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Pilatus PC-24 Certified

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Ready for Winter Flying

As we begin a new year, we have the opportunity to think about ways we can put our flying machines to good use, be it for business, pleasure or charity flying. It is also the time of year when winter is upon us in full force. That recent blast of Arctic air means fantastic climb rates, great runway performance, cool engine temps, and unlimited visibilities. It also means we must pay attention to not-so-great consequences: turbulence and icing. Fortunately, we have a number of great avoidance tools at our fingertips. Referencing the FAA's Advisory Circular 00-45H, here is a quick review of the strengths and weaknesses of these tools that are found in popular flight planning apps, such as ForeFlight, as well as at aviationweather.gov.

The National Weather Service's Graphical Turbulence Guidance product solves the mystery of determining the location and intensity of turbulence before you find yourself becoming a PIREP. It includes an analysis and forecast for clear air turbulence as well as turbulence from mountain wave activity. The product is based on an ensemble of turbulence indicators and, therefore, can capture more diverse sources of turbulence to provide a more reliable forecast. The latest version of the GTG product is issued every hour out to a maximum of 18-hour lead-time beginning at 1,000 feet MSL with a vertical resolution of 2,000 feet that extends to FL450.

It's important to note a couple of limitations of the GTG. First, these are automated forecasts and do not have any human input like you might find with AIRMET Tango, SIGMETs for severe or extreme turbulence and Center Weather Advisories (CWAs). They are dependent on the accuracy of the computer model output used to create them. Second, the GTG does not predict turbulence associated with convective clouds, or small-scale terrain features.

There are two icing tools that should be essential part of every pilot's flight planning toolbox: the Current Icing Product (CIP) and the Forecast Icing Product (FIP). The CIP combines data from sensors and NWP models to provide an hourly three-dimensional diagnosis of the icing environment. This information is displayed on a suite of graphics and is sometimes referred to as an analysis. But it's actually a zero-hour forecast.

The FIP gives you the same suite of products as the CIP, but describes the icing environment in the future and is based solely on models. Just like the GTG, the CIP and FIP are produced automatically with no human modifications.

With the CIP and FIP, you get five graphics: Icing probability; icing severity; icing severity-probability less than 25 percent; icing severity-probability greater than 50 percent; and icing severity plus supercooled large drops (SLD). You can cycle through different altitudes and timeframes to analyze and view trends of icing conditions. The threat of SLD is shown as red squares on

the map. SLD is defined as supercooled water droplets and include freezing drizzle and/or freezing rain aloft. SLD are outside the icing certification envelopes and are considered particularly hazardous.

If you are a ForeFlight user, keep in mind that unless you are flying with the SiriusXM SXAR1 aviation receiver and subscribe to SiriusXM Pilot for ForeFlight, you will not see the SLD threats on the icing maps.

While all IFR pilots are familiar users of Terminal Area Forecasts, the Model Output Statistics (MOS) provides weather trends

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for airports without a TAF. The MOS is derived from the output of weather prediction models such as the North American Mesoscale (NAM) and Global Forecast System (GFS).

Another distinct benefit is that the MOS is updated hourly. You'll get a refreshed forecast at an airport that will tend to track better with the actual weather. Moreover, MOS is highly tailored for each airport. So, if the airport is in a valley or near an ocean, MOS is aware of the nearby terrain features and local effects of the weather for that airport.

MOS is most accurate in the first six hours and, since it is location specific, will usually provide you with more detailed guidance. One thing to note, however, is that MOS should never be used for legal requirements such as determining an alternate on an IFR flight plan.

Finally, one important way to discern the accuracy of a forecast is to check the forecaster's confidence. The forecast discussion gives you insight into what the meteorologists at the NWS are thinking and what they believe the models are telling or not telling them.

Tomorrow, I am scheduled to fly an Angel Flight mission and the forecast has been a mess. After studying all the resources, I decided to change the patient hand-off point to a different airport. Sometimes these tools don't give us what we want, but they can give us what we need to stay safe.

Happy New Year and fly safe throughout 2018.



Dianne

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PRICE AND AVAILABILITY SUBJECT TO CHANGE.

