

A Chilly  
Caravan Tale

Owner's Corner:  
Cessna 340A

Shared  
Lifetime Lessons

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JUNE 2022 \$3.95 US  
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*Twin & Turbine* (ISSN 1092-6402), USPS 24432 is published monthly by Village Press, Inc. with advertising offices located at 2779 Aero Park Drive, Traverse City, Michigan 49686. Telephone (231) 946-3712. Printed in the United States of America. All rights reserved. Copyright 2016, Village Press, Inc. Periodical Postage Paid at Traverse City, MI.

SUBSCRIPTIONS: *Twin & Turbine* is distributed at no charge to all registered owners of cabin-class aircraft. The mailing list is updated monthly. All others may subscribe by writing to: *Twin & Turbine*, P.O. Box 968, Traverse City, MI 49685, or by calling 1-800-447-7367. Rates for the United States and its possessions follow: one year \$15.00; two years \$29.00. Canadian subscriptions are one year \$24.00; two years \$46.00, including GST tax. Overseas subscriptions are one year \$52.00; two years \$99.00, U.S. funds. Single copies \$6.50.

ADVERTISING: Advertising in *Twin & Turbine* does not necessarily imply endorsement. Queries, questions, and requests for media kits should be directed to the Advertising Director, *Twin & Turbine*, P.O. Box 968, Traverse City, Michigan 49685. Telephone 1-800-773-7798. Website: www.twinandturbine.com.

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**POSTMASTER: Send address changes and inquiries to Twin & Turbine, Village Press, Inc., P.O. Box 968, Traverse City, MI 49685.**

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## Sell or Hold?

### In a FOMO Market, That's the Dilemma

*This month's briefing is provided by Editor-at-Large Dianne White.*

FOMO. I recently heard this acronym (which stands for “fear of missing out”) accurately applied to the aircraft market by an aircraft sales executive in Texas. Over the last two years, the confluence of the pandemic, increased travel needs, an aversion to airline travel and buyers flush with cash has created a perfect storm for aircraft demand. Used aircraft inventories have been at historic lows, and the resultant scarcity of airplanes for sale has driven prices up significantly.

As an aircraft owner, I've been sitting back watching the FOMO action. It's easy to get sucked into this highly contagious game, especially with these unprecedented transaction numbers. If you are getting out of aviation, selling completely makes sense. Especially if you own an airplane that has a “story” in its logbook. If you have a pristine airplane with fresh engine(s), fresh inspections, and updated avionics, you can almost name your price.

Our particular bird has a new factory engine, the latest Garmin TXi glass retrofit, and a fairly recent refurbished interior. However, it needs paint. One of the key principles of aircraft ownership is this: don't spend money on upgrades and refurb and expect to get dollar-for-dollar back when you sell. Invest in the plane with the mindset that you will get the benefits and enjoyment out of it now, and that it will help it be more marketable when you decide to sell. But does that hold up in a FOMO market? Maybe not.

Here's the more salient issue: We're not getting out of aviation. What will we replace it with? The airframe we desire as our next plane has been selling at ridiculously high levels compared to a few years ago. The airplane we really want is slightly out of financial scope given higher interest rates. Sure, I could sell high and buy high, but if the market resets – and it probably will – I will now own an asset potentially worth a lot less than I paid. I have many friends in aviation who play this game well. It's an individual decision and dependent on your appetite for risk. For us, we've decided to “hold” and do the repaint now.

With our airplane on the schedule at a reputable paint shop, it's time to start thinking about paint schemes and colors. Luckily, we've been through the process a few times and understand it. But the pressure of getting the scheme and paint chips just right is so much harder than redesigning the panel or picking out avionics.

My first experience with the aircraft paint process was when I acquired my mother's prized Cessna 172M – an aircraft she purchased new in 1975 – the aircraft was in excellent condition with the exception of the paint. Age, sun and an unfortunate meeting with a pressure hose left it oxidized, faded and down to the metal in places. I was never crazy about Cessna's groovy 1970's orange-and-brown scheme that adorned the plane. It reminded me of an A&W root beer label – so not fitting an aircraft that played such an important part in our family's history. As a kid, I was so proud of that plane, except for its “fugly” paint scheme. If I ever had a say in its repainting...

Confronted with an entire spectrum of colors and finishes, it was like standing in front a wall of Jelly Belly dispensers. Picking a scheme started out exciting but became overwhelming. It isn't like you get a do-over if you make a bad choice.

One night, I was flipping through family photos and came upon one that gave me pause. It was of my mom standing in front of that old Cessna with our daughter who was five at the time (circa the year 2000). Grandma had taken her flying that day and someone – probably my dad – snapped a photo. Both of them are beaming with my mom appearing to be in mid-sentence, probably retelling all the things they saw on the flight. The little girl would later earn her pilot's license in this plane, just as I did. It occurred to me that this one little Cessna would help launch my career and that of my daughter's, who now flies an EA-18G Growler Super Hornet for the U.S. Navy.

It was that moment I knew there was only one answer to my paint problem. I needed to restore the Cessna's faded feathers to its original glory exactly as looked when it rolled off the final production line at Cessna's Pawnee plant...in all its “Tropical Orange” and “Saddle Brown” glory. Nothing else would be fitting for a plane that has meant so much to our family.

Our business aircraft, the one we are about to paint, has no special history, at least not yet. It's a blank canvass on which we can convey our story. And what will that story be? In the end, I'm confident our finished product will be not too wild, not too boring, but 100% uniquely us. FOMO? Not a chance. **T&T**





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# Pilot Confessions

## How I've Tried to Kill Myself Flying Airplanes (And What I Learned As a Result)

by **Bill Frank**



*Originally published in COPA Pilot Magazine.*

**T**here is an old aviation adage that there are old pilots and bold pilots but no old, bold pilots. There is a ring of truth in that saying. I now qualify as old, and when younger was, at times, certainly bold. Fortunately, after almost 50 years of flying airplanes, I've learned a thing or two, and more than a few times, that learning nearly killed me, and worse, others.

Without claiming any special wisdom, I'd like to share some of my bad decisions with the obvious intention of sharing something that may prevent others from making some of those same mistakes. As with reading accident reports, our nature is to deny that we would ever make those mistakes – until we do. Keep an open mind and avoid learning the hard way.

### Episode #1 – Fuelishness

The flight was a trip home to Cleveland, MS (KRVN) from KIWS in the Houston area. Flight time at 15,000 feet in my Cessna 340 would be around 2 hours with the expectation of arriving home around 10 p.m. This occurred in the 1980s when weather forecasting was not as accurate as it is with today's computer-generated modeling. At my destination and in the surrounding area, weather was forecast to be VFR until fog was expected early the following morning. Not wanting to pay the exorbitant prices for fuel in the Houston area (probably a whopping \$1.50 a gallon at that time), I planned for 3 hours of fuel to land with a comfortable hour of reserve; more than legal, given the forecast weather. My wife and I departed later than expected, anticipating a new arrival time of midnight. It was a clear, moonless night. Despite some vectoring around the Houston TCA (later Class B), we had a bit of a tailwind in route and fuel did not appear to be an issue.

Enroute Flight Advisory Service was closed for the night, so nearing my destination, I checked weather with Jackson Approach as well as Memphis Center. The report was not good, with widespread low visibility and low ceilings due to mist and fog. Definitely not what I was expecting. As I descended I could see ground lights below me in the area of my destination and elected to proceed with the VOR A approach, at that time the only one available. In the time it took me to begin the approach, the fog had thickened and ceilings lowered. I proceeded with the missed approach, contacted Memphis Center, and when asked to “say intentions,” I had none. After wasting 20 minutes on an approach that I had no chance of completing, I wasted another 10 minutes deciding where to divert. The decision was ultimately made to proceed to Memphis, 30 minutes away with 30 minutes of estimated fuel left.

The only smart decision I made that night was to declare a fuel emergency. It was midnight and Memphis was landing FedEx on Runway 27. As I was coming from the south, I was vectored onto the ILS for Runway 36R. I was given weather of ceiling 200 feet and visibility of half-mile. I kept the autopilot coupled and vaguely remember seeing approach lighting allowing further descent. Seconds later, I saw the runway centerline lighting, clicked the autopilot off, flared and landed with a distinct “thud.” The fuel gages read zero. Shaking, I managed to taxi to the FBO and shut down.

The following morning, I asked that the aircraft be topped

off with fuel. When I arrived at the FBO and signed the fuel slip, I was horrified. Doing some quick math, I realized that I had landed with about 3 gallons of gas left in each main tank. A missed approach would have resulted in the death of myself, my wife, and possibly others on the ground. It was a very sobering experience.

