



FLYING LESSONS for October 17, 2012

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 is abbreviated this issue because of my duties at back-to-back aviation events. We'll be back to full signal strength next week.

This week's lessons:

The pilot of a single-engine, piston-powered aircraft found one of the airplane's brakes hanging up while taxiing for takeoff. Takeoff was normal, however, as was landing at another airport after a short cross-country flight.

Taxiing to parking, however, the pilot had significant difficulty controlling direction. While being marshaled into a tie-down spot, the pilot did not have braking on one side at all. The airplane's movement was erratic and the marshaller had to run to avoid being hit by the aircraft.

After a short break the pilot considered whether to fly home. She even called her instructor, but apparently failed to relate the difficulty she was having with directional control. The instructor suggested she fly home. The pilot elected to go.

Taxiing out, she was unable to maintain directional control and went off the taxiway into the grass. She shut down the engine; several airport bystanders helped push the airplane back onto the pavement.

The pilot then restarted the engine and taxied to the runway. She was able to take off without further incident.

Returning to her home airport, she landed and began braking to make the midfield taxiway turn-off. The airplane again went out of control and departed the edge of the runway. The airplane collided with a fence, damaging a wing and resulting in a sudden propeller stoppage.

Did you see that one coming? Of course you did. It's easy in retrospect, but in real-time it's always hard to make a no-go decision, even when conditions clearly call for it. It's especially tempting to decide to "go" when the flight is taking you home—toward your house, your car, your family, your job, your hangar and your mechanic.

There are other facts in this particular event, but the main *LESSON* is to make two go/no-go decisions on every cross-country flight—one before you leave home, another before you launch toward home. In reality, you need to be making go/no-go decisions almost constantly in flight, evaluating the airplane, the weather and yourself to determine if you can continue, or if you should divert, turn around, change altitude or land.

Put another way, work to objectively decide whether to go or not, regardless of whether the trip is the flight out or the flight home. Would you delay or cancel if just starting out? Use the same criteria for the return trip as well.

The day will come when you need to call a mechanic, get a hotel, or leave the airplane and find another way to destination or to home because of an aircraft mechanical issue. Knowing that it *will* happen makes it easier to plan for the inconvenience, and to make the no-go decision when the time inevitably comes.

Most pilots who survive an airplane crash admit that they knew something wasn't right. There's almost always a precursor to a mechanical failure. The airplane will talk to you—it's up to you to listen, and decide.

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



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Debrief: Readers write about recent *FLYING LESSONS*:

Reader Paul Robichaux writes:

Wow. I am just about to take my PP-ASEL checkride and the things I read each week in *FLYING LESSONS* have been incredibly sobering.. and even more incredibly helpful. All the more so this week with the discussion of what to do on takeoff if an engine fails. I mostly fly out of KPAO [Palo Alto, California], which has nothing but marsh (and SF Bay) to the north and east and super-congested urban areas to the west. I've spent a lot of time thinking recently about where I'd go after a climbout failure leaving rwy 31. Thanks for all your effort in publishing and disseminating this valuable information.

Thanks for seeing the positive *LESSONS* of these report, Paul. Learning about risk management and mitigation is a vital part of learning to fly...but one many of us are not exposed to in their certificate training. Let us know when you pass your Private checkride.

Reader Mike Massell comments:

I just finished reading your *FLYING LESSONS* for October 4, 2012 and in the Debrief section of this issue there was a lot of discussion regarding the immediate actions of what to do immediately after an engine failure on take off. There were quite a few different examples of real case scenarios most with favorable outcomes. Luck versus experience?

In any case, something that I learned during my commuter days, I flew reserve for a couple of years so I was fortunate to fly with every captain. I learned a valuable lesson that I was never aware of. We had runway performance data, which gave us specific directions for which way to go after an engine failure or other emergency immediately following takeoff. In lieu of that though is the back of the 10-03, 10-9, 11-1 for Jepps and the A/FD (Airport/Facility Directory for the government issue charts). It was interesting to watch the different captains as some reviewed the data and others didn't have a clue, myself included. Different captains and usually the better ones always reviewed the data on the back of the Jepps even though they had the runway analysis data.

Mind you, I already had my instrument ticket, my instrument instructor rating, my advanced ground instructor rating, my ATP, yet had never been exposed to this. Now prior to every takeoff I review this data and review it with the other pilot as our departure briefing. It just may give you another out even if you manage to keep it right side up after an engine out or other issue immediately following wheels leaving Terra firma.

It's always best to prepare for the worst—if it's a waste of time, then it's worth it. Thanks, Mike.

And reader Paul Sergeant sent a note:

Once I no longer work full-time in wireless telecoms, I intend to concentrate on teaching flying. But that's probably about 10 years away. In the meantime, your *FLYING LESSONS Weekly* is about the only one I receive that I read end to end, twice over.

Thanks, Paul.

Comments? Questions? *LESSONS* of your own? Email mastery.flight.training@cox.net.

Focus on autopilot malfunctions

The three “loss of aircraft control” events in [the October 2012 NASA Aviation Safety Reporting System] *CALLBACK* share a common factor—an autopilot malfunction. Thankfully, they also share a common result in that the pilots involved were able to recover from the resulting loss of control. Read “[When Autopilots Go Bad](#)” in ASRS Callback #393.

See http://asrs.arc.nasa.gov/docs/cb/cb_393.pdf

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