ON SPINNING

BY

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My flying days don't extend back to the days when spins were required to get a private certificate, but the instructor who signed me off for my private practical test got her start in flying back in that era. She took her private check ride in a J-3 Cub. In fact, to hear her tell it, her instructor conspired with the FAA inspector to go up with her for an instructional flight without sharing with her the fact that it was her flight test. By doing this they bypassed her extreme state of nervousness and she passed just fine.

Part of the story, as I recall it, was that she was asked to do left and right spins and recoveries on a predetermined heading. These days, if a private applicant manages to get into a spin, he flunks the test. The only practical test these days that requires spins is the flight instructor airplane test, and spins can be waived on that one if there is a so-called spin endorsement in the applicant's logbook, stating that said applicant has received training in spin entries and spin recoveries, both left and right.

Back when I was giving an occasional CFI practical test, I always wanted to see the applicant get into and out of a spin. Many, let me repeat that, *many* times I'd find these individuals incapable of distinguishing a spin from a spiral. The spiral resembles a spin, but the wings are not thoroughly stalled, and the airplane is gaining speed right smartly and building up unhealthy "G" forces as the maneuver develops. In a nice stable spin, the bird comes down in a state similar to an autorotation in

a helicopter, except that the whole airplane, not just the rotor, is rotating. It comes down relatively slowly and does not gain airspeed. Another guy and I nursed a Cessna 150 up to nearly ten thousand feet one day, kicked it into a nice spin, and let 'er rip. I forget how many turns we did, but I remember the engine quit on us after a while. When we got tired of that, we relaxed back pressure on the stick and neutralized the rudders, and the plane came out of the spin, just as nice as you please.

Most of the spin demonstrations I saw on CFI tests were in Cessna 150s and 152s, aircraft that were extremely spin-resistant. That's why, I think, some of these budding instructors didn't know the difference between a spin and a spiral. Some of them had probably never seen a true spin before. I suspect that their instructors didn't know the difference either. That's why I never accepted the spin endorsement. I've been in too many inadvertent spins with students to think an instructor not thoroughly familiar with that condition of flight is a safe tutor of the art.

The Piper Tomahawk has good spin characteristics, as I discovered the first time I spun one. The placard said it was approved for spins (slow deceleration only), so I assumed that it must have normal entry and exit characteristics. Imagine my surprise, following a fairly well-developed spin of a couple of turns, when it failed to pop out of the spin after I neutralized the controls. Even the application of opposite rudder did little to mitigate our whirligig maneuver. I finally thought of pushing forward on the stick, and this effort was rewarded with success. It reminded me of the folly of attempting spins without at least a careful briefing from someone familiar with the aircraft type you're attempting to use for the maneuver.

Another unexpected spin adventure occurred in a Cessna 150 with a student I was training to be an instructor. This story probably illustrates how miscommunication can lead to disaster, rather than what a deadly spinner the little Cessna isn't.

Before we went up for the spin training flight, I asked my student whether he knew the procedure for spin recovery, and he said he did. So imagine my surprise when, following a 2-turn spin, he stomped opposite rudder and tried to shove the stick all the way forward. The result was a brisk foray into the world of negative "Gs," with cigarette ashes flying out of both ash trays and other detritus emerging from under the seats.

The problem, as it developed, was that I had asked him the wrong question. I should have asked him whether he had ever *done* a spin, not whether he knew *how* to do one. Come to find out, he had read in a Navy training manual the procedure for getting a T-6 advanced military trainer out of a spin. In that type, you evidently had to apply opposite rudder, then shove the stick all the way forward and say three Hail Marys while you waited for the beast to quit spinning. This guy had never actually done or recovered from a spin himself.

Then there was the Luscombe, which we all called the Mighty Can. The fuselage aft of the wings in this aircraft resembled a giant metal megaphone. The rumble of the tailwheel rolling along the taxiway was amplified until it made a sound that resembled that of a 50 gallon drum being rolled along the floor of a warehouse.

Anyway, The Can spun fairly nicely, and there was none of this nonsense about "slow deceleration" mentioned in the operating limitations. So we got to spin it over the top and out

the bottom, starting things off with a sort of a snap roll that fell very nicely into the vertical mode of a stable spin. My friend Pat had the temerity to apply full opposite aileron during one of these forays into the corners of the Can's flight envelope, and he discovered that the spin would flatten out until the nose was nearly horizontal, as long as you held the ailerons in like that. When you neutralized them, it fell back into a very respectable normal, nose-down spin.

