

but full flaps are not used until established on the final approach. The angle of bank is varied as needed throughout the pattern to correct for wind conditions and to align the airplane with the final approach. The turn-to-final should be completed at a minimum altitude of 300 feet above the terrain.

Common errors in the performance of power-off accuracy approaches are:

- Downwind leg is too far from the runway/landing area
- Overextension of downwind leg resulting from a tailwind
- Inadequate compensation for wind drift on base leg
- Skidding turns in an effort to increase gliding distance
- Failure to lower landing gear in retractable gear airplanes
- Attempting to “stretch” the glide during an undershoot
- Premature flap extension/landing gear extension
- Use of throttle to increase the glide instead of merely clearing the engine
- Forcing the airplane onto the runway in order to avoid overshooting the designated landing spot

Emergency Approaches and Landings (Simulated)

During dual training flights, the instructor should give simulated emergency landings by retarding the throttle and calling “simulated emergency landing.” The objective of these simulated emergency landings is to develop a pilot’s accuracy, judgment, planning, procedures, and confidence when little or no power is available. A simulated emergency landing may be given with the airplane in any configuration. When the instructor calls “simulated emergency landing,” immediately establish a glide attitude and ensure that the flaps and landing gear are in the proper configuration for the existing situation. When the proper glide speed is attained, the nose can then be lowered and the airplane trimmed to maintain that speed.

A constant gliding speed is maintained because variations of gliding speed nullify all attempts at accuracy in judgment of gliding distance and the landing spot. The many variables, such as altitude, obstruction, wind direction, landing direction, landing surface and gradient, and landing distance requirements of the airplane, determines the pattern and approach procedures to use.

Use any combination of normal gliding maneuvers, from wings level to spirals to eventually arrive at the normal key position at a normal traffic pattern altitude for the selected

landing area. From the key point on, the approach is a normal power-off approach. [Figure 8-29]

With the greater choice of fields afforded by higher altitudes, the inexperienced pilot may be inclined to delay making a decision, and with considerable altitude in which to maneuver, errors in maneuvering and estimation of glide distance may develop.

All pilots must learn to determine the wind direction and estimate its speed from the windsock at the airport, smoke from factories or houses, dust, brush fires, and windmills.

Once a field has been selected, a pilot should always be required to indicate the proposed landing area to the instructor. Normally, the pilot should be required to plan and fly a pattern for landing on the field first elected until the instructor terminates the simulated emergency landing. This provides the instructor an opportunity to explain and correct any errors; it also gives the pilot an opportunity to see the results of the errors. However, if the pilot realizes during the approach that a poor field has been selected—one that would obviously result in disaster if a landing were to be made—and there is a more advantageous field within gliding distance, a change to the better field should be permitted. The hazards involved in these last-minute decisions, such as excessive maneuvering at very low altitudes, must be thoroughly explained by the instructor.

Instructors must stress slipping the airplane, using flaps, varying the position of the base leg, and varying the turn onto final approach as ways of correcting for misjudgment of altitude and glide angle.

Eagerness to get down is one of the most common faults of inexperienced pilots during simulated emergency landings. They forget about speed and arrive at the edge of the field with too much speed to permit a safe landing. Too much speed is just as dangerous as too little; it results in excessive floating and overshooting the desired landing spot. Instructors must stress during their instruction that pilots cannot dive at a field and expect to land on it.

During all simulated emergency landings, keep the engine warm and cleared. During a simulated emergency landing, either the instructor or the pilot should have complete control of the throttle. There must be no doubt as to who has control since many near accidents have occurred from such misunderstandings.

Every simulated emergency landing approach is terminated as soon as it can be determined whether a safe landing could have been made. In no case should it be continued to a point