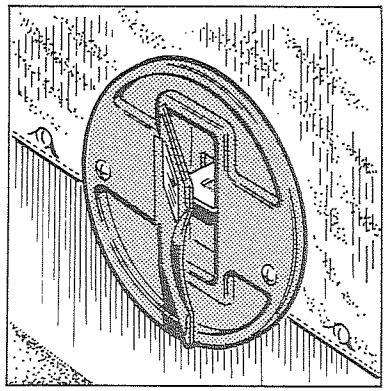
Standard fuel capacity of the Cherokee Six is 84 gallons, all of which is usable except for approximately one pint in each of the four tanks. The two main inboard tanks, which hold 25 gallons each, are attached to the wing structure with screws and nut plates and can be removed easily for service or inspection. The tip tanks are constructed of resin-impregnated fiberglass and hold 17 gallons each.



Fuel Control Selector

The fuel selector control is located below the center of the instrument panel on the sloping face of the control

tunnel. It has five positions corresponding to each of the four tanks plus an **OFF** position. When using less than the standard 84 gallon capacity of the tanks, fuel should be distributed equally between each side and may be placed in either the inboard or tip tanks.



Fuel Drain Lever

Each fuel tank is equipped with an individual quick drain located at the lower inboard rear corner of the tank. The fuel strainer and a system quick drain valve are located in the fuselage at the lowest point of the fuel system. This strainer should be drained regularly to avoid the accumulation of water or sediment. The drain valve is operated by pressing **DOWN** on the lever located on the right hand side of the cabin below the forward edge of the right center seat.

Fuel quantity gauges for each of the four tanks are located in the engine gauge cluster on the right side of the instrument panel. A fuel pressure indicator is also incorporated in the engine gauge cluster.

Dual electric fuel pumps are provided for use in case of failure of the engine-driven pump. The electric pumps operate from a single switch and should be **ON** for all take-offs and landings.

ELECTRICAL SYSTEM

The Cherokee Six is equipped with the Piper FTP (Full Time Power) Electrical System. Its 12 volt alternator provides electrical power at all engine speeds and results in improved performance for radio and electrical equipment and longer battery life.

Intentional spins are prohibited in this airplane. In the event that an inadvertent spin occurs, standard recovery technique should be used immediately.

CRUISING

The cruising speed of the Cherokee Six is determined by many factors including power setting, altitude, temperature, loading, and equipment installed on the airplane.

The normal cruising power is 75% of the rated horsepower of the engine. True airspeeds, which can be obtained at various altitudes and power settings, can be determined from the charts in Section IV of this handbook.

Use of the mixture control in cruising flight reduces fuel consumption significantly, especially at high altitudes. The mixture should always be leaned during cruising operations at 75% power or less, but during the climb only at altitudes above 5000 feet.

When selecting cruising RPM below 2300, limiting manifold pressure for continuous operation, as specified by the Lycoming Operator's Manual, should be observed.

The continuous use of carburetor heat during cruising flight decreases engine efficiency. Unless icing conditions in the carburetor are severe, do not cruise with the heat on. Apply full carburetor heat slowly and only for a few seconds at intervals determined by icing severity.

In order to keep the airplane in best laternal trim during cruising flight, the fuel should be used alternately from each tip tank and, when they are nearly exhausted, from each main tank. It is recommended that one tip tank be used for one hour after take-off; the other tip tank used until nearly exhausted, then return to the first tip tank. When nearly exhausted, turn to one main tank and alternate at one hour intervals to maintain lateral trim.

APPROACH AND LANDING

Before landing check list:

1. Mixture **RICH**
2. Propeller set
3. Carburetor heat **OFF** (unless icing conditions exist)
4. Electric fuel pump **ON**
5. Fuel selector on proper tank
6. Flaps as desired (under 125 MPH)

The airplane should be trimmed to an approach speed of about 90 MPH and flaps extended. The flaps can be lowered at speeds up to 125 MPH, if desired. The propeller should be set at full RPM or at a high cruising RPM to facilitate an emergency go-around if needed. Carburetor heat should not be applied unless there is an indication of carburetor icing, since the use of carburetor heat causes a reduction in power which may be critical in case of a go-around. Full throttle operation with heat on is likely to cause detonation.

The amount of flap used during landings and the speed of the aircraft at contact with the runway should be varied according to the landing surface and conditions of wind and aircraft loading. It is generally good practice to contact the ground at the minimum possible safe speed consistent with existing conditions.