Piper M

by Dianne White

Photos by Glenn Watson





500

New for 2018:

Garmin G1000 NXi

For accomplished IFR pilots flying high-performance piston aircraft, there comes a time when they want more: more speed, range, payload, altitude and cabin space. But what they do not want is significantly higher operating costs or more complexity for single-pilot operations. The Piper M500 – with its lowest-in-class operating costs, simplicity of operation and safety features – fits that niche like no other aircraft can.

Now equipped with Garmin G1000 NXi, the M500 steps to the front of the line with the latest avionics innovations and connectivity capabilities.

Twenty years ago, Piper announced the Meridian as a natural extension of its highly successful Malibu and Mirage piston-powered aircraft. Certified in 2001, it quickly took hold in the marketplace as an easy step-up to turbine power. In fact, it quickly established a reputation for being an economical-to-operate, fun-to-fly cabin-class turboprop powered by the reliable Pratt & Whitney Canada PT6A-42A engine delivering flat-rated 500 shaft horsepower.

Over the years, the aircraft has gone through several iterations of cockpit equipment, from the Meggitt Magic, then the Avidyne Entegra and later the Garmin G1000. In 2015, Piper rebranded the Meridian the M500 with a number of flight deck safety enhancements and a fresh updated look to the interior styling.

“What makes the M500 a popular choice for the pilot moving up from a high-performance piston single is not just the size of cabin, but the fact they can step into a turbine product with compelling operating costs. The fuel burn

Continued on page 8



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A U T H E N T I C • P R I V A T E • U N I Q U E

The M500: Love at First Flight

by Amir Novini



In 2016, I stepped away from a Citation V with two nearly-new twin turbofan Pratt & Whitney JT15-5D engines capable of roughly 6,000 pounds of total thrust, 4,300 fpm climb, 16,300 pounds maximum gross weight, and Garmin avionics. This aircraft boasts a nearly 2,000-mile range with 45,000-foot service ceiling, a refreshment center and a flushable toilet.

And from this, I upgraded to a Piper M500. Maybe I should start at the beginning.

I learned to fly in the late 1980s, first owning a 1980 Cessna 172RG. In 1997, I started my own company in computer vision and automated inspection, and within three years I was ready for a bigger and faster aircraft. I obtained my multi-engine rating and purchased a Cessna 340A, which was a capable aircraft, super turbocharged, known-icing certified, pressurized with the ability of flying up to FL250.

By the late 2000s, the business was doing well while the rest of the economy was doing poorly. Suddenly, highly capable jets were on the market at a fraction of the price they sold for a few years prior. I purchased a 1980 Citation 501SP, obtained a CE500 type rating and began flying with a capable jet instructor/first officer all over the country. A year later, I obtained single-pilot jet privileges but seldom flew alone, especially into the busy corridors of the east and the west coasts.

Why switch to a single-engine turboprop? Why the Piper M500? There were several reasons.

First, our company grew and I needed to spend more time attending to it rather than fly to the customer sites. My long trips out west subsided and shifted to the East Coast with the range requirements of 200 to 600 nm, although I occasionally still do longer trips. Second, the Citation V is a two-pilot aircraft with stringent insurance requirements on the second-in-command (SIC). The qualified SICs in our area were not always available when I needed them. One can get a single-pilot waiver by training every year and subsequent check ride in the Citation V. But then I ask any owner-pilot, "How lucky do you feel flying a 16,000-pound jet in less-than-stellar weather poking into New York or other busy airspace and all alone?"

I test-flew the M500 and it was love at first flight. Once in the air, she flew more like a jet than a single-engine aircraft. It had a positive and stable feel to it. The takeoffs and landings in twin-jets, especially in stiff crosswinds, are somewhat easier since they typically weigh a lot more than the Meridian. However, the takeoffs and landings in the Meridian are simply fabulous if you are proficient on your "stick and rudder" skills. I also enjoyed the "new smell" of a modern,

factory-new machine equipped with a solid integration of Garmin G1000 avionics and autopilot.

Once the decision to purchase a factory-new M500 was made, everything fell into place as smooth as clockwork.

