

# **FLYING LESSONS** for March 31, 2011

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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*FLYING LESSONS Weekly* is abbreviated this week because of workload associated with my responsibilities at Sun n' Fun. We'll return to the full format next week.

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## **Debrief:** Readers write about recent *FLYING LESSONS*:

Reader Rick Garner writes about several recent *FLYING LESSONS* items:

I think the [FAA's \[2011\] Safety Stand-Down](#) program is an excellent idea. As chairman of the safety committee where I work, I can say from experience that safety stand-downs do work. I look forward to participating in any way I can. I plan to spread the word to the pilot's association at our local airport (of which several members are CFI's) to hopefully inspire group participation.

BTW, just a brief comment on the importance of PIREPS. Coincidentally, I was flying an Angel Flight mission last weekend [which was the subject of a recent *FLYING LESSONS* report] but there has already been enough said on that subject. While over mountainous terrain in western Virginia I heard a [Beechcraft] Bonanza pilot in the area report icing conditions at my altitude of 7000 ft. He asked for a higher altitude and shortly afterwards reported clear air in between layers at 9000. I knew that if I encountered ice in this area that my only two options would be to climb or turn around. Due to the terrain, lower would not be an option. Prior to hearing the PIREP, I wasn't sure how high I would have to climb so I was fully prepared to turn around if I started collecting ice. Sure enough, ten minutes later I entered the clouds and started picking up some light rime. Thanks to the PIREP, I knew I could find clear air two thousand feet above me and I was able to safely complete the mission. Apparently even the controllers had no knowledge of the ice in the area prior to those first PIREPs and they would not have been able to offer much help. Without the Bonanza pilot's PIREP, I would not have risked a climb to an unknown altitude in my [Cessna] Cardinal and I would have been forced to turn around and abort the mission.

For what it's worth on the subject of volunteer medical flights, I would have had no problem making the decision to abort the mission. I have personally cancelled several missions due to forecast icing or other weather conditions I wasn't comfortable with and I have never received any negative feedback. I have also had missions cancelled by other pilots of multi-leg missions and I have always fully supported their decisions. The patients are always advised by the mission coordinators to have alternate means of transportation available just in case. All pilots in our organization are encouraged to make safety the number one priority and I think we do a very fine job of it.

I will get off that soapbox for now. Thanks for the great work you do!

See [www.faasafety.gov/Standdown/](http://www.faasafety.gov/Standdown/)

These are good soapbox topics, Rick. Thank you. Your observation is correct—forecast models may identify areas of possible airframe icing and even its likely intensity. But there is currently no technology in use to actually detect icing other than a pilot's report of icing conditions. Tops reports, as you say, are extremely helpful pre- and in-flight decision-making tools. So too are

reports of “negative icing” when ice is suspected but not present...and outside air temperature (OAT) reports at altitude regardless of icing or whether you’re even in the clouds at the time.

Several readers asked if the [April 2 FAA Safety Stand-down](#) will be recorded for later viewing. The answer is yes...and I’ll try to get specific information on how to access the stand-down in next week’s *FLYING LESSONS*.

See [www.faasafety.gov/Standdown/Content/StanddownBrochure.pdf](http://www.faasafety.gov/Standdown/Content/StanddownBrochure.pdf)

Reader and instructor pilot Dave Dewhurst comments on “stalls on the go-around” as discussed last week in *FLYING LESSONS*:

The elevator trim stall described in your article is only used as a demonstrated maneuver on the CFI test. It should be taught at the Private level and on every airplane-specific transition. In a [Beechcraft] Bonanza with the airplane trimmed for a power-off V<sub>x</sub> speed, [for example], application of full power will produce a power-on stall with a stall break. [Dave’s instructors] teach to trim for a speed at or above V<sub>y</sub> so that aft yoke pressure is required for flare. That way applications of full power are not as dramatic... I have seen two cases in a Mooney where the pilot performing the trimmed-V<sub>x</sub> maneuver did not have enough upper body strength to push the yoke forward enough to avoid a stall. In that case we teach to roll the airplane into a 45-degree bank to unload the vertical component of lift for a time long enough to get the airplane trim corrected.

Not something I'd want to have to do at the first part of a go-around! Thanks, Dave.

Instructor and airline safety expert Alan Davis discusses how pilots can blatantly disregard the rules, their own safety and that of passengers, when under self-induced pressure to “go” and, most especially, to get home...and how the flight instructor must take responsibility as the last safety valve to turn off such behavior:

I can relate a true story....

A commercial/instrument student (with a Private certificate) at the school where I learned how to fly took an airplane on a vacation cross country rental home for the holidays, taking a couple other students with him and dropping one off along the way. During the flight he used his usual fuel management process which was to fly “B\*\*\*s to the walls” with no leaning because he didn’t have to pay for the extra fuel used, so why lean? He just wanted to go there fast.

On the return flight, which probably would have lasted about 6 flight hours or so with one stop, he did not fuel at the one stop. The weather was not good at destination (though indicated to improve), and worse along the route with no indication of improvement, so he filed IFR (with no rating). One of his passengers decided to get off and fly with the airlines (the best decision of the day!), and the other two took off headed for home - without refueling. Part way to the destination the PIC noted low fuel and then tried to get into an airport so he could fuel, but the weather was very widespread and, in old parlance, WOXOF [zero ceiling, zero visibility] for many miles. (I’m really dating myself there!)

After several instrument approaches, during which observers on the field reported hearing the aircraft very low on the miss, he was not able to make visual and climbed back on top. He eventually ran out of fuel, descended into the murk, and crashed in a remote area. As I understand it, as this was before ELTs, the aircraft was finally found during the next hunting season with the two occupants in their seats. The tanks were not ruptured, so he must have made visual just before impact and flared, and the tanks contained only fumes.