Normally, the best technique for short and slow landings is to use full flap and enough power to maintain the desired airspeed and approach flight path. Mixture should be full rich, fuel on the fullest tank, carburetor heat off, and electric fuel pump on. Reduce the speed during the flareout and contact the ground close to the stalling speed (63 to 70 MPH). After ground contact hold the nose wheel off as long as possible. As the airplane slows down, drop the nose and apply the brakes. There will be less chance of skidding the tires if the flaps are retracted before applying the brakes. Braking is most effective when back pressure is applied to the control wheel, putting most of the aircraft weight on the main wheels. In high wind conditions, particularly

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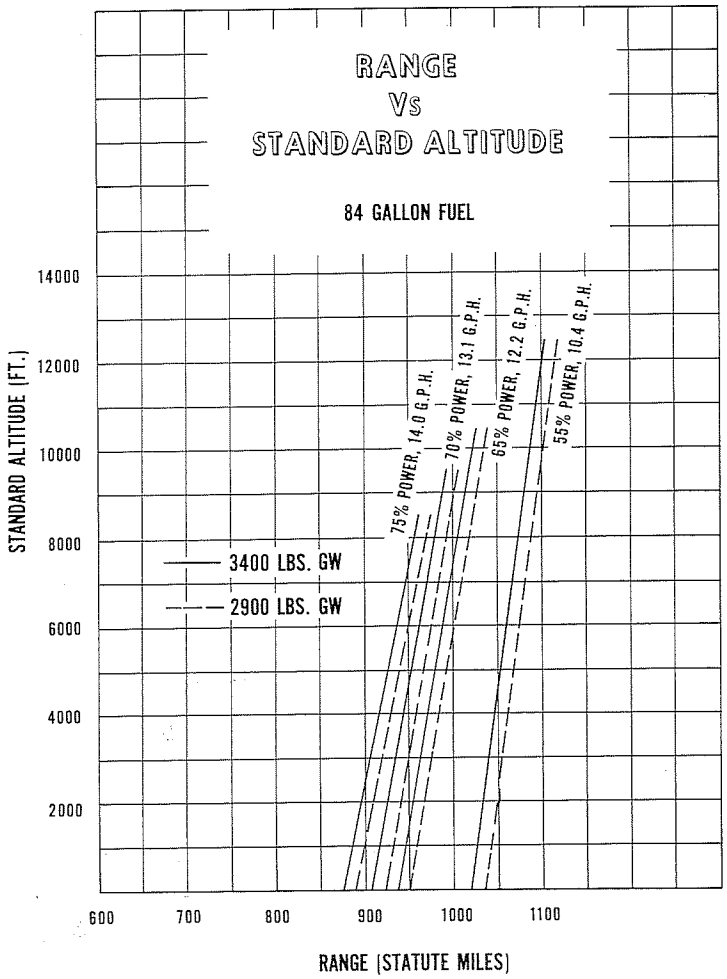

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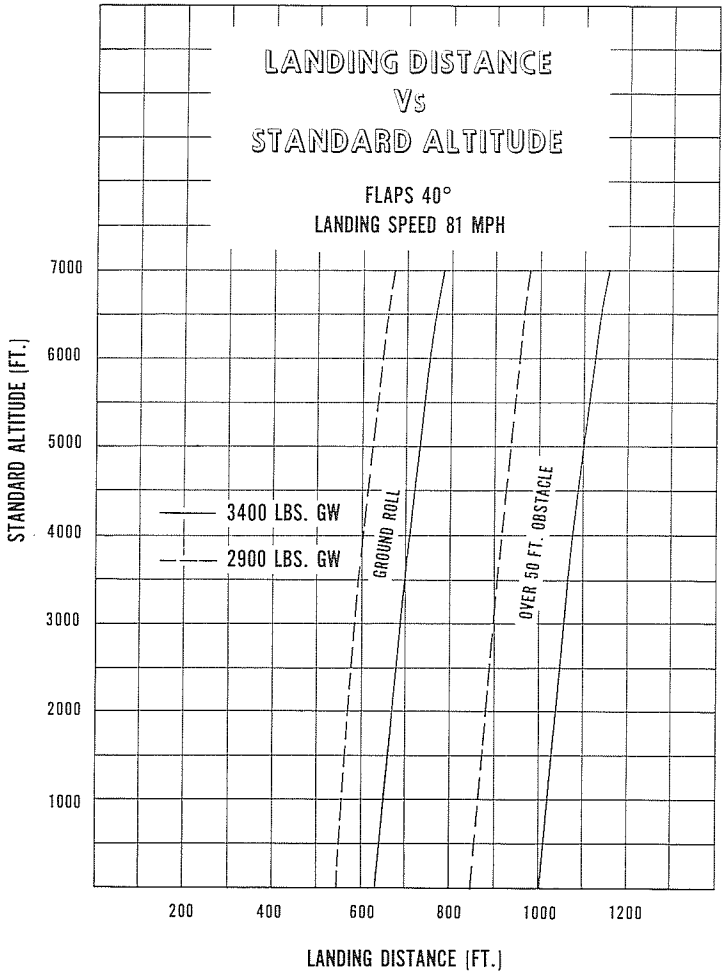