Of all the aircraft I've owned in my 30-year flying career, this aircraft is a true pilot's airplane, with the most responsive, immaculate handling characteristics of anything else I have flown. Having now owned my M500 for nearly a year, it has more than met all of my expectations. It's love at *every* flight. •

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as single-lever power operation, autostart function, de-ice that automatically cycles once activated, and of course, the G1000 NXi.”

G1000 NXi

The new generation of G1000 brings enhancements to general aviation's most popular integrated avionics system. The NXi offers added processing power for brighter, smoother high-resolution displays. Not only will the system initialize faster at startup, but it offers better clarity, reduced power consumption and

Continued from page 6

is lowest of any single-engine turboprop on the market,” said Jackie Carlon, senior director of marketing at Piper Aircraft. “Simplicity is another outstanding attribute. It’s less complex to fly than a piston single with pilot workload-saving features such

improved dimming performance. NXi comes with a unique HSI mapping feature that gives pilots an MFD-like perspective map right on your PFD. The detailed graphical landscape helps focus your instrument scan — while allowing you to

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view mapping, terrain, obstacles, traffic, weather overlays, nav aids, airport diagrams and more. It's a great aid for pilot situational awareness, especially when things get extra busy in the cockpit.

With NXi, Garmin expanded their ground-operation features with the addition of SurfaceWatch, which helps pilots avoid runway incursions or miscues such as taking off or landing on the wrong runway. It even tells you if you're lined up on a runway that appears to be too short for safe takeoff or landing.

Garmin G1000 NXi Key Features

- Faster processor for better performance and graphics;
- SurfaceWatch runway identification and alerting;
- HSI mapping puts MFD-like perspective map on the PFD;
- GMA 350c Bluetooth audio panel allows wireless connection with smartphone or tablet for phone calls or entertainment;
- Flight Stream 510 for wireless gateway for uploading of flight plans from ForeFlight or Garmin Pilot;
- Support of a variety of satellite datalink options including ADS-B and SiriusXM satellite weather.

Also, SurfaceWatch can optionally provide runway distance-remaining annunciations, beginning at 5,000 feet down through 500 feet remaining.

In addition, G1000 NXi has connectivity upgrades. The all-digital GMA 350c Bluetooth audio panel allows pilots to make calls or stream audio entertainment from a phone or tablet. It also can be paired with a Garmin Pilot app to transmit terrain, obstacle or traffic alerts. Flight Stream 510 is a wireless gateway that allows to upload and update flight plans from a mobile device running Garmin Pilot or ForeFlight.

Lastly, the G1000 NXi integrates with the Garmin GWX 68 digital color radar and supports the XM WX Satellite Weather. The GTX 33ES provides ADS-B in and out and an optional Connex satellite link receiver can also bring seamless on-demand worldwide weather information to your cockpit for international operations.

While the 2018 M500 and the M350 models will come equipped standard with G1000 NXi, Piper is working toward an aftermarket NXi solution for the G1000-equipped M-class aircraft. The company said it expects to have a solution available via STC by the end of 2018.

Safety Features

One of the M500's primary safety enhancements is the electronic stability protection (ESP), which is incorporated into the aircraft's Garmin GFC700 autopilot installation. ESP operates

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whenever the autopilot is not engaged, providing overspeed, underspeed and over-bank protection. The system provides gentle correction whenever the pilot ventures too close to the edges of the aircraft's operating envelope.

Another upgrade found on the M500 is the coupled go-around. Once the aircraft reaches minimums, all the pilot has to do is add power and clean up the aircraft; the autopilot will fly the missed approach and enter the hold. The aircraft is also equipped with an automatic level mode, a great safety feature. Should the pilot

2018 Piper Meridian M500

Standard Equipped Price:	\$2.2 million
Engine	Pratt & Whitney PT6A-42A, 500 shp
TBO	3,600 hours
Propeller	Hartzell 4-blade, constant speed, full feathering, reversible
Fuel Capacity	170 US gal usable
Seating	5 plus 1 crew

Weights

Max Ramp Weight	5,134 lbs
Max Takeoff Weight	5,092 lbs
Standard Useful Load	1,698 lbs
Full Fuel Payload	315 lbs

Dimensions

Wingspan	43 ft
Length	29.6 ft
Height	11.3 ft
Cabin Length	25.1 ft

Performance

Max Cruise Speed	260 ktas
Climb Performance	1,556 fpm
Takeoff Distance	1,650 ft
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Max Operating Altitude	30,000 ft
Vmo	188 ktas
Max Range with Fuel Burn @	1,000 nm 45 Min Reserve 37 gph Cruise Altitudes



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become disoriented, a simple push of the blue button will enable the autopilot to return the aircraft to stable, level flight.

