



FLYING LESSONS for January 31, 2019

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National Flight Instructor Hall of Fame inductee

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 almost all 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 as a 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.**

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This week's LESSONS:

Many *FLYING LESSONS* readers operate an airplane at least in part as a business tool. Personal aviation provides great flexibility and opportunity for the business professional. But most business pilots are business professionals *first*, and pilots second (or even further down on the list of personal and professional obligations).

For the business pilot flying is not their primary focus; it's something that happens *before* work begins or *after* business obligations are done.

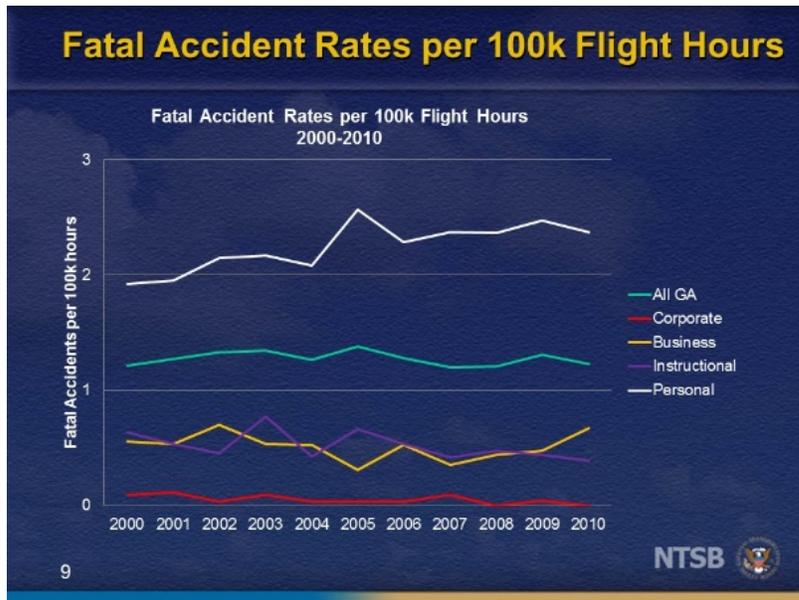
While at the NBAA Safety Committee's annual strategic planning session last week (in part why I did not have time to publish *FLYING LESSONS* last week) I was inspired to revive and update an article I wrote several years ago for the benefit of *FLYING LESSONS* readers who operate or plan to operate a personally flown aircraft in the conduct of business. The information has applicability to pilots who fly purely for recreational transportation for many of the same reasons.

The Unique Risks of the Business Pilot

You derive great pleasure and satisfaction from flying your aircraft. You enjoy being aloft, the interaction with other pilots and controllers, and the feeling of mastery over a complex technical skill. Flying may be an artistic or creative outlet, and can enhance your perspective on other aspects of your life.

But if you fly as part of running a business you own or manage, ultimately the airplane is a business tool. Flying gives your business a greater operational reach. It permits you to more closely oversee remote operations and better serve your customers. A company airplane lets you outflank the competition. Your personal aircraft is a vital extension of your business. You fly in the furtherance of your business, but not as a full-time career pilot. You are a ***business pilot***.

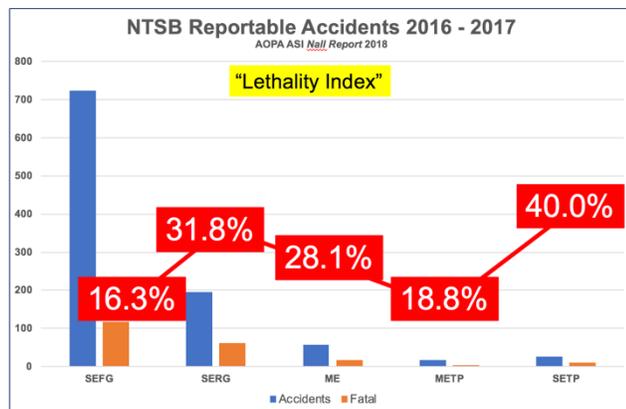
The U.S. National Transportation Safety Board tells us business flying is statistically



much safer than general aviation as a whole. Unfortunately, there are still deadly mishaps in business aviation. And more disturbing, **there is a clear trend upward in the rate of fatal business flying accidents.**

Business flying, in fact, is the only category of general aviation with an *increasing* fatal accident rate. Although more recent data show the total number of fatal accidents is decreasing since 2010, the business aviation rate appears to continue this relative trend.

