

Dominion Flyer

For Customers and Friends of Dominion Aviation

MAY 2017



Meet the Airport Neighbors:

State Police Ready for Livesaving 24/7

Just inside a hangar at Richmond Executive Airport, a gleaming blue and gray medevac helicopter stands ready. Preflight complete, medical equipment stocked and checked, tug attached. The pilot, flight nurse and medic are in the ready room, only steps away.

When the call comes at any time of day or night, the crew and machine are ready to go.

In Richmond, this is a job for the state police, explains Lt. Jay Cullen, Aviation Unit Commander. Last year, he said, the unit flew 878 patients on medflight missions.

Cullen, a tall and lean 48-year-old, clad in a navy-blue jump suit, shows the gear that makes the helicopters so capable. Crews can reach first responders or trauma centers on any

frequency. With spotlights, infrared imagers and night vision goggles, they're ready to land wherever there's a clear spot. Weather, traffic and terrain monitors alert pilots to hazards. A hoist is ready if needed. Above and below the cockpit are wire cutters, "which we've never had to try."

Inside the cabin, "We have everything that an ambulance does," explained Cullen, "except it's smaller." And of course it's much, much faster.

Only Virginia's and Maryland's state police are in the medevac helicopter business, Cullen continued. In most places, it's a private business, as it is in Roanoke, Charlottesville and Norfolk. In the early 1980's the state found large gaps in service and asked the state police to gear up in Richmond. Another base now operates in Abingdon.

The state police fleet comprises two twin-engine [EC145](#) and four single-engine [Bell 407](#) helicopters, two [Cessna 182s](#) and a 2015-model [Cessna 206](#).

Medical transportation accounts for the largest share of the unit's flight hours, 950 last year. Another 650 were devoted to searches and surveillance, often in support of other law-enforcement agencies. Transportation, largely for the governor's office, accounted for 750 hours and 350 were devoted to training. Another 160 hours went to maintenance and photo flights.

The fixed-wing fleet, based in Abingdon, Lynchburg and here, supports law enforcement. The 206 is air conditioned and carries a [FLIR 380-HDc](#) imaging system. All 17 of the unit's pilots are cross-trained to fly both rotary and fixed wing.

Commercial medevac services have been criticized for safety and for cost, and Cullen believes he has an advantage on both points.

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Lt. Jay Cullen at the controls. All the helicopters are IFR-equipped.

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A Memo from Mike By [Mike Mickel](#), CEO, Dominion Aviation Services, Inc.



Welcome to the second edition of Dominion Flyer. We introduce you this month to another of our airport neighbors, one of the most sophisticated operations on the field. We meet the State Police Aviation Unit and its affable commander, Lt. Jay Cullen.

When most people think of state police aviation, they think of “bear in the air” speed traps. In fact, those are rare missions for Virginia state police. By far their most frequent mission is a medivac helicopter flight to whisk a severely injured patient to emergency care. It’s purely a Good Samaritan operation, because the state makes no charge for its flights.

Also in this edition, you’ll learn about the flight simulator we’ll soon install at Dominion. Jet and multi-engine pilots are well

acquainted with simulator training. It lets you practice the direst emergencies – again and again, until recovery becomes second nature. Meanwhile you’re burning no fuel and wasting no time positioning the airplane to repeat.

With our new machine, we can simulate single-engine Cirrus and Diamond airplanes – with almost any panel and equipment. Instructors can create challenging weather, simulate equipment failures and even simulate the Cirrus parachute system.

Safety is our top priority at Dominion, and we want to share what we’ve learned with our customers. The simulator will be one more, highly effective way to extend knowledge and skills.

Thanks again for your business and thanks for reading the Dominion Flyer. As always, we’ll welcome your comments and suggestions – and if there’s anything about Dominion or the airport that you’re wondering about, we’ll be happy to get you an answer.

Simulators, SOPs Help Us Avoid Nasty Surprises

By [Bryan Smith](#), Director of Cirrus Operations

I had the opportunity to fly with one of my first students a few weeks ago in a [Cirrus](#). Many years ago I was approached by a father inquiring about flight lessons. He said his son was a natural since he had been flying a desk top simulator before he could walk. I was skeptical, but you know what, he was exceptional! I can only assume the simulator was a huge part of his success. The FAA requires 10 hours before you can solo. Jeff had 8 hours when he went for his pre-solo check ride, and I had to keep him in the cockpit another hour or so to get enough time to be legal! Jeff went on to become an Air Force [F-15](#) pilot and then an F-15 Instructor Pilot. He just signed on with FedEx in the [767](#)!

