

Crosswind Landings

By: Brad Whitsitt (xwind.com)

Did you know? Crosswinds are the number one cause of weather related General Aviation accidents every year? The NTSB counted 2684 GA accidents that were weather related from 1995 through 2001. 25% were due to crosswinds. In fact, the top two, Crosswinds and Gusts make up 45% of weather related accidents. In comparison, Low Ceilings account for 7% and Icing just 2% of weather related accidents.

Crosswind accidents are almost never fatal, so they do not get much press. But these accidents are still traumatic and cost millions in repairs and lost revenue for flight schools. Some in the industry believe that only half of all crosswind accidents are reported. We all know stories of pilots who make trips through grass, mud, lights, storm drains, fences, etc. Many of us have made the trip ourselves after a failed crosswind landing. We have all watched crosswind landings and wondered how some pilots ever make it.

Why are there so many crosswind accidents? Here are some facts.

Low experience - Many pilots have very little crosswind experience. Flying the pattern in a crosswind is not hard. The hard part is that 5 second window where the aircraft must work with the Earth to land in a crosswind. The right things must be assertively done at the right time.

Look in your own logbook and count the times that you landed with over 10 knots of crosswind component. Now, multiply that by 5. This is the number of seconds of real crosswind experience you have in your flying career!

How can anyone be good at anything when they have only 2 minutes of experience? Most new private pilots are very lucky if they have 90 seconds of experience.

Low Currency – We all know that 3 takeoffs and landings are required every 90 days. But, there is no required currency for the more difficult crosswind landing. For many pilots, it has been a year since they had to land in a crosswind component over 10 knots.

Limited Testing – Most checkrides occur on good weather days. It is very unlikely that pilots must demonstrate landing with more than 10 knots of crosswind component. We all know how to talk about crosswinds on our checkride, but can we do it?

Even when getting a new aircraft checkout at the local FBO, how many do that on a windy day. We probably don't need to demonstrate crosswind skill there either. During flight reviews, we are likely to do that on a good weather day. Pilots can go a long way through the ratings and not demonstrate crosswind skill. It gets worse. When you get a jet job and take training in a multi-million dollar simulator, they assume you can land in a crosswind and that is not practiced much at all.

Hard to Practice – Even if you decide that you are going to get good at crosswinds, you must find the right weather. The wind must be strong but not too strong and other conditions can't interfere, such as rain, snow, or clouds. If you are going to practice on your own, the outcome must be successful, but you need to practice beyond your comfort zone in order to learn. Now, don't bend anything. What a challenge!

You can get an instructor. But, then you must schedule a time and you can't schedule the conditions. Even if you want to practice, it can be hard to match your schedule, the instructor's schedule and the weather's schedule.

If you get the right weather, look how long it takes to go around the airport to get 5 seconds of practice on each landing. Can you land 10 times in an hour? With an instructor, you can easily spend \$150 and not get 50 seconds worth of experience.

Instruction is Weak – Many flight instructors are not that good at crosswinds themselves. Many new instructors have only 350 hours when they start instructing. How much crosswind experience do they have? 3 minutes? How much crosswind experience do they have from the right seat? 1 minute? As a Chief Flight Instructor, I have heard some very poor crosswind technique offered to students by instructors. Instruction in the industry is weak. How many pilots continue to employ improper technique because they learned it from their instructor?

There is also little incentive for an instructor to risk their tickets to help entry level pilots get good at crosswinds. Give a student pilot the basics and let them figure out the rest on their own ticket. That is how it works.

I was told by an FAA examiner in Chicago that he fails 60% of private pilot applicants because they have no idea how to handle an airplane in a crosswind. Many examiners are not looking as hard at this issue. But, he believes that instruction in this area is weak. I heard him say that in his forum at Oshkosh in 2007.

Many pilots execute crosswind landings with wrong information. For example, if you believe that you need to “plant” the airplane at the highest possible speed in a crosswind, you may do this every time even though it does not work very well. It is surprising how many wrong concepts are used all the time.

Embarrassing – It is very hard for some pilots to admit that they really need help after 5 years of flying if they still have not tamed the crosswind landing. I just want to encourage you a little. How can you do something for only 2 minutes with weak instruction and no testing, that you last tried a year ago, and expect to be good at it? This is a hard thing to master.

Xwind, LLC has created a motion based simulator that places a pilot in a gusty crosswind forever with no risk. As a pilot, you can sit there in a cockpit that rolls, yaws, and moves laterally and you can achieve excellence in crosswind skill instead of just getting by. You will see results in the airplane the very next time you fly.

Become a professional! Check out the training centers at xwindsim.com and multiply your crosswind experience by 100!

Brad Whitsitt is an Electrical Engineer and Flight Instructor with over 4000 flight hours. Brad is also the president of Xwind, LLC, a company dedicated to crosswind landing skill excellence. For more information contact Brad at:

xwindsim.com, brad@xwindsim.com, (317) 501-0733.

For information about NTSB data visit: http://www.nts.gov/publicctn/A_Stat.htm