What this illustrates is a person with no regard for process, no regard for regulations, and no regard for their life or the life of others - and, unfortunately, it seems like these slip through the system from time to time. The question is – how? Certainly someone should have seen these issues and questioned whether they should even continue the training - let alone rent a well-equipped airplane (which should have had about 11 hours range at 55%!!) to the person. Even if he hadn’t fueled but at least leaned, he would have not had the problem as the weather AT destination improved - but he never go there.

As it came out later in the investigation, he had engaged previously in a number of risky and illegal behaviors with aircraft, which I won’t enumerate here. He was obviously one who was in aviation only for the “thrill” and would have been better leaving and buying a boat - before he took another life along with him.

Reader George Boney writes about recent *FLYING LESSONS* on consistency with landings...

I think your *FLYING LESSONS* are great. They always make me think about how I am doing something and

perhaps develop a better method.

On flying the approach and landing, I like the part about airspeed (or energy) and glidepath control being the two parts of a safe, repeatable landing performance. The tough part of this is learning to accept the "waiting." When we first learn to fly, we are chasing the airspeed and glidepath all the way to landing, constantly making changes. But after sufficient practice, we make 2 or 3 corrections early in the process and then we just have to wait for the runway to arrive.

Beginning pilots keep making adjustments that are not needed and the passengers might not want. I think part of this is our need to "do something" and partly past experience (a good landing requires constant correction).

A good landing does require constant attention, but it does not require constant correction. As your flying improves, you find yourself doing less. This good because it gives you "activity margin" so when you fly that approach to minimums in 10-knot gusts you have the extra mental bandwidth required. If you are fighting with the airplane all the way to landing in clear and calm, you probably need more practice before you tackle minimums in hard IFR.

...John Hodgson gives us more airframe icing experience...

Ice is a known killer along with thunder storms, fire in the air and mid air collisions as we all know. If the [ADDS ice page](#) has moderate or worse and especially SLD in the forecast near my route of flight I don't go. I have "known ice" [certification] on my [Cessna] T303 but just use it to turn and run. I don't think that is overly cautious. Generate your own "non negotiable" SOPs [Standard Operating Procedures] and do not deviate from them. Delay/cancel the trip, drive or use the airlines.

See [http://aviationweather.gov/adds/icing/icing\\_nav.php](http://aviationweather.gov/adds/icing/icing_nav.php)

...and Lee David writes about pilot-induced pressures we can put on other pilots:

Regarding "[Let's stop doing this to one another](#)" [in the] March 17, 2011 *FLYING LESSONS Weekly*:  
Excellent point and clearly stated. This is a team effort and all pilots are in this together- whenever possible with whatever it takes - wherever it happens.

Thinking about other pilots is as important as thinking about yourself, requiring more help than criticism, more positive effort than denial and more knowledge than ignorance. A dynamic relationship exceeding the static limitations of lethargy and isolation.

As a team, pilots are stronger and safer. Thanks Thomas, you have the message...keep the faith.

See [www.mastery-flight-training.com/20110317flying\\_lessons.pdf](http://www.mastery-flight-training.com/20110317flying_lessons.pdf)

Thank you, all, for your valued input. Readers, what's *your* opinion? Tell us at [mastery.flight.training@cox.net](mailto:mastery.flight.training@cox.net).

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## Autopilots Aren't Automatic

*From AOPA's Air Safety Institute comes this advisory on the need for constant autopilot monitoring and scrutiny, and solid hand-flying skills:*

The FAA's human-factors expert recently concluded that constant autopilot use tends to erode hand-flying skills. And with the increasingly complicated interface between multi-mode three-axis autopilots and electronic panels, it takes training for pilots to become proficient in autopilot use.

On the afternoon of April 28, 2009, a Cirrus SR22 took off into a 200-foot overcast from Cleveland's Cuyahoga County Airport. In the minutes that followed, pitch angle ranged from 50-degrees nose up to 60-degrees nose down and airspeed varied between 50 knots and 172 [knots] before the aircraft crashed, killing both on board. Read more in this [special report](#) from the Air Safety Institute.

See [www.aopa.org/asf/epilot\\_acc/cen09fa267.html?WT.mc\\_id=110318epilot&WT.mc\\_sect=sap](http://www.aopa.org/asf/epilot_acc/cen09fa267.html?WT.mc_id=110318epilot&WT.mc_sect=sap)

## Follow the glideslope?

You're inbound on the ILS. On the approach but outside the Final Approach Fix, you are ready to drop down to depicted crossing altitudes when you notice the glideslope is nearly centered. To

make it easier on yourself and a smoother ride for your passengers, you disregard the published step-downs and simply follow the glideslope from your location well outside the FAF. We all do it, right? Before this week it's what I taught, too! But a new FAA Information for Operators (InFO) report tells us that, under some conditions, this "logical" technique can lead to insufficient traffic—and even terrain—separation. Read [InFO 11009, Failure to Comply with Minimum Crossing Altitudes at Stepdown Fixes Located on Instrument Landing System \(ILS\) Inbound Courses](#) to see why following the step-downs is "mandatory."

See [www.faa.gov/other\\_visit/aviation\\_industry/airline\\_operators/airline\\_safety/info/all\\_infos/media/2011/InFO11009.pdf](http://www.faa.gov/other_visit/aviation_industry/airline_operators/airline_safety/info/all_infos/media/2011/InFO11009.pdf)

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

***Fly safe, and have fun!***

Thomas P. Turner, M.S. Aviation Safety, MCFI  
2010 National FAA Safety Team Representative of the Year  
2008 FAA Central Region CFI of the Year



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