

STALL SPEEDS

Aircraft stall speeds are a function of gross weight, flap position, and engine power setting for unaccelerated stalls. In addition, turning flight adds effective weight as a function of bank angle (i.e. 60° bank while maintaining level flight equals twice the effective gross weight). Stalls should be conducted from minimum to maximum weights, three flap positions, and appropriate power settings (idle and T.O.).

These tests should be conducted at altitudes such that should a spin inadvertently occur there is sufficient altitude for recovery. Three thousand feet AGL is recommended. As the aircraft is decelerated slowly, altitude should be maintained and notes made as to what speed the stall warnings are initially felt and when the aircraft fully stalls. Sufficient stalls should be conducted to define the repeatability at any one condition, and at three or four weights such that a line can be drawn thru the speed points to form a line for cruise and landing configuration.

Stalls should cover both the cruise configuration and the landing configuration with the gear and flaps in the full down position. Intermediate flaps would be the final data to obtain. **Be sure to note the altitude lost on each stall** so that the Note can be filled in on your “Stall Speeds (Owners)” chart.

Once your stall speed lines are defined, the values can be corrected for bank angle by using the chart for bank angle effects. The chart is used by entering at the gross weight, moving vertically up the chart until intersecting the appropriate line, then horizontally right to the reference line, then following the line until reaching the degree of bank desired then horizontally again to the right scale.

Stall Speed Chart for _____

