



FLYING LESSONS for May 3, 2018

FLYING LESSONS uses recent mishap reports to consider what *might* have contributed to accidents, so you can make better decisions if you face similar circumstances. In almost all cases design characteristics of a specific airplane have little direct bearing on the possible causes of aircraft accidents—but knowing how your airplane's systems respond can make the difference as a scenario unfolds. So apply these FLYING LESSONS to the specific airplane you fly. Verify all technical information before applying it to your aircraft or operation, with manufacturers' data and recommendations taking precedence. **You are pilot in command, and are ultimately responsible for the decisions you make.**

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This week's LESSONS:

My e-mail bag is e-overflowing, so let's go right to the reader's Debrief.

Comments? Questions? Let us learn from you, at mastery.flight.training@cox.net



IFR Operations for Non-Towered Airports

Tips to easily manage your clearance and release
[Click here for video...](#)

See <https://www.pilotworkshop.com/nto-ifr?ad-tracking=turner-nto-ops>

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Debrief: Readers write about recent FLYING LESSONS:

Reader Chris Ceplecha writes about the Cessna Citation/Cessna 150 collision discussed in [last week's LESSONS](#) (and the week before):

The airlines mandate responding to all TCAS TAs [traffic advisories] and RAs [resolution advisories, or directions for avoiding another airplane]. Granted, ADS-B is not TCAS or TCAD, but it is good data nonetheless. Why some pilot would want to silent these most important ADS-B cautions/warnings is beyond me. Furthermore, people offering "advice" should stay within their areas of expertise. A mechanic offering advice on how to fly is suspect at best. Maybe he is a pilot/CFI, but the A&P qualification by itself does not qualify as an expert on flight ops. I read statement like this and I am puzzled and concerned about the GA world.

Good point, Chris. I believe the mechanic meant well and was mainly concerned about pilot distraction close to the ground. The pilot who wrote had that same concern. It's reasonable for *anyone* to assume this is a good idea...until you consider that most midair collisions happen in the airport traffic area—something that apparently isn't publicized as well as it should be. Regardless of the source, we *all* need to evaluate advice and combine it with our knowledge of *why* we should or should not take it before deciding what to do.

See <http://www.mastery-flight-training.com/20180426-flying-lessons.pdf>

Reader Rick Baron adds:

Without knowing anything about the [NTSB preliminary] report my guess was that the Citation did not make the appropriate radio calls to this non-towered airport prior to landing. I wouldn't be surprised if they didn't even have the CTAF dialed in to hear the departing aircraft taking the runway. **This is not an uncommon occurrence.** As a GA [general aviation] pilot I feel this is beyond irresponsible on the part of many of these corporate pilots who feel they own the runways. I hope the entire legal system including the FAA and the NTSB come down hard on this sort of arrogant behavior which costs the lives of these two men. Ignorance and stupidity are no defense.

I commonly find business jet and turboprop pilots arriving and departing nontowered airports without radio calls on the Common Traffic Advisory Frequency (CTAF). I also frequently see them taking off and landing downwind when it suits their direction of flight. That was not the case in the collision that prompted this discussion.

I understand the workload involved in switching back and forth between CTAF and an air traffic control frequency when obtaining an IFR release and checking in once airborne while taking off, and getting clearance for a visual approach and canceling the IFR flight plan when landing. It's even more intense when flying as a single pilot, which is usually the case in turboprops and becoming more common in jets. That's still no excuse for not making those calls—it's a matter of workload management. I don't understand the many downwind departures and arrivals I see at nontowered airports, presumably to save two or three minutes it would take to fly a conventional takeoff or landing into the wind.

The guiding concept of collision avoidance in visual conditions is "see and avoid." For that reason, the pilots aboard the Cessna 150 shared responsibility for the collision that cost their lives—they were just as responsible for detecting and avoiding the jet visually as the Citation crew was for avoiding the Cessna.

The most effective way to avoid a collision is to:

- Scan *all* runways and approaches before taking off and landing;
- Make all recommended radio calls, and monitor for radio calls from others;
- Use, but don't rely upon, traffic detection systems, knowing their limitations as well as their used;
- Fly predictably, taking off and landing as closely into the wind as appropriate runway length and width allow, using established pattern procedures; and
- Never forget that the other aircraft may not be visible on your traffic display, and that at nontowered airports even a communications radio is not required and may not be installed or used in the other aircraft.

Lastly, remember that unless you're flying an airliner or a military aircraft, we are *all* part of "general aviation." Business jets are actually the most vibrant category of general aviation operation. When talking about the interface of business and personal aviation, it's not "us" against "them," it's "we" who need to work together to avoid conflicts and the threat of collision.

A reader who asks to remain anonymous sends this note in response to past *LESSONS* about "layered STCs":

I thought your [\[March 15 Debrief\] re multiple STCs](#) was very interesting. The following [accident at Monmouth County Airport](#) has remained in my memory because of so many issues. Although very poor pilot judgment was perhaps the last straw, this aircraft had a host of issues:

Several witnesses on the ground observed the airplane fly over runway 32, with the landing gear retracted, at an estimated altitude of 50 feet above the ground and at a much higher rate of speed than normal. The airplane was about one-third down the runway when the nose of the airplane pitched up and a section of the airplane separated. The airplane rolled and veered toward the right, away from the runway. The airplane impacted the ground and continued sliding and rolling as debris separated from the airplane. The airplane came to a stop inverted and against a snow

embankment on a taxiway near the pilot/owner's hangar.

