FLYING LESSONS for March 7, 2013

suggested by this week's aircraft mishap reports

FLYING LESSONS uses the past week's 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 make and model airplane have little direct bearing on the possible causes of aircraft accidents, so apply these *FLYING LESSONS* to any 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:

Creating realistic expectations is one of the key elements of making safe preflight and in-flight decisions. Knowing what the airplane can (and cannot) do under the environmental conditions, and more importantly, what you are able to do as pilot in command in your state of qualifications, currency and fatigue.

Perhaps it's even more important to create realistic expectations in those affected by your decisions—your passengers. After all, they trust your judgment (if not, would they fly with you?). Without knowing it, however, they may influence your judgment as well.

With unrealistic expectations, passengers may encourage you to fly when otherwise you might not. They may not realize that airplanes are influenced by weather conditions much more than automobiles, and that they are far less forgiving of mechanical discrepancies.

It's very difficult to explain at the last minute that conditions don't permit making a trip, or that you need to leave a day early to get home, or that you may have to stay several days later than expected, even find alternate transportation to make it home anytime near your intended return.

So seemingly every week we read reports of airplanes that crash during attempted flight in very adverse conditions, weather in which most *FLYING LESSONS* readers would not consider flying. Often these cases of "get-home-itis" happen tragically with family members on board, on a Sunday afternoon departing a vacation locale—suggesting family and work stresses to get home overcame conservative decision-making.

How can we create the proper expectations in our passengers, so they know why we must make the decisions we do, or at least so that they know to accept our pilot-in-command judgment to reschedule or cancel a trip as willingly as they accept the decisions we make in flight? It's a long-term process, and one that must begin well before we're standing beside a loaded airplane watching dark clouds roll in.

Approach your passengers' education openly and positively. Explain that airplanes are heavily influenced by the weather. Note that the vast majority of airline delays are caused by adverse weather conditions—most people have experienced airline weather delays, and making the connection between airline schedules and the limitations of lighter airplanes may make it easier for them to accept those limitations.

Start by describing the very many things you can do with your pilot certificates and ratings. Then point out the things you cannot do—fly in thunderstorms, icing conditions, high winds, etc.—because of airplane design limitations or your own experience and currency.

Next describe the effect currency has on your piloting abilities. Flying an airplane is far more like speaking a foreign language than it is driving a car…it takes frequent, challenging practice to remain fluent. Your flying fluency demands a high level of familiarity—and the only way to retain that familiarity is practice and regular, challenging instruction. Your passengers

need to know that if schedules or finances have limited your flying in recent weeks that you'll need to be even more conservative about weather and other environmental conditions.

Talk about the effect of fatigue on piloting ability and judgment. Point out that flying itself can be fatiguing, so you need to make go/no-go decisions based not only on your fatigue state at the beginning of a flight, but how you'll likely feel and act at the end of the trip.

Review how the airplane needs to be in a high state of mechanical readiness to reliability perform as you wish. Demonstrate how you inspect the airplane before flight, what specifically you're looking for, and what indications will cause a delay for repair or even cancellation of a flight. Show how you use checklists in every phase of flight to confirm everything is performing precisely as expected.

Acknowledge and accept that your family and other passengers may not be as enamored with personal aviation as you. They will probably have fears and concerns more out of lack of familiarity with the unusual noises and sensations in airplanes. Explain how light turbulence is no different that waves rocking a boat, that the noises of flap and gear movement, and autopilot disconnect and other alarms, are normal.

Lastly, let your passengers watch as you gather weather information and preflight the airplane. Willingly and cheerful answer any questions. Include your passengers not in the go/no-go decision itself—that's your responsibility—but explain to them what information you're looking for, and how the actual and forecast conditions compare to the airplane's limitations and your own.

If your passengers are more familiar with the capability and limitations of personal aviation, and have a realistic appreciation for what you and the airplane can and cannot do safely, they may be less likely to unwittingly heap stress upon you that may tempt you to discard your better judgment.

Ultimately you, and no one else, must make the decision whether or not to attempt a flight, and once airborne, whether to continue to your planned destination or divert to somewhere else. With a little education and realistic expectations, however, your passengers may be more inclined to go along with your decisions without pushback.

For more guidance, consider King School's DVD "Practical Risk Management for Reluctant Passengers and Their Pilots."

See www.kingschools.com/aviation-courses/risk-management/passengers-pilots?s=1

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Debrief: Readers write about recent *FLYING LESSONS:*

More readers chime in about our discussion of GPS approach mode confusion. Howard Greenburg writes:

> Good tip last week! I also find my students forgetting to reset the GPS back to GPS [after a missed

> approach] (assuming they were doing an ILS/VOR/LOC approach) and then they don't get course guidance on the HSI/CDI. So, adding that to the end of your go around checklist would be useful.

Very true, Howard. Yet another reason for creating *and using* cockpit checklists for confirming avionics settings, including GPS modes.

Reader Mike Busch comments:

> **>I maintain, however, that my intention in using such a purposely outlandish nickname for the GPS/V-LOC button is precisely to make its use memorable.** I doubt many *FLYING LESSONS* will push that button again without thinking about this facetious nickname, and more importantly, they're less likely to forget to engage and confirm the proper mode as a result.
>
> Good plan! Back when Cessna 182s were falling out of the sky because their flush-style fuel caps were allowing water to leak into the tanks, and bladder wrinkles were holding the water in an undrainable location until the airplane's next takeoff, we started calling the flush-style caps "KILLER CAPS." (Perhaps "KILLER KAPS" would have been even more memorable.) **This helped persuade a lot of Cessna owners to take the problem seriously** and replace their flush-style fuel caps with the "umbrellac cap" kit from Cessna, which solved the problem. The umbrella caps don't look quite as cool as the flush-style caps, but they'll keep you from dying.
>
> How about an aftermarket kit that replaces the stock GPS/V-LOC button with one that has a skull-and-crossbones symbol on it? That could be a great conversation starter when you have a non-pilot sitting in the right front seat.

