

Cessna 170 Manuever Guide

Engine Starting

Setup: Follow the checklist

Procedure: Once the engine is started, Apply Carb heat, Power at 800 RPM for 2 minutes, Power at 1000 RPM for 2 minutes, then power as normal.

Taxi

If you are hard over, you are going to have to use opposite rudder, brake, and throttle to straighten out the airplane.

“Taxiing is facilitated using a steerable tailwheel which operates with the rudder. The tailwheel is steerable through approximately 66° to either side of the straight rearward trailing position and automatically becomes full swiveling when turned to a greater angle. The airplane may be thus turned around its own length, if desired, yet if fully steerable while taxiing. By using the steerable tailwheel and by keeping the heels on the floor, excessive heat and unnecessary wear on the brakes can be avoided. The heels on the floor precaution applies also to take-off and landing procedure.”
(Owner’s Pg. 21)

Normal Takeoff

TAKEOFF FLOW: Radio call, Fuel pump ON, Mixture, RICH, Carb Heat OFF, trim SET, check left, check right, Heels on the floor, taxi onto the runway

Yoke back, Active on the pedals and get the plane rolling down the centerline (WIND: if there is any wind, aileron into the wind) Throttle slowly to full, heels on the floor, active on the pedals. CALL OUTS “Engine in the green, airspeed alive” After 3-4 seconds slight forward pressure on the yoke to lift the tail.

Look at the end of the runway, active on the pedals. RIGHT pedal makes the nose go RIGHT, LEFT pedal makes the nose go LEFT.

Airspeed 60 mph, pull back on the yoke, climb out at 75 mph. Climb to 500 AGL make the turn to crosswind, climb to 750 ft AGL and enter the downwind, throttle to 1800 rpm for an 80 mph downwind.

Maneuvering During Slow Flight

Setup: Clearing turns, Fuel pump ON, Mixture RICH, Carb heat OFF, Fuel lever BOTH

Procedure: Power 1500 RPM, Carb heat ON, as the plane slows, 1st notch of flaps (80 mph), 2nd notch of flaps (75mph), 3rd notch of flaps (70 mph), Power to 1800 RPM, hold 60 mph.

Recovery: Power FULL, Carb heat OFF, remove 3rd notch of flaps. As speed increases, remove the 2nd notch of flaps, remove 1st notch of flaps, climb back to original altitude and heading.

Power-Off Stalls

Setup: Clearing turns, Fuel pump ON, Mixture RICH, Carb heat OFF, Fuel lever BOTH

Procedure: Power 1500 RPM, Carb heat ON, as the plane slows, 1st notch of flaps (80 mph), 2nd notch of flaps (75mph), 3rd notch of flaps (70 mph), descend 200 ft, then hold altitude till buffet.

Recovery: Power FULL, Carb heat OFF, remove 3rd notch of flaps, as speed increases, remove the 2nd notch of flaps, remove 1st notch of flaps, climb back to original altitude and heading.

Power-On Stalls

Setup: Clearing turns, Fuel pump ON, Mixture RICH, Carb heat OFF, Fuel lever BOTH

Procedure: Power 1500 RPM, Carb heat ON, slow plane to 60 mph, Power FULL, pitch to takeoff pitch attitude, hold pitch till buffet. Max pitch 15°

Recovery: Power FULL, Carb heat OFF, Reduce pitch to slightly below horizon, allow speed to increase, maneuver back to original altitude and heading.

Steep Turns

Setup: Clearing turns, Fuel pump ON, Mixture RICH, Carb heat OFF, Fuel lever BOTH

Procedure: Power 2000 RPM, Entry speed 95 mph, bank to 45 degrees, once you are at 45 degrees add 100-200 RPM, focus on the sight picture of the cowling and the horizon.

Recovery: Reduce power back to 2000 RPM

Pattern Work

80 mph on downwind, ABEAM the numbers, LANDING FLOW: Fuel Pump ON, Mixture RICH, Carb heat ON, throttle 1500 rpm, 1st notch of flaps.

Aim to turn a 1 mile final at 500 feet.

75 mph on base, 2nd notch of flaps

60 mph over the numbers (three point landing)

65 mph over the numbers (two wheel landing)

Three point landings

Cross the numbers at 50 feet AGL and 60 mph, get in ground effect, active on the pedals, nose straight down the runway and aileron slightly into the wind, with slight opposite rudder.

POWER BACK, PULL BACK, slowly pull back power and the yoke at the same time. The objective is to stall the aircraft into the runway at 2-3 feet above the runway surface.

Two wheel landings

Cross the numbers at 50 feet AGL and 65-70 mph, get in ground effect, active on the pedals, nose straight down the runway and aileron slightly into the wind, with slight opposite rudder.

POWER STEADY, Slight forward pressure on the yoke. The objective is to get the two wheels on the runway surface then power back slowly and fly the tail to the ground.

Short-Field Takeoff and Maximum Performance Climb

“For unusually short field take-offs the application of full flaps will be of assistance, applied just before the airplane is ready to leave the ground. The flaps should not be released until an altitude of at least 100 feet above the highest obstacle has been obtained.” (Owner’s manual, Pg.20)

Go-Around/Rejected Landing

GO AROUND FLOW: Radio call, Carb heat OFF, Power FULL, Positive rate, Flaps up, one notch at a time, Pitch for 70 MPH

Turns around a point

Setup: Clearing turns, Fuel pump ON, Mixture RICH, Carb heat OFF, Fuel lever BOTH

Procedure: 95 mph (1800 rpm)

S-Turns

Setup: Clearing turns, Fuel pump ON, Mixture RICH, Carb heat OFF, Fuel lever BOTH

Procedure: 95 mph (1800 rpm)

Rectangular course

Setup: Clearing turns, Fuel pump ON, Mixture RICH, Carb heat OFF, Fuel lever BOTH

Procedure: 95 mph (1800 rpm)

Engine out

Setup: Clearing turns, Fuel pump ON, Mixture RICH, Carb heat OFF, Fuel lever BOTH

Touch and Go

TOUCH AND GO FLOW: Carb heat OFF, remove flaps, Carb heat OFF, Power FULL, Positive rate, Flaps up, one notch at a time, Pitch for 70 MPH

TIPS:

Braking: Brakes should really only be used to come to a full stop. DO NOT USE ANY BRAKES above 40 mph. Below 40 mph, light tapping to add additional control is acceptable.

When you commit to landing put the elevator in your lap.