Training aid only, not flight instruction. Review it with your CFI and get their approval before you use it in training or in the airplane. Check every number against the POH and current FAA sources. Last reviewed Nov 7, 2026.

CHEROKEE FLOW CARDS

Cherokee 140 · Chair-fly these on the ground

THE NUMBERS THESE CARDS USE

Miles per hour, from the 1975 Cruiser manual (POM 761 555) · confirm each one in your POH and write it in

Speed	What it is	Our number	Your POH
Rotate	Normal takeoff	60–65	
Vx	Best angle of climb, obstacle clearance	78	
Vy	Best rate of climb	89	
Best glide	Engine out, flaps up, at gross	80	
Va	Maneuvering speed at gross; lower when lighter	129	
Vno	Top of the green arc: smooth air only above it	140	
Vfe	Top of the white arc: max with flaps out	115	
Pattern	Downwind / abeam / base / final / fence	100 / 90 / 80 / 75 / 70	

Approach speeds from the manual: 85 flaps up, minus 3 per notch (76 with flaps 40). The Cherokee 140 Transition Guide has the full table.

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IN THE PATTERN

BEFORE LANDING

On downwind, or about 3 miles out on a straight-in.

Downwind

1. **Fuel selector: fullest tank**
   Land on the tank you trust most.
2. **Fuel pump: ON**
   Backs up the engine-driven pump close to the ground.
3. **Mixture: RICH**
   Full power must be there if you go around.
4. **Belts and door: snug, latched**
5. **Landing light: ON**
   Be seen.

Abeam the threshold

6. **Carb heat: ON**
   Low power is when carb ice forms.
7. **Power: 1,800–2,000 RPM**
   Start down about 500 fpm.
8. **Flaps: 10**
   Only below the white arc.
9. **Pitch: 90 mph**

Base

10. **Flaps: 25**
11. **Pitch: 80 mph**

Final

12. **Flaps: 40**
    Stable by 300 AGL, or go around.
13. **Pitch: 75, then 70 over the fence**
14. **Carb heat: OFF on short final**
    So full power is there if you need it.

Say it Fuel, pump, rich, belts, light. Then heat, power, flaps.

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GO-AROUND

Not stable at 300 AGL, runway not clear, a bad bounce, told to, or any doubt at all.

1. **Power: FULL**
   Smoothly, all the way in.
2. **Carb heat: OFF**
   Heated air costs you power. Agree the exact order with your CFI.
3. **Pitch: climb attitude, 80 mph**
   Stop the descent first. The flaps are making drag.
4. **Right rudder: as needed**
   Full power, slow, nose high: the airplane wants to go left.
5. **Flaps: 25, then 10, then up**
   One step at a time, only once climbing.
6. **Climb: 89 mph (Vy)**
   Sidestep to the side of the runway so you can see traffic.
7. **Radio: "Cherokee [tail], going around"**
   Then fly the pattern again.

Decide early. A go-around is a normal maneuver, never a failure.

Say it **Power, heat, pitch, rudder, flaps, call.**

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MANEUVERS

STEEP TURNS

At least 1,500 AGL, after clearing turns. Pick a landmark on your entry heading.

1. **Speed: cruise, at or below Va**
   Va is 129 at gross and lower when you are light.
2. **Roll in: 45° bank**
   Smooth and coordinated.
3. **Back pressure: as you pass 30°**
   Hold the nose on the horizon.
4. **Power: add about 100 RPM**
   Makes up for the extra drag.
5. **Hold: altitude, bank, ball**
   Eyes outside. Glance at the altimeter.
6. **Roll out: lead by about 20°**
   About half the bank angle.
7. **Reverse: straight into the other direction**
   If your instructor asks for it.

Private pilot standards: altitude ±100 ft, airspeed ±10 kt, bank ±5°, roll out ±10°.

Say it **Forty-five, back, power, hold, lead by half.**

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SLOW FLIGHT

At least 1,500 AGL, after clearing turns.

