

SECTION III

CHEROKEE "ARROW"

airports, on aircraft equipped with the backup gear extender, the landing gear can be retracted at the pilot's discretion by placing the gear selector switch in the up position and then holding the emergency gear lever in the override up position. It is necessary to hold the lever in the override up position until the airspeed* required for retraction by the system has been attained.

After takeoff has proceeded to a safe altitude, recommended climb power is 25 inches of manifold pressure and 2500 rpm.

*Approximate airspeed of 85 mph IAS at sea level to 100 mph IAS at 10,000 ft, with a straight line variation between.

CLIMB

The best rate of climb at gross weight will be obtained at 100 mph. The best angle of climb may be obtained at 90 mph. At light gross weights these speeds are reduced somewhat. For climbing en route a speed of 110 mph is recommended. This will produce better forward speed and increased visibility over the nose during the climb.

STALLS

All controls are effective at speeds down through the stalling speed, and stalls are gentle and easily controlled.

STALL SPEED TABLE

Angle Of Bank	Flaps 40°	Flaps Retracted
0°	63 MPH	69 MPH
20°	65 MPH	71 MPH
40°	72 MPH	79 MPH
60°	89 MPH	98 MPH

Power Off — Gear Down — Gross Weight 2500 lbs.

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CRUISING

The cruising speed of the Cherokee Arrow 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 may be obtained at various altitudes and power settings can be determined from the charts in "Section IV" of this handbook.

When selecting RPM below 2400, limiting manifold pressure for continuous operation, as specified by the Lycoming Operator's Manual, should be observed.

To INCREASE power, first increase RPM, then increase manifold pressure.

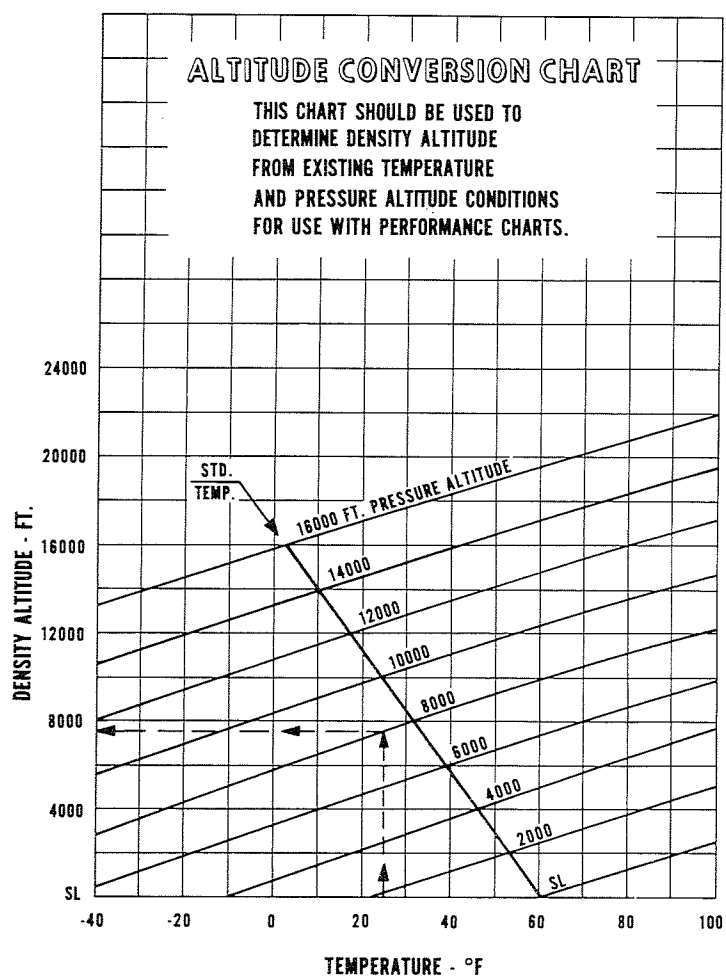
To DECREASE power, first decrease manifold pressure, then decrease RPM.

Use of the mixture control in cruising flight reduces fuel consumption significantly, especially at higher altitudes. The mixture should be leaned during cruising operation above 5000 feet altitude and at the pilot's discretion at lower altitudes when 75% power or less is being used. If any doubt exists as to the amount of power being used, the mixture should be in the FULL RICH position for all operations under 5000 feet.

To lean the mixture, pull the mixture control until the engine becomes rough, indicating that the lean mixture limit has been reached in the leaner cylinders. Then enrich the mixture by pushing the control towards the instrument panel until engine operation becomes smooth. The fuel flow meter will give a close approximation of the fuel being consumed.

If the airplane is equipped with the optional exhaust gas temperature (EGT) gauge, a more accurate means of leaning is available to the pilot. For best power mixture, lean the mixture until the peak EGT is reached, then enrich the mixture until the temperature drops a minimum of 25° F. For best economy mixture, lean until the peak EGT is reached and continue to lean until the temperature drops a minimum of 25° F. Do not lean above 75% power.

PA-28R-180 PIPER CHEROKEE



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