

Thomas P. Turner's Mastery of Flight

www.thomaspturner.com

FLYING LESSONS for September 21, 2023

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.**

FLYING LESSONS is an independent product of MASTERY FLIGHT TRAINING, INC. www.thomaspturner.com

Pursue *Mastery of Flight*™

Construction of the new Mastery Flight Training website is under way! This edition will be added to the pdf archives when the new website launches in October. Thanks for your patience.

This week's LESSONS:

Let's go straight to reader insights in this week's Debrief.

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

My friends and sponsors at Pilot Workshops extend this offer to **all** *FLYING LESSONS* readers in all aircraft types:



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Debrief: Readers write about recent *FLYING LESSONS*:

Reader Boyd Spittler comments on last week's *LESSONS* inspired by the apparent fuel-exhaustion crash of a Beech King Air near Chicago:

Timely discussion for [this event in Siberia](#). Thanks for persevering with the mission.

That's an interesting case to be sure! Originally reported as a hydraulic system problem after a missed approach, indications are increasing that hydraulic fluid may not have been the critical liquid in short supply when the crew of this airliner decided to make an emergency landing in a field. Amazingly for an aircraft this large, they were successful and no one was injured. In fact, reports are they are going to "repair" the problem and attempt to fly the Airbus off the field! Those things rarely go well, but given the state of Russian airline industry, and that this particular jet appears to be one that was seized by Russia at the onset of sanctions following the invasion of Ukraine, it may be the airplane's "owners" feel there's nothing to lose by trying (expect perhaps the aircrew's lives). Thanks, Boyd, for this and for your financial contribution that helps me persevere.

See <https://www.bbc.com/news/world-europe-66785897>

Reader, author and [Jetwhine](#) podcaster Rob Mark asks for a clarification:

Boy, that King Air crash has everyone scratching their heads up here [in the Chicago area]. I don't know anyone who turned around in a GA aircraft to go BACK to ORD. One thing puzzled me. You said in the text ... "**The pilot told us what happened.**" You meant indirectly because of his behavior, right? You didn't really chat with the guy?

I meant that he told ATC (and us) on frequency that he ran out of gas. Ultimately *that's* what happened. Why that happened, no, I don't have any more information than you. Thanks, Rob.

See <https://www.jetwhine.com>

Frequent Debriefer Henry Fiorientini adds:

[The King Air crash] hit home, as I frequently fly over/near ORD being routed to/from KPWK (I always file IFR) .

Maybe it's just me, but prior to me saying:

we have a big-time problem, we're out of fuel," and then "both engines quit" and "we don't have any fuel."

I would broadcast:

"Mayday Mayday Mayday. Bonanza 78HF is declaring an emergency. I say again, Bonanza 78HF is declaring an emergency. Heading straight for the numbers"

And regardless of whatever ATC responds with (like, oh "follow..."), my response is "UNABLE. Hotel Fox is declaring an emergency. Heading for the numbers. Clear all traffic."

I would not waste air time with, but in my mind I am thinking: FAR 91.3 says "*The pilot in command is at all times responsible for, and is the final authority for, the operation of that aircraft*" In other words:

- **MY** Problem is getting this plane safely on the ground
- EVERYTHING ELSE is **someone else's** problem.

To quote the [Oshkosh] Tent Topic ATC speaker from a few years ago : "Just be alive at the hearing." Or as my father said "Better to be the subject of hearing, than that of an inquest."

Or, maybe that's just me.

Exactly the *LESSON* I tried to get across that week. Thank you, Henry.

Reader Jeff Wolford, with whom I've worked on the [National Business Aviation Association \(NBAA\) Safety Committee](#) and who is a leader in adapting the concepts of Safety Management Systems ([SMS](#)) to small flight departments and even single-pilot owner/operators, continues:

...for your [recent] article, you just have to read most of the accident reports to see that **ADM [aeronautical decision-making] plays a major role in most accidents**. While we have reduced "Fuel Starvation" accidents, they still happen too often, and as you mentioned, this is one type of accident that can be avoided by using what's between the headsets!

I was very fortunate when I was working on my Private, Commercial, Instrument and ME ratings. I had three **really great instructors and they always stressed ADM and planning**. I learned how to fly while I was in the Navy and stationed in Pearl Harbor. One of the things you really learn when flying in Hawaii, is fuel planning. Most of your cross-country flying is over water, so if you misjudge your fuel, things can get interesting.

Several years after I got out of the Navy, I was flying for a corporation that operated three Learjets. We had a 25D, and two 35s. I was an FO [first officer, or copilot] and flying with one of our captains. He was a pretty crotchety at best and in a bad mood on this day. We had a trip from Hazard, Kentucky to Belmar Farmingdale, New Jersey. This trip was in the 25. I asked him about

how much fuel he wanted so we could get ready, he told me and when I explained that I didn't think it was enough, **he told me he was the captain and that when he wanted to know my opinion, he would ask.** He ordered the fuel.

