OPTIMIZING PRECISION: AN AOA INDICATOR BEATS AN ASI EVERY TIME

As we learned pretty much on our first day in ground school, angle of attack (AoA) is the angle formed by the wing's chord line relative to the wind and the final arbiter of airspeed control. But the vast majority of general aviation airplanes aren't equipped with an AoA indicator. Instead, we learn to rely on the airspeed indicator (ASI) as a pitch indicator beyond the attitude indicator tick marks—with a caution that power changes can influence airspeed at a set altitude.

But remember your basic flight instruction and the definition of an aerodynamic stall: the angle of attack at which air flow across the upper wing becomes interrupted or disrupted. That stalled angle of attack remains constant—though with sufficient power one can pitch the airplane beyond the wing's critical AoA and continue to fly.

But if we reduce the power setting at that high AoA, what happens? Riiight...the bird stalls and the ground rushes up at you.

Advocates for improving aviation safety strongly urge all forms of pilots to consider installing an AOA as a way to help avoid those stall-related accidents that occur in airport patterns, on turning to final, and on climbout after takeoff. With good reason.

For more information on AoA and ideas on equipping your airplane with a suitable indicator, see our June 2011 issue.