

POWER-OFF STALLS

OBJECTIVE

To teach the multi engine student pilot the knowledge of the elements related to power-off stalls.

COMPLETION STANDARDS

1. Selects an entry altitude that will allow the task to be completed no lower than 3,000 feet (920 meters) AGL.
2. Establishes a stabilized descent in the approach or landing configuration, as specified by the examiner.
3. Transitions smoothly from the approach or landing attitude to a pitch attitude that will induce a stall.
4. Maintains a specified heading, $\pm 10^\circ$, in straight flight; maintains a specified angle of bank not to exceed 20° ,
Private - $\pm 10^\circ$, in turning flight, while inducing the stall.
Commercial - $\pm 5^\circ$, in turning flight, while inducing the stall.
5. Recognizes and recovers promptly after the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
6. Retracts the flaps to the recommended setting; retracts the landing gear, if retractable, after a positive rate of climb is established;
7. Accelerates to V_X or V_Y speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

DESCRIPTION

The airplane is stabilized during entry at the airspeed, configuration, and power setting appropriate for landing approach. The pitch attitude is then raised that will induce a full stall. A recovery is initiated promptly after the full stall.

PROCEDURE

1. Clear the area. Begin the maneuver at an altitude where you will always be at least 3000 feet AGL.
2. Compete clearing turns.
3. Cowl flaps as required.
4. Apply the carburetor heat if required.
5. Adjust the mixture for the anticipation of full power.

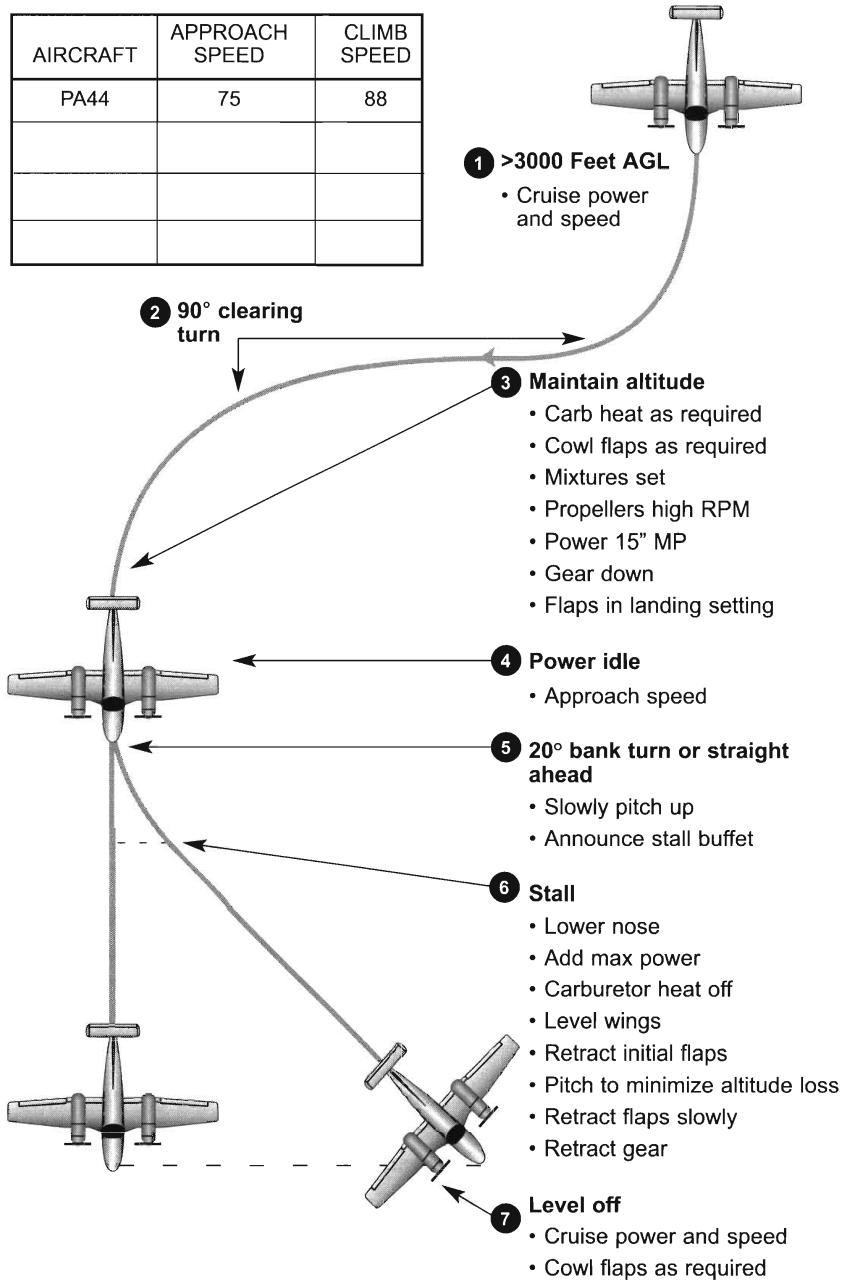
6. Propellers to high RPM.
7. Reduce power to 15" MP.
8. Maintain heading and altitude while slowing to approach speed.
9. Once airspeed is in the flap operating range, lower flaps and landing gear to the landing setting (or as directed).
10. Reduce power to idle and establish glide at final approach speed.
11. For turning stalls, establish a 20° bank in either direction.
12. Continue increasing the pitch attitude, announcing any buffeting, until a full stall occurs.
13. Initiate recovery by lowering nose and simultaneously applying full power while using coordinated aileron and rudder to level the wings.
14. Carburetor heat off.
15. Adjust pitch to minimize altitude loss.
16. Retract flaps as recommended in the POH/AFM.
17. Once a positive recovery is assured, slowly raise flaps, landing gear and accelerate to cruise speed.
18. Cowl flaps as required.

