

SECTION I

CHEROKEE 140 "B"

SPECIFICATIONS (cont):

PERFORMANCE

GROSS WEIGHT	2150
Cruising Range (75% power, sea level, mi)	495 (710**)
Cruising Range (75% power, optimum altitude)	540 (780**)
Optimum Cruising Range (55% power, optimum altitude)	670 (930**)
Instructional Power Cruising Range (50% power, sea level)	630 (880**)
Stalling Speed (flaps down, mph)	55
Landing Roll (flaps down, ft)	535

WEIGHTS

Gross Weight (lbs)	2150
Empty Weight (Standard) (lbs)	1230
USEFUL LOAD (Standard) (lbs)	920

POWER PLANT

Engine - Lycoming	O-320-E2A
Rated Horsepower and Speed (rpm)	150 at 2700
Bore (inches)	5.125
Stroke (inches)	3.875
Displacement (cubic inches)	319.8
Compression Ratio	7:1
Dry Weight (pounds)	272

** WITH RESERVE FUEL (50 GAL)

In the conventional take-off procedure set the trim control slightly aft of neutral. Allow the airplane to accelerate to 50 to 60 miles per hour, then ease back on the wheel enough to let the airplane fly itself from the ground. Premature or excessive raising of the nose will result in a delayed take-off. After take-off let the aircraft accelerate to the desired climb speed by lowering the nose slightly.

Short Field, Obstacle Clearance:

Lower the flaps to 25° (second notch), accelerate to 55-60 miles per hour and ease back on the control wheel to rotate. After breaking ground, accelerate to the best angle of climb speed, 74 miles per hour. Slowly retract the flaps when the obstacle has been cleared and continue climb at 85 miles per hour.

Short Field, No Obstacles:

Lower the flaps to 25° (second notch) accelerate to 55-60 miles per hour. Ease back on the control wheel to rotate and accelerate to best rate of climb speed, 85 miles per hour. Slowly retract the flaps while climbing out.

Soft Field, No Obstacle:

Lower the flaps to 25° (second notch), accelerate aircraft and pull nose gear from the ground as soon as possible, lift off at lowest possible airspeed. Accelerate just above the ground to best rate of climb speed, 85 miles per hour. Climb out while slowly retracting the flaps.

Soft Field, Obstacle Clearance:

Lower flaps to 25° (second notch), accelerate aircraft, pull nose gear off as soon as possible and lift off at lowest possible airspeed. Accelerate just above the ground to best angle of climb speed, 74 miles per hour to climb past obstacle clearance height, continue climb while accelerating to best rate of climb speed, 85 miles per hour and slowly retract the flaps.

CLIMB

The best rate of climb airspeed at gross weight is 85 miles per hour while the best angle of climb airspeed is 74 miles per hour. At lighter than gross weight these speeds are reduced. The recommended enroute climbing speed of 100 miles per hour provides increased visibility over the nose. Shallow turns of a few degrees will also aid forward visibility during climb out.

STALLS

Stall characteristics of the Cherokee are conventional. Visual stall warning is provided by a red light located on the left side of the instrument panel which is turned on automatically between 5 and 10 miles per hour above stall speed. Gross weight stalling speed with power off and full flaps is 55 miles per hour at 2150 pounds. With flaps up this speed is increased 9 miles per hour.

Intentional spins are prohibited in the normal category airplane. Lazy eights and chandelles may be performed in the normal category provided a 60° angle of bank and/or a 30° angle of pitch is not exceeded. For approved maneuvers and entry speeds refer to the Flight Manual.

STALL SPEED TABLE

Angle of Bank	Flaps 40°	Flaps Retracted
0°	55 MPH	64 MPH
20°	57 MPH	66 MPH
40°	63 MPH	73 MPH
60°	78 MPH	91 MPH
Power Off — Gross Weight 2150 lbs.		