1. **Carb heat: ON**
   Power is coming back.
2. **Power: about 1,500 RPM**
   Hold altitude as the speed bleeds off.
3. **Flaps: as briefed**
   Each notch only below the white arc.
4. **Pitch: just above the stall warning**
   Any slower and the horn sounds.
5. **Power: as needed to hold altitude**
   Pitch for airspeed, power for altitude.
6. **Right rudder: keep the ball centered**

Recover

7. **Power: FULL, carb heat OFF**
8. **Pitch: level, accelerate**
   Do not climb into a stall.
9. **Flaps: up in stages**
   Stay level as each comes up.

Say it Heat, power, flaps, pitch. Then full, level, clean.

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POWER-OFF STALL

Practices a stall in the landing configuration. At least 1,500 AGL, clearing turns done.

1. **Carb heat: ON**
2. **Power: 1,500, configure to land**
   Flaps 10, 25, 40 as speed allows.
3. **Descend: at 75 mph**
   Like a final approach.
4. **Power: IDLE**
5. **Pitch: smoothly up to the stall**
   Keep the ball centered. Wings level, or bank as briefed.

Recover

6. **Pitch: forward, reduce the angle of attack**
   This is what breaks the stall.
7. **Power: FULL, carb heat OFF**
8. **Wings: level with rudder and aileron**
9. **Flaps: to 25, then up in stages**
   Climb at Vx, then Vy.

Say it **Unload, power, level, climb, clean.**

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POWER-ON STALL

Practices a departure stall. At least 1,500 AGL, clearing turns done.

1. **Slow: to liftoff speed**
   About 60–65 mph, with power reduced.
2. **Power: takeoff or departure power**
   As your instructor briefs.
3. **Pitch: up smoothly to the stall**
4. **Right rudder: lots of it**
   High power, low speed: the nose wants to go left.

Recover

5. **Pitch: forward, reduce the angle of attack**
6. **Wings: level, ball centered**
   Uncoordinated stalls are where spins start.
7. **Power: FULL**
8. **Climb: Vx, then Vy**
   Back to the altitude you started at.

Say it **Unload, level, full, climb.**

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UNUSUAL ATTITUDES

You look up and the airplane is somewhere you didn't put it.

Nose high, speed falling

1. **Power: FULL**
   Speed is what you are short of.
2. **Pitch: forward to the horizon**
3. **Wings: level, coordinated**

Nose low, speed rising

4. **Power: IDLE**
   Stop the speed from building.
5. **Wings: roll level FIRST**
   Pulling in a bank only tightens the spiral.
6. **Pitch: ease back to the horizon**
   Gently. Don't overstress it on the pull-out.

Say it **Nose high: power up, nose down. Nose low: power off, roll, then pull.**

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SHORT AND SOFT FIELD

SHORT-FIELD TAKEOFF

A short runway or an obstacle off the end.

1. **Flaps: 25° (second notch)**
   The POM short-field setting.
2. **Line up: use every foot of runway**
   Start from the very end.
3. **Brakes: HOLD**
4. **Power: FULL, check the gauges**
   Mixture rich, carb heat off, RPM good.
5. **Release: the brakes**
6. **Rotate: 55–60 mph**
7. **Climb: Vx, 78 mph, until clear**
   Then lower the nose to Vy, 89.
8. **Flaps: up in stages, above the obstacle**

Say it Every foot, brakes, full, go, Vx, clean.

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SOFT-FIELD TAKEOFF

Grass, mud, snow or gravel.

1. **Flaps:** 25° (second notch)
2. **Keep rolling:** don't stop on the soft surface
   Taxi with the yoke full back.
3. **Yoke:** FULL AFT
   Takes weight off the nosewheel.
4. **Power:** FULL, smoothly
5. **Nose:** up as soon as it will come
   Then ease off the back pressure to hold it there.
6. **Lift off:** at the lowest possible speed
7. **Level:** in ground effect
   Let the speed build to Vx or Vy.
8. **Climb:** Vx or Vy, flaps up in stages

Say it Roll, yoke back, power, fly off, stay low, climb.

