



## When will I solo?

### *Answers to the age-old question*

*By: LeRoy Cook*

Most student pilots will eventually broach the subject to their flight instructor: "When am I going to be ready to go solo?" Sometimes it's expressed with the presumption that all is in readiness, at least in the student's mind. At other times, the student poses the question out of a gnawing fear that the first flight alone in the airplane might be imposed before he or she feels ready. In either case, there is a frequent misunderstanding that solo is somehow programmed to occur on a schedule, after a preset number of lessons.

The amount of flight time accrued before solo is entirely an individual matter, influenced by frequency of lessons and luck with weather. I have sent students to fly solo in six hours and in 40 hours--it all depends. There was once a tacit understanding that a student would solo after eight hours of dual, or else someone wasn't doing their job. In the days of Piper Cubs and Aeronca Champs, life was simpler, airspace was unembellished, and the pace of traffic slower. With only stick-and-rudder skills to be learned, eight hours was plenty of time. Not so today; either I'm not as good an instructor as I used to be, or there's more to teach. I tend to think it's the latter.

Whenever I'm asked the S-question, I give the simplest answer first: "When I'm no longer needed in the airplane, then I may as well leave." That said, I add some illumination, depending on the vibes I'm picking up from the tenor of the conversation. The opening statement was the bare-bones truth; when the certificated flight instructor is no longer necessary, the student is capable of, and should be, flying solo. To explain what CFIs are looking for, we'll describe how we judge this readiness to be turned loose.

I've had students misunderstand the fledging process to the point that they assume cross-country flying is begun without benefit of dual training. There will never, I assure them, be a time when they are left to fend entirely for themselves. Solo is simply a time of shared responsibility, when the instructor acts as final dispatch authority but the student is allowed to practice unaided. The benefits of solo are twofold: It builds confidence in the student's mind to support continued progress, and it is more efficient because the CFI cannot interrupt the student's train of thought by sharing pearls of wisdom from the right seat.

The goal of soloing is to prove, to the student and the rest of the flying world, that enough knowledge and skill have been implanted to allow command of the air. Before entering the next phase of training, when we'll be occupied with cross-country navigation, several hours of solo practice will be needed to polish basic flying technique--something that can deteriorate in an environment of longer trips.

## Proving you can

Evaluation is an integral part of teaching. My students know I like to lecture *ad nauseum*, but there comes a time when a CFI has to clam up and observe the student's self-initiated response to a problem. I can't solo an individual who is still waiting for me to prompt an action. One of the best indicators of forthcoming solo status is a go-around begun with no action on my part; it may have been the pilot's ineptitude that necessitated the go-around, but I know I won't have to worry about this student pranging the machine because of paralysis of the throttle hand. Acting correctly to try again shows he or she is solo material.

If there's a weakness we have as young instructors, it's demanding perfection from a beginning student. A looser tolerance can be accepted from a novice, as long as corrections are being made and there's sufficient room for error. Being five knots off the VY number wouldn't be ideal for a student preparing for the checkride, but a typical about-to-solo person has to be cut some slack, in expectation of improvement with practice. Safety is assured by maintaining margins and initiating timely corrections.

Skill development is best shown by consistent results. This is not to be confused with consistent procedures, which are simply the result of programming. Aviation is not a static business, and it's the pilot's job to handle whatever variables are tossed at him and make everything come out all right in the end. I want to see the airplane arrive in the designated acceptable touchdown zone on the correct airspeed, aligned and configured appropriately for a smooth transition to taxiing. The flare should be taking place at about the same height each time, with any ballooning tendency arrested before it gets out of hand, and the airplane held off the ground until it reaches that semi-stalled state that nosegears love. If I see this happen three times in a row, with a prior history of triple successes, I know this is a solo day.

Instructors never assume that any student is going to solo when he or she arrives for the next lesson. Everybody has a bad day once in a while, and if the individual happens to be off his game just when we might have expected he'd be ready for solo, we'll simply keep quiet and defer the solo until later. I've also learned not to push the weather; I only turn people loose for the first time when the winds are no factor, when ceiling and visibility are high and stable, and when precipitation is not threatening. There must be at least two hours of fuel left in the tanks and an extra hour of daylight remaining past the expected finishing time.

Communication must always be available, but it should not be strategic to the plan. By that I mean I won't talk to the student while he or she is in the air unless some unplanned event requires it. If a person is going to need my coaching to get the airplane back on the ground, I shouldn't be soloing him. Barring unforeseen circumstances, the routine has already been established. We are, after all, simply doing the same thing we've done repeatedly over the last several hours--trundling down the runway, lifting off into a climbout, and maneuvering around the pattern to wind up on a stable final. "Just keep doing what you've been doing," is my parting advice as I exit the airplane.

## So long, see ya later

Long goodbyes are stressful. Since we teach full-stop and taxi-back circuits at this stage, we'll be doing nothing unusual to raise the student's heart rate until I ask them to stop taxiing. I'll just say, "You're doing everything on your own. I'm not actually accomplishing anything but critiquing, so why don't you go out there and give me three takeoffs and landings by yourself?" While I'm talking, I'm unbuckling and opening the door. In the absence of strong protest or quaking distress, I'll add "I'll be right here if you need me."

After a quick endorsement of the student pilot certificate and logbook, I walk away without looking back. Yes, I've had students refuse to solo, and that's OK; sometimes they have to think it over and prepare for it mentally. If that's what they need, we'll try again another day.

Where do instructors go when the student is soloing? We all have established different habits, but mine is to remain reassuringly visible beside the taxiway or runway, strolling around only while the airplane is off in a distant part of the pattern. I want to see how smooth the takeoff and climb look, a precursor to the landing that will follow. Taking refuge in the control tower, with its great vantage point, used to be a good choice, but most towers are now sited in fortress-like locations, making them inaccessible. I intend to be available for a quick, calming consultation between landings, walking up to the wing to get a report and give a pat on the shoulder; your instructor might call you over a handheld radio, or simply give a thumbs-up as you taxi back for the next takeoff. The last landing is concluded with a long walk to the hangar while my airplane taxis past me, now in the hands of a newly created pilot.

And after solo, what? The first solo flight, despite all the hoopla and shirt defacement, is largely a mental exercise. Now that it's out of the way we can go right back to polishing skills and learning new things. Twice as much productive time can be achieved in a solo session, in my opinion, so I'll go out with the just-soloed individual for an hour of review, outlining the work to be done solo. Then, if the weather's good, two or three hours of solo practice can be done before we schedule a dual session that introduces advanced maneuvers.

The solo is the first rung on the ladder, but make no mistake about it--it is a major accomplishment. By soloing, you have proven that you are a pilot, not just a pupil. No one can come up there to help you get the airplane down; you're totally dependent on the skills you've brought with you. Your instructor will let you solo when you're ready, and not before.

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