### What I Learned

- The only time you can have too much fuel is when you are on fire. Always carry as much fuel as weight and balance will allow.
- You can be legal and still run out of fuel. With the data linked weather available today, this would not have happened. Use all available resources.
- Always plan an alternate and never hesitate to divert.
- You must avoid getting sucked into trying to complete the mission. I wanted to sleep in my own bed that night, and both my wife and I had to be at work the next day. "Get-home-itis" is a very strong motivator for making poor decisions.
- Never hesitate to declare an emergency. Doing so saved my life by allowing priority handling to an approach that was not in use that night. Had I been given vectors for the 27 ILS, I would not be writing this story.

### Episode #2 – A Rookie With a Problem and No Plan

It was 1979 and I was just handed my temporary IFR certificate. Anxious to put it to use, I planned a trip the following weekend from Columbus, Ohio (KCMH) to Boyne Mountain, Michigan (KBFA) via the Litchfield VOR to avoid the Detroit TCA. There would be three of us on board for the day ski trip. The aircraft was a brand-new single-engine Rockwell Commander 114, complete with a cassette tape player (which soon played a part in this story). The weather that day was for widespread IFR with ceilings of 800 to 1,000 feet, well within my newfound capabilities. Or so I thought.

We loaded up the airplane early in the morning with just enough fuel for my alternate of Traverse City (KTVC). Everyone was excited about the idea of hopping in a private airplane for a day of skiing. We soon departed into the gloom of an 800-foot overcast, but within 20 minutes, we were on top of the clouds at our cruising altitude of 6,000 feet with an absolute clear, bright, sunny day above the undercast. My friends were suitably impressed – though that was not to last.

Somewhere around the Litchfield VOR, the alternator field wire loosened and disconnected, leaving only battery power. A small yellow light on the far right of the instrument panel indicating loss of the alternator dutifully lit up, completely unnoticed by me, the pilot. I was engrossed in conversation with my passengers and listening to music on the cassette player. How cool, indeed. Soon enough the music output began to slur – my first indication that something was amiss. Of course, my initial reaction was that something was wrong with the tape player or the cassette itself, not uncommon in those days. After switching tapes




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with no change, I suddenly noticed the “idiot light” on the panel and realized what was happening. Now what?

I mean, how could this happen to me on my very first IFR flight? How unfair. Once I accepted the situation, I surprisingly got down to business. I was very quickly dealing with a total electrical failure: no radio, no transponder, no HSI, no navigation and no plan. I had clouds below me for as far as I could see, which in clear air was probably 100 miles, but limited fuel. It was decision time. How I dealt with this emergency would obviously affect the lives of all of us on board.

I first had to explain to my very nervous passengers that the loss of electrical power would not affect the engine or control of the aircraft. I would navigate by the “wet” compass and find an airport. I knew we were somewhere south of Lansing, Michigan. Figuring that most of the major roads in the area would be running North-South, my game plan was to initiate a slow descent on an Easterly heading until breaking out below the overcast. The compass would be most accurate on an East-West heading (remember, I just finished my IFR rating), and ceilings should be around 1,000 feet AGL. Before you scream “idiot,” remember this was 1979 and cellphone towers didn't exist. Though Michigan is not known for its mountains, proceeding north would take me into progressively higher terrain. We began our descent through the clouds. As hoped, we broke out of the clouds about 1,000 feet above ground level.

Again, as hoped, we found a four-lane highway and followed it north towards Lansing. I eventually found a large airport with a layout consistent with KLAN and began to line up on the longest runway. Finally, some good news, as I saw a bright green light from the tower. I lowered the gear handle, not, of course, expecting green lights and continued the approach. About half a mile from the runway threshold, the green light changed to a flashing red light. What now? It finally occurred to me that the landing gear was an ELECTRO-hydraulic system, and the gear never lowered. I aborted the landing and flew away from the airport. Now sweating profusely, I asked the front seat passenger to read the emergency checklist for manually lowering the gear and managed to control the airplane, stay below the clouds all while extending the gear. I returned to the airport, again got a green light, and landed without incident. The field wire was quickly reattached by a mechanic, but we all felt we had enough and returned home.

## What I Learned

- Monitor your systems, and more importantly, know what your normal readings are. A slightly low oil pressure may be within normal range but be signaling an impending failure. A discharging battery means a failed alternator.
- Know where the nearest VFR conditions are. In my case, I neglected to brief that and couldn't ask once I lost all electrical power.
- Don't ever put yourself and passengers in a position where you must make a blind descent in IMC conditions (e.g., Kobe Bryant). Always have an out. The outcome could easily have been tragic with today's proliferation of towers.
- Know your systems. I was totally distracted dealing with the total electrical failure and never considered how the gear worked. As a result, I had a second emergency to deal with in getting the gear down while scud running under a low overcast.
- If the radios get quiet for an inordinate amount of time, query ATC, they will probably appreciate the conversation on a slow day.

## Episode #3 – Hypoxia

I used to do some flying freight at night in a twin Cessna 402. The mission that night was from Columbus, Ohio, to Burlington, Vermont, then on to Buffalo, New York, before returning home. It was wintertime, so I'll let you imagine how the weather was. It didn't matter; my job was to go anyway. The Cessna 402 was equipped with boots, heated props and alcohol for the windshield. Nonetheless, it was not FIKI certified. It was also unpressurized.

On departing Columbus, I started picking up ice at around 6,000 feet. I queried ATC for a tops report but none was available in my area. I asked for higher, slid my seat back to grab the oxygen cannula from the side pocket. I plugged in the cannula, slid the seat back forward, and passing 13,000 feet went on oxygen. I ended up at FL190 before I was on top of the clouds and out of icing. It was a good 30 minutes later that things started to get weird. It began with a hilarious exchange with ATC about changing frequencies. The audacity, I thought, of ATC wanting to change frequency when the one I was on was working just fine. Now, if I could only find the blasted radio...

Having military training, I had been through the altitude chamber numerous times. One of the things you learn from that experience is to recognize your personal symptoms of hypoxia. My primary symptom was that I got “giddy” – everything was suddenly humorous. Now remember, the pulse oximeter had yet to be invented. A dim lightbulb began to glow in the back of my mind. Something wasn't right. I regained enough wit about me to realize I was hypoxic. In sliding my seat back and forth, I had chopped my cannula in half and was receiving no oxygen. No worries I thought as I reached over to the copilots' side pocket and grabbed for a cannula – nothing. I hazily reasoned that I was now in trouble. No way, I thought, was I going to descend back down into the icing. I would just find another cannula



somewhere. I crawled out of my seat (yup, single pilot) and began unstrapping the cargo behind me.

I think I invented Tetris that night but somehow managed access to another side pocket. Now, what was it that I was looking for? My time of useful consciousness was rapidly running out. It was a “there by the grace of God” moment that I found a cannula. If I had attempted to immediately return to the cockpit, I would not be relating this story. Instead, something pushed me to plug it in right there. After I took a few breaths, the lights came back on, and I was able to move back in my seat. Now fully coherent, I had some explaining to do with ATC. They were as grateful to have me back as I was to be back.

### What I Learned

- The only answer for hypoxia is an immediate descent. Once you have regained a clear head, you can figure out what went wrong. I was lucky, very lucky, that I survived.
- Use the PRICE checklist (as taught by April Gafford of JATO Aviation). I do this check on the hour and half hour.
  - P = Check the Pressure gauge to determine how much oxygen you have
  - R = Regulator. Check the proper setting for how much oxygen flow you are getting. There are different scales for oxy-saver cannulas.
  - I = Index finger, check pulse ox

C = Run the entire length of the Cannula checking for leaks, kinks and secure connections.

E = Emergency plan – what are you going to do if you are not getting oxygen

- If you ever have the chance to participate in an altitude chamber course, please take advantage of the opportunity. It is important to learn your initial symptoms of hypoxia.

### Summary

Unfortunately, there are a few more stories I could relate – mostly when I was a young, bold pilot. What has allowed me to become an old, not so bold pilot was that I’ve learned from these mistakes and taken them to heart. It is unlikely that you will ever experience the same emergencies, so focus on the “what I learned” portion. I’ve spent the last 20 years of my instruction trying to teach clients how not to kill themselves. It’s great to fly that perfect approach or grease a landing, but it’s how you take on risk management and deal with abnormal situations and what you learn from it all that allows you to become an old, not so bold pilot. **T&T**

**Bill Frank** is a longtime flight instructor with nearly 50 years of flight experience. He is the 2020 recipient of the COPA Safety and Education Foundation Lifetime Achievement award and the 2022 Safety Award from Cirrus Aircraft. He holds several type ratings and turboprop experience with Pilatus PC-12 NG, TBM 900 series and EPIC aircraft.



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# Ferry Tales

## The Coldest Caravan

by Joe Casey



Glaciers in Greenland.



Refueling in Iceland.



Landing in Minnesota.

I love an adventure. A real adventure. The more weird, interesting and off-grid it is, the better. I'm not sure of all the psychological issues associated with the way my mind is (un)wired, but when I got the call to fly a Cessna Caravan on amphibious floats from Nigeria to Minnesota, a smile spread across my face.