We have known the advantages of simulators for quite some time now. We can drill multiple approaches, emergency procedures and even fly in realistic weather. We do this to add a next level of training while gaining simulated experi-

ence and keeping up with currency. The net result is a huge increase in safety. The FAA thinks it is so important; they let us log real time towards a certification! But really nothing beats being in the cockpit, or so we thought.

Spring is a perfect time to catch up on currency. After our unpredictable winter with varying temps, cloud ceilings, and wind, you may feel a little rusty. The FAA requires pilots to be current on landing in order to take passengers. Generally 90 days would come to mind, but I have found infrequent flying and lack of landings can start to degrade skills in as little as 30 days, or sooner depending on experience.

I also have to stay current while flying many days each month. I just returned from several days in Orlando in a simulator for my type rating. It is required every year. Did you know, in a Level D sim, you can log simulated landings as real landings, and even night landing currency! Simulators become opportunities to review flows, [CRM](#), limitations, emergency procedures, memory items and follow SOP’s.

Having SOP’s or “standard operating procedures” for a high performance aircraft in a crew situation is critical for safety. The same may be applied to single pilot operations. You can dramatically increase your own safety by using SOP’s and flows for your aircraft. A flow may simplify a “check-list” from a “to do list”. For example in the Cirrus aircraft, you can start every scenario by flowing from the fuel shut off upwards. You should know the position of each

switch or lever in order to complete that flow efficiently. Engine start; flow from the fuel selector up the center. Shut down, engine out, [CAPS](#) deployment, pre landing, and clearing the runway all start at the fuel selector moving upwards. Air conditioning is part of that flow. Did you remember to shut off the recirculation button before takeoff? If you do not have a flow, one of the Instructors at Dominion can help you develop yours.

The advantages of using a simulator can be dramatic when coupled with a good instructor. This saves wear and tear on the actual airplane, while allowing you to safely experience scenarios you may be hesitant to experience. My upset recover training in the [CJ](#), was based on a recent news story floating around about an [Airbus A380](#) which flew 1000 feet over a [Challenger](#) going in the opposite direction. The result, as the story goes, is that the Challenger was violently rolled over by the wing tip vortices and plummeted some 10,000 feet before a recovery could be controlled. I recently had two less dramatic roll over events due to wing tip vortices. Maybe now, I will know where at least one FedEx 767 will be and I can avoid his wake turbulence!



Let’s talk safety

Join Bryan Smith for a *free* safety meeting at 6 p.m. every third Wednesday in the terminal building conference room. Coming topics include: ...

- ▶ **May 17:** Thunderstorm Avoidance
- ▶ **June 21:** ATC Operations at Towered and Untowered Fields
- ▶ **July 19:** High, Hot and Humid



With Good Communication, We Can Minimize Surprises

When the airplane is in the shop for its annual, every owner's prayer is for "no surprises."

Unfortunately, the prayer isn't always answered. The point of an inspection, after all, is to look for trouble – before it becomes unsafe. But owners and mechanics can minimize unnecessary surprises through good communication.

For example, you probably expect to have the airplane serviced while it's in the shop for its annual spa treatment. But let's be sure we all agree on how much servicing is expected. Oil change? New spark plugs? A simple wash? Detailing?

If there's an Airworthiness Directive (AD) that specifies servicing or replacing a part at certain intervals, we have to do it or you're not airworthy. But if the maintenance manual or a service bulletin specifies service and there's no AD to back it up, let's agree whether to do it. Same if there's a scheduled item that's close, but not quite due.

If we're going to comply with a scheduled item, we need to



plan the work and order parts. We can save you money on shipping (or get you out sooner) if we know in advance what we'll need.

How about incoming squawks? Does your EGT #2 go from max to blank while flying? We may need a probe, so let's get it here early. We rely on you to describe the problem the best you can. Sometimes owners try to troubleshoot and give us the answer without explaining how they reached that conclusion. That can add delay and cost, and degrade the great customer experience we're striving to create.

The best understanding comes with written, signed agreements, which we'll prepare for you. Technicians work best when the plan

is very clear. They can be more efficient and precise, and deliver you a better product. Our Maintenance Agreement provides one last effort to combine our discussions, emails or text onto one easy to read form with costs included.

Please give me a call to get started. We'll make everything as clear as we can – and make sure the only surprises are the ones from natural causes.

Dominion to Install FAA-Approved Simulator

Flight simulation is coming to FCI.

Dominion Aviation has ordered a FlyThisSim model FM-100, which should be delivered in early June. The FAA considers it a Basic Aviation Training Device (BATD) and allows time in the sim to count for part, but not all, of the requirements for training and instrument currency.