To simplify management of the pressurization, the system is integrated with the flight deck. Once the destination airport is entered, the system automatically pressurizes and depressurizes throughout the entire flight without any intervention by the pilot.

M500 Interior Upgrades

While previous PA46 models all shared the same interiors regardless of price point, the M500 comes with what Piper calls an Executive Interior, which includes higher grade leathers, USB charging ports in the cockpit and cabin, and four contrasting interior color palettes, which echo trends from the high-end automobile industry. The aircraft comes with standard paint scheme, but customers can do customized schemes to reflect their tastes and personality.

Piper's experience with the Meridian, and now the M500, is that it appeals to step-up pilots with young, growing families, thanks to its large cabin and jet-like air-stair door that makes entering and exiting the aircraft easier.

"We also see pilots with aging parents who find it difficult to climb onto the wing and into the cabin of a small piston plane. The M500 offers a whole new level of comfort," Carlon added.

All M-Class aircraft come with an initial training slot at Legacy Flight Training located at Piper's Vero Beach, Florida headquarters. Simcom is an approved training provider for the M500. Warranty on a new M500 is three years for the airframe and avionics; the powerplant is covered for seven years and Hartzell prop comes with a five-year warranty.

For 2018 models, the M500 is base-priced at \$2.040 million with the typically equipped aircraft coming in at \$2.2 million. 



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Pilatus PC-24 Certified Right on Time

by Dianne White

The competitive field of light jets just got a new player. In early December, Pilatus received FAA and EASA certification for the PC-24 business jet, the first for a Swiss company. Pilatus expects to begin delivering the aircraft to the U.S. market in early 2018.

The \$8.9 million clean-sheet jet was first publicly announced in 2013 and the Swiss company stuck to its aggressive development schedule like clockwork. The first PC-24 prototype completed its first flight in May 2015 and all three prototypes accumulated a total of 2,205 hours so far. Pilatus currently has eight PC-24s on the assembly line at its facility in Stans, with 23 deliveries to customer around the world planned throughout 2018.

“The PC-24 is the first-ever Pilatus business jet. Naturally, the requirements associated with obtaining certification for this sort of aircraft are extremely rigorous, and I need hardly mention that we faced some big challenges. In 2013, we announced that the PC-24 would be ready in 2017, and now, shortly before the end of the year, we have achieved exactly that. And all performance data promised to our first 84 customers have been achieved or even exceeded,” said Oscar J. Schwenk, chairman at Pilatus.

Pilatus invested more than 500 million Swiss francs of own funds in the PC-24 development program. A further 150 million francs went into buildings and state-of-the-art production machinery at Stans in order to expand our PC-24 series production capacity in parallel. In the United States, one of the most important markets for the company, Pilatus is investing in a new completions and support center located in Broomfield, Colorado. It is scheduled to be completed in 2018.

The first PC-24 was handed over to the American fractional aircraft ownership business PlaneSense in Stans in December. The aircraft will then be flown to the United States in January 2018, for the official delivery.

Pilatus calls the PC-24 a “super versatile jet,” or SVJ, because it combines the best features and capabilities of a light jet and a turboprop. With a 17,650 MTOW, the aircraft is designed to be operated from short and unimproved runways landing in as little as 2,525 feet over a 50-foot obstacle. At a 5,000-foot strip, ISA +20 and MTOW, the aircraft requires a balanced field length of 4,430 feet. At maximum landing weight, a PC-24 configured for landing has a stall speed is 82 kts.

Powered by two Williams FJ44-4A engines, the PC-24 can climb directly to FL450, its maximum altitude, in 30 minutes or less. The aircraft's top speed is 440 kts at FL300. With four passengers on board, the aircraft can achieve a 1,950 nm range; at maximum payload, the jet can fly 1,190 nm miles.