More recently the [AOPA Air Safety Institute](https://www.aopa.org/training-and-safety/air-safety-institute) published its [General Aviation Accident Scorecard for 2016-2017](https://www.aopa.org/-/media/files/aopa/home/training-and-safety/nall-report/20162017accidentscorecard.pdf?ia=en&hash=65D267F91F4F4B031916D848897CD26B0F246042). In this report AOPA cites what it calls the “**Lethality Index**,” the percentage of NTSB-reported mishaps that involve fatalities. The Lethality Index (percentages in red boxes) is broken down by type of aircraft: single-engine fixed gear (SEFG), single-engine retractables (SERG), and multiengine airplanes (ME). It further breaks out the SEFG tailwheel, SERG turbines and ME turboprops. Using the *Scorecard* I’ve created this Lethality Index chart.



Although there are many exceptions, in general business pilots fly SERG and ME airplanes, while ME turboprops (METPs) are usually flown by full-time career pilots. Single-engine turboprops (SETPs), on the other hand, are often flown by business pilots. Of course some METPs are flown by business pilots, as are more and more SEFG Cirruses. And overwhelmingly career-pilot Cessna Caravans are SETPs. But AOPA’s Lethality Index suggests that, at least in general, the business pilot population continues to contribute to a higher rate of serious and fatal crashes.

See:
<https://www.aopa.org/training-and-safety/air-safety-institute>
<https://www.aopa.org/-/media/files/aopa/home/training-and-safety/nall-report/20162017accidentscorecard.pdf?ia=en&hash=65D267F91F4F4B031916D848897CD26B0F246042>

The things that make us safer in all types of general aviation—crosswind control, fuel management, weather avoidance, aircraft maintenance, emergency preparedness—work equally well in the business cockpit. **There are some aspects of flying an airplane in the furtherance of a business, however, that add an additional layer of risk.** The good news is that, if you apply the same forward thinking to piloting the company airplane that you do to piloting the company itself, **there are ways to manage the unique risks of the business pilot.**

Schedule

What good is a business airplane if you can't fly where you want, when you want? There are some conditions or situations that, despite your best efforts, are going to require you delay or cancel a flight. A line of strong thunderstorms, heavy icing conditions, or areas of low fog can make the no-go decision easy. Severe personal health issues or major mechanical issues with the airplane are also obvious no-go calls. ***The unique risks of the business pilot occur when the conditions are not so clear-cut***—situations that require a judgment call, and which may be in direct opposition to your business transportation needs.

True Story: While I was a young flight instructor in a one-man flight school in Sedalia, Missouri, a shiny new A36 landed at our rural airport. Two passengers drove off with their local business contact, while the pilot stayed behind. I learned the airplane was owned by a chain of funeral homes based in Topeka, Kansas, and the passengers were company owners on an inspection tour of their remote offices.

As the afternoon wore on the pilot was watching a line of thunderstorms form along the Kansas/Missouri border on the FBO's computer. When the company owners returned he explained that the storms were cutting off their path home, and they would have to wait a couple of hours until the line blew past. The passengers became very agitated, one stating repeatedly that he *had* to get back to Topeka for a very important meeting. They were heavily pressuring the pilot to get them through the line of storms that was by then solid, severe and extending hundreds of miles in each direction. One owner threatened to fire the pilot and looked at me in a way that suggested, "You'd get me through it, wouldn't you, kid?" The pilot then told his bosses something very wise: "**Do you want to be owners of a funeral home, or its customers?**" The passengers backed down immediately. An hour and a half later they were airborne in smooth, clear skies behind the line of storms after it passed.

That pilot's dedication and his quick summation of the situation to his passengers left a great impression on me. Looking back, I wonder what would have happened if one of the business owners had been the pilot himself. Would he have let the stress of an impending meeting cloud his judgment, and try to pick his way through the storms? So very often that's exactly what we read about when a business airplane is involved in a crash.

Risk factors

Let's look at the special risk factors affecting business pilots, and suggest some ways you can avoid making a bad business aviation call:

Weather

Assuming you and the airplane are instrument rated and current, there's not much you can do about the weather. NEXRAD uplinks and ADS-B weather are a help, but they do not alter the airplane's ability to handle adverse weather...they just make it easier to avoid getting too close to it. Weather hazards are the #1 reason for delays and cancellations of airline flights, and your business-use airplane isn't any different. In other words, *there's no such thing as an all-weather airplane*. **The more you fly, the more often you'll cancel or reschedule flights.**

So how do you protect against adverse weather impacting your business schedule? Like any other business contingency, ***you plan for it.***

- Be ready to leave a few hours or even a day earlier, or to stay a few hours (or days) later, if the weather requires.
- Keep a RON (Remain Over Night) bag in the airplane with fresh clothes and toiletries in case you have to cancel a flight away from home.
- Watch the weather frequently enough that you can make alternate transportation plans if a major weather outbreak is forecast.