The benefits are many, explained Bryan Smith, Dominion's Director of Cirrus Operations:

- It's a better way to teach advanced flight displays, such as the G1000, than powering up an aircraft on the ground.
- It can teach emergency procedures, including Cirrus parachute deployments, that would be too dangerous in



an airplane.

- It can simulate any weather, any day.
- It can operate when the weather outside is unflyable or the airplane is in maintenance.
- You can practice more approaches in less time at less cost, because the instructor can restart the procedure at any point. You won't run the clock flying back out to repeat the approach.

Dominion is ordering software to simulate any of 22 Cirrus panel and airframe configurations and any of 7 Diamond configurations. Smith said the manufacturer has worked closely with Cirrus to assure realism.

The initial cost will be \$80 per hour for the simulator plus \$60 per hour for the instructor. All training will be with an instructor.

Save on Fuel

Maintenance Plus customers enjoy a 75¢ per gallon fuel discount, a 7.5% discount on shop labor and more. Learn more at [our website](#) or call 804-271-7793 and ask for Maintenance.

State Police Pursue Lifesaving Mission from FCI *Continued from Page 1*

"A lot of accidents are weather-related or come from pressure on the pilot to fly more missions," Cullen explained. The state doesn't charge for its medevac flights, so there's no financial incentive to fly when we shouldn't.

That also means accident victims aren't hit with a bill that can exceed \$50,000 if their insurance doesn't cover a for-profit medevac flight.

Also for safety, Cullen continued, "we were ahead of the curve in IFR helicopters. That will save you many times at night and in marginal weather." All the pilots stay IFR current and all the helicopters are IFR equipped, though only the twin-engine models are eligible for IFR certification.

In addition to the 17 pilots, including Cullen, the unit employs

three full-and one part-time mechanic and two support staff.

On a medevac flight from FCI, state police provide the pilot and helicopter, VCU Health provides the flight nurse and Chesterfield County Fire and EMS provides a medic.

All the pilots are state troopers, though they're assigned full-time to aviation. Some were military pilots who joined the unit after trooper training, while a growing number are troopers who became interested in aviation and trained on the job.

What about "bear in the air" speed checks that most people associate with state police aviation? "The speed enforcement mission is still on the books," Cullen replied, but those operations are costly and staff-intensive and the unit is shorthanded – so "we have not conducted a [speed check] mission in some time."

It All Started in a Cessna 152 at FCI

After Flying F-15E, Jeff O'Dell Moves on to FedEx Jets

Jeff O'Dell's flying career is one that most pilots would envy. Fresh from 12 years jockeying a supersonic fighter, he's transitioning to big jets for Federal Express.

He stopped recently at Dominion Aviation to revisit the field where his career began in a humble Cessna 152 – and go for a spin in a Cirrus SR22 with his original flight instructor, Bryan Smith.

O'Dell's primary training was in the old Dominion Flight school, which was sold in 2007. The new Dominion Flight School, opened in 2015, flies a Cirrus fleet.

O'Dell, 35, grew up in Midlothian, learned to fly in high school and enrolled in ROTC at Virginia Tech. In the Air Force, he flew the [T-38C](#), then logged the bulk of his 2,095 military hours in the [F-15E Strike Eagle](#). He flew 1,349 sorties, including combat in Afghanistan, and served as a check airman, evaluating other pilots.



Flying F-15 Strike Eagle



Flying Cirrus SR-22 with Bryan Smith

He also met his wife, Sarah, who's also a fighter pilot. They were able to serve in the same squadron for 12 years. She left the Air Force a few months ahead of him, shortly after their first child's birth. Both left with the rank of Major.

After starting the job with FedEx, O'Dell and his wife plan to move to Louisville, Kentucky, to be close to family.

Articulate and enthusiastic, O'Dell has great experiences to share. "The F-15E," he said "will fly at 50,000 feet or it will fly at 100 feet. It can pull 9 G's. We remind trainees the one thing it won't do is fly below 150 knots."

"Our little secret is that these airplanes are really easy to just fly from point to point," O'Dell confided. "The difficult part is using them as a weapon system with numerous other aircraft, and that's the part that requires constant training."

Literally and figuratively, he's covered a lot of ground fast since that first solo in a 152 in Dominion Aviation's flight school.

Ask us

Have you been wondering what, why or where about something at the airport, but don't know whom to ask? We'll find you an answer, and we might use it in the next issue of Dominion Flyer. Write to mmickel@dominionaviation.com.

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