

Engine Failure At Altitude

Three Gs

Glide: Trim for best glide speed power-off descent.

Grass: Turn to your emergency landing site. Look for flat, brown area, figure out where the wind is coming from.

Gas: Do a flow check to troubleshoot fuel selector, mixture, throttle, magnetos, and fuel pump.

Checklist: If altitude permits, complete the Engine Failure Inflight and No-Restart checklists.

Forced Landing

If no restart, maintain best glide speed, and circle over your landing site to the left for better visibility.

Locate the High and Low key points. Aim to be 1000 ft AGL downwind abeam your desired touchdown point.

Extend flaps only when field can be reached.

Rectangular Course

1. Pre-maneuver flow
2. Clear the area
3. Maintain 600-1000 ft AGL
4. Low cruise power setting
5. Avoid overflying homes
6. Find a rectangular field
7. Note wind direction, position aircraft to start downwind with turns to the left.
8. Maintain ¼ mile from boundary of field, crab into the wind to stay on track.
9. Start turn abeam boundary of field.
10. Adjust for wind using bank:
 - a. Downwind to Crosswind: Steep bank 30°, more than 90° of turn.
 - b. Crosswind to Upwind: Medium to shallow bank 20, less than 90° of turn.
 - c. Upwind to Crosswind: Shallow to Medium bank 10-20°, less than 90° of turn.
 - d. Crosswind to Downwind: Medium to Steep Bank 20-30°, more than 90° of turn.

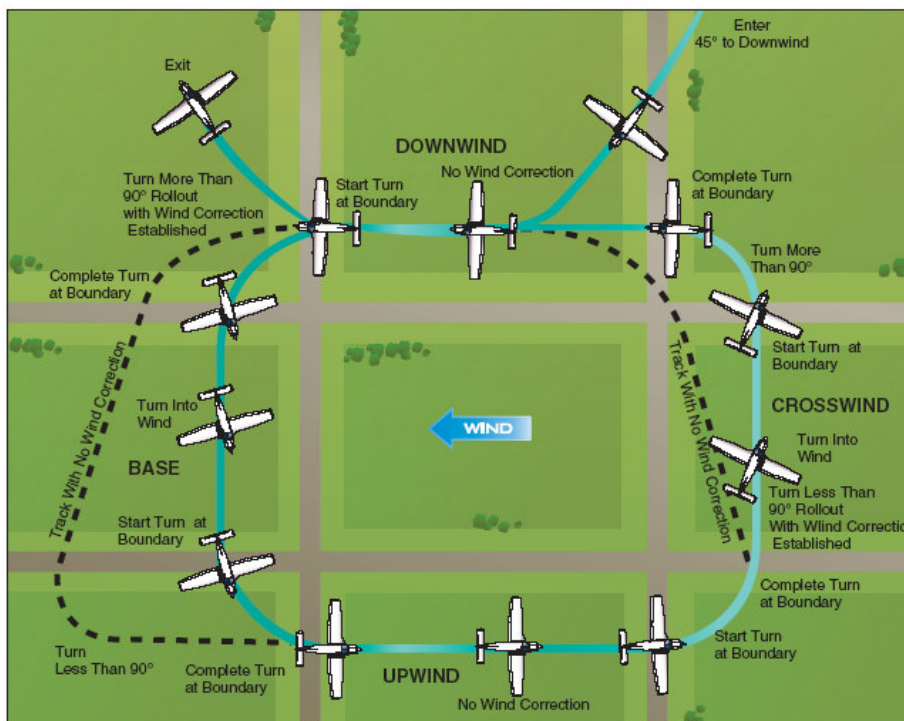


Figure 6-4. Rectangular course.

