FLYING LESSONS for May 31, 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.

If you wish to receive the free, expanded *FLYING LESSONS* report each week, email "subscribe" to mastery.flight.training@cox.net.

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This week's lessons:

When I was first learning to fly in the mid-1980s, there were several now-quaint bits of flying wisdom batted about from pilot to pilot. One an early instructor taught me was to be especially careful watching for airplanes when within about five miles of a VOR. In pre-GPS (or even LORAN) days most cross-country navigation (even under Visual Flight Rules) was along low-altitude, VOR-based airways (Victor Airways in the U.S.). This made the area around VORs natural choke points, funnels through which many airplanes frequently flew. It made sense to be especially alert for other airplanes in these choke points.

I was also taught to avoid flying directly over prominent landmarks or points of interest…on the assumption they would be interesting to other pilots as well, so I was more likely to collide with another aircraft in such a place.

Another pearl of wisdom was to fly slightly off of normal routes and altitudes. Keep slightly to the right of centered on the airway. Fly at 6700 feet instead of 6500. When following a road or railroad track, keep to the right of directly overhead. The idea was that oncoming aircraft would be on altitudes and centerlines, so you'd miss a near head-on collision, and did not run the risk of overtaking (or being overtaken by) airplanes flying at substantially higher speeds. All this assumed, of course, that the *other* guy wasn't privy to your wisdom, and wasn't *also* flying to the right of course and 200 feet above the expected altitude.

In today's GPS-guided, point-to-point world, the chokepoints of VORs and Airways centerlines are generally moot (Northeast U.S. flying excepted). Today's chokepoints, instead, are created by invisible boundaries of airspace, VFR corridors and tight stretches between airspace requiring mandatory ATC participation (frequently unavailable to VFR airplanes) and temporary or permanent Special Use Airspace such as Restricted and Prohibited Areas and Temporary Flight Restrictions airspace.

The limitations of flying in these areas are such that, however, that often we don't have any luxury to fly at an "off" altitude or along anything other than a narrow course centerline, lest we bust the airspace or signal some sort of alarm-triggering intent by our noncompliance. We have to fly with precision—in the same airspace with other pilots presumably flying the same routes and altitudes just as precisely.

When flying in VFR corridors or any narrow path between, around, over or beneath airspace, it's all the more important to keep your eyes outside the airplane, with your head on the proverbial swivel watching for other aircraft. Ironically very precise paths will tend to make us be more heads-down in the cockpit in order to more precisely fly approved routes and altitudes.

It takes practice and a good scan to hold attitude, altitude, heading and course as precisely as when flying an instrument approach, while you're flying heads-up, eyes-outside in Visual Meteorological Conditions (VMC).

It's even more important to have this "precision VFR" capability as second nature *before* you fly in between-the-restrictions airspace. It's not a skill to be learned while actually flying the route and watching for traffic.

Another common heads-down activity in flight is instrument and/or GPS familiarization training. Think about your last simulated instrument flight (even if you're VFR only); under U.S. rules you logged at least three hours of simulated IFR to earn anything other than a Recreational or Sport Pilot certificate, and any pilot might expect some simulated IFR on a Flight Review. You were scanning the panel while wearing a View Limiting Device specifically designed to prevent you from looking outside the airplane. If you're getting checked out on a new GPS or toher avionics, your attention is probably very focused on the panel. Your instructor, meanwhile, may be overly intent on watching *you*—what you're doing, how your performing, and teaching what you need to know—as well as scanning the flight instruments or Primary Flight Display (PFD) to gauge your performance.

In other words, in most instrument and avionics instruction, there's a very real risk that no one is looking outside the airplane.

Two *FLYING LESSONS* result from this knowledge: First, the flight instructor should remember her/his first responsibility is the safety of the flight, even if the CFI is not officially acting as pilot-in-command. Watching outside takes precedence over scanning the panel, even if this means the instructor is not instructing full-time as a result. Second, even if the instructor is good at cross-checking inside and outside to fulfill the primary safety role as well as teach, instrument instruction is not something that should be done while flying through a VFR corridor or in a tight spot between, over, under or around airspace not open to you at the time.

Flying in a corridor or around restric*tive* airspace? Do it with all eyes looking outside. Save your simulated instrument dual or new avionics checkout for after you've exited the choke points where many airplanes fly in a confined area.

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

What would you do?

Last week *FLYING LESSONS* related an editorial by EAA president Rod Hightower, where he described watching the owner of a high-performance Cessna refuse all offers of help while trying to hand-start the airplane…with no one aboard, and pointed at a business jet and several other airplanes. In last week's issue *FLYING LESSONS* asked readers to complete a one-question survey on what they would do under similar circumstances. Here is the question, and your responses:

Imagine you were with Rod's crew and saw the Cessna pilot trying to prop his airplane. Would you:

43.5 % Offer to get in the airplane to hold the brakes and manage the engine as needed

17.4 % Attempt to talk the pilot out of hand-propping his airplane

13.0 % Write down the Cessna's N-number and report the pilot to the FAA

8.7 % Video the whole thing to post it on YouTube

0.0 % Grab some popcorn and watch the show

Other (comments):

- I would offer to tie and then untie the plane after starting. From a liability perspective I don't think I would offer to get in the plane.
- Express my concerns about safety, note the pilot's desire to get out quick, and try to negotiate a safer handling of the situation. If that failed, I might escalate my demands--at least have the plane pointed in a direction where no one else or their property could be hurt.
- Tactfully, but firmly inform the pilot that his current methods are putting other people and property at risk, and that you will help him safely start his plane either by jumping, or propping (depending on which the helper feels he can safely do properly), and that lack of cooperation on his part will result in involving both local, and FAA authorities in protecting the public from his current course of action.
- Park car in front of his airplane. Offer to move it if he will listen to some reason. If not, call 911, "trying to prevent an idiot from crashing an airplane"

Do you have other ideas? Do we have a moral obligation to intercede? Does our typical (and understandable) lack of action when seeing blatantly unsafe actions contribute to the overall accident rate? How can we create a much more pervading culture of risk evaluation and management in general aviation? Or would that be limiting our freedoms too much? Let us hear your thoughts, anonymously on request…at mftsurvey@cox.net.

Improving Experimental-Amateur-Built Aircraft Safety

Last week *FLYING LESSONS* reported on the U.S. National Transportation Safety Board study of Experimental-Amateur Built Aircraft (E-ABA) mishaps. I commented: "Undoubtedly you'll be hearing more from EAA to better define the risk and address mitigation strategies as well."

As expected, hear from EAA we did. President and CEO Rod Hightower provides an eloquent, three-minute video with an overview of NTSB's 16 recommendations, including four directed specifically at EAA, and the Association's reaction. EAA Vice President of Government Relations Doug MacNair also comments on the report in this podcast, including the nature of NTSB recommendations and what's likely to happen next. Both express a very realistic and healthy attitude toward the need for improved initial pilot training in E-ABA types, and agree there are actions that must be taken that can still remain short of imposing new, Draconian regulations. Both are worth a listen, even if you never fly E-ABA.

See:
www.ntsb.gov/news/2012/120522.html
www.eaa.org
www.eaa.org/news/2012/2012-05-22_ntsbstudy.asp
www.avweb.com/podcast/podcast/AudioPodcast_DougMacnair_EAA_ExperimentalHomebuiltSafety_NTSBReport_206740-1.html?kw=AVwebAudio

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Personal Aviation: Freedom. Choices. Responsibility.

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