The flight started with all the issues to be expected coming out of a third-world country in Africa. I could write a book about the first half of the trip, with long airline flights, heat, humidity, unfamiliar customs, odd regulations, the Sahara Desert, high-density altitudes, people helping me, people trying to steal from me, low fuel levels on long legs, scenic flight through France, and unbelievable views from my moving window. The first half of the flight from Nigeria north through the Sahara, across the

Mediterranean, up through France and Ireland to Iceland was full of great stories. But it was the second half of the flight where the experiences tested my ability as a pilot.

A Caravan on amphibious floats is a wonderful airplane. It feels like an overgrown Cessna 210, except that the floats lower the CG and add a "pendulum effect" to the flying characteristics. Tried and true, trustworthy and tall (really tall), the Caravan has a big presence on the ramp. I'm not the only one that thought well of the amphibious Caravan. Everywhere I went landed, people came out of the woodwork to see the special bird.

For the second half of the trip (Iceland to Minnesota), Warren Lovell joined me on the trip. Warren is a team member with Shepherd Aero, the company that manages my international flights. I've done many flights

for Shepherd Aero, and I think they are singularly outstanding. Warren asked if he could join me on the flight, and I was thrilled to have him along.

We departed Belfast, Ireland (EGAA) on a clear Friday afternoon for Keflavik, Iceland (BIKF). It started to get cold in the cockpit, so we turned on the cabin heat. But, the cabin heat did not work. In the Caravan, a switch opens a bleed air valve, allowing bleed air to enter the cabin. For some reason, the bleed air was not entering the cabin as anticipated. I suspect it had not been opened the entire time the Caravan was in Africa. There simply was no reason for it in that heat.

Leaving BIKF, we climbed up to FL120, and our problems started. The



problem was the cold. The temps at FL120 started at -23C near Iceland, but it got colder as we flew toward Greenland. We could not descend due to the risk of airframe icing at the lower altitudes, and with the heater not working, it got cold. I don't mean a little chilly. I mean COLD! With an OAT of -23C, the cockpit was probably -10C while in flight. The sun's rays

were bathing the cockpit on the way to Greenland, which helped keep the temperature in the cockpit almost bearable.

We crossed a cold front when we passed eastern Greenland, and the temperature dropped to -30C at FL120. I had an immersion suit fully on, blankets covering me, a goose down jacket, along with extra socks, shirts and long johns. I was bundled, but the cold was still extreme.

The landing at BGSF was easy, with the weather nice and calm winds. We ran inside (literally) and soaked up all the warmth we could muster. Both of us were bitterly cold-soaked and uncomfortable, but it was about to get worse. We took off from BGSF at 5:59 p.m., just before the time when the airport closes. The view up the fjord at

Sondestrom was spectacular as we climbed up over the many peaks towards Iqaluit, Canada (CYFB). Again we climbed up to FL120, and again it got cold. And it was going to get colder.

The sun was setting and our only source of warmth was going away. Additionally, the temperature was dropping as we flew towards Iqaluit. The OAT was -33C as the sun made its slow descent below the horizon. The cold was simply unbearable. We were already bundled up with everything we could find to bundle with, but it was simply not enough. I lost feeling in my heels and toes. My well-gloved fingers hurt. My core temperature was undetermined, but it was certainly lower than it should have been. Time just dragged on. It was a

4-hour flight to Iqaluit, and we were both frigid upon landing.

The next day Warren and I committed to each other that something had to change. We had more than 10 hours of flying to get to our destination, and most of that was over the cold of Canada with forecast temperatures below -30C. We went to one of the local mini-markets, and we whooped for joy when we found about 20 packets of "foot warmer" packages on the shelf. With those small heaters, we felt that we had a good chance of being comfortable.

We departed CYFB in the clear blue sky and started the climb over the vegetation-free ground in the arctic towards LeGrande Riviere (CYGL). We then broke out the foot warmers gleefully thinking about the heat they were to provide. But, wouldn't you know it – none of them worked! There were no dates on the packages, but clearly they were older because they simply did not produce any heat. It was going to be another cold-soaking for Warren and me. The temperature was -33C and unrelenting. The cold takes everything out of you. It was physically and mentally draining. We knew we had nearly 5 hours of frigid flying ahead of us to CYGL.

The views were smooth, beautiful, white and lovely, but there was just no way to enjoy anything because we were so frozen. Interestingly, I bet I took dozens of photos on the first half of my ferry flight from Nigeria to Iceland and didn't take a single picture from Iceland to Duluth, Minnesota. It is not that there were no views to behold, but I just didn't dare pull my fingers out from the gloves.


Upon landing at CYGL, I again barely made it out of the cockpit and into the building. My feet hurt. My body hurt. I was so depleted of energy. I went into the building, took off the immersion suit, and laid down in the middle of the floor in the terminal building. I was completely exhausted.

Warmth returned to my bones, and I started to feel better. And then, another wave of glorious warmth came upon us. Two airline pilots from the area were dead-heading to another location, awaiting their next flight. They

saw us, took pity, and left the building to "get a few items." They came back with some snack items and foot warmers. Oh my gosh, foot warmers! I would have given both of those guys \$1,000 for those, but the Good Samaritans refused to take our money. Instantly I broke open the packages, and glorious heat began to flow.

We departed CYGL for KDLH, and the foot warmers were a complete gamechanger. Even though the temperature never rose above -30C in cruise flight, our feet and hands were much, much better. As we flew southbound, more trees began to dot the scenery, and many lakes and rivers of the region were still snow-covered. Hudson Bay was still completely frozen over, but breaks in the ice were present, showing that things were beginning to change – spring was just around the corner. And then the sun began to set, and the bitter cold came upon us yet again. The foot warmers began to lose their ability to produce heat. It was going to be a frigid 5-hour flight.





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So here I was, at night, at the end of a very long, cold day, and wanting to be on the ground. Could anything else go wrong? Yes. It can always get worse. Some of the lighting in the cockpit began to flicker and extinguish; the ice light that illuminates the wing popped a circuit breaker; the autopilot began to porpoise incessantly; and the intercom began to have loud cracks that were as annoying as they were a hindrance to communication. I was so glad to have Warren along to help. We juggled the ever-increasing complexity of the flight as well as I've seen any crew handle a flight.

We remained at 12,000 feet in the bitter cold of -32C until we were near Duluth to ensure no icing up. I hand-flew the airplane on the ILS approach to Runway 27 at Duluth and gave an audible sigh of relief when the runway light came into view. Upon landing, my feet hurt again. I was hurting cold. I was tired. I really just wanted a hot shower and a bed. Within two minutes of getting out of the shower,

I was in bed and fast asleep. It was an incredibly long day.

So, was I a complete idiot for taking this flight? I've wrestled with this question now that my body has warmed up and my mind works better.

To "not take the trip" would be against my grain, against my personality, and against my penchant for accepting the tougher missions. Could decisions have been made to mitigate the risk? Sure. It is easy to armchair QB a flight after the fact. Had the bleed air valve worked, it would have been a gamechanger. Warmth at altitude would have changed everything. I got an object lesson on the cumulative effects of numbing cold. Nothing works as well in cold as it does at a moderate temperature, especially the mind. I'm convinced that my decisions were altered simply by my mind not processing as well as it would normally.

Could the bleed air valve have been repaired? Maybe, but where? There are not readily available mechanics along the North Atlantic route. And, if

there were, where would they do the maintenance? In the howling winds of Iceland or the frigid temperatures of Iqaluit? No, there's not a simple answer. It's a complex question to a complex situation. There are a thousand "what if's" that need to be processed.

You don't need to cross the North Atlantic in the arctic regions to have aviation quandaries. Most pilots reading this article will go flying when challenges exist because they always exist. If you only flew when the wind didn't blow, the temperatures were moderate and the visibility CAVU, you'd never go flying. We all accept the risks of flying for the fabulous rewards that flying offers.

The lesson learned and affirmed with this flight is that "in the heat of the battle, you'll not be as good as you think you will be." The extreme cold was the factor for me on this flight, but we can all experience conditions that make us less than our best in the lower 48. Turbulence, fatigue, a seemingly benign change in medical condition, excessive heat or humidity, and any other number of factors can tilt the scales of safety in a downward direction.

We fly in a dynamic environment. Things change. Today's flight will not be like yesterday's flight or tomorrow's flight. The best pilots are not the ones who avoid risk but that mitigate risk well and adapt to ever-changing situations.

You can bet your bottom dollar that I'd take this flight again if given the chance to do it over again. You'll definitely find me in a cockpit on the other side of the world seeking out an aviation adventure in the future. But, you'll find me dragging a suitcase with better cold-weather equipment and the knowledge that extremes will cause you to be less than your best. **T&T**



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**Joe Casey** is an FAA-DPE and an ATP, CFI, CFII (A/H), MEI, CFG, CFIH, as well as a retired U.S. Army UH60 standardization instructor/examiner. An active instructor in the PA46 and King Air markets, he has accumulated 14,300-plus hours of flight time, with more than 5,200 dual-given as a flight instructor. Contact Joe at [joe@flycasey.com](mailto:joe@flycasey.com) or 903.721.9549.