Turns Around a Point

1. Pre-maneuver flow.
2. Clear the area.
3. Maintain 600-1000 ft AGL.
4. Low cruise power setting.
5. Avoid overflying homes.
6. Find an intersection of two roads.
7. Note wind direction, position aircraft to start downwind with turns to the left.
8. Maintain $\frac{1}{4}$ mile from the point.
9. Start turn abeam the point
10. Adjust for wind using bank:
 - a. Downwind: Steep bank $\sim 30^\circ$.
 - b. Crosswind: Medium bank $\sim 20^\circ$.
 - c. Upwind: Shallow bank $\sim 10^\circ$

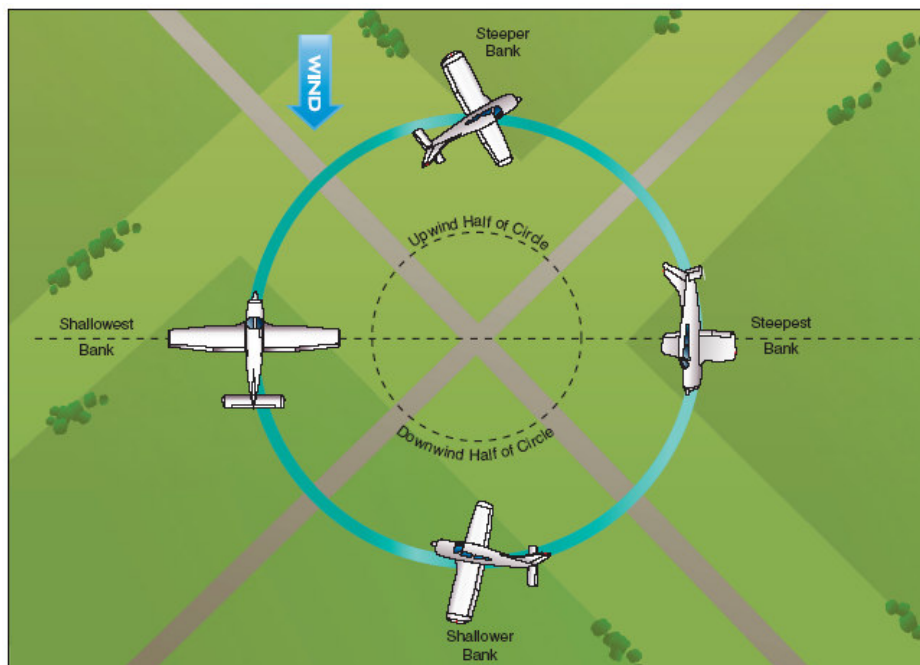


Figure 6-6. Turns around a point.

S-Turns Across a Road

1. Pre-maneuver flow.
2. Clear the area.
3. Maintain 600-1000 ft AGL.
4. Low cruise power setting.
5. Avoid overflying homes.
6. Find a straight road or subdivision that is perpendicular to the wind.
7. Position aircraft to start downwind with turns to the left.
8. Cross perpendicular over the road with wings level.
9. Start a steep bank (30°) when over the road.
10. Adjust for wind using bank:
 - a. Downwind: Steep bank $\sim 30^\circ$.
 - b. Crosswind: Medium bank $\sim 20^\circ$.
 - c. Upwind: Shallow bank $\sim 10^\circ$
11. Cross perpendicular over the road with wings level.
12. Start a turn in the opposite direction (to the right) using a shallow bank angle (10°) and adjust for wind with bank angle as above.
13. Cross perpendicular over the road with wings level.