The jet's most unique feature is its large 4 by 4.25-foot cargo door. Other nice features are a pressurized baggage compartment, and the engines' Quiet Power Mode that provides ground power with little noise, an industry first.

FlightSafety has certified the first full-flight simulator for the PC-24 located at its Dallas learning center. Pilot training in the Level C sim is scheduled to begin in January 2018. 



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Personal Safety Standdown

by Thomas P. Turner

Every year Bombardier Aircraft, parent company of Canadair and Learjet, holds a three-day conference in Wichita called the Bombardier Safety Standdown. The “BSS” began 21 years ago as an in-house meeting of Learjet factory demonstration and flight test pilots, and has grown into an international by-invitation event capped at about 500 attendees annually. Although the BSS seminars and breakout groups are aimed at the corporate jet flight department, including pilots, mechanics, flight attendants, safety officers and senior management, there is a great deal that applies to pilots of single-pilot airplanes as well. It is especially so because we do not have a second pilot along to monitor what we’re doing, help during the high workload times, and act as quality control if we need it.

I attended the BSS six years ago and got a great deal out of it. When I was invited back this year I decided it was time for a refresher and to learn the latest that we can apply to single-pilot operations. To provide a feel for what we discussed and what I learned, I’ll provide some quotes from the 2017 Bombardier Safety Standdown:

“FAA enforcement actions have been cut 70 percent in the past five years. The emphasis is on education.” – Ali Bahrami, FAA Associate Administrator for Aviation Safety (the most senior FAA safety official)

“Flying safely and preventing accidents, may be entirely different things. Accidents come from things we don’t think we are doing in the cockpit – intentional and unintentional noncompliance.” – John DeLisi, Director, Office of Safety, NTSB

“You will perform at or just below your everyday standard under stress.” – Dr. Tony Kern, Col USAF (ret.), Convergent Technologies, Inc.

“Drugs and medications are evident in over half of all aviation accidents.” – Allen Parmet, MD, Senior Aviation Medical Examiner

“Every one of us will eventually do something stupid. The goal is risk management, not risk avoidance.” – Mark Briggs, Safety Management Resources, Inc.

“Don’t be ‘conveniently complacent.’” – Amy Grubb, PhD, Federal Bureau of Investigation



"When you read an NTSB accident report, substitute 'I' for 'the pilot' or 'the crew.'" – Dan Boedigheimer, Advanced Aircrew Academy, Inc.

"Safety is the result of continually seeking excellence." – Greg Wooldridge, Captain USN (ret.), three-time US Navy Blue Angels commander

"As new technologies come online, pilots must evolve." – Etinne Cote, Bombardier Business Aircraft, Inc.

"With experience we learn the edges of acceptable performance. With experience we tend to do things in a non-standard way." – Scott Shappell, PhD., Embry Riddle Aeronautical University

"You are flying people who expect a professionally flown and maintained aircraft. People want to do things on the cheap. Safety is priority one, as long as it is convenient." – Robert Sumwalt, Chairman, NTSB

"Are you flying safely, or have you just been lucky?" – Al Gorthy, Captain USN (ret.)

Hold Your Own Standdown

We may have missed the time for New Year's resolutions, but resolve to hold your own Personal Safety Standdown (PSS) in 2018. Find something that you want to learn, or learn better, or re-learn, and put a firm completion date on your schedule to get it done. Make it what *you* want, and need, to become an even better pilot.

You don't have to travel, you don't have to do it with others, it doesn't have to cost you anything. There are hours upon hours of flying, instructional and maintenance training programs and videos free to you from the AOPA Air Safety Institute at www.aopa.org. The FAA has many more at www.faa.gov. Take some time to actually read your autopilot manual, or that flying techniques book you've always meant to read. All it takes is to budget a little time. I'm certain you'll find something interesting that will reinforce what you already know, and make you even smarter about flying your aircraft.

If you need some ideas, consider one of these tracks for your personal standdown:

- Weather theory and understanding
- Ice formation, forecasts and avoidance strategies
- Engine and fuel management
- Autopilot operation
- Advanced GPS operation (vertical modes, GPSS, etc.)
- Emergency procedures
- Pilot fatigue strategies
- High-performance maneuvers (short-field operations, mountain flying, etc.)
- Other (you get the idea)

If you want to learn in a group setting, enroll at www.faa.gov for notices about free FAA WINGS programs in your area.