The plane was a little nose-heavy, since somebody had replaced its original 65-horsepower engine with a 100-horsepower 0-200 engine from a Cessna 150. So it recovered quite easily, and nobody ever had a problem with Can spins.

The first spin I was ever in came on my second flying lesson. We had some extra altitude when it was time to go back to the barn, and my instructor thought he'd like to spin on down to a lower height. He pointed to the placard over the windshield, showing that spins were an approved maneuver in this airplane, and assured me that what he was about to do was perfectly safe.

I was seventeen years old and therefore invincible. I also figured that this fellow knew what he was doing, and that he wasn't going to risk his own neck; so the prospect of riding through a spin didn't disturb me in the slightest.

It was quite spectacular, watching the earth rise up in front of us and rotate around, as we were pushed back and slightly off to the sides of our seats. Some months later, when I was on solo status, I tried a few spins while I was out by myself, but I don't know whether these maneuvers were true spins or just steep spirals, since I didn't know the difference back in those days.

Since the Cessna 150 is so spin-resistant, it is often hesitant to enter a true, stable spin. Many of these little trainers have been bashed around so much that they are a little out of rig, and you'll often find that they spin nicely in one direction but not in the other. That's how we got that elongated spin going – We found a training plane that was very easy to spin in whatever direction we were using that day.

But often we'd try to spin and wouldn't be able to coax the little trainers into the maneuver without loading up the wings first, which was a no-no, according to the operating limitations listed in the handbook.

One example of a couple of excellent 150 spins stands out in my memory. A friend of my boss was an airline pilot for Delta. He stopped off to say hi to my boss, and then his wife was supposed to drive him over to Moissant to catch his flight out of there. My boss suggested that I fly him over in one of the school airplanes and save the wife a trip. I thought it was kinda cool to be going up with a four-striper.

He asked if he could fly the thing, since he hadn't been in a little bug smasher like this one in quite a few years. I put him in the pilot's seat and told him to have at it. He said he was running a little early, since he had left some time for the car trip over to the big airport, and he asked if we could fly around for a few minutes and play with the Cessna.

That was fine with me. I was curious to see what this bigtime pro could do with one of our little birdies. We got into a few stalls, and he asked if it would be okay to spin it. I told him to go right ahead, anticipating that he'd have as much trouble

getting this particular plane to spin as everyone else had. It was, for some reason extremely spin-resistant in both directions.

Imagine my surprise when he pulled it up into a fairly normal-looking stall, then kicked the rudder over and the machine entered the prettiest, cleanest, most stable spin I had ever seen. He let it rotate a couple or three times and recovered right on heading, lined up perfectly with a canal we were using for a reference. Then he climbed back up and did another one, this time in the opposite direction, with the same beautiful result.

I was truly in awe of his skill as an airman. I had to find out how he did these magnificent spins. I couldn't see anything out of the ordinary with his technique, but the results were truly astounding.

It's a guy thing. I was very hesitant to ask him how he had done that. After all, I was supposed to be the Cessna 150 expert, and he had said that he was way not current in the bird. We flew over to Moissant and landed. I was about to swallow my tongue, trying to figure out a way to ask him his secret without exposing my own ignorance.

I still hadn't figured out what to say when he opened the door and got out. Then he reached into the baggage compartment and hauled out his brain bag. The thing probably weighed fifty pounds. It must have contained every company manual, Airman's Information Manual, and all of the approach plates and enroute charts for the entire world.

So that's how I was spared the embarrassment of asking. Turns out that we had gotten the center of gravity back so far, with that monster brain bag in the back, that the plane spun the

way an airplane is supposed to spin. In subsequent years, I'd find stuff to put back there when we were going up for those kinds of activities in Cessna 150s and 152s. I used to carry around an electric portable typewriter to type up my pink slips, when I was an examiner. Putting that in the far rear area helped, and sometimes we'd find some books or other heavy items to stow back there. I'm here to tell you that a tail-heavy airplane definitely spins easier than a nose-heavy one.

So that's the story of some of my spinning experiences. If you want to try one out, grab yourself and instructor and go to it. Spins are fun, and if you should ever find yourself in an inadvertent spin, you'll be glad you can recognize it and deal with it. Been there, done that, got the T-shirt!