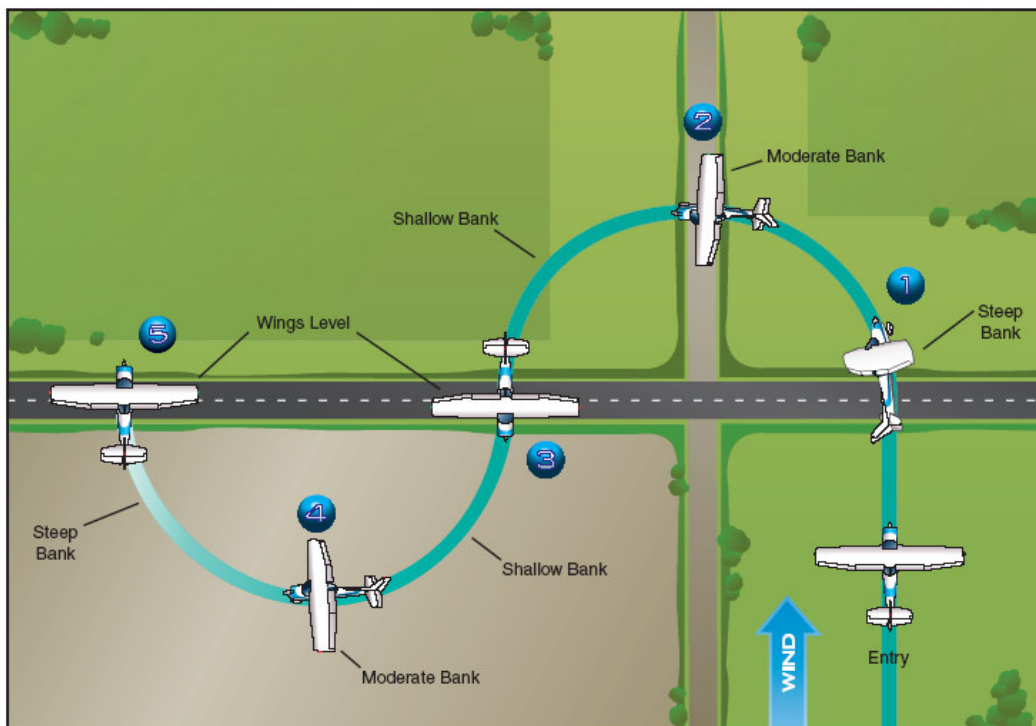


Figure 6-5. S-Turns.

Normal Takeoff

Flaps up
Centerline..... align/ crosscheck compass

Power advance smoothly to full
Directional control maintain with rudder
Instruments power 2350,
oil pressure, temperature, fuel flow, airspeed.

Vrrotate
Climb out pitch for Vy
Centerline maintain runway hdg
1000 ft AGL..... pitch for cruise
climb speed & complete climb flow and
checklist.

Crosswind Takeoff

Flaps up
Centerline align/ crosscheck compass
Aileron turn into the wind

Power advance smoothly to full
Directional control maintain with rudder
Instruments power 2350,
oil pressure, temperature, fuel flow, airspeed
Reduce aileron..... as airspeed increases

Vr rotate
Airspeed pitch for Vy
Centerlinemaintain, crab into the wind
1000 ft AGL..... pitch for cruise
climb speed & complete climb flow and
checklist.

Go Around (C172S)

CRAM, CLIMB, CLEAN, CALL

Decide early 200ft/Stabilized
Power full in
Pitch stabilize and pitch for climb attitude
Flaps 20°
Positive rate of climb and 60kts.....flaps 10°
Vy flaps up
Go-Around..... announce

Remember: Fly the airplane first! Then communicate!

Forward Slip to Landing

- 1.Power idle
- 2.Aileron bank into the wind
- 3.Rudder add full opposite to start yaw
- 4.Elevator slightly forward
- 5.Control inputshold

Note: Pitch to maintain airspeed (airspeed indicator is going to be inaccurate, use sound and feel)

- 6.Recovery... simultaneously neutralize controls, relax elevator pressure.