References

- Private Pilot Practical Test Standards FAA-S-8081-14A, pg. 2-24.*
Commercial Pilot Practical Test Standards FAA-S-8081-12B, pg. 2-26.
Airplane Flying Handbook FAA-H-8083-3, pg. 4-3, 4-8, 12-26.
Stall and Spin Awareness Training AC 61-67.
Pilot Operating Handbook/Approved Flight Manual.

POWER-OFF STALLS

AIRCRAFT	APPROACH SPEED	CLIMB SPEED
PA44	75	88



Limitations — Completes task above 3,000 Feet AGL

Maintains heading $\pm 10^\circ$ • Maintains bank angle Private $\pm 10^\circ$ - Commercial $\pm 5^\circ$

POWER-ON STALLS

OBJECTIVE

To teach the multi engine student pilot the knowledge of the elements related to power-on stalls.

COMPLETION STANDARDS

1. Selects an entry altitude that will allow the task to be completed no lower than 3,000 feet (920 meters) AGL.
2. Establishes the takeoff or departure configuration. Sets power to no less than 65 percent available power.
3. Transitions smoothly from the takeoff or departure attitude to a pitch attitude that will induce a stall.
4. Maintains a specified heading,
Private - $\pm 10^\circ$, in straight flight;
Commercial - $\pm 5^\circ$, in straight flight;
maintains a specified angle of bank not to exceed 20° , $\pm 10^\circ$, in turning flight, while inducing the stall.
5. Recognizes and recovers promptly after the stall occurs by simultaneously reducing the angle of attack, increasing power to maximum allowable, and leveling the wings to return to a straight-and-level flight attitude with a minimum loss of altitude appropriate for the airplane.
6. Retracts flaps to the recommended setting; retracts the landing gear, if retractable, after a positive rate of climb is established.
7. Accelerates to V_X or V_Y speed before the final flap retraction; returns to the altitude, heading, and airspeed specified by the examiner.

Note: In some high performance airplanes, the power may have to be reduced below the practical test standards guideline power setting to prevent excessively high pitch attitudes (greater than 30° nose up).

DESCRIPTION

The airplane is stabilized during entry at the airspeed, configuration, and power setting appropriate to takeoff and departure. The pitch attitude is then raised that will induce a full stall. Recovery is initiated promptly after the full stall.