Reader Bill Horan adds:

> Lively discussion, indeed. You hold you own well, Tom. I appreciate the obvious hyperbole in the discussion but I try to instill in my students the standard of calling every thing in the cockpit by it's formal name rather than pointing to an instrument or switch and saying "this is set or that is set." **I think the VLOC button position should be part of the checklist on every approach**.

Thanks, Bill. I look at it not as an argument, but a discussion. We all win because we learn from each other. I should say that I indeed do use the term "GPS/VLOC button" in the airplane. I use the facetious slang "button of death" during briefings on the ground, to emphasize the vital need to ensure this is set properly for an approach. Most of my students pick up on that, although sometimes they joke about it in the cockpit…as I intend, because (as *FLYING LESSONS* reader Rod Machado demonstrates so well) there is great teaching potential in humor.

Alexander Stanonis quips:

> Someone told me once that I shouldn't say "if this then death". I wouldn't let my family fly w/ them. Ignorance is bliss. Flying is dangerous.

Reader John Collins expands on last week's *LESSONS* about go-arounds and missed approaches:

> It is important to note that when pitching up on the go-around while still in the landing configuration, the values of Vx and Vy listed in the POH [Pilot's Operating Handbook] are typically not [those] listed for the go-around configuration. In my [Beechcraft] Bonanza, if I were to attempt to climb in the go-around at the POH Vy with the gear and [full] flaps extended, there would be almost no climb possible. My partner in [an] FBO attempted a go-around in his V35B [Bonanza] on an extremely windy day with a strong crosswind, and barely was able to clear the trees by using Vy. He was taught not to retract the gear and flaps until all obstacles were cleared because of the slow gear retraction speed that increases drag during the retraction cycle, and the flaps don't have an approach setting detent. He was ready to quit flying as he was really scared by the experience.
>
> I told him that the Vy speed was inappropriate for the go-around and noted that the earlier Owner's Manual listed the Vx and Vy values for the various configurations, including gear down and gear/flaps down. The speeds were substantially lower by at least 20 knots. The newer POH[s] don't list the Vx and Vy in this configuration, but they provide a "Balked Landing" speed that matches the earlier Vy from the Owner's Manual for the flaps/gear down configuration. We went out flying and I demonstrated the near-zero climb capability at Vy with the gear/flaps down and the great climb capability at the slower speed. I have seen this error made by numerous pilots and routinely demonstrate this on initial type checkout. My message is know your airplane, follow the POH guidance, but don't use the values of Vx and Vy which are typically only published for the clean configuration when the aircraft is not in that configuration.

Thanks, John. Again the discussion returns to the need for type-specific knowledge of whatever airplane you fly, and to fully read the POH.

Don Lawton comments:

> Nice addition with the graphics. I would add to the "Positive Rate" step on a go-around that one should confirm the positive VSI ROC indication **with the altimeter winding up**.

Good idea, Don. I use graphics when I think they help make a point (and when I have time to create them). I'll update the go-around graphic with your addition and a couple others suggested by readers since last week.

Mac Barksdale also writes about last week's *LESSONS*:

> Very appropriate following the go-around accident at Thomson, Georgia for the Beech Premier Jet. Sometimes it is crew coordination confusion that precipitates decision delay. Perhaps [it was an] unfamiliar airport at night. Lighting and [an approach] from the west-to-east has no hazards. And it is a bit uphill, making for easy stopping.

Indeed, Mac, it was the Premier go-around cash that prompted last week's *LESSONS.* Recall, as stated at the top of each edition, "*FLYING LESSONS* uses the past week's mishap reports to consider what *might* have contributed to accidents, so you can make better decisions if you face similar circumstances." There is much to learn from any fatal crash, that may not have contributed to the crash that prompts the discussion. Thanks, Mac.

Frequent Debriefer Woodie Diamond brings it home for this week:

> Ya know, though I enjoy the *FLYING LESSONS* that examine particular events or routines, **I find the issues that talk about the "basics" to be the most rewarding**. The latest issue is a prime example; no drama, no question, simply "go around."
>
> My only comment would be that you omitted an item in the bullet checklist, though you alluded to it in the introduction: "Is the Pilot prepared to land?" My first real flight instructor placed an item on the landing checklist that he insisted all of this students practice: "Happy Feet." To this day, as I am orally going through the landing checklist, I'll announce "Happy Feet" and wiggle the rudder. Even my current long time flight instructor gets a chuckle out of it, but totally agrees with the intent. **Make sure the appendages that are farthest away from the brain are awake, and the rest of the pilot will wake up**.
>
> We fly amazing time machines that are designed to make dreams come true. Unfortunately, these magic machines too often outperform the pilots, simply because the pilots aren't awake.

Thank you, Woodie. Stay happy!

What do *you* think? Let us know, at Mastery.flight.training@cox.net

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Please keep it coming! I forward *FLYING LESSONS* to all my students... private and instrument. -- Bill Horan

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