



STEVE KROG

COMMENTARY / THE CLASSIC INSTRUCTOR



Fear Factor and Flying

Tips to gain comfort and confidence

BY STEVE KROG

I READ A STATEMENT the other day that really made me think not only about my primary training but also the student training we do here at Cub Air Flight. The statement read as follows: "A terrified student is no longer learning. They tend to 'lock up' and become an instructional safety risk. As an instructor we should always create and educate in a safe learning zone."

I've mentioned in the past that my initial flight instruction was not pleasant. In fact, it was terrifying. I was ready to give up flight training after the second lesson. Experiencing a multiple-turn spin without knowledge of or training in the maneuver was something I never wanted to experience again in my lifetime.

It took the convincing of an excellent CFI to get me back in the airplane, and I thank him every day for his patience and direction in getting me to where I am today. It took a lot of additional flight time to overcome the fear of flying. I made a vow to myself back then that if I was ever to go on and become a flight instructor, I would never do to a student what my first instructor did to me.

I'll admit, I was timid about performing stalls of any kind because of my terrifying experience. Even steep turns gave me a knot in my stomach. To overcome this fear, whenever I would go flying for

pleasure, I would challenge myself before the flight that I was not going to land without first doing several 360-degree steep turns in both directions and at least three power-off and power-on stalls.

Playing this mind game with myself helped me a great deal. Setting a goal on what I was going to do gave me a limit to shoot for. Once done, I could do almost anything else I wished to do before concluding the flight.

OVERCOMING FEAR

Fifty-plus years later, I live by the statement above, and I never intentionally try to scare a student. If a student is showing apprehension about performing a stall, I have a routine that I like to use to build comfort and confidence. First, we perform slow flight with shallow 10-degree turns left and right using the FAA definition of slow flight, which is approximately 10 mph above stall speed.

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Once that is accomplished, we slow the aircraft down so that the stall warning horn or light is activated intermittently. On a J-3 Cub the bottom half of the door is a great reference. If the door is beginning to come up a bit, pushed by the relative wind at a higher angle of attack, we're at the desired speed for slow flight on the edge of a stall.

After the slow flight exercise, I have the student set up for a power-off stall. As the angle of attack reaches that point, I have them tell me when they begin to feel the "burble" or partial stall of the wing, and then have them lower the nose for a few seconds and repeat the maneuver. After a half-dozen tries at this, the student's comfort level has improved significantly.

Now it's time to proceed to the full stall. At our flight school, all stalls are done to a full break. The so-called imminent stalls aren't really stalls at all, and they do not teach a student what to do and do confidently if a full stall occurs. I've had examiners tell me about having to take the controls during a checkride because the student didn't know how to do a full stall, and when it occurred, they had no idea how to recover from it.

Usually, the student will aggressively push the nose over when recovering from a full stall. It's a natural "fear" reaction. At this point I usually perform a full stall and show the student that it only



takes lowering the nose just below the horizon for the airplane to once again generate lift and be capable of flying without losing 1,000 feet of altitude or gaining excessive speed. Practicing this at least a

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half-dozen times builds the student's confidence and readies them to proceed to the next level.

With the student's confidence level increasing, we include left and right banking turns while performing the stall. When doing so, I have the student glance at the turn coordinator and apply rudder inputs as necessary to keep the ball centered while continuing with the full stall. By doing so, the aircraft will usually return to a wings-level attitude, assuming the aircraft is properly rigged, as the stall recovery is completed.

The next step in increasing confidence and decreasing fear is repeating the stall series but doing so with partial power of approximately 1800 rpm. The nose attitude is a bit steeper and the break slightly more abrupt. Keeping the ball centered while performing the stall allows for a predictable recovery. Because of the use of partial power, the break may be slightly sharper, but the recovery happens more quickly.

Full power-on stalls are next in the process of confidence building while lessening the fear factor. Primary training aircraft are usually 150 hp or less, so full power application is used. When performing the stall, power is reduced to approximately 1800 rpm and then the nose attitude is increased. As the airspeed diminishes to the normal indicated takeoff speed, the attitude is continually increased while smoothly applying full power. Here I call attention to the turn coordinator and have the student keep the ball centered. If they can do so, the aircraft will pitch downward when the stall and break occurs without dropping a wing. The airspeed increases rapidly to the point where the airplane is generating lift and can again maintain altitude in a matter of one to two seconds. While lowering the nose, the student will also relax the rudder input.

Performing a series of full power stalls following this procedure is a tremendous confidence builder for the student. The fear factor

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is lessened, and the student flies without the jittery nervousness that they've been harboring. It will probably take another session or even two before the student establishes enough confidence to fly and perform stalls without discomfort.

Another level of training and confidence building we do for and with our students is teaching spins, cross-controlled stalls, and hard secondary stalls. None of these maneuvers are required of private pilot candidates, but I'm a firm believer that by experiencing them, the pilot will be much more confident, relaxed, and safe.

I've told hundreds of students over the years that until you have experienced a spin from inside the airplane, you have no idea how you will react should a spin occur. You can read every book and article ever published about spins or watch YouTube videos all day long showing spins, but until experiencing one, you have no idea how you will truly act. If allowed to try a spin without the assistance of an instructor or someone who is competent in spins, the vast majority will apply control inputs exactly opposite of what is required to recover from a spin.

There are four inputs required to recover from a spin, all performed simultaneously. After entering a spin, reduce power to idle, return the ailerons and elevator to neutral, apply hard opposite rudder, and hold it until rotating stops. When rotation stops, the rudder should go to neutral, the ailerons should remain in the neutral position, and slight back-pressure should be applied to the elevator, taking the aircraft from a nose-down attitude back to a level flying attitude. Once level, smooth power application can be made to return to a level cruise flight attitude.

A good pilot should always be willing to learn and strive toward improving their skill levels. That's how we become safe pilots. Sadly, many pleasure pilots stop all forms of skill improvement practice or training except when undergoing the required flight review every two years.

Recently, I was involved in presenting at a local aviation safety gathering. When attendees were asked if they thought they could take and pass a current private pilot FAA checkride, most smiled and admitted they probably could but not within the maneuver tolerances required for the official checkride.

Just think about this, every airline, charter, or military pilot is required to undergo regular flight training to confirm and enhance flight skills. We as general aviation pleasure pilots should take personal responsibility to ensure we are flying safely and not endangering ourselves or anyone around us. *EAA*

Steve Krog, EAA 173799, has been flying for more than five decades and giving tailwheel instruction for nearly as long. In 2006, he launched Cub Air Flight, a flight training school using tailwheel aircraft for all primary training.