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SHORT-FIELD LANDING

A short runway or an obstacle on approach.

1. **Flaps:** 40, stable early
2. **Speed:** POH short-field approach speed
   Exact, not "about."
3. **Aim point:** just past the threshold
   Power controls the glidepath.
4. **Touch down:** at the aim point, minimum speed
   Little or no float.
5. **Flaps:** up, if the POH says so
   Puts weight on the wheels for braking.
6. **Brakes:** as hard as needed, yoke back

Say it Slow, steep, on the spot, stop.

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SOFT-FIELD LANDING

Grass, mud, snow or gravel.

1. **Flaps:** 40
2. **Approach:** normal speed, a little power in
   The power lets you touch down softly.
3. **Flare:** hold it off, slowest touchdown
   Mains first, as gently as you can.
4. **Nosewheel:** hold it off
   Yoke coming back all the way.
5. **Keep moving:** yoke full aft
   Use power to keep rolling. Don't stop until firm ground.

Say it Power in, gentle mains, nose up, keep rolling.

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EMERGENCIES

ENGINE FAILURE AFTER TAKEOFF

The engine quits or loses power on the climbout, low.

1. **Pitch: DOWN to 80 mph, now**
   You lose speed fast in a climb attitude. This comes first.
2. **Land: straight ahead**
   Within about 30° either side. Small turns only.
3. **Flaps: as needed for the landing**
4. **Mixture: IDLE CUTOFF**
5. **Fuel selector: OFF**
6. **Magnetos: OFF**
7. **Master: OFF, after the flaps are set**

Do not turn back to the runway unless you and your CFI have briefed and practiced it at altitude.

Say it Nose down. Straight ahead. Shut it off.

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ENGINE FAILURE IN FLIGHT

The engine stops or keeps losing power at altitude.

1. **A: Airspeed: 80 mph, trim for it**
   Best glide buys you time and distance.
2. **B: Best field: pick it now, into the wind**
   Within gliding distance. Commit to it.

C: Checklist, restart

3. **Fuel selector: the other tank**
   Fuel is the usual cause.
4. **Fuel pump: ON**
5. **Mixture: RICH**
6. **Carb heat: ON**
7. **Primer: IN and LOCKED**
   An unlocked primer can make the engine run rough or quit.
8. **Magnetos: LEFT, RIGHT, BOTH**
   See if it runs on one.
9. **D: Declare: 121.5 or ATC, “Mayday”, squawk 7700**

E: Execute, if it won't restart

10. **Mixture: IDLE CUTOFF**
11. **Fuel selector: OFF**
12. **Magnetos: OFF**
13. **Flaps: as needed, landing assured**
14. **Master: OFF**
15. **Door: unlatched before touchdown**
    So a bent frame can't trap you.
16. **Belts: tight**

Say it Airspeed, Best field, Checklist, Declare, Execute.

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ROUGH ENGINE, CARB ICE

RPM dropping slowly, roughness, especially in humid air or at low power.

1. **Carb heat: FULL ON**
   It may run rougher for a moment as the ice melts. Leave it on.
2. **Mixture: adjust for smoothness**
3. **Fuel selector: the other tank**
4. **Fuel pump: ON**
5. **Magnetos: check LEFT, RIGHT, BOTH**
6. **Primer: locked**
7. **Land: at the nearest suitable airport**
   If it doesn't clear up completely.

Say it Heat, mixture, tank, pump, mags.

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LOW OIL PRESSURE

Oil pressure dropping, often with temperature rising.