The airplane was modified with a total of 22 Supplemental Type Certificates (STCs), including a Horton short field take-off and landing (STOL) kit, an Aviation Enterprises wingtip fuel tanks, and Aviation Enterprises winglets. The Aviation Enterprises STC included the addition of two, 3 foot long, 20 gallon fuel tanks that were attached to the outboard ends of the original wings. The winglet was then attached to the outboard end of each fuel tank.

The NTSB's investigation focused on whether the interface of the multiple STCs somehow created a condition that contributed to the inflight separation of wing components. As we discussed in March, there is no clear guidance on how to make the determination whether the combination of multiple modifications impacts the performance, load-carrying capability or structural integrity of an aircraft. The only rule in this regard is that it is the responsibility of the installer to determine whether a modification is affected by interaction with another modification.

See:

<http://www.mastery-flight-training.com/20180315-flying-lessons.pdf>

https://www.nts.gov/about/employment/_layouts/ntsb.aviation/brief2.aspx?ev_id=20100215X82210&ntsbno=ERA10FA140&akey=1

A reader who did not give his name responded to the [April 18 FLYING LESSONS](#) and the discussion of adjusting final approach airspeed for wind conditions:

If you've ever encountered wind shear [sic] during a landing you'll enjoy having a few extra knots.

See <http://www.mastery-flight-training.com/20180418-flying-lessons.pdf>

I replied: **I have, and that's what the half-the-gust-factor is for.**

The reader continued:

With all due respect, gusting is different than wind shear in that wind shear can change from a headwind to a tailwind and will not be noted in an ATIS/AWOS. For example, winds variable at 5 can rapidly go from a 5 kt headwind to a 5 kt tail wind, which is a 10 kt differential. If not prepared with a few extra knots on the landing one might find themselves a bit high with no lift remaining. Therefore, I'd be hesitant to criticize anyone who wants to carry a few extra kts to prevent such an occurrence.

Ok, I agree. Define "few" in this context.

My POH landing speed is 66 kts in my Piper Archer III. I now land at 70 kts. If gusting necessitates more I will add it but for gusts of 8-10 kts or less the 70 works out well. Also, this works well for any sudden change in wind direction not mentioned by the ATIS/AWOS or ATC.

I used to land at the POH of 66 kts but had a wind shear incident which caused me to literally drop out of the sky about 3 ft above the runway. No stall warning, nothing. After 1 solid bounce I initiated an immediate go around. ATC knew it was wind shear, even without me telling them, and vectored me to a different runway advising me of their knowledge of wind shear they'd recently noticed.

Wind shear upon landing is something I'm now always thinking about when the winds are variable. Gusts are more predictable as they may change direction somewhat but they don't change from headwind to tailwind in the blink of an eye.

Therefore I see no problem and do not consider anyone a bad pilot for adding a few extra kts. Springtime winds can be especially tricky for light GA aircraft. Reviewing headwind shifting to tailwind is time well spent.

Certainly four knots is a very prudent adjustment under such circumstances. What I was alluding to was the pilot who comes in 10 or 15 knots faster than "book" not so much as a deliberate choice, but because he/she has no real strategy at all. Thanks for the discussion!

Questions? Comments? Suggestions? Let us know, at mastery.flight.training@cox.net



NBAA

The National Business Aviation Association (NBAA) is now accepting nominations for the 2018 **NBAA Dr. Tony Kern Professionalism in Aviation Award**.

This award recognizes individual aviation professionals who have demonstrated outstanding professionalism and leadership in support of safety in business aviation by exhibiting these qualities:

- Vocational Excellence
- Professional Ethics
- Continuous Improvement
- Professional Engagement
- Professional Image
- Selflessness

Here's your chance to **recognize the pilot, mechanic, cabin crew, instructor, flight department manager or other aviation professional for her or his work**. This award is named for retired US Air Force B-1 Lancer pilot/safety officer and business aviation subject matter expert [Dr. Tony Kern](#) (who also edited my *Checklists and Compliance* book back in the day). [Here is a description of the award and how to nominate your fellow aviation professionals](#). I applaud NBAA for recognizing that "safety" is the outcome of **professionalism**.

See:

<https://www.convergentperformance.com/convergent-performers>

<https://www.nbaa.org/about/awards/kern-professionalism/>

Best Glide

The U.S. Federal Aviation Administration this week published an Aviation Safety brochure on [Best Glide Speed and Distance](#) in conjunction with the government/industry partnership General Aviation Joint Steering Committee ([GAJSC](#)). It's a good summation and could be a starting point for a discussion at your local pilot gathering, when training new pilots and as part of the ground portion of a Flight Review. The brochure briefly mentions the difference between Best Glide and Least Rate of Descent speed, but I feel this topic needs to be explored further—perhaps in an upcoming issue of *FLYING LESSONS Weekly*. That said, give [the latest FAA guidance](#) a look.

See:

https://www.faa.gov/news/safety_briefing/2018/media/SE_Topic_18-05.pdf

<http://www.gajsc.org/>

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