Thomas P. Turner's
Mastery of Flight™

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FLYING LESSONS for March 20, 2025

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 most 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 in your success as the 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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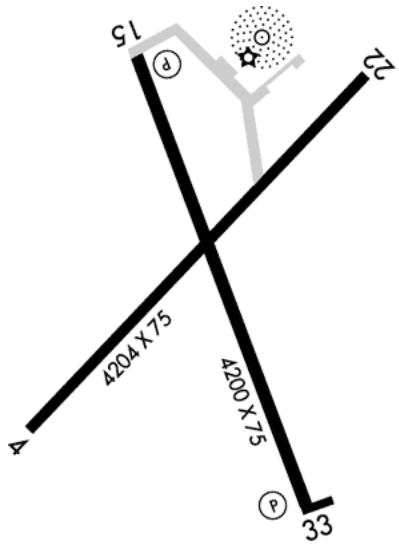
This week's LESSONS:

I'm going to give away a flight training secret. Or at least I'm going to give away a teachable-moment surprise I include in much of the training I provide.

About 20 miles east of Wichita, Kansas is the airport at El Dorado, Kansas ("El Dough-RAID-Oh," because we butcher Hispanic names in Kansas). KEQA is a non-towered country airport with very little traffic almost all the time. It has two almost identical 4200-foot (1280 meter) long by 75-foot (23 meter) wide runways set at almost right angles to one another…with neither directly aligned with the prevailing winds. The clone runways and typical lack of traffic create a great "classroom" for addressing two areas that can always stand practice: **crosswind landings** and **single-pilot workload management**.



In a typical Flight Review session out of one of the Wichita area airports, after some "airwork" maneuvers at altitude working our way east away from the Class C airspace, I direct the Pilot Receiving Instruction (PRI) to gather airport and weather information for KEQA and enter the VFR pattern for the runway most aligned with the current winds (adjusted only if another airplane is in the pattern and will still be there when we get close to the airport). We make a normal, full stop landing and follow that up with several circuits to full stops, taxi-backs and takeoffs.

Making all landings to a full stop vastly **reduces the risk of a gear collapse** mishap in the retractable gear airplanes in which I teach. Equally important, a full stop and taxi-back permits pausing to completely **reconfigure the airplane** and **reset the trim** for the next takeoff, repetitive training reinforcement of using the **Pretakeoff Briefing** technique to review your actions should you have engine or control issues, less-than-expected acceleration, trouble with directional control or any other abnormality on the ground, and options for recovery should an emergency develop shortly after takeoff. Few pilots outside of commercial operations, in my experience, make any **deliberate consideration of risks and emergency actions** just before taking off so that the decisions they make at zero airspeed are already made should an emergency occur. Full

stops and taxi-backs give instructors time to teach this technique and reenforce its use multiple times on a relatively short training flight.

But that's not the training secret.

After two or three times around the pattern to the runway most closely aligned with the wind, and a go-around from short final, I direct the pilot to switch to the other runway, consistent with any other traffic. We'll make two or three normal landings to a full stop in the Kansas crosswind.

That's the first emphasis topic: **crosswind takeoffs and landings**. El Dorado usually has a small crosswind component on the "best" runway and a near-maximum crosswind component on the other runway. It's a great place to train pilots.

Here's the "secret" *LESSON*: I brief the pilot to make "one more" crosswind takeoff and landing, and then we'll head back toward Wichita. Once airborne and soon after landing gear retraction **I introduce a problem**. In twin-engine airplanes I simulate failure of one engine. In single-engine models I throttle back significantly to simulate partial power loss, which studies show may actually be more common than total engine failure in engine-related accident reports. Instead of a power loss, I might introduce the forward cabin door popping open in flight—a rite of passage for the Beechcraft® pilot in my view.

See https://www.atsb.gov.au/publications/2010/avoidable-3-ar-2010-055

In any case the performance loss is not so great that it requires an off-airport landing straight ahead. I coach the pilot as needed to continue the upwind climb while completing any memory checklist steps and enter a pattern for a landing—***as normally as possible***. In my experience **virtually every pilot** climbs enough to turn crosswind, then enters the downwind leg, setting up for a normal landing in a distracting, degraded-performance condition for **the runway from which they departed**—the one with the maximum crosswind in this case.

***This* is the *LESSON*:** In an unusual situation most pilots seem to default to the familiar, instead of evaluating options and picking the best one for the circumstances. Without thinking, that is, because they don't think, most pilots I've put through this scenario would attempt to land on a fairly short and somewhat narrow runway at near the airplane's maximum demonstrated crosswind in an airplane control and performance-degraded condition.

Make it easy on yourself. If you're in an abnormal or emergency situation, reduce the adverse variables as much as possible. Choose the longest runway with the least crosswind. If control and performance permit reject the airport with obstacles and pick the nearby runway with clearer approaches. Fly normal altitudes, normal speeds and to the extent possible normal configurations to make your landing as close to normal as possible.