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# VISION CENTER

## TRAINING FOR THE CIRRUS SF50 TYPE RATING

by **Rich Pickett**

“Fire, fire, fire!” I was climbing through 10,000 feet in the Cirrus Vision Jet, having just departed Knoxville (KTYS) and joining the SWIFFT TWO arrival into Nashville (KBNA). I moved the thrust lever to idle, pitched to 120 KIAS, and waited 15 seconds to see if the FIRE light extinguished, indicating a bleed leak rather than an engine fire. No such luck. At 15 seconds, I still had the FIRE alarm sounding so next was Fire Acknowledge Switch activate and push one of the two fire extinguisher buttons. This canceled the alarm, but I still had a problem: gravity.

Now the fun began. I fly gliders, and while the jet has a reasonable glide ratio, it wasn't a sailplane. Knoxville was close, so I started to load the RNAV 23R back at the airport. My instructor, Joe Logan, then reminded me, “You do know you don't have two engines.” Oops, I forgot I wasn't flying a multi-engine jet. I was at the Cirrus Vision Training Center in Knoxville for my SF50 type rating.



PHOTO BY AUTHOR

I zoomed into the map on the Garmin G3000 map page and headed to Monroe County (KMIV), hoping to be at high-key at 3,000 AGL with low-key at 1,500 (abeam the touchdown). My delay would cost me valuable time and altitude, but I was determined not to try to stretch the glide with potentially disastrous results. On final it was clear I wouldn't make it, however, the grass before the runway was smooth and after landing on it, I rolled up on the runway. At least the simulator didn't indicate a crash with the red screen of death.



G3000 procedure trainer.



Vision Jet in flight.

Thankfully, my subsequent attempt was more successful, with a nice landing back at Knoxville. The Williams International FJ-series engines have an excellent safety record and the chance of a fire is very remote. However, if this would have happened in the real jet and a safe landing wasn't possible, I could have simply used two hands, grabbed the Cirrus Aircraft Parachute System (CAPS) activation handle and pulled. Another day in the bag in my pursuit of a Cirrus Vision Jet type rating.

### Time for the Type

After flying and writing several articles on the Cirrus Vision Jet, I wanted to add a type rating for the jet and compare their unique training program to others I've completed. Having owned both the SR20 and SR22 and previously being an active Cirrus Standardized Instructor Pilot (CSIP), I was intrigued

by the Cirrus training methodology since 80 percent of Vision Jet owners previously owned one of their singles. While some corporations and charters use their aircraft, Cirrus' primary focus is owner-operators, specifically those transitioning from Cirrus piston aircraft.

With my turbine experience and type ratings, I was qualified to bypass some of the pre-training detailed below. Prior to my arrival, Tatiana Goldman with the Cirrus Training Department provided me with various manuals and access to their Vision Jet video training series on the Cirrus Approach website, the home of all of their courses. Tatiana was there to help whenever I had a question, whether regarding my schedule or questions about the local area.

The video courses totaled over 16 hours, divided into easily consumable segments, most less than 30 minutes in

length. They cover related information such as radar, high altitude operations, meteorology, as well as Vision Jet-specific content. The courses also provide a basis of knowledge prior to the in-person training. The two weeks of training includes five days of ground instruction, five Systems Integration Training (SIT) lessons, five simulator sessions, and a check ride.

Cirrus is customer focused from the first contact through the completion of the course. They understand their clients extremely well, and since most are new to turbine operations and training, Cirrus works diligently to support their success. As you progress through the course, they adapt the learning modalities and sessions to ensure a full understanding of this unique aircraft and flying to ATP standards.

In my cohort of trainees, two of us had previous turbine experience, and three had none. But everyone had previous Cirrus SR22 flight time and definitely came prepared. My primary advice to anyone seeking their first type rating is to commit to advance studying and perfecting your IFR competency. This way you can devote energy and focus on the jet experience itself. If you are not prepared, the journey is more difficult, stressful and not as much fun!

John Fiscus, Pierce Lane and Joe Hogan were our initial instructors – all working diligently to transfer as much of their knowledge to us as possible in five days. John and Joe are contractors with extensive experience with Cirrus aircraft, which proved invaluable in



learning the operational use of the jet. Pierce has been with Cirrus for many years and is well-experienced with the Vision Jet.

Mark Woglam, one of my classmates and a new Vision Jet owner, impressed me with his comprehensive recollection of the memory items, motivating me to study harder during the course. Ulises Mones, a Cirrus Sales Director for Latin America and the Caribbean, also joined us to obtain his Vision Jet rating. Ulises is supporting a growing number of Vision Jets in his region. Even during the provided lunches, we learned about flying the jet from other students and instructors.

Just when we reached our absorption limit on the first day, we had our first exposure to the avionics using the Garmin G3000 Cockpit Procedure Trainers (CPT). It was a great opportunity to practice the procedure flows for operating the Vision Jet. The trainers are freely available for use by the students, and I took every advantage of them to practice for many additional hours. While I have flown and taught with the G3000 in various aircraft, the ability to explore more features with the Vision Jet was very helpful.

In addition to the desktop avionics trainers, Cirrus Aircraft offers two high-fidelity Level-6 FTDs with complete cockpits and visuals. While

non-motion, they have nearly equal value, in my opinion, for training. Cirrus has integrated them well in its program along with the Level-D motion simulator and fleet of Vision Jets, offering flexibility that is not available with any other course. I've encountered simulator breakdowns during training for other type ratings. If that happens during the Vision Jet course, the instructors can transfer the lessons to the FTDs or even the jet itself. This is essential to keep everyone on schedule.

The second week centered on using the Level-D simulator and flying flight profiles (with a number of emergencies, of course). The simulator is great. I asked my instructor, Landon Palmer, to top off the tanks and instantly I had 296 gallons of Jet-A. While the focus for the check ride (evaluated to ATP standards) is on understanding aircraft systems, mastery of emergency responses, and instrument procedures, the simulator sessions also provide valuable scenario-based opportunities.

One scenario was a flight from Aspen (KASE) to Denver (KDEN). A low ceiling, warm temperatures and steep terrain made for a nice challenge. Even before starting the engines, it is imperative to evaluate aircraft performance under those conditions and the associated climb requirements.

The LINDZ 9 IFR departure requires a minimum of 465 feet/nm to 10,000 MSL. I limited the Vision Jet takeoff weight to 5,300 pounds to achieve the required climb gradient.

Prior to departure, I configured the G3000 MFD with both a map and terrain (TAWS) – useful when flying in mountainous terrain. Climbing through 12,000 MSL, I heard a loud bang! I had a catastrophic engine failure with zero chance of an air start. The TAWS page showed I was above terrain, however, it was solid IMC. I steered towards lower terrain and with two hands pulled the CAPS handle.

CAPS is more than just the parachute and rocket.

Activating it triggers several actions. The CAPS system, in concert with the autopilot, reduces the power to idle, then pitches the nose up to a maximum of 60 degrees (usually 30) if necessary for the deployment speed of 135 KIAS. The tractor rocket then launches from the nose, an ejector airbag propels the parachute free of the aircraft (attached to Kevlar harness straps positioned on the fuselage), the chute inflates, and the plane is stabilized – all within 15 seconds. You become a passenger as you (and any other occupants) safely descend at 1,560 FPM. With CAPS and Safe Return (the Cirrus emergency auto-land system designed with Garmin), you have almost all emergencies covered.

With my prior flight experience, Cirrus customized the training to include two training flights in the airplane in place of simulator sessions, which removed my Supervised Operating Experience (SOE) requirement after completion of the course. My instructors Landon Palmer and Matt Welch flew with me on the flights around Tennessee, which was a great opportunity to obtain more time in the jet. I kept reducing the throttle just to obtain more flight time. It was awesome to integrate the simulator training with flying the aircraft itself.

## The Check Ride

After around 40 check rides, I can't say they are my favorite flying activity, however, I do find them fascinating. Tony Hicks, a Vision Jet Technical Center Evaluator (TCE), met me at 7 a.m. and immediately put me at ease. When we were done with the ground portion of the practical test, I couldn't believe we had spent two-and-a-half hours reviewing the airplane. I enjoyed all of it.

Tony offered me the option of completing some tasks, such as emergencies, air work, etc. in the simulator and the rest in the jet. So, we headed to the simulator, where we spent over an hour doing steep turns, stalls and a myriad of normal and abnormal events – complete with the usual engine fire scenario.