PROCEDURE

1. Clear the area.
2. Complete clearing turns.

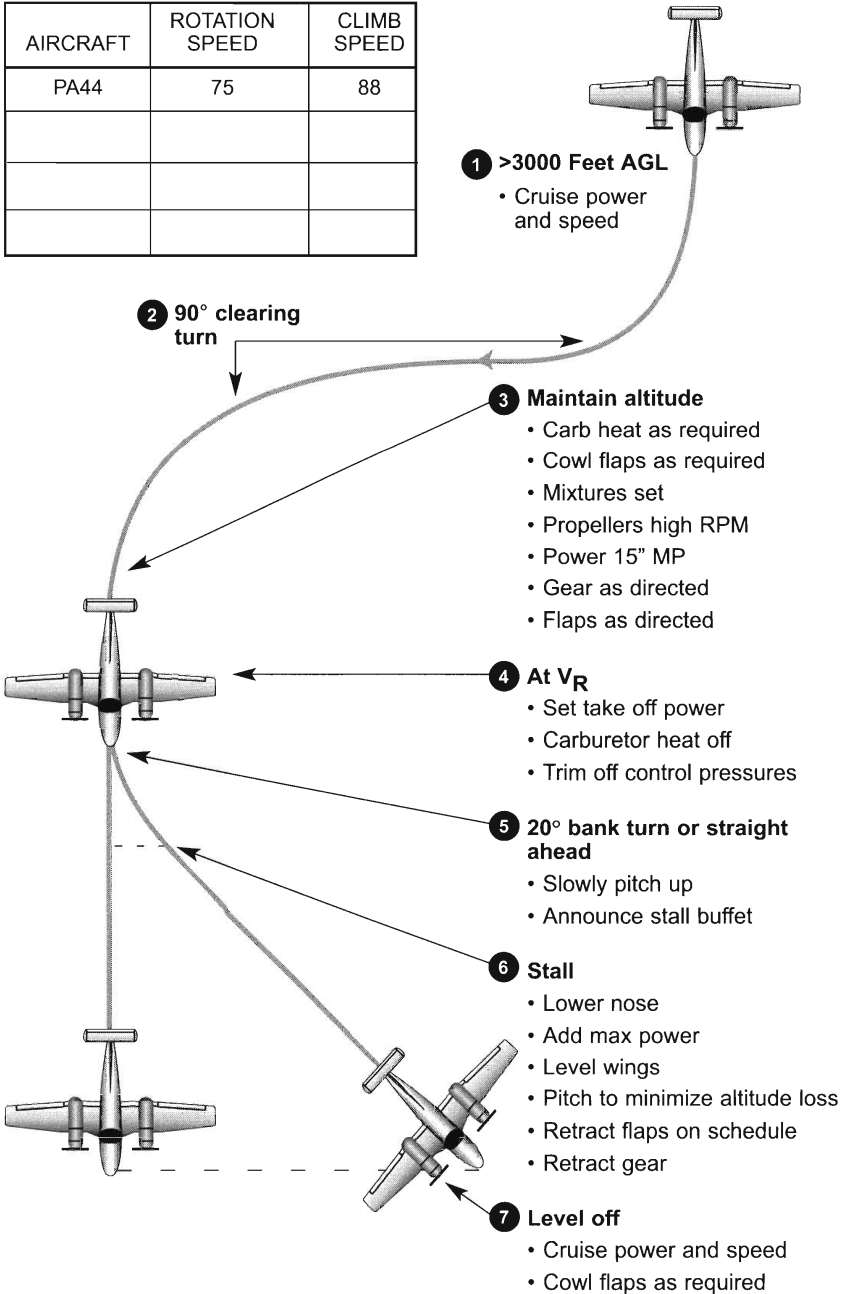
3. Cowl flaps as required.
4. Apply the carburetor heat if required.
5. Adjust the mixture for the anticipation of full power.
6. Propellers high RPM.
7. Reduce power to 15" MP.
8. Maintain heading and altitude while slowing to rotation speed.
9. Once airspeed is in the flap operating range, lower flaps to the takeoff setting and lower landing gear (or as directed).
10. Once rotation speed is obtained, simultaneously increase pitch to stall attitude and apply takeoff power or a power setting so as not to exceed excessively high pitch attitudes (30° or more nose up).
11. Trim aircraft.
12. Carburetor heat off.
13. For turning stalls, establish a 20° bank in either direction.
14. Continue increasing the pitch attitude, announcing any buffeting, until a full stall occurs.
15. Initiate recovery by lowering nose to decrease angle of attack while using coordinated aileron and rudder to level the wings.
16. Increase power or verify power is at maximum available.
17. Adjust pitch to minimize altitude loss.
18. Once a positive recovery is assured, slowly raise flaps, landing gear (if extended) and accelerate to cruise speed.

References

Private Pilot Practical Test Standards FAA-S-8081-14A, pg. 2-25
Commercial Pilot Practical Test Standards FAA-S-8081-12B, pg. 2-27.
Airplane Flying Handbook FAA-H-8083-3, pg. 4-8, 4-9, 12-26.
Stall and Spin Awareness Training AC 61-67.
Pilot Operating Handbook/Approved Flight Manual.

POWER-ON STALLS

AIRCRAFT	ROTATION SPEED	CLIMB SPEED
PA44	75	88



Limitations — Completes task above 3,000 Feet AGL

Maintains bank angle $\pm 10^\circ$ • Maintains heading Private $\pm 10^\circ$ - Commercial $\pm 5^\circ$