

STEEP SPIRAL

Maneuver Classification:

The Steep Spiral is classified as a “PERFORMANCE MANEUVER” in Practical Test Standards. It is NOT an emergency maneuver.

Maneuver description and analysis.

An altitude of at least 4,500 feet AGL should be established to allow maneuver completion at 1,500 feet AGL.

The maneuver is commenced from above a chosen ground reference point, and the power is brought to idle. A bank of 60 degrees may be established and a pitch down attitude of approximately 7 to 10 degrees is set. Some left rudder is required if the maneuver is being performed in a single engine airplane turning left. Three complete turns will be made.

The Airplane Flying Handbook requires “GLIDE SPEED” NOT BEST GLIDE SPEED. Best glide speed is well below stalling speed at 60 degrees angle of bank which is the maximum allowed in this maneuver.

A safe speed in a typical light airplane is about 90 KIAS – see “STEEP SPIRAL AERODYNAMIC FORCES” analysis.

Little or no variation in bank or pitch is required for a stable maneuver unless there is significant wind. As with any other maneuver to a ground reference, bank may be varied to maintain position i.e. radius around the reference point, and pitch attitude to maintain the “glide speed”.

The engine should be cleared once per turn generally passing through the initial entry heading.

Recovery is initiated upon completion of the third turn by rolling wings level establishing a level flight pitch attitude and resuming normal a power setting.

[Attachement #1:](#)

[Attachement #2:](#)