Dean International Inc.
Commercial Pilot Maneuvers
PA-28-201 Arrow

Slow Flight

- ⟦ Perform two 90° clearing turns while maintaining altitude.
- ⟦ Complete pre-maneuver check list: Fuel selector proper tank, mixture rich, fuel pump on, seat belts fastened.
- ⟦ Reduce power to 15° MP and trim off to maintain altitude.
- ⟦ Below 129 knots, extend gear and check for 3 green lights while maintaining altitude and heading.
- ⟦ Below 103 knots, extend flaps 1st notch while maintaining altitude and heading, then proceed to the 2nd notch while maintaining altitude and heading. Finally extend the 3rd notch while maintaining altitude and heading.
- ⟦ Propeller full forward – below 100 kts.
- ⟦ Power to approximately 20".
- ⟦ Target speed should be 65 to 70 knots.
- ⟦ Control altitude with power and speed with pitch.

To Recover:

- ⟦ Apply full power.
- ⟦ Retract flaps to 10°.
- ⟦ Re tract landing gear and reduce angel of attack as necessary to maintain altitude.
- ⟦ Retract rest of flaps to 10°.
- ⟦ Fuel pump off.
- ⟦ Resume normal cruise.

Power Off Stall

- ⟦ Perform two 90° clearing turns while maintaining altitude.
- ⟦ Complete pre-maneuver check list: Fuel selector proper tank, mixture rich, fuel pump on, seat belts fastened.
- ⟦ Retract power to 15" MP and trim off to maintain altitude.
- ⟦ Below 129 knots, extend gear and check for 3 green lights while maintaining altitude and heading.
- ⟦ Below 103 knots, extend flaps 1st notch while maintaining altitude and heading, then proceed to the 2nd notch while maintaining altitude and heading. Finally extend the 3rd notch while maintaining altitude and heading.
- ⟦ Propeller full forward - below 100 kts.
- ⟦ Reduce power to idle, gradually increase the angle of attack (maintain right rudder) until some buffeting occurs.
- ⟦ At the first indication of the stall (First Buffet), recover by lowering the nose below the horizon and giving maximum power (right rudder) as airspeed increases.
- ⟦ Establish positive rate of climb, then retract flaps to 10°; landing gear and rest of flaps (in this sequence).
- ⟦ Fuel pump off.
- ⟦ Establish normal cruise power settings.

Power On Stall (Take-Off and Departure Stall)

- ⟦ Perform two 90° clearing turns while maintaining altitude.
- ⟦ Complete pre-maneuver checklist: Fuel selector proper tank, mixture rich, fuel pump on, seat belts fastened.
- ⟦ Reduce power to 15" MP and trim off to maintain altitude.
- ⟦ The speed should be gradually reduced to take-off speed (approximately 65 to 70 knots) while maintaining altitude: propeller full forward.
- ⟦ When take-off speed is achieved: add full power, increase the angle of attack (right rudder) until the stall occurs.
- ⟦ Recover by lowering the nose to the horizon, maintain coordination and then establish a positive rate of climb.
- ⟦ Fuel pump off.
- ⟦ Return to normal cruise when enough speed is gained.

Steep Turns

- ⟦ Perform two 90° clearing turns while maintaining altitude.
- ⟦ Power to 22" RPM 2400.
- ⟦ Complete the pre-maneuver checklist: Fuel selector proper tank, mixture rich, fuel pump on, seat belts fastened.
- ⟦ Smoothly roll into 50° of bank while maintaining altitude and coordination. Roll out approximately 25° before desired heading. Upon completion of one 360 go right away into the next 360 on the other side.
- ⟦ It is important to maintain altitude exactly, hold a constant bank during the turn and roll out on exactly the same heading as you rolled in. Use outside references.

Chandelle

- ⟦ Perform two 90° clearing turns while maintaining altitude.
- ⟦ Complete the pre-maneuver checklist: Fuel selector proper tank, mixture rich, fuel pump on, seat belts fastened.
- ⟦ Establish 2 reference points (90° and 180°)
- ⟦ Start the maneuver by rolling into a 30 bank gradually increase the angle of attack, the props forward and add full power (maintain coordination).
- ⟦ When the 90° reference point is reached hold the pitch constant and gradually roll out only after passing the 90° point so that 180° point is reached with the wings level; hold this altitude momentarily, then release the pressure on the elevator so the airplane returns to cruise flight . Reduce power settings to normal cruise.

Note: First half of the maneuver should be: constant bank (no greater than 30°) and changing pitch. **Be careful not to over bank**. Second half should be: constant pitch, changing bank, (Roll Out) speed to finish should be 5 to 10 knots above stall.

Lazy Eight

- ⟦ Perform two 90° clearing turns while maintaining altitude.
- ⟦ Mixture normal, prop 2300 RPM, throttle 22" MP.
- ⟦ Enter at Va.
- ⟦ Perform Lazy Eight as described in Operating Procedures for Cessna 172.
- ⟦ Power should be adjusted slightly for conditions to maintain an average altitude.

Eight on Pylons

- Before starting this maneuver calculate the pivotal altitude applicable for the PA 28-201 and show how it is accomplished –KTAS squared divided by 11.5 knots or 15 mph.
- Perform two 90° clearing turns while maintaining altitude.
- Complete pre-maneuver checklist: Fuel selector proper tank, mixture rich, fuel pump on, seat belts fastened.
- Determine wind direction and select 2 pylons which are located perpendicular to the wind.
- Select the appropriate pivotal altitude depending on the aircraft true airspeed.
- Start the maneuver by flying downwind between the pylons at 45° angle of entry.
- Reach to the first pylon and roll into a coordinated medium to steep bank so the airplanes, lateral axis pivots on the pylons.
- Since the airplane is turning around the pylon there will be a point where it is going to face the wind (upwind side of the maneuver). At this point, the ground speed is going to decrease which is evident by observing the pylon moving ahead of the reference point on the airplane: this needs to be corrected by lowering the nose and decreasing bank and for instance, building up more speed to "catch" the pylon.
- When the airplane is located between the pylons at 45° angle, the other pylon should be the target by flying momentarily straight and level until the airplane is exactly abeam.
- Since the increasing so the pylon appears to be moving behind the airplane; this needs to be corrected by increasing the angle of attack and increasing bank to decrease ground speed, so the pylon "catches" the airplane.