Side Slip to Landing

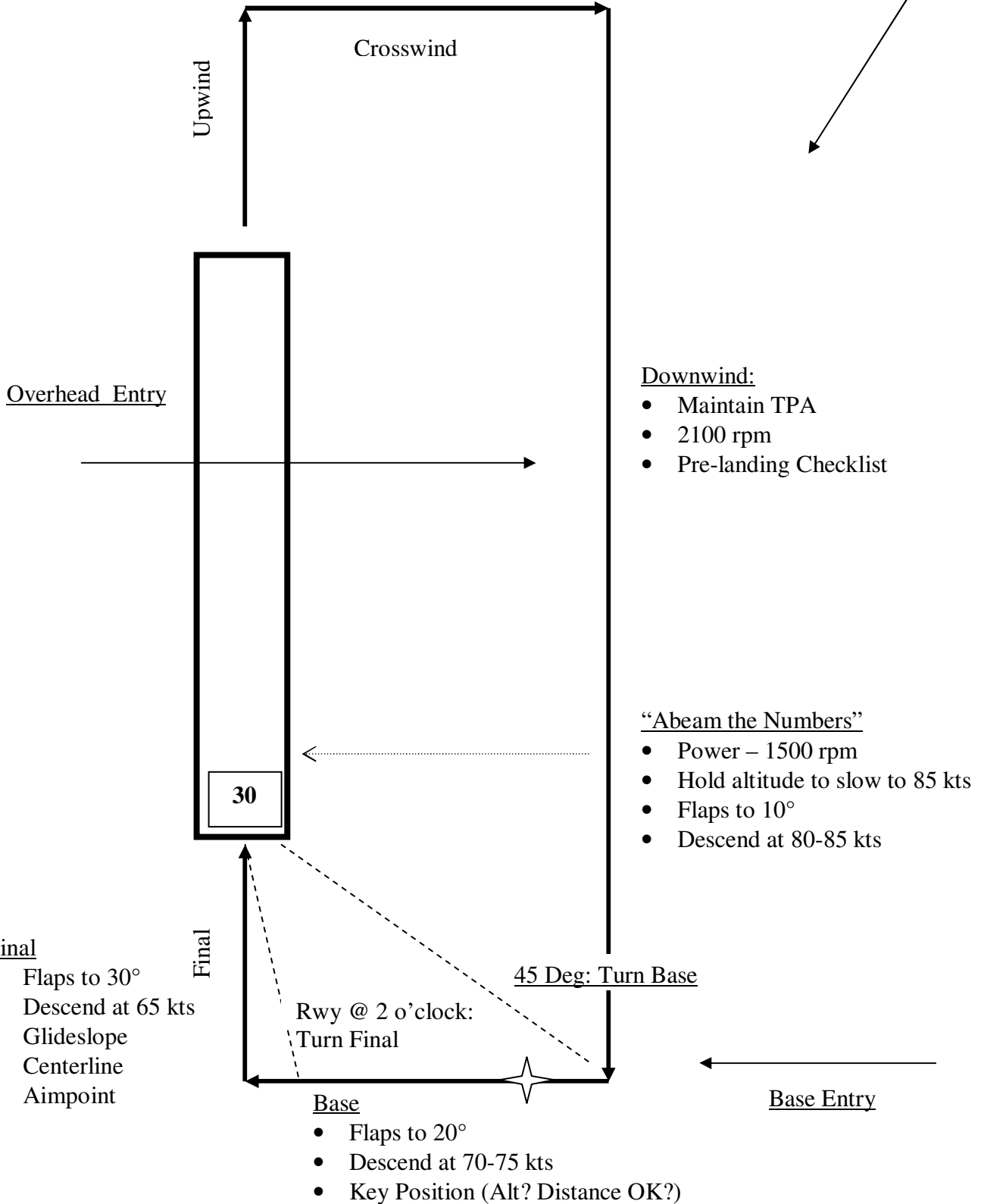
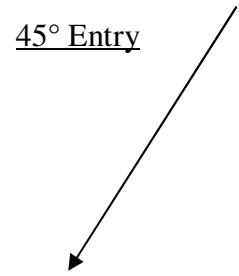
- 1.Power As required
- 2.Aileron bank to stay over centerline
- 3.Rudder to keep nose straight on centerline
- 4.Control inputshold

(Bank the airplane into the wind to cancel crosswind effect, and use rudder to keep the nose parallel to the centerline. Touchdown on upwind wheel first with no side load. Gently lower the downwind wheel and nose. Maintain directional control with rudder and aileron into the wind).

San Carlos (KSQL)
Traffic Patterns
(C172S)

ZZ
Upwind

- Climb at Vy until traffic pattern altitude (TPA)
- No Turns before 500 AGL



Normal and Crosswind Landing (C172)

Downwind

1. Power.....2100 rpm
2. Complete pre-landing flow & checklist

Abeam Numbers

1. Power 1500 rpm
2. Flaps 10° (Below 110 Kts)
3. Airspeed.....pitch for 80-85 Kts
4. Trimas needed

Base

1. Flaps 20°
2. Airspeed pitch for 70-75 Kts

Final Approach

1. Flaps 30° or as needed
2. Airspeedpitch for 65 Kts
3. Glideslope (red/white)..... maintain with power
4. Centerlinemaintain with aileron
5. Use rudder (feet) to keep nose parallel with centerline
6. Aim pointfixed on windshield
7. "200 ft/ Stabilized"

Roundout/ Flare

1. 10 to 20 ft off ground.....reduce power smoothly to idle
2. Eyesmiddle of runway
3. Elevator..... apply to stop descent and level off 1-2 ft above runway (hold back pressure)
4. As airplane slows in ground effect, hold the

airplane off the ground as long as possible and don't let it touch down. It will land when it's ready.