- Let the people you'll meet know you may have to alter your meeting plans if the weather's too bad—it may limit your ability to make the sale today, but subtly let them know this is all part of your business strategy to ensure you'll be around to serve their needs after the contract is signed.

These mitigations all help you maintain a constant mindset that weather delays are going to happen, and you'll have Plan B at the ready if needed.

Maintenance

The best defense against aircraft maintenance delays or cancellations is to give the airplane the maintenance attention and budget it needs. If your company's computer system broke you'd fix it. If a software update is released you load it before you begin to have service issues with the old software. The airplane may be just as important to your business, so you have to keep it maintained as well.

The next most important defense is to *catch issues before they impact your flight schedule*.

- Take a few moments after the last flight of the day to give the airplane a post-flight inspection—the same as a preflight, done when there's time to have a discrepancy fixed before your next planned trip.
- Do a thorough preflight inspection a couple of days before a flight for the same reason.
- If you don't have time to get to the hangar that often, teach a local flight instructor how to conduct a good preflight inspection of your airplane, then pay him or her to check out the airplane and report discrepancies once a week or as you need.

None of this replaces your requirement to personally preflight the airplane before a trip, but these added inspections will curtail those last-minute maintenance squawks, and help you avoid the temptation to fly with a known maintenance fault.

Training

Deep down you know you should train more frequently, and seek out more challenging training than you currently do. Trouble is, **training takes time**—the businessperson's most valuable resource—and it's easy to defer training again and again under the stress of running a business. Before you know it two years will have passed and you need a quickie Flight Review just to meet minimum requirements.

You probably don't accept minimum standards from your employees (or yourself) in the business...and a business mistake probably won't kill you. Training is just as important as meeting payroll and doing your taxes. **Put it on your calendar** far enough in advance you can schedule other work around it.

Fatigue

You put in long hours at the office. You wear yourself out when on the road. Are you in any shape to pilot a complex machine into potentially dark and stormy skies? Will you be alert enough to fly a complicated approach after a couple of hours bouncing along in the airplane? There is growing evidence that sleep deprivation and fatigue have an adverse impact on almost every aspect of our lives (including business decisions). The NTSB is beginning to look into the sleep cycles of pilots for the 72 hours prior to a crash when possible as part of crash investigations.

There is no FAA standard regarding crew rest for Part 91 operations. There's no real science yet into the impact of fatigue on business pilots. **It's up to you to decide if you're too tired** to take off. The harder part is to predict whether you'll still be alert enough to approach and land on the other end after exposure to workload, turbulence, reduced oxygen intake and a few additional hours since sleeping.

Taking a cue from the airline industry, which science *has* addressed, the National Business Aircraft Association has published recommended crew rest and duty day standards for business pilots. In its simplest form, NBAA suggests no more than 10 flying hours in any 24-hour period, and more apropos to most business pilots, a maximum 14-hour duty day. For the business pilot, I consider that to be **14 hours from alarm clock to engine shutdown**. A 14-hour limit may be challenging in a business environment. But it's a limitation you can live with.

The risks affecting business pilots are the same that impact pilots of all general aviation airplanes. The hazards become more acute, however, under the real and imagined time pressures of running a company. With planning, discipline and flexibility—the same attributes that make you successful in business—you can manage the unique risks of the business pilot.

As one component of my professional obligations I represent the [American Bonanza Society](#) on the National Business Aviation Association (NBAA) [Safety Committee](#). My participation focuses on single-pilot aircraft operations as part of the Single Pilot Working Group, whose major product is the annual [Single Pilot Safety Stand-Down](#). The next Single Pilot Safety Stand-Down will be held Oct 21, 2019 in Las Vegas, Nevada.

See:

www.bonanza.org

www.nbaa.org

<https://nbaa.org/aircraft-operations/safety/>

<https://nbaa.org/events/2018-business-aviation-convention-exhibition/newsroom/pre-convention/risk-mitigation-focus-10th-annual-single-pilot-safety-standdown/>

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Pursue Mastery of Flight.

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