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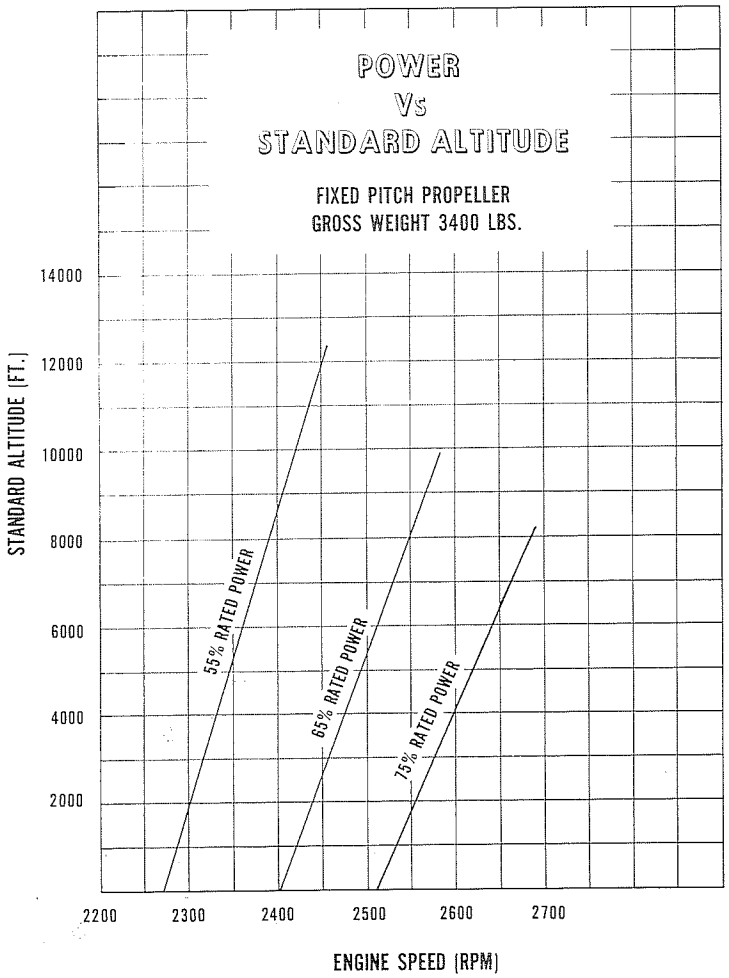

Power Setting Table - Lycoming Model O-540-E, 260 HP Engine

Press. Alt. 1000 Feet	Std. Alt. Temp. °F	143 HP - 55% Rated Approx. Fuel 11.4 GPH RPM AND MAN. PRESS. 2100	2200	2300	2400	169 HP - 65% Rated Approx. Fuel 12.7 GPH RPM AND MAN. PRESS. 2100	2200	2300	2400	195 HP - 75% Rated Approx. Fuel 14.1 GPH RPM AND MAN. PRESS. 2200	2300	2400	2500
SL	59	21.7	20.8	20.2	19.5	24.6	23.6	22.7	21.9	26.3	25.3	24.4	23.8
1	55	21.5	20.6	20.0	19.3	24.4	23.3	22.5	21.7	26.0	25.0	24.1	23.5
2	52	21.3	20.4	19.8	19.1	24.1	23.1	22.2	21.5	25.7	24.8	23.9	23.3
3	48	21.0	20.1	19.6	18.9	23.8	22.9	22.0	21.2	25.4	24.5	23.6	23.0
4	45	20.8	19.9	19.4	18.7	23.6	22.6	21.8	21.0	25.1	24.2	23.3	22.7
5	41	20.6	19.7	19.2	18.4	23.3	22.4	21.5	20.8	24.8	23.9	23.0	22.5
6	38	20.4	19.5	18.9	18.2	23.1	22.2	21.3	20.6	-	23.7	22.8	22.2
7	34	20.2	19.3	18.7	18.0	22.8	22.0	21.1	20.4	-	-	22.5	22.0
8	31	20.0	19.1	18.5	17.8	22.6	21.8	20.8	20.1	-	-	22.3	21.7
9	27	19.8	18.8	18.3	17.6	-	21.6	20.6	19.9				
10	23	19.6	18.6	18.1	17.4	-	-	20.3	19.7				
11	19	19.4	18.4	17.9	17.2	-	-	-	19.5				
12	16	19.2	18.2	17.7	17.0				19.3				
13	12	-	17.9	17.4	16.8								
14	9	-	17.7	17.2	16.6								
15	5	-	-	17.0	16.4								

To maintain constant power, correct manifold pressure approximately 0.17" Hg. for each 10^{o} F variation in carburetor air temperature from standard altitude temperature. Add manifold pressure for air temperature above standard; subtract for temperatures below standard.