1. **Gauges: cross-check pressure and temperature**
   Zero pressure with normal temperature may be the gauge. Treat it as real anyway.
2. **Power: reduce**
   Less heat, less strain.
3. **Land: at the nearest airport**
4. **Plan: for the engine to quit**
   Keep a field in gliding range all the way.

Say it **Believe it. Nearest airport. Keep a field.**

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ENGINE FIRE IN FLIGHT

Flames, or smoke from under the cowl.

1. **Fuel selector: OFF**
   Starve the fire.
2. **Throttle: CLOSED**
3. **Mixture: IDLE CUTOFF**
4. **Fuel pump: OFF**
5. **Heater and defroster: OFF**
   Keep smoke out of the cabin.
6. **Descend: and land, now**
   Emergency descent if needed. Do not restart.

Say it **Fuel off, throttle closed, mixture out, heat off. Get down.**

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ENGINE FIRE DURING START

Flames from the engine while cranking, usually from over-priming.

If it hasn't started

1. **Mixture: IDLE CUTOFF**
2. **Throttle: OPEN**
3. **Starter: keep CRANKING**
   Pulls the fire into the engine.

If it has started

4. **Engine: keep it RUNNING**
   Then shut down and get it inspected.

If the fire continues more than a few seconds

5. **Fuel selector: OFF**
6. **Fuel pump: OFF**
7. **Magnetos and master: OFF**
8. **Get out: with the extinguisher**
   Fight it from outside, or walk away.

Say it Cutoff, open, keep cranking. Still burning: fuel off, out.

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ELECTRICAL FIRE

The smell of hot insulation, or smoke from behind the panel.

1. **Master: OFF**
2. **Avionics and switches: all OFF**
3. **Vents: OPEN**
   Clears the smoke.
4. **Cabin heat: OFF**
5. **Extinguisher: if there are flames**
6. **Land: as soon as possible**
7. **If you need power: restore one item at a time**
   Wait between each. Stop at the one that smokes.

Say it **Master off, everything off, air out, get down.**

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CHARGING SYSTEM FAILURE

The ammeter shows a discharge or zero, or the low-voltage light comes on.

1. **Ammeter: confirm the discharge**
2. **Load: turn on the landing light**
   Confirms the ammeter really reads zero.
3. **Electrical load: reduce**
4. **ALT FIELD breaker: check**
5. **ALT switch: OFF for 1 second, then ON**
   Still zero: ALT OFF, minimum load. You are on the battery.
6. **ATC: tell them while you can**
7. **Land: at the nearest suitable airport**
   The battery won't last long.

The engine runs on magnetos and doesn't need the electrical system.

Say it **Confirm, shed load, breaker, cycle ALT, land.**

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EMERGENCY DESCENT

Fire, smoke or anything that needs you on the ground right now.

1. **Throttle: IDLE**
2. **Carb heat: ON**
3. **Bank: 30–45°, spiral down**
   Keeps the load low and lets you see below.
4. **Airspeed: below 140 (Vno)**
   Below Va in turbulence.
5. **Recover: early, wings level, power**
   Plenty of height to spare.

Say it Idle, heat, bank, watch the speed.

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SPIN RECOVERY

An unintended spin, usually from an uncoordinated stall.

1. **P: Power: IDLE**
2. **A: Ailerons: NEUTRAL**
3. **R: Rudder: FULL opposite the rotation**
   Look at the turn coordinator, not out the side.
4. **E: Elevator: FORWARD, briskly**
   Breaks the stall.
5. **Rudder: neutral when the rotation stops**
6. **Pull out: smoothly**
   Don't exceed the limits or stall it again.

Check the POH for whether intentional spins are approved in your airplane and in which category.

Say it **PARE: Power, Ailerons, Rudder, Elevator.**

These cards are our own working flows for a PA-28-140, written for chair-flying. They are not a substitute for the POH, the airplane's checklist or a flight instructor. Every airplane is different, even of the same model: check each step and number against your POH and go through the cards with your CFI before you use them.

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