It was then off to the Cirrus Vision Jet for some instrument approaches



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9W	17O	9DY
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at Knoxville. In many aspects the simulator is easier: no traffic, airport construction, or turbulence – just you, the plane and the examiner. On the other hand, it was a lot of fun managing other traffic, some light turbulence, and changing winds, while enjoying the excellent design, fit, and feel that Cirrus has become known for.

Five hours after we started, Tony handed me my new temporary FAA license with the SF50 endorsement. The two weeks went by fast. I was then fortunate to fly a Vision Jet home with a friend which allowed me to experience even more time in this versatile personal jet.

### Training Program

Matt “Mutt” Manifold, a former Air Force F-16 pilot and General, is the Cirrus Aircraft Vision Center's Director of Operations and explained to me they will complete 200 initial type ratings and 500 recurrent training events this year for the SF50 alone. With over 775 Vision Jet pilots trained

to date and growing, that is an impressive accomplishment.

If you purchase a new Cirrus Vision Jet, each aircraft comes with an entitlement for an initial rating Cirrus Aircraft has built upon its highly successful delivery process for new SRs. The training department works with new owners to complete their training by the time they arrive at Knoxville to accept delivery of their new jet.

This proactive training process starts six to eight months before delivery. A Cirrus Aircraft instructor or CSIP can start working with the new owners to ensure their flying skills will serve them well flying the jet. They provide the customer with an instructor-led Flight Skills Assessment (FSA) at a Cirrus Aircraft center or customer location. This isn't a test, just simply a way for Cirrus and the new owner to understand the owner's current skill level.

Cirrus also offers a three-day Jet Readiness course to help owners

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prepare for the new flying experience. The training can be done at Knoxville or at their location. In the event they aren't currently flying an SR aircraft, training can be done in their aircraft or a Cirrus-supplied SR22. This paradigm is very similar to what is done with the Eclipse Jet type rating courses and has proven to be a very successful model over the years. Since jets are typically flown on IFR flight plans and in airspace that may be new to piston pilots, such a readiness course is essential to increase the chance of success.

For purchasers of a pre-owned Vision Jet, the demand is so high for training slots that it may take some time to schedule. Cirrus Aircraft knows well in advance of new jet deliveries but may not know when a used aircraft changes owners until very close to closing, hence the potential delay. And if you are buying a new Vision jet, communicate with Cirrus early in the process to minimize delays. In the interim, qualified Vision pilots can assist new owners until training is completed.

Cirrus Aircraft's JetStream program, which covers almost all maintenance from tip to tail, also includes recurrent training for the owners. This is commendable since it integrates training into their owner experience without having to consider it a separate item to manage. For pilots not covered by the Jetstream program, the Cirrus Training Department can also schedule their recurrent training. With such a high demand, it is highly suggested that pilots plan well in advance (even perhaps immediately after their last training event) to ensure a date. With Cirrus producing almost 100 jets this year alone, advance planning for training is highly recommended. **T&T**

*After 12,000 hours flying over 110 aircraft models, **Rich Pickett** still has a passion for flying. Rich holds ATP, CFII SME, SES, and Glider licenses and type ratings in Aero Vodochody L29 and L39, Citation 500, 510s, 525S, Eclipse 500S, Falcon 10 and Vision Jet. His company, Personal Wings, provides training, mentoring, and aircraft services. Contact Rich at [rich@personalwings.com](mailto:rich@personalwings.com).*



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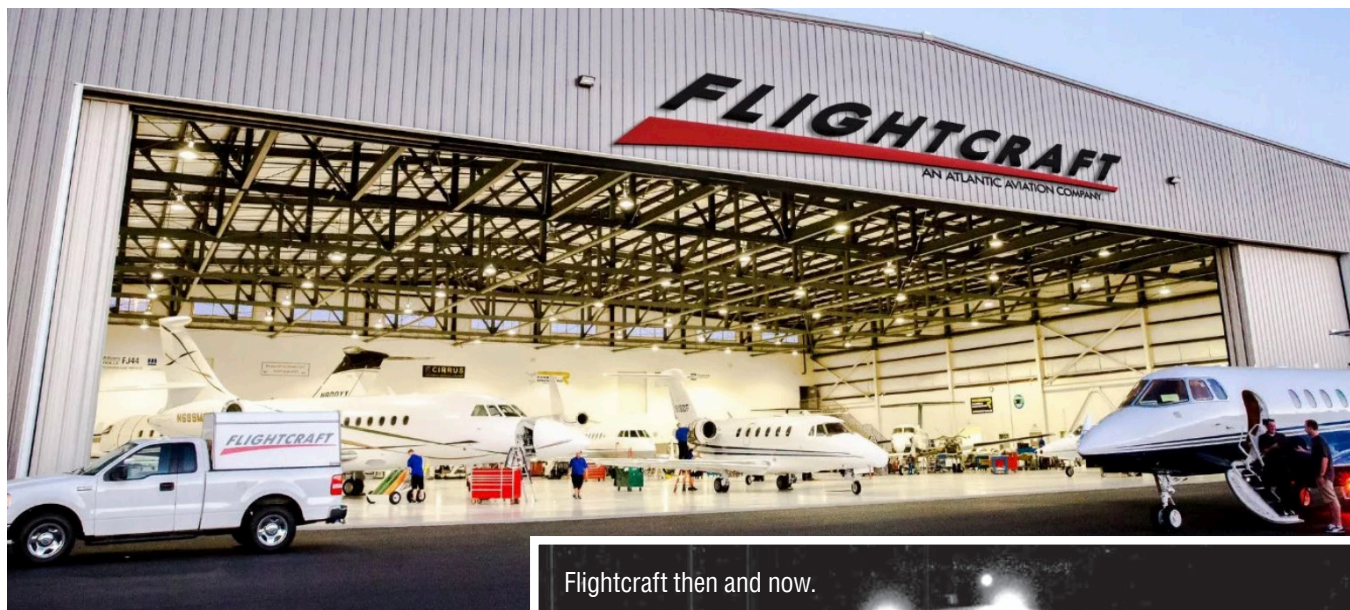


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## Flightcraft

by Lance Phillips

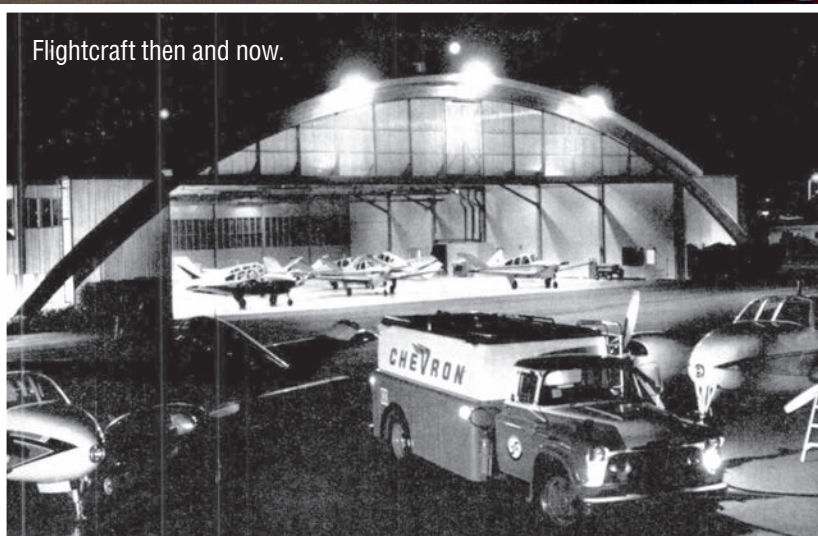


Innovation is an oft overused and under-achieved term these days. But back in the early days of aviation, lots of Americans seemed to be running over with it. In Portland, Oregon, a few business leaders got together in the 1940s and decided to bring solutions to the Pacific Northwest's transportation challenges, forever cementing their place in aviation history and providing an enduring legacy that continues to this day.

Invention was the name of the game when Si King and Charlie Miller joined forces to lead the young aviation startup, Flightcraft, at Portland's newly minted super airport, now PDX. King, Flightcraft's president and manager, continually looked for ways to make moving aircraft, baggage and people around the Flightcraft tarmac easier and safer. While Miller, Flightcraft secretary and treasurer, wanted to carry more in easier ways on every aircraft available. Their colleague and Flightcraft vice president C.D. Weyerhaeuser designed and implemented a hangar opening, a single-span of local wood, strong enough and wide enough to accommodate the long wingspans of the day.

But it's important to understand how the area got to its current airport configuration. Portland has used two locations over the years for its major commercial airport – Swan Island from 1927 to 1940 and the floodplain of the

Flightcraft then and now.



Columbia River since 1940. The second site has seen repeated adjustments of runways and expansions and upgrades of terminal facilities. As of recently, it served millions of passengers with direct flights to almost 100 domestic and double-digit international destinations.

