



“Never Again”, Up & Down

by Larry Bothe, 12/23/2007

I intended to leave for Chicago from my home base just north of Philadelphia at about 9:00 in the morning. The weather was basically clear, but with the typical summer forecast of a chance of thunderstorms after 2PM. And of course I would have a headwind on the way west so the trip was going to take a while in my Cessna 172. The plan was for me to drop my neighbor's 16-year old daughter, Lori, off in northern Indiana so she could visit her grandmother, and then I would continue on to attend my business conference in Chicago.

Somehow we just couldn't get going that day. By the time we finally got off it was nearly 2:00 in the afternoon; about the time I should have been leaving Indiana for the short second leg up to Meigs Field. The weather was still good as we left Collegeville, but a couple hours later out in western PA we started to encounter buildups. At first they were widely scattered so I pressed on. But the farther I went west the buildups became closer together, tops higher, and the clouds uglier-looking. Pretty soon I was doing some enthusiastic maneuvering to remain clear of the clouds. Then the inevitable happened; there was no place to go but into a cloud. I tried the time-honored 180° turn but I was too late; it was all closed up behind me.

I was a relatively new instrument pilot (this adventure occurred back in the late 70's) so I had little real-world IFR experience. But I knew this much: flying in building, dark, towering cumulous clouds is not a good plan. About the time I finished fumbling around with my charts and found the frequency for Center things really got bad. It started to rain very hard, the hardest I have ever seen in my entire flying career. Water ran into the plane seemingly everywhere. It was as if it had turned into a sieve. The view out the windscreen, through the water, was an ugly dark gray/green color that I had never seen before or since. The engine ran rough. I remembered reading an article by Richard Collins where he suggested that if a Skyhawk was ingesting enough water it might be necessary to turn on the carb heat, so I did that.

Then we started up. The VSI pegged at 2000fpm. We went from 8500 up 11,000 in the blink of an eye. The time was very short, but I remember it seemed like slow motion. I had time to think, “There is going to be hell to pay when this switches to a downdraft.” Then it switched and we were going down, like the bottom had fallen out or we were in a runaway elevator. The VSI abruptly changed to pegged at 2000fpm down. At least I knew from my instrument training that I should not worry about holding altitude; just keep the wings and pitch level, slow to maneuvering speed and let the altitude vary as the air currents carried the plane. I flew out of the downdraft at about 7000 feet. The whole bad encounter lasted less than 2 minutes. During that time I saw the VSI



pegged both ways, and changed altitude a total of 6500 feet. That's an average of over 3000fpm; pretty abrupt for a Skyhawk.

Somewhere in there, I don't really recall at what point, I was able to get in touch with ATC. I told them I was in trouble, they needed to make me IFR, and I asked what was the heading of the shortest distance out of that mess. I guess I sounded pretty scared because the first thing the controller asked me was if I wanted to declare an emergency. I distinctly recall squeaking back to him the words, "No, I'm trying to prevent one." After the usual identification routine he told me to turn north and I would be out in about 20 miles, with altitude at my discretion.

That 20-mile ride took around 10 minutes, but it was the longest 10 minutes of my life. Then suddenly we popped out into clear, bright sunshine, and just off to our right was the Franklin, PA airport. I asked Lori if she wanted to land (she had been stone-quiet through all of the ordeal) and she said yes. We landed and both had to run for the bathroom. Although it didn't occur to me at the time, I guess we were pretty close to wetting our pants out of fear.

I am very thankful for what didn't happen on this flight since it is probably the only reason we survived. In spite of my worst fears, we never had anything worse than moderate turbulence. Why there was no violent wind shear when we went abruptly from updraft to downdraft I will never know. Just luck, I guess. The plane remained controllable at all times. And there was no hail. Large hail can be very damaging, even to the point of breaking the windshield in a light plane. If that had happened I would have surely lost control.

Since that time I have never gotten myself into a thunderstorm situation again; once was more than enough. When I started to fly more IFR I bought a Stormscope for my 172. I have been a CFI for many years and I often tell part of this story to my instrument students. I want them to know that if they ever get into a cell they should keep the wings level and pitch for level flight. Don't worry about holding altitude, even if that is contrary to what ATC has assigned. Trying to maintain altitude could well cause either a stall or an overspeed and in-flight breakup. ATC helped me, but I waited way too long to contact them. Especially today with Center having weather overlaid on their radar, calling them at the first sign of build-ups along your route can get you a vector around the weather. That certainly would have worked on my case, with the edge of the convective activity only 20 miles to the north.

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