I tried explaining that the weather was bad and that we would need an alternate. Once again, I was told that **he was the captain and made the decisions.** We took off, ATC held us down at a much lower altitude than planned. When we got to KBLM, the weather was low IFR and the only approach available was an NDB approach. This particular captain was not very good at NDB approaches. I volunteered to fly it from the right seat. Once again, **I was shut down.** When we began the approach, we were already down to 1500 pounds of fuel and for a 25 Lear, that's not good in low IFR. He missed the approach and as we went around, he said that he wanted to try it again. At this point, **I assumed command of the airplane, declared a low fuel state with ATC and requested an immediate divert** to JFK. We were vectored onto the ILS for 4R and broke out close to minimums. I had to shut down one engine and transfer the fuel from into one wing to keep from flaming out on the way to the ramp. When we shut down, we had less than 500 pounds of fuel.

I learned a valuable *LESSON*: **no matter what position you sit in the cockpit, your primary job is safety.** If you are an FO and the PIC makes a decision that can put the flight in jeopardy, stand up to the PIC and **do the right thing.** If you are the PIC and the FO questions something, **listen,** he or she may see something you missed.

Fuel planning is essential. You need to be prepared to adjust if conditions change. In Navy boot camp, I learned about the 6 Ps-Proper Planning Prevents Piss-Poor Performance. This applies to aviation. Take time to plan, and something changes, make an educated decision about an alternate and **DO NOT overestimate range.** It's much better to land at the closest airport that is suitable rather than run out of fuel and hope for a successful off airport landing.

If we can get everyone to do thorough preflight planning (including weather, performance numbers, weight and balance, and fuel planning), and use checklists, we would see a lot fewer accidents.

Excellent insights, and a scary experience from which we can all learn. I'd add one thing: **don't think about fuel in terms of range, think about it terms of endurance. How long can you be in the air and still get the wheels on a runway with a healthy fuel reserve remaining?** If your plan changes in flight, for example, you are in a situation in which you are burning more fuel than expected (extended climb, go-around, missed approach and climb; lower altitude than planned, especially in a turboprop or a jet), or you will be in flight longer than expected (winds less favorable or more adverse than expected; diversions around weather; amended routing; diversion to an alternate), **how will changes affect the time you have before you need to be on the ground?** Thanks, Jeff.

See:

<https://nbaa.org/about/leadership/standing-committees/nbaa-safety-committee/>

<https://www.faa.gov/about/initiatives/sms/explained/components>

Reader and retired astronaut Jay Apt writes:

You write: **"I truly wish that the good decisions, the expertly planned and executed flights, were as well documented as accidents so we could learn from positive examples. Unfortunately crashes are what get reported."** I'd recommend to you chapter 27 of Rick Durden's [*The Thinking Pilot's Flight Manual Volume 3*](#), published last year. It is an NTSB-like analysis of a Des Moines to Denver flight in a [Cessna] 210.

Good suggestion, Jay. I'll order a copy.

See <https://tinyurl.com/Rick-Durden-Vol-3>

Reader and [*General Aviation News*](#) publisher Ben Sclair wraps it up this week with a great idea:

Hey Tom, [You wrote:]

"I truly wish that the good decisions, the expertly planned and executed flights, were as well documented as accidents so we could learn from positive examples. Unfortunately crashes are what get reported. Sadly, there's never a shortage of events from which to draw new *LESSONS* and repeat the old. Let's take as many positives as we can."

Why not just ask your readers to provide an "expertly planned and executed flight?" Or offer one up yourself as an example. Step by step. Show what it takes, in detail. To be a fly on the wall watching... that's what I thought of almost immediately after reading your paragraph.

Great idea, Ben! I've written several such items in *FLYING LESSONS* and elsewhere over the years—when I have the new website back up and can populate the archives I'll be able to link to them again.

Readers, don't make us wait. Take us along on your latest, best flight. Tell us how you prepared for challenges, managed risks, and exercised command authority in flight to complete a flight we'd never read about otherwise. Send your tale of **airmanship and aeronautical decision making done right**, at mastery.flight.training@cox.net.

See www.generalaviationnews.com

What do you think? Let us learn from you, at mastery.flight.training@cox.net.



See www.nafinet.org.

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FLYING LESSONS readers are awesome!

Two weeks ago I told you about the nefarious work of an unscrupulous web design firm and how they ripped me off for over \$10,000...while attempting to get even more. I reminded readers I volunteer my time and resources to produce, host and deliver *FLYING LESSONS Weekly* but asked if you'd be generous enough to help not recover what I lost but contribute toward building a new website.

Thomas P. Turner's
Mastery of Flight

Generous readers came through and in only two weeks donated enough to cover the entire cost of the new www.thomaspturner.com. Launch is expected by mid-October. Thank you so much for your generosity!

Of course I'm always grateful to my regular monthly contributors and other donors that cover most of the "normal" expenses of hosting and delivering the weekly reports. **Thank you, too!**

One time or once a month, if you're so inclined to help cover the costs of hosting and delivering the weekly reports [please donate through this secure PayPal link](#) that is independent of the old Mastery Flight Training website.

See https://www.paypal.com/donate/?hosted_button_id=R5FFEHVEXGJ5C

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Thanks to our regular monthly financial contributors:

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2021 Jack Eggspuehler Service Award winner
2010 National FAA Safety Team Representative of the Year
2008 FAA Central Region CFI of the Year
Three-time Master CFI

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