Swan Island was a marshy, undeveloped swampland in the mid-20s. A major dredging project moved the natural island and attached it to the east bank of the river. Construction of the airport by the Port of Portland began in 1926, and Swan Island Municipal Airport opened on September 14, 1927. Charles Lindbergh, who was on a nationwide tour flying The Spirit of St. Louis, took part in the opening ceremonies. The Oregon Journal reported that Lindbergh "landed like a feather with the punctuality of a crack railroad train."



But as air travel increased and the needs of travelers outgrew the island site, it became apparent that Portland needed another airport. By 1935, Swan Island Airport became obsolete. The small airfield couldn't easily be expanded, nor could it accommodate the larger aircraft and passenger loads expected to become common in Portland. Plans immediately were conceived to relocate the outdated airfield to a larger site.

In 1936, with a \$300,000 bond issue, the City of Portland purchased 700 acres of land along the Columbia River. This, too, was marshy riverside land that needed 4 million cubic yards of dredged landfill to be usable. A \$1.3 million grant from the Works Progress Administration, a part of President Franklin D. Roosevelt's New Deal, helped pay for construction costs. The Portland-Columbia Airport was completed in 1940, with its opening ceremony on October 13.

A new terminal was located off Marine Drive with the runways forming an X toward the western side of the airport. Its location identifier PDX was adopted after World War II, by adding X to the existing National Weather Service identifier, much like Los Angeles and Phoenix. The Port of Portland constructed a new terminal in 1959 between two parallel runways that had been newly constructed. That runway configuration remains in use, and terminal expansions and upgrades followed in 1977, 1986, 1992 and 1994.

Eight years after the new airport's opening, Flightcraft began operations. The Beechcraft Bonanza happened to be introduced the year prior, and Flightcraft was heralded as one of the early stars in the Beechcraft dealer constellation. There were as many as six Flightcraft locations at one point.

We can credit the development of the electric scoop-type aircraft tug to Si King, one of Flightcraft's founders. In 1945, Wilt Paulson founded the Willamette Aircraft and Engine Company in Beaverton, Oregon, to repurpose military aircraft for crop dusting and other civilian uses. After a move to Warrenton, Oregon in 1948, Paulson's business morphed into the electric vehicle company known as LEKTRO. LEKTRO developed products for the logging, farming, golf and aviation industries. In 1967, Paulson and Si King got together to solve the problem caused by tow bars of the day, which often damaged aircraft nose gear when towing. Si King envisioned a system in which the nose gear could be lifted with a scoop to cradle the gear, eliminating the towbar. They created the Airporter electric towbarless tug. Thousands were built and sold around the world, and the concept is still in widespread use today.

It was the Beech 18's height of popularity, and the Flightcraft team sold and serviced the amazing twin from its Portland facility. They operated Flightcraft out of PDX until the early 1970s when Beech Holdings bought the company to maintain its service center. Less than a year later, in 1973, Vin Manilla and David Hinson bought Flightcraft from Beech Holdings, and Hinson stayed on until 1978



Flightcraft services Dassault Falcons, Cessna Citations and Beechcraft King Airs.

when he left to start Midway Airlines. Hinson eventually was appointed to head the FAA under President Clinton.

Flightcraft was acquired by The Papé Group, a family-owned business specializing in capital equipment distributorships. It controls distribution of such heavy equipment manufacturers as John Deere, Hyster, Ditchwitch and Bobcat.

The Papé Group had been a Flightcraft customer, said Phil Botana, Flightcraft's previous president, and bought into the business as another capital equipment distributor with a reputation for strong aftermarket support. "What Papé found," said Botana, "was that this is a similar business but with a very different client base. Management was able to build relationships with other aircraft-operator customers – relationships that have helped the parent company prosper."

Botana said, "The partnership decided to get out of the business. It's likely the company management wanted to be in control of who ultimately took over the dealership." Botana credits his predecessor, Ernie Sturm, with building Flightcraft's business into what it had become by then. He said Papé hired Sturm when it acquired the company, and he led the business through some difficult times. We have written a lot about Beechcraft's mid-1980s decision to change its business relationship with its dealers. Under the old scenario, Botana said, most of a dealer's profits were generated through aircraft sales. Maintenance and other support functions were not considered profit centers, and they existed at the dealer level mostly to support the sales department.

Beechcraft completely rewrote the business model. Botana said, "The [original] arrangement led to underdevelopment of the support market. Then when the [OEM] takes away the sales profits, it's tough to revamp and turn around the business model." Shop rates weren't necessarily intended to generate profit but to incentivize owners to

buy another airplane. When it became necessary to raise maintenance rates to generate profit, customers found it a difficult pill to swallow.

Sturm navigated the treacherous waters, though Flightcraft scaled back from its high of as many as six locations to its then two-facility status, with operations in Portland (PDX) and Eugene (EUG), Oregon. Sturm secured Cessna Citation service center status, and revenues from the four main lines of business roughly started to break out as 35 percent for tech support, 30 percent for line service, 20 percent for sales and brokerage activity, and the remaining 15 percent from charter and aircraft management income.

After the sale to Dean Papé, the company started an aggressive expansion that would result in Flightcraft FBO and maintenance facilities in Portland and Eugene, Spokane and Seattle, Washington, and Hayward and Oakland, California. Over time, the company sold off all but the Portland and Eugene FBOs. A new FAA tower, parking garage, and canopy over drop-off lanes were completed in 1999.

Brent Fraser, Flightcraft's general manager, took a job with Flightcraft as a mechanic in 1999, but after about a year, moved for a position as a mechanic managing aircraft for ACM Aviation in Silicon Valley. He remained there until 2009. "I always kept my eye on Flightcraft because I felt it had significant potential," Fraser said.

By 2011, Atlantic Aviation had acquired Flightcraft and rebranded its FBO businesses. However, the maintenance

side of the operation retained the Flightcraft name. They wanted to build a future-proof business, and Brent Fraser was again back to lead the way. Flightcraft built new hangar facilities and left the 1950s-era wooden arches behind them.

According to AIN at the time, Fraser said, "Through conversations with colleagues, I became aware that Atlantic Aviation wanted to strengthen and build the maintenance, repair and overhaul portion of the business, so I aggressively approached them about playing a key role in that effort. I always loved the area and the company; I watched them for 10 years waiting for such an opportunity to arise," he said.

"The day I walked in the door, my singular goal was to make Flightcraft the only show around." To do that, Fraser drew on his experience as Hawker crew chief at the KC Aviation facility in Westfield, Massachusetts, during the 1990s. He told AIN, "I was part of an aggressive program that saw that business grow from 10 employees to several hundred. It was done by extremely hard work, never saying no, and with the determination that if we weren't able to specifically help a customer, we made sure to find a way to get it done." He employed the same strategy at Flightcraft and "the growth we've experienced to date underscores its importance."

Through Fraser's leadership, Flightcraft has grown from its two locations in Portland and Eugene to include another facility at BFI, Boeing Field in Seattle, Washington. BFI was established to serve a market of fleet operators, but technicians from Oregon can travel to Seattle to take care of any needs at any location.

Currently, Flightcraft maintains classic Dassault Falcon jets and Textron Aviation's King Air and Citation lines. Fraser said, "We've done more than just expand our capabilities to service Falcons, we've brought some of the most knowledgeable technicians available to lead the way. We offer full capabilities to keep any flight department in the air. We support our customers through decades of combined skills to give you unmatched quality in work, pricing and on-time delivery."

In addition to Falcon support, Flightcraft is a Textron Aviation authorized service center (ASC) and a Citation certified repair station with AOG support all day, every day. Their team are experts with the 500 series Citation line having more than 20 years of Citation-heavy maintenance experience.

It is evident that now, just as in the 1940s, that Flightcraft is a shining example of innovation and determination. Through ownership changes, market changes and industry changes, the leaders at Flightcraft made the right decisions and found new avenues to success, solving problems in unique ways. That is actually the definition of innovation. **T&T**

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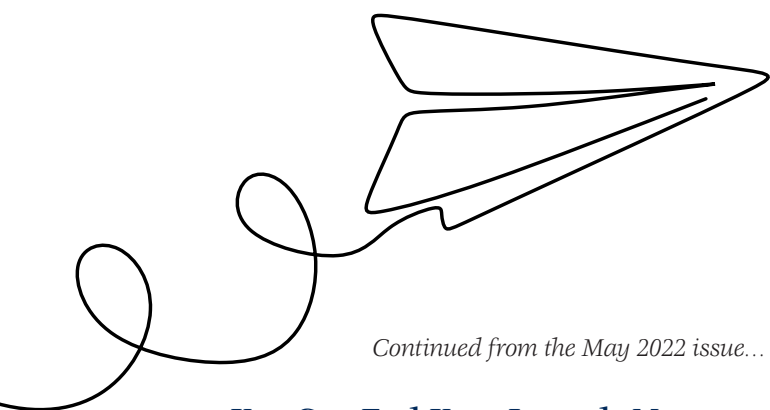
\*Climb and cruise performance increases will vary depending upon aircraft condition, operating procedures, altitude and atmospheric conditions.