5. Eyesat end of runway
6. Rudder as needed to keep nose parallel with the centerline, and avoid landing with side load on main gear.
7. Aileron.....to stay over the centerline
8. Touchdown.....with nose up attitude similar to power-off stall attitude. Wheel must be straddling the centerline.

Ground Roll

1. Nose..... gently relax backpressure to lower the nose.
2. Stay on the centerline and maintain directional control with rudders.

Crosswind Landing

1. Use crab or sideslip to maintain centerline.
2. Use aileron into wind to stay over centerline and opposite rudder to keep nose parallel with centerline.
3. Touchdown on upwind wheel first with no side load or side-drift. Gently lower downwind wheel and nose.
4. Use rudder for directional control, add aileron into wind.

Normal and Crosswind Landing (C152)

Downwind

1. Power.....2100 rpm
2. Complete pre-landing flow & checklist

Abeam Numbers

1. Carb Heat On
2. Power 1500 rpm
3. Flaps 10° (Below 85 Kts)
4. Airspeed.....pitch for 75-80 Kts
5. Trimas needed

Base

1. Flaps 20°
2. Airspeed pitch for 65-70 Kts

Final Approach

1. Flaps 30° or as needed
2. Airspeedpitch for 55-60 Kts
3. Glideslope (red/white)... maintain with power
4. Centerlinemaintain with aileron
5. Use rudder (feet) to keep nose straight.
6. Aim pointfixed on windshield
7. "200 ft/ Stabilized"

Roundout/ Flare

1. 10 to 20 ft off ground.....reduce power smoothly to idle
2. Eyesmiddle of runway
3. Elevator..... apply to stop descent and level off 1-2 ft above runway (hold back pressure)

4. As airplane slows in ground effect, hold the airplane off the ground as long as possible and don't let it touch down. It will land when it's ready.
5. Eyesat end of runway
6. Rudder as needed to keep nose parallel with the centerline, and avoid landing with side load on main gear.
7. Aileron.....to stay over the centerline
8. Touchdown.....with nose up attitude similar to power-off stall attitude. Wheel must be straddling the centerline.

Ground Roll

1. Nose..... gently relax backpressure to lower the nose.
2. Stay on the centerline and maintain directional control with rudders.

Crosswind Landing

1. Use crab or sideslip to maintain centerline.
2. Use aileron into wind to stay over centerline and opposite rudder to keep nose parallel with centerline.
3. Touchdown on upwind wheel first with no side load or side-drift. Gently lower downwind wheel and nose.
4. Use rudder for directional control, add aileron into wind.

Normal and Crosswind Landing (Warrior II)

Downwind

1. Power.....2100 rpm
2. Complete pre-landing flow & checklist

Abeam Numbers

1. Power 1500 rpm
2. Flaps 10° (Below 103 Kts)
3. Airspeed.....pitch for 80-85 Kts
4. Trimas needed

Base

1. Flaps 25° (2nd Notch)
2. Airspeed pitch for 70-75 Kts

Final Approach

1. Flaps 40° or as needed
2. Airspeedpitch for 65 Kts
3. Glideslope (red/white)... maintain with power
4. Centerlinemaintain with aileron
5. Use rudder (feet) to keep nose straight.
6. Aim pointfixed on windshield
7. "200 ft/ Stabilized"

Roundout/ Flare

1. 10 to 20 ft off ground.....reduce power smoothly to idle
2. Eyesmiddle of runway
3. Elevator..... apply to stop descent and level off 1-2 ft above runway (hold back pressure)

4. As airplane slows in ground effect, hold the airplane off the ground as long as possible and don't let it touch down. It will land when it's ready.
5. Eyesat end of runway
6. Rudder as needed to keep nose parallel with the centerline, and avoid landing with side load on main gear.
7. Aileron.....to stay over the centerline
8. Touchdown.....with nose up attitude similar to power-off stall attitude. Wheel must be straddling the centerline.

Ground Roll

1. Nose..... gently relax backpressure to lower the nose.
2. Stay on the centerline and maintain directional control with rudders.

Crosswind Landing

1. Use crab or sideslip to maintain centerline.
2. Use aileron into wind to stay over centerline and opposite rudder to keep nose parallel with centerline.
3. Touchdown on upwind wheel first with no side load or side-drift. Gently lower downwind wheel and nose.
4. Use rudder for directional control, add aileron into wind.