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FEATURING:

BARBER 340A WHAT DOES IT COST TO OWN A 340? 310 TRAINING AT SIMCOM READERS WRITE AND MUCH MORE...

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310 TRAINING AT SIMCOM

by Brian Ingraham, TTCF Member

My aviation career has included many and varied positions, from mechanic to pilot to FAA Inspector to Managing Director of Safety for the fifth largest airline in the world. Throughout my time, I have strived to enhance my understanding and command of the jobs at hand, and to use all the available tools to increase levels of safety.

As multi-engine pilots, we understand that there are phases of flight which are particularly dangerous -- engine failures immediately after takeoff, singleengine go-arounds, systems emergencies while IMC, etc. We also know that practicing the responses for these events and developing the "muscle memory" that enables instinctive reactions is what improves our personal flying safety.

Unfortunately, replication of emergencies when attempted at the limits of aircraft performance or pilot proficiency in an actual aircraft has proven dangerous, and sometimes fatal. Thus flight simulators and flight training devices have become the norm in enabling pilots to face emergency situations and practice their responses. Regulatory requirements, insurance demands, and pilot training costs have also contributed to the use of simulators by all facets of aviation including the airlines, corporate flight departments, and the GA community. But the bottom line is that simulator training enhances safety.

I bought my Cessna 310K two years ago. For the preceding decade I had been flying mostly highperformance single-engine airplanes and corporate jets, as well as helicopters offshore, but I was rusty in multi-engine piston aircraft in the instrument environment.

After spending the time and money necessary to bring my 310 back into the condition I wanted, it was time to focus on my light-twin skills and single-pilot IFR capabilities. I feel comfortable flying my airplane and I have a good understanding of the 310's systems, but my time heading up flight safety at a major air carrier kept me thinking, "What would I REALLY do if...?" Simulator training seemed to be the best course of action. I came up with several viable options: Recurrent Training Center (RTC)



When I bought my 310K two years ago, I wanted to achieve the same level of flying safety I had enjoyed in my professional career.

with locations in Illinois and Florida, SIMCOM with locations in Texas and Florida, and Flight Safety International in Kansas and California. My research into each included locations, facilities, and pricing, and I finally selected SIMCOM in Orlando. To be honest, my main deciding factor was the fact that I have family and business in Florida, so Orlando worked out well for me.

My initial contact with Rick Allen, the SIMCOM Northern Regional Sales Manager, was friendly and informative. We discussed the various programs available, which varied from a one-day, instrument re-currency program, to the



The airlines, military and corporate flight departments all utilize simulator training for emergency procedures and their safety record is proof of its effectiveness.

two-day Twin Cessna Recurrent class, and all the way to the three-day Twin Cessna Initial program. My first thought was to settle for the one-day course, but knowing what I know about the value of simulator training time, I eventually selected the three-day course.

> Each course is basically laid out in the same fashion, with two hours of aircraft-specific ground school, a 30-minute flight brief, two hours in the simulator, and a 30-minute debrief per day. This may not sound like a lot of "flying time," but believe me... the simulator sessions are rapidfire and intense, leaving the pilot ready to get off the hot seat by day's end.

Due to other business obligations, I had to change from the full three-day course to the two-day "Express Recurrent" session, beginning on October 1.

This option provided for two hours of classroom training, the normal preflight/ postflight briefing, and two-hour simulator sessions each morning, with an additional hour of classroom and simulator time after lunch.

The SIMCOM facility in Orlando is conveniently located about 4 miles north of Orlando International Airport (MCO) for those who arrive by commercial airlines, and 10 miles south of Orlando Executive Airport (ORL) for those flying in privately. Hotels and restaurants are plentiful nearby. A modern, twostory building houses the executive and administrative offices, as well as the

numerous models of flight training devices and full-motion simulators.

I was met by accounting manager Melanie Sleigh and escorted to an office for the final administrative functions (including payment!), where I also met piston-twin coordinator Trish Kosnick. Both ladies are professional, knowledgeable, and friendly, as was everyone that I met. Once the formalities were complete, I was escorted upstairs to the student lounge where I found the typical pilot breakfast of (free) coffee and pastries, along with vending machines.



I was very impressed with the courtesy and professionalism of everyone I met at SIMCOM in Orlando.

My assigned instructor, Carlos Kelly, met me promptly at 0800 and the fun began. He is very professional, with an easy demeanor and good communication skills. He is also en extremely skilled pilot and instructor. The first two hours of the day were in the classroom, where Carlos went over the schedule and then dove into aircraft systems and performance. The course is tailored to a Cessna 310 in general, but the sample aircraft is a "Q" model, which is different from my "K" in many respects.

"And then there were engine failures. Oh Lordy the engine failures! At every possible stage of flight..."