A recent crash illustrates the need to ***make abnormal landings as normal as possible***. The pilot of a turbine-modified Beech Bonanza reported the forward cabin door had come open almost immediately after takeoff. The winds were strong and favored the departure runway; the pilot told Air Traffic Control he would enter a downwind for that runway to land and secure the door. But instead of making things "as normal as possible" and climbing to pattern height before turning downwind, he made an immediate, low-altitude turn at a slow speed, never climbing more than about 250 feet above ground level. Had the pilot flown the pattern as close to normal as possible we would probably never have known about the open cabin door. As it is, I fervently hope the five aboard have a full and rapid recovery.

See a good overview of what we know so far in this video by Flywire.com creator and *FLYING LESSONS* reader Scott "Gunny" Perdue.

See https://www.youtube.com/watch?v=G5FOb8RUOpc

***That's* the training secret** I provide to most pilots who come all the way out to Kansas to fly with me. Don't be a hero. Make a quick but conscious choice to **make your abnormal landing as normal as possible.** Make it easy on yourself.

Questions? Comments? Supportable opinions? Let us know at mastery.flight.training@cox.net.

Debrief

Readers write about previous *LESSONS*

A reader who is an accomplished test pilot but who wishes to remain anonymous writes about the Debrief in last week's *LESSON*:

> For the student who asked **how much altitude would be required to recover from a stall**, I would also point out that most AFMs [*Airplane Flight Manuals*] will contain this information. CAR 3 required it (and used to be in FAR 23 until 1993). In some cases it is on the Stall Speed chart, in others it is on the Limitations placard.
>
> However, it should be noted that **these values for altitude loss are conservative**; the pilot cannot add power until the airplane has accelerated above 1.2Vs. From AC 23-8C, the Flight Test Guide for Small Airplanes:
>
> > The power used to regain level flight may not be applied until flying control is regained. This is considered to mean not before a speed of 1.2 VS1 is attained in the recovery dive.

Very interesting, anonymous. Thank you.

See https://thomaspturner.com/flying-lessons-weekly/flying-lessons-for-march-6-2025/

Reader John Majane addresses the *LESSON* from last week:

> Tom this week's subject is a big beef for me.I often see many planes coming in, landing long, setting down on all three wheels and then you can literally see **the elevator flopping down**. The **pilots are letting go of the controls**. Also, **no crosswind correction in the ailerons** on roll out. ***Same with departures,*** you can see the ailerons neutral and the elevator flopping in the down position as the start the takeoff roll.
>
> I was not taught that way and I learned in a C-150, taught by a Vietnam Veteran that [sic] flew F-4 Phantoms, hardly tailwheel. I must admit that I did get my tailwheel endorsement at 18 in a 7DC and I flew for a commercial glider operation for over a decade and accumulated a couple of thousands hours in tailwheel planes towing gliders. So I'm sensitive to control inputs.
>
> The whole thing is pretty simple. ***To land with a crosswind control the drift with the ailerons and keep the plane parallel with the runway with the rudder.*** It really is not complicated. Rolling out **keep the aileron into the wind and the elevator up**. Departure is the same thing except once you break ground you crab into the wind to maintain runway heading. As you stated **taxing is simple, climb into or dive away from the wind** depending on if it is a headwind or tailwind.
>
> Last weekend I landed back home with winds 24G38 about 30 degrees crosswind component. Not an issue with my Bonanza if proper controls are used. The only thing that I was worried about was opening the door after shutdown.

That's why I stress using crosswind controls during taxi even when the wind is light—so the pilot learns to be subconsciously aware of the wind while on the ground, so he/she will input crosswind

controls during taxi and when on the runway taking orr or landing without having to think about it. Thank you, John.

Reader Gerry Visel adds:

> I've flown light sport aircraft for about ten years, and transitioned from a tricycle-geared Challenger 2 to my Avid Flyer with its tailwheel a few years ago. I fly from a single runway grass strip where the prevailing wind is 90 degrees to the runway.
>
> With a tailwheel aircraft, you always need to be flying the tail with the rudder pedals, correcting for the inherent dynamic instability of the CG being behind the mains. **Adding crosswind is just more of the same**, with the added stick position requirement to accommodate the wind.
>
> I find that my personal limits are quite a bit higher than friends that fly from multi-runway airfields. ***If you only have one runway to choose from and you want to fly at all, you gotta learn crosswinds!***
>
> Thanks for the excellent articles. I share them frequently, especially in our IMV/VMC Club meetings.

Thank you, Gerry, for sharing your experience.

More to say? Let us learn from you, at **mastery.flight.training@cox.net**

Share safer skies. Forward *FLYING LESSONS* to a friend.

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"[My donation is] long overdue support for you and your incredible work. Thanks as always for providing the best continuing General Aviation education in the industry."

– Andrew Urban, Sun River, Wisconsin

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NEW THIS WEEK: Panatech Computer (Henry Fiorentini), John Whitehead, Andy Urban

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