

Transferable Skill of Soaring

A lifelong dream was fulfilled by becoming a Cal-Fire tanker pilot. Achieving the status of brand new, beginner tanker captain was the most intense training I've ever had. I learned how to safely get in, but not too far in, and out of places with a heavily loaded aircraft. A season of being allowed to make mistakes so that my learning was far more meaningful than any other training, type rating, endorsement, etc I've had in the past 16,000 hours of flying. That red stuff doesn't lie. I'm in survival mode now. Still ahead of me over the next 30 years, a continuous influx of learning is to be expected. Kudos to the instructors and the Cal-Fire training program!

Along the way I've done quite a few things to get here

I've towed banners and gliders. Flown cargo in Metro Liners, flown for two airlines and a ton of jumpers as well in some 100+ types of aircraft as PIC. I considered myself a full-time general aviation pilot that had a hobby job of being an airline pilot to simply pay the bills of owning a few aircraft of my own. I enjoy off-airport camping in the middle of nowhere with my Cessna 180. But the one thing in aviation that constantly sticks out, that at first to the naked eye, seems a little insignificant but time and time again proves to be one of the most transferable skills in aviation. ***That is flying Sailplanes.***

When I say flying Sailplanes I don't simply mean going out to the flatlands of Florida, doing 20 solo flights around the pattern and adding on a commercial glider rating. That is doing yourself an injustice and you'd really be missing the point. What I mean is getting the experience of being 100 miles from home at 800 AGL and climbing your way back out of the traffic pattern of a dusty, lonely airstrip in the middle of the desert in order to return home. I'm talking about the western U.S. or perhaps the French Alps. Some really unforgiving yet manageable terrain if given it's due respect. Really having the opportunity to learn all about wave, shear lines, thermal and ridge soaring to extract every last bit of energy from the sky as efficiently possible.

When a sailplane pilot looks at the sky

They do it just a little differently than most pilots and, in many ways, tanker flying has the same similarities. I tend to look at the sky as a complicated living organism and it's a symbiotic relationship with the ground and how the two work together. Sure, we will read a winds and temperature aloft forecast, a low-level surface prognostic chart and

use a few fancy web sites to get the overall big picture. But, in the low level, the immediate vicinity of the aircraft is what we are ultimately concerned with.

I have spent years imagining every little nook and cranny of a ridgeline

A saddle, spine bowl, cliff, sun-swept slopes, etc and how all those pieces of the sky-ground puzzle cohabitate in an attempt to create a mental 3-D cat scan image of the sky in front of me. How is flying past that saddle or spine going to funnel the air through and around the target area? Maybe it's a ridge lift day, maybe it's a stable day and instead of ridge lift, the backside of the ridge is wave? Sure, It's sinking air but I know in what spots that sinking air is going to give me that smooth, predictable ride. I also know where the dangers lie and I can adjust accordingly.

When I get on the scene of an incident...

I find myself saying all those things the instructors spent all summer saying, except it's their voice in my head, not mine. Looking for the hazards, the line, the exit, and the traps. Much like a sailplane pattern I find myself building the entire drop pattern from the exit backwards all the way back up into the orbit. I do a quick "does what I'm about to do make sense?" That's my little check of is it Safe, Effective and Efficient? If the answer is yes at "cleared to manoeuvre" I mentally push the play button and fly the line or wire all the way until I've exited the Fire Traffic Area. Just as I've imagined, or close to it anyway.

While actually flying the wire down to the drop and through the exit I find myself doing something else. It's automatic, after 18 years of flying gliders cross country, teaching and competing in them. My mind goes from the wire and flight path picture to kind of an augmented sense that adds in the element of feel. Sure, we all feel what an airplane is doing, but this feel is more proactive confirmation of all those little factors of wind, thermals, terrain and the role they all play in that living organism immediately around the aircraft. I teach my glider students that we're in a small aircraft and like an insect's antenna, using these large wings that reach out and give you that additional sense along every inch of that wing. In this case 73 feet of it. Giving you infinite data points as to how the aircraft is responding to the environment around it. The winds, terrain, the pilot. These are confirming or denying everything you thought you'd experience

and feel flying toward the target and back out. The trick is learning to listen to what the machine is telling you.

A little bump, “the right-wing came up!” Again, the machine is talking to me, it’s time to listen or land off-airport. “That’s lift over there,” the craft is talking to me again, urging me to turn before I fly past that thermal. Fighting the urge to let mother nature kick me out of the energy party I bank back towards it...Snatching it, I begin extracting all the energy from the sky I can. At least in sailplanes that is a very basic form of feel anyway, dare I say seat of the pants?

In a tanker?

It might be increasing the angle of attack to load the wing a bit more in order to descend at a faster rate to the target area before unloading the wing just a touch while closer to the terrain where I expect the ride to get a little more challenging. It could be that momentary burst of power crossing an imaginary confluence of two rivers of swirling air mixing in the middle of my wire... “Okay, that’s it,” reloading the wing in harmony with slight power changes as needed to continue my controlled descent on speed to the target. Airspeed, angle of attack all back in alignment. My eyes continue to move... “exit, look close, look far, look a bit off-center.” I continue to scan for things I can see, the ever-possible unknown hazards I can’t see and the things I can only imagine in the air mass in front of me. “Keep those power levels moving,” the instructor's voice in my head continues. The machine, its wing, the air, the terrain and the pilot are all working as one living being. We’re all in harmony now, I push the button. “On line, on target!” At least that’s what we all hope to hear. It’s an infinitely complicated process that seems to require years of varied experience to acquire. And I know that I’ll never achieve 100% perfection, but I’ll enjoy the process of attempting to anyway.

Yet, with all the complexities and busyness of the job in a strangely comforting way it all seems somewhat familiar. I feel like I’ve been there before somehow. The dance, the poetry, the gracefulness of it all during a controlled chaotic and unforgiving few moments. In some way, it all comes back to a relatable experience I’ve had in a sailplane. Being mid-slope crawling my way back up a turbulent ridge or as we say “polishing rocks” during the standard post-flight adult beverage session that will commence upon my return. Round and round until finally making out of the hole you dug yourself into. The learning to listen to what the machine is saying. It’s alive and talking to you. The sailplane is a great way to learn to listen. The rewards and failures

are absolute, there are no second chances with a simple application of power. The rewards are as equally satisfying.

No matter what I've done in aviation it always seems relatable to flying a sailplane

It could be asking for "10 right for weather" on a clear, sunny day downwind of the Rockies to take advantage of mountain wave. I'll save a little fuel for the inevitable holding and concluding auto land I'll be doing at 600 RVR . It could be hauling a heavy load safely into a tight airstrip for a few days of camping. Here in my home of Southern California, it's that climbing in thermals and shear line to save the drop zone a couple of bucks on Jet A fuel... after all, I'm compensated with free jumps. My parachute? Just a glider with an inflatable wing with feet for landing gear. What could possibly go wrong?

In an Air Tanker, more so than the other forms of aviation. The energy management, the weather around the aircraft and how it's responding play and even larger role. Soaring is simple, basic, and yet so complex making it a great Segway into any form of flying I've done.

Your machine is talking to you. Are you listening?



Keith Eyster has been soaring at Sky Sailing in Warner Springs for over 18 years as a tow pilot and CFIG. He holds an ATP, a few type ratings and currently flies the S-2 Tracker for Cal-Fire.