# From the Flight Deck

by Kevin R. Dingman



## Paper Airplanes – Reloaded



*Continued from the May 2022 issue...*

### You Can Feel Your Innards Move

**A**fter I slow to subsonic, the next check is the over-G limit function of the flight control computer. It should allow you to pull as hard as you want, as quickly as you want, and not let the jet go to more than 9 Gs plus-or-minus point four Gs. As soon as you drop to subsonic, you roll to 80 degrees of bank and quickly pull; about 25 pounds of pressure on the stick. The G-suit squeezes the crap out of you, and you push back to stay conscious. A lot of people have said to me over the years that it must be fun to pull 9 Gs. Nope, 9 Gs hurts. You can feel your innards move.

If you know anything about GLOC (G-loss of consciousness, pronounced G-lock), you know that the “onset” rate is a major factor affecting whether you black out or not. That means how quickly you go from 1 G to 9 Gs. The nerve cluster in your upper neck that makes you wake up from a dream when you think you’re falling, or makes you gasp when you feel zero-G unexpectedly, is the same one that tells your heart to beat faster when you pull Gs. The function is to increase your blood pressure allowing you to stay conscious and keep most of your vision.

This cluster, however, isn’t “designed” to react to an instant 9 Gs; there’s a

delay. Thus, the G-suit and the need for your physical reaction in preparation for the Gs. This test requires an instant onset rate to verify the computer can catch the impending over-G. Not good for the human body. We lost a handful of F-16 guys because they blacked out at some point in a mission – usually due to high onset rates and ran into the rocks. The good news is you only have to hold 9 Gs for a few seconds during an FCF.

### Doing the Test Naked

At the end of the max-G check, you’ve used up a bunch of energy and slowed to less than 300 KIAS. This sets you up for the next gut-check. The flight control computer has another pilot-proof feature; it shouldn’t let you stall – ever. If the F-16 is stalled, it tends to go into a “deep stall” or “deep spin.” Picture a falling leaf with the nose pitching up, then down, then up, etc. Usually unrecoverable.

The stall is so potentially dangerous they put a special switch in the cockpit called “manual pitch override,” or MPO. Pushing this switch gives you extra stabalator (stabalateron!) travel to help increase the amplitude of the pitching moment in the stall. Hopefully, the extra amplitude in the down direction will be great enough to “fall” out the bottom of the





cycle and accelerate to flying speed. This part of the flight envelope was tested at Edwards in an F-16 with a spin chute attached. Today I'll be doing the test naked (no spin chute).

When you reach the point where the flight control computer steps in to "help," you're supposed to get a tone in your helmet followed by something like a stick-pusher in a civilian jet. The stick in the F-16 is unaffected, but the stabalateron moves. You fly the test by pulling the jet into a 60-degree climb at low power, then watch what happens. If you maintain a constant 60-degree angle of climb using the flight path marker in the HUD, the AOA (angle of attack) increases as the speed bleeds off. As an FCF pilot, you have to let the jet go all the way to the edge of the envelope just in case that's the point at which the computer is set. If it exceeds the critical AOA, it not only fails the FCF but you're very close to a deep stall as well.

### Falling Through 13,000 Feet

My enthusiasm for this FCF drops to zero when my AOA reaches the point where I should have heard the tone. An instant later, the nose drops, and for a split second, I think the computer has pushed it over and just failed to give me the tone. Not this time. The nose pitches back up, un-commanded. I'm in a deep stall. This test maneuver is started at 15,000 feet for air data computer testing parameters. The minimum altitude for ejection when the airplane is uncontrolled is 10,000 feet. I'm out of control and falling through 13,000 feet. The emergency procedure for out-of-control has only four steps.

First, release the controls. In the F-16, that's pretty simple: stop applying pressure in any direction to the stick. Step two is MPO switch: override and hold. Third, stick: cycle in phase. That means try to increase the amplitude of the pitch motion in both the up and down directions. And finally: eject at minimum uncontrolled altitude. When the nose first pitched down, I had already released control pressure, and now I'm holding the MPO switch. At the second pitch-down, I glance at the altimeter to decide if I should push the stick forward or pull the ejection handle. I push forward on the stick. I'm comfortable with the capabilities of the ACES II ejection system. I'll ride it to 10,000 feet. The nose hesitates on the down cycle, and just at the point I expect it to pitch back up, it falls through to straight down and I begin to accelerate. Almost as quickly as I entered the stall, I was out of it. Yeah, right – in dog years. It seemed like 10 minutes of falling. As the airspeed hits 200 KIAS, I start pulling back and bottom out at about 10,001 feet.

I finish up the rest of the FCF checklist and take the jet back to base with a failed AOA limiter to be entered in the maintenance log. I've used up 6,100 pounds of fuel in 42 minutes and another 0.7 hours goes into my logbook. Most of my F-16 time was accumulated 0.5 to 1.5 at a time. Almost all of it was very intense, fun flying – FCFs, dropping bombs and fighting against jets from the Fighter Weapon School (Top Gun) or Aggressor squadron.

Fighter time doesn't include ground time either, only flight time. It's not surprising that when employers look at flying time, fighter time means something different.

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Frank Lloyd Wright once said, "Early in life, I had to choose between honest arrogance and hypocritical humility." The F-16 can make you arrogant – honest.

### Not Vaccinated

It's normal to finish a high-G flight wet with sweat, which I am. As I get undressed, I see the G-measles on the inside of my arms. Not something most people are vaccinated for. You get them from pulling Gs. The capillaries on the inside of your forearms and your butt a couple of inches below the beltline show them the most because that's where the blood pools, more capillaries are close to the surface, and the blood pressure seems to be the highest. They show up

as hundreds of small red dots (petechiae) – like pin pricks. You can't feel them, but everyone that pulls Gs gets them.

General Yeager once said to me, "Maybe you'll get higher than me." He was talking about the altitude records he set and my just-beginning Air Force career. By the time I left Edwards Air Force base for OTS, I was convinced I wanted to be a Test Pilot. Each time I did an FCF takeoff, I thought of his words to me. I never made it to Test Pilot School and I never set any altitude records, but as the General was quoted in *The Right Stuff* as having said, "I had a ball!" John Gillespie Magee, Jr. said, as pilots, you and I "have done a hundred things" others have not dreamed of. Remember to look out the window while you're flying and appreciate those hundred things.

Isn't it magical where making a paper airplane can lead? Don't be afraid to make paper airplanes, and don't be afraid to throw them in class. **T&T**

**Kevin Dingman** has been flying for more than 40 years. He's an ATP typed in the B737, DC9 and CE-650 with 25,000 hours in his logbook. A retired Air Force major, he flew the F-16 and later performed as an USAF Civil Air Patrol Liaison Officer. He flies volunteer missions for the Christian organization Wings of Mercy, is retired from a major airline, flies the Cessna Citation for RAI Jets, and owns and operates a Beechcraft Duke. Contact Kevin at [dinger10d@gmail.com](mailto:dinger10d@gmail.com).



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## Borne to Fly

by Grant Boyd



1978 Cessna 340A



Stephen Osborne

Stephen Osborne, a general contractor from Topeka, Kansas, is a second-generation aviator and aircraft owner. He currently owns a 1964 Piper PA-24-400 Comanche 400 and a 1978 Cessna 340A, flying around 150 to 200 hours each year for business and recreation.

His introduction to aviation occurred early on when he routinely served as an enthusiastic tag along on business trips with his late father, David. "I started flying with Dad at a young age and probably had a few hundred hours of right seat time before my first flight lesson. He would always let me take the controls while flipping through charts, letting me keep things straight and level while he flipped through approach plates."

By the time Stephen was born, his father had a demonstrated love

for aviation and a growing number of logbook entries from a variety of aircraft. "Dad started flying when he was in his late teens, and his first flight was in a PT-19. His uncle owned and regularly flew a Cessna 195, which further fueled his love for aviation. He received his private pilot rating in the early 1980s, instrument rating shortly after, and commercial rating in 2010. In the 1980s to 1990s, Dad regularly flew a PA-32 Lance and even leased a PA-32 Saratoga for business use for several years."

Informal flying opportunities with his father ultimately led Stephen down the path to formal flight training, and he earned his Private Pilot Certificate in 2003. Competing priorities in life soon trumped aviation, though, and he didn't again fly consistently for more than a decade.

In 2018, Stephen began once again focusing on aviation and has since been pursuing additional ratings with fervor. That same year, he purchased a 1964 Piper PA-24-400 Comanche 400. There were several unique attributes that helped sway him in favor of this aircraft over others.

"We chose the Comanche for its durability with a really heavy zinc chromated airframe (minimal or no corrosion) and the balance of speed and efficiency. The Comanche 400 is a really efficient aircraft, boring 20 gph while cruising at 180-plus knots at 11,000 feet (normally aspirated). Add a 124-gallon usable fuel load, and you can go a really long way without stopping."

