

## **STEVE KROG**

## **New Standards**

Could you pass a private pilot checkride today? BY STEVE KROG

**HOW LONG HAS IT BEEN** since you took — and passed — your private pilot (or sport pilot) checkride? Two years ago? Five, 10, 20 or more years ago? Could you pass a checkride now given today's requirements?

For years, if not decades, the checkride requirements for the private pilot certificate were fairly standard. Basic aerodynamics, weather, FAA regulations, and weight and balance were covered during the oral portion. The flight portion of the checkride involved performing various maneuvers, ground reference, and a couple of takeoffs and landings in different configurations. If the minimum requirements were met as outlined by the FAA Practical Test Standards, a certificate was issued.

It wasn't until the late 1980s that the FAA upped the ante a bit in the name of safety and required all active pilots, regardless of ratings held, to undergo a flight review every two years. This has certainly been helpful in achieving and maintaining a level of safety among all of us, especially among those of us who fly for recreation. It is not a "pass/fail" activity but rather a review.

Private pilot checkride requirements changed in June of 2016 when the FAA issued the new Airman Certification Standards (ACS) that are to be used by all examiners. This 107-page document stipulates how and what the examiner is to look for and satisfy on each checkride.

For example: When a student is asked to demonstrate a short-field landing, the examiner has a 37-item checklist to determine if the student thinks through and then performs the maneuver satisfactorily. The bottom line to meet the minimum requirements is this: Touch down smoothly at an appropriate airspeed; and touch down within the available runway, at or within 200 feet beyond the specified point, threshold markings or runway numbers, with no side drift, minimum float, and with the airplane's longitudinal axis aligned with and over the runway centerline. Do you, when doing some pleasure flying, ever practice a short-field landing? And, if so, could you meet the minimum requirements as stated above? It might be beneficial to attempt one or two in the near future to improve your proficiency.

Using the new ACS guidelines, examiners are required to use scenario-based simulated situations when conducting checkrides. I use several different designated examiners; all seem to be very thorough and fair. One of the scenarios used is in the performance of the cross-country phase of the checkride.



Today, with the many tools available to us, one might plan a medium cross-country flight by checking weather on television, or online, then punch in the destination airport on the iPad and launch. When was the last time you looked at a sectional chart, actually drew a pencil line, and followed along during the flight? It has become a lost art.

## Some of the maneuvers you may have been required to perform when you took your checkride may have undergone some changes.

The essentials for a student today require significantly more planning for the cross-country checkride flight. According to the outline in the Airman Certification Standards, there are 37 weather-related items that must be checked followed by 35 more items involving the actual flight planning. As a flight instructor, I'm not opposed to the detailed planning involved as it instills a base from which to build when the student becomes a certificated pilot. You may already be doing many of the countless required items listed without realizing it, as they have become second nature.







With the flight-planning satisfactorily completed and reviewed, the examiners I use generally begin with the cross-country portion of the checkride. How does the student arrange his or her map and planning sheet for easy access? What action does the student take to exit the traffic pattern and get established on course? Does the student note the actual takeoff time? Then the fun begins.

Generally, after the student has established the course line, leveled off at the desired altitude, and adjusted the power setting, the examiner will tell the student, "The weather has changed, and we need to fly to the nearest alternate airport. Where is it? What heading are you going to fly? How far away is it, and how long will it take you? Oh, and your cellphone and iPad are in the back so you'll have to make the calculations in your head."

If asked, could you perform those requested functions today?

Once the student has again satisfactorily demonstrated the ability to change course and calculate time and distance to the alternate airport, the second phase of the scenario is introduced. The examiner will quietly state via the intercom, "Your oil pressure is dropping, and the oil temperature is rising rapidly. What are you going to do?"

What would you do?

The correct action, provided the engine is still running smoothly, as expected by the examiner is to immediately turn to and proceed to the nearest airport maintaining your altitude. Do not touch the throttle. If the engine is still running, leave it alone. A running but sick engine will quit a lot sooner if power changes are attempted. Assume it is already trashed and concern yourself with preventing injury to you and any passengers, then you can take action to save the airplane. When you have determined that you can safely reach the airport, then and only then adjust the power and establish a rapid or emergency descent to landing. Hard slips, use of flaps, or a combination of both may be used to demonstrate the emergency descent. Again, there are 28 items the examiner is looking at when observing your emergency descent. All can be found in the Airman Certification Standards.

Recently, I had a student take (and pass) his private pilot checkride in a Piper Cherokee 140. Prior to the flight, the examiner had discussed all aspects of the actual flight with the student. However, when it came time for the "low oil, high oil temperature" scenario, the student casually looked over at the gauges and stated, "No, I don't have low oil pressure or a high oil temp." Both were in the green so he continued on his cross-country course. A minute later the examiner repeated his statement, and the student again checked and said everything was fine. Finally, the examiner stated very clearly that this was a "simulated" situation and asked the student to demonstrate his actions should this have been an actual occurrence. During the post-flight review, we all had a good laugh about this experience.

The ACS does not specify how much altitude needs to be lost when demonstrating an emergency descent. Here at the flight school we usually use 1,000 feet for practice. Recognize and recover promptly after a fully developed stall occurs.

Prior to the ACS, both power-on and power-off stalls could be demonstrated in either of two methods, depending on the request of the examiner — the imminent stall versus the full stall. The imminent stall was defined as when the buffet is first felt or recognized but before the full stall break occurs. There is no mention of imminent stalls in the new guidelines.

Most of us, when practicing stalls, pay little attention to heading and bank angle. Rather we establish a stall configuration, allow the full stall to occur, and then initiate a safe recovery. The next time you practice a stall or two, try holding your heading within 10 degrees.

Before the summer flying season arrives, take a few minutes, download the ACS, and scan through the various maneuvers and requirements. Then do a little practice flying.

Some of the maneuvers you may have been required to perform when you took your checkride may have undergone some changes. Many of you had to demonstrate an accelerated stall but these are no longer required. There are two types of stalls that are now required: the power-off and the power-on stall.

The ACS specifies the following steps for the power-off stall. Establish a stabilized descent in the approach or landing configuration. Transition smoothly to a pitch attitude that will induce a stall. Maintain a specified heading within 10 degrees, if in straight flight, and maintain a specified angle of bank not to exceed 20 degrees and staying within 10 degrees, if in turning flight, while inducing the stall. Recognize and recover promptly after a full stall has occurred.

The procedure for the power-on stall has also changed. Set power to no less than 65 percent available power. Transition smoothly from the takeoff and departure attitude to the pitch attitude that will induce a stall. Maintain specified heading, within 10 degrees, if in straight flight, and maintain a specified angle of bank not to exceed 20 degrees and staying within 10 degrees, if in turning flight, while inducing the stall. Spins, yet again, are not a required maneuver. Spin awareness is a requirement, however. I am from the old school of thought. How does one know how you will react should a spin occur if you've never been in a spin? One can talk about spins and watch spin videos all day, but if one accidentally experiences a spin, calm thought and input are usually not the first reaction. I make it a point for all my students to experience a spin or two from inside the airplane. Usually after one or two spin entries and recoveries, the student relaxes and can easily perform a safe entry and recovery with a minimal loss of altitude.

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The FAA Private Pilot – Airplane Airman Certification Standards can be downloaded by going to www.EAA.org/Extras.

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