Luckily, I brought lots of photos of my airplane's panel and other details so we were able to compare notes on switch locations, etc.

The simulator we used is actually a Cessna 421C Level 6 Flight Training Device. The obvious difference between a Flight Training Device (FTD) and a Full Flight Simulator (FFS) is motion, but the FTD provides good aerodynamic modeling for control inputs, systems accuracy and exterior visuals. The downside is that all aircraft motion is indicated either through instrument changes or the visual clues from outside, so there is no "seat of the pants" feel to flying the aircraft. Consequently, the small corrections that one would normally make when reacting to feedback from the actual airplane in flight aren't possible. That said, once I was used to "flying" the FTD, the lack of motion was barely noticeable.

Another slight downside involved systems. All tip-tank Twin Cessnas from the earliest 310s to the 421B are basically the same when considering fuel system design, landing gear design and operation, engine controls, emergency procedures, etc. All that changed with the 421C. The fuel system differences and hydraulic landing gear change some of the normal, abnormal, and emergency procedures, and those differences must be taken into account.

However, my purpose for attending this training was not to learn my aircraft's systems (although the classroom portion is dedicated to this), but to brush up on my emergency procedures, and renew my instrument flight capabilities.

One big difference between the FTD and my aircraft is the engines. My normallyaspirated IO-470 engines produce 260 HP each while the turbocharged GTSIO-520s on the 421 are rated at a much higher 375 HP each. While the engine operation differences are minor, we had to make some changes to make the FTD perform like my 310. We first tried to vary the aircraft "weight" and various power settings. but finally determined that the power-to-weight ratio of a 421C at maximum gross weight is about the same as my fully loaded 310K, so the simulator was adjusted to that weight. The avionics in this particular FTD are old school. Navigation is handled by a King KX-165 VHF Nav, a King KNS-80 RNAV, and a King KLN-90B. This could be a distraction to those with upgraded panels, but my panel has many of the same

components so it proved to be a perfect setup.

I won't describe every maneuver and emergency that the instructor subjected me to over the course of two days and six hours on the hot seat, but it was extensive. We began with normal flight and steep turns to acclimate me to the "airplane," then ILS approaches in varying sorts of weather and at various locations, VOR approaches into mountain airports, even a couple of ILS approaches in a 100-foot overcast just to say I could do it.

And then there were engine failures. Oh Lordy the engine failures! At every possible stage of flight...cruise, takeoff roll, after takeoff before gear retraction, after takeoff after gear retraction, after takeoff after gear retraction after punching into the 400-foot overcast, left engine, right engine -- you name it, I did it. Carlos even gave me a double engine failure to simulate a misfueling scenario. Then there were system failures, partial panel in IMC, landing gear failures

(continued on next page)

I lost an engine on takeoff...!



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My instructor, Carlos Kelly, was professional, very knowledgeable and easy to work with.

during a single-engine approach with a 600-foot ceiling, engine fire scenario, and engine-driven fuel pump failures.

All of the above brought back basic airmanship skills that had been getting rusty, as well as reenforced my belief in checklists, memory items, and the basic first steps for any airborne emergency: 1) Fly The Airplane, and 2) Do Nothing In Haste. Once you know that the airplane is flying, take time to fully assess the situation, determine the appropriate action and then take that action. Look at an engine control, then touch it and say it out loud before taking any action to feather a propeller, or turn on an electric fuel pump or cross-feed an engine. Identify and verify before doing anything. We all "know" this stuff. These procedures were part and parcel of our multi-engine training and checking. But that training may have occurred years ago, and let's face it, very few of us actually take the time during our normal flying to practice emergency procedures.

Simulator training is not cheap, although there are lower-cost options than what I chose. My two-day Twin Cessna Express Recurrent course at SIMCOM came in at \$3,710. That doesn't include travel to Orlando, the hotel, rental car, or meals. But in return I now have the skills necessary to handle whatever operational circumstances might arise in flying my 310.

As Carlos and I were chewing the fat and swapping war stories at the end of Day 2, he showed me a picture of the Cessna 421 instrument panel of an airplane belonging to another of his students, which included all of the latest high-tech glass. Displayed prominently in the middle of his panel was a placard that has also become part of his checklist flow. It reads "TODAY IS THE DAY" and it serves to keep his mind focused and keep him aware that something can go wrong at any time. Should that moment ever come, he wants to be sure he'll be able to recall the actions and procedures that he learned and practiced during his simulator training.

It also keeps him coming back to practice those skills to ensure they are second nature. I now have the same placard for my airplane. SIMCOM proved a valuable experience to help me maintain the highest level of operational safety. At the end of the day, safely making it from Point A to Point B is what private aviation is all about, and our Twin Cessnas are more than up to the task.

I maintain my airplane to the highest possible standards, and I now feel better knowing that I am maintaining my skills to that same level. I'll be back next year.



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