Stephen is as passionate about his Comanche as he is about aviation in general and only has good things to





The Osborne boys in front of David's 1965 Piper PA-24-360.



1964 Piper Comanche 400

say about the plane. "This is like our hotrod. It has an incredible amount of power, is a super sexy airplane, and is just so fun to fly. She turns heads when pulling into airshows, as it is one of only 146 that were built. And to make things better, I can easily stretch out 1,000 miles without stopping for fuel. If someone were looking for a long-distance cruiser, a Comanche should be a top contender. Parts are a little difficult to find, but diligent preventative maintenance and planning ahead will alleviate most of these worries."

Stephen recently passed the 500-hour total time mark and holds both instrument and multi-engine ratings. He is currently studying for the commercial written exam and hopes to complete all the needed requirements by the end of the year. Outside of training for additional ratings, one of Stephen's recent focuses has been becoming more proficient operating his 1978 Cessna 340A that he purchased in 2021.

To help bridge the gap from an unpressurized single-engine to a pressurized twin-engine, he attended a Cessna 340 initial training course at Aircraft Simulator Training (AST) in Burnet, Texas.

"The experience was incredible. Three days of motion simulator time with a variety of emergency situations and a wealth of knowledge on systems and maintenance. There was a heavy emphasis on major

aircraft systems, operation, regular maintenance, landing gear, pressurization, electrical system, air conditioning, flaps, etc. The AST team owns and flies a C340 regularly, so they really know the airplane and speak on an expert level of subject matter."

In addition to the desire to fly higher, faster and further, the C340's purchase was a result of an in-flight emergency that his father David had experienced nearly ten years ago. At the time, he owned a quarter share in a 1965 Piper PA-24-360 and had flown it approximately 1,000 hours before a catastrophic crash. The event occurred at approximately 9:50 p.m. on August 16, 2012, and was the result of an engine failure. According to the NTSB's findings, the engine's failure was due to inadequately torqued right magneto attachment nuts, which ultimately caused oil to escape and the engine to seize.

Even with smoke quickly filling the cockpit, David successfully piloted

the powerless aircraft to a section of dirt road flanked by powerlines roughly 15 nautical miles north of the intended destination – Phillip Billard Municipal Airport (KTOP). His concise decision making allowed him and his passengers to survive an event that pilots spend years training for the possibility of. This harrowing emergency experience would be the basis for his self-penned book "Five Minutes to Impact: The Final Flight of the Comanche."

"After Dad's 2012 crash, we knew a twin was a must for any night IFR or long-range family travel. The Cessna 340 was the perfect mix of speed, efficiency, range and payload not just to visit clients 300 miles out but also a great way to load up my wife and kids for a quick hop to Lloyd Stearman Field (1K1) for brunch on a Saturday."

And for Stephen, his recently acquired twin piston fits both roles perfectly. It serves both as a family hauler for him, his wife Elisabeth and their five children, as well as a corporate

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shuttle for the company his father founded, The Osborne Company. The company has a growing portfolio of multi-family, student housing, church, restaurant, electric, and general commercial projects, located in more than 30 states.

"Considering drive time to the commercial airport, TSA security, etc., I can beat the airlines to any airport within 800 miles of home and have fun while doing it. I fly two to three times

per month to visit our construction sites or clients. Two hours to Dallas or two hours to Denver as opposed to eight hours of driving makes us far more efficient day to day."

As a testament to the C340's importance to both his and his business' livelihood, Stephen highlighted a roughly 950 nautical mile out and back mission.

"I was recently asked to represent a client on short notice at a construction

project meeting near Nashville, TN. I was faced with a 9-plus hour drive each way, overnight hotel stay and essentially two days out of the office. Or an airline trip and rental cars for a long day of travel and TSA security. Alternatively, we were wheels up in the C340 at 7 a.m. from our home field, Topeka Regional Airport (KFOE), attended the 10:00 a.m. meeting just a few miles from John C. Tune Airport (KJWN), then was back at my desk in the home office by 2:30 p.m."

After one year of twin Cessna ownership, Stephen offered some words of wisdom for prospective owners. First, he emphasized, "Private pressurized cabin class air travel was a whole new world of flying coming from a Comanche 400. It is life-changing."

He followed with, "I'm not as tired after flying now, thanks to pressurization. The speed is nice, but comfort is nicer. And this one has both. Recurrent training is a must (thanks to AST and some helpful CFIs along the way). The 340 is so efficient, carrying six

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adults, burning 34 gph while cruising 200 KTS at 16,000 feet.”

One of his top recommendations to future and current owners: “Get involved with maintenance. You learn the aircraft, know what to look for, and have confidence things were fixed right in front of your eyes.”

His first foray into twin maintenance was during the initial aircraft purchasing phase, where he learned that issues could be hiding behind modern touches. “The landing gear system is probably the greatest telltale sign of good or poor maintenance. This was our number one consideration when searching for an aircraft. There were a lot of pretty instrument panels out there, but the landing gear or engine cradles were trash.”

A continual eye and emphasis on maintenance has been extremely beneficial in keeping the 44-year-old twin operating safely and reliably. “Communicate maintenance issues or concerns early so you can start sourcing parts early. We keep a spare alternator and starter in the airplane just to keep one step ahead of Murphy. And if in doubt about a maintenance issue, just get it fixed. My wife and kids depend on our aircraft keeping me safe.”

To help continue being an aviator focused on skill proficiency and improvement, Stephen has his sights set on future training opportunities. In addition to regularly flying, observing and assisting with maintenance, he hopes to pursue additional ratings in the future, including seaplane and tailwheel. When asked what his future aircraft plans may be, Stephen said, “I am currently looking at upgrading to a turbine twin down the road (three to five years) – maybe a Cessna 421. But right now, I just love the 340.” 

**Grant Boyd** is a private pilot and general aviation professional. He has written more than 170 articles for aviation magazines and enjoys learning about unique aircraft missions. Grant was selected as an NBAA “Top 40 Under 40” recipient in 2020 and holds an MBA from Wichita State University. He can be reached at [grantboyd2015@gmail.com](mailto:grantboyd2015@gmail.com).



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# Confirmation Bias

**"N**ovember three nine six delta mike, maintain runway heading, cleared for takeoff runway one five."

It was a totally routine departure. "Power set, airspeed alive both sides, 70 knots, V1, rotate" – you know, all the usual stuff. I glanced at the after-takeoff checklist to make sure I hadn't forgotten something.

"TRAFFIC, TRAFFIC!" came the unexpected bark from the Garmin avionics suite. That interrupted my flow as I focused my total attention on a possible plane in my path. That's part of life in the large city of "Big D."

Climbing out of the upper twenties, I was in for a surprise.

"CABIN ALTITUDE, CABIN ALTITUDE" blared through the overhead speaker along with several big red master warning lights. "What in the world," I said out loud as I came to grips with exactly what was happening. The memory item was to don the oxygen mask first and then resolve the problem. I did just that and then glanced at the cabin altitude indicator.

It was above 10,000 feet and climbing. "How can that be," I wondered as I transmitted to Center that I was declaring

an emergency and commencing an immediate descent. Traffic was cleared away from me as I put the airplane in a steep dive to stop the rapid increase in cabin altitude.

Minutes later, I had regained my composure, landed at the closest suitable airport, and phoned the number that Center had given to me.

What in the world had ruined my day?

As I glanced around the cockpit, I finally saw it. The pressurization selector was set to OFF instead of BOTH! The airplane had just come out of maintenance, and someone had rotated the selector 180 degrees to the OFF position.

Now that I have your attention, this incident didn't actually happen to me. It certainly could have. But it did happen to CJP's former Chairman Marc Dulude, and he was kind enough to share it on a "What Good Looks Like" video ("Flight after Maintenance") viewable at [citationjetpilots.com/safety](http://citationjetpilots.com/safety).

Marc had experienced confirmation bias, defined as "the tendency to interpret new evidence as confirmation of one's existing beliefs or theories." As Marc explains in

the video, he expected to see the pressurization selector in the BOTH position because that's where it always was. And even though he made an extra effort to check every switch after maintenance, this one slipped by.

From the pictures, you can see how easily this can happen.

To make matters worse, his normal after-takeoff pressurization check was interrupted by the "TRAFFIC TRAFFIC" warning.

Marc is another one of the generous members of CJP who have shared their experiences so that others can avoid them. Thanks, Marc.

Fly safe. 



**David Miller** has owned and flown a variety of aircraft from light twins to midsize jets for more than 50 years. With 6,000 plus hours in his logbook, David is the Director of Programs and Safety Education for the Citation Jet Pilot's Safety Foundation. You can contact David at [davidmiller1@sbcglobal.net](mailto:davidmiller1@sbcglobal.net).



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