You might take your PSS to a higher level yet. Enroll in a recognized, type-specific training course for the airplane you fly. Consider scheduling a simulator-based training program to explore procedures or parts of the flight envelope you can't

safely or accurately replicate in the airplane. Thus, if you encounter a serious problem in flight it's not the first time you've ever seen or practiced the scenario. Take a recognized radar interpretation course, or an engine management seminar, or a couple hours of partial-panel flight instruction. Arrange to spend a couple of hours in an Approach or Center control facility, to better learn how you fit into the National Airspace System and what resources Air Traffic Control makes available to you. There is no limit to what you can do that will improve your knowledge, awareness and capability...if you take the time for a PSS.

Here's another quote from Blue Angels "Boss" Captain Wooldridge: "You have safety standdowns not because you've had a mishap, but so you can avoid one in the future." Safety isn't a strategy, it's the outcome of education and mastery of your *airplane*, the *environment* and *yourself*. If you're like me there's a lot left to learn in all three categories. Map out, schedule and commit to your Personal Safety Standdown. 

Thomas P. Turner is an ATP CFII/MEI, holds a master's Degree in Aviation Safety, and was the 2010 National FAA Safety Team Representative of the Year. Subscribe to Tom's free FLYING LESSONS Weekly e-newsletter at www.mastery-flight-training.com.



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Yingling Aviation, a
71-year-old company**

**Board Member, Doc's
Friends and GAMA**

RATINGS:
Private, Multi-Engine,

by **Rebecca Groom Jacobs**

1. Can you summarize Yingling's history serving the aviation community? Where do you envision the company going in the future?

Since 1946, Yingling Aviation has provided general aviation services from aircraft sales to maintenance to interiors. We've also had a unique and close relationship with Textron Aviation as an authorized service facility for Cessna and Beechcraft. In recent years, a core focus of ours has been improving our processes and equipment. Aircraft today are more robust with technology, powerplant and engineering, so it is critical our people have the knowledge and resources required to service these aircraft.

Future-wise, we are seeing expansion across multiple areas. Our propeller repair shop has expanded three times in three years. And in 2018, we are breaking ground on a new, expanded maintenance facility as well as adding aircraft paint to our list of services.

2. Can you describe your current view on the activity and strength of the GA market?

I'm optimistic. By all appearances, the economy is beginning to show some traction for aircraft purchases, both new and used. Pricing seems to be firming up and aircraft utilization is increasing based on the most recent measurements by NBAA. We see it at Yingling with increased activity with aircraft movements on the ramp and fuel sales. Maintenance, avionics, interiors, props, including parts were all up over the last year. Privatization is still a concern, as well as the need for long-term, predictable tax reform. But overall, I'm feeling like this might be the real deal this time around.

3. How are we as an industry going to help grow the general aviation pilot community and attract millennials to flying?

If we do not invest in attracting young people to aviation careers, it will hurt all of us. At Yingling, we have introduced the new concept of remanufacturing an older 172, whereby we essentially perform a complete refresh of the aircraft spinner to tail with new avionics and a significantly attractive purchase price to help lower the hourly rental cost for student pilots. This way students hopefully finish lessons instead of



dropping out due to budget reasons. Likewise, a remanufactured yet modernized airplane for 40 to 45 percent of a new aircraft is attractive to flight training organizations and flying clubs. Our hope is the project invigorates a path for the younger generation to enter the industry.

4. What inspired you to serve on the Board for Doc's Friends? (Doc is one of two flyable B-29 Superfortresses.)

Jeff Turner, the former CEO of Spirit AeroSystems and chairman of Doc's Friends is actually a good friend of mine. Back when work had halted on the airplane due to lack of funding, Jeff took me to see the airplane, visit with the volunteers and described his idea to form a nonprofit to complete the restoration. After seeing the B-29 and hearing the volunteers' heartfelt stories, I was hooked. So, I became the treasurer of Doc's Friends and a very strong aviation-minded board was put together. "Doc" has since become an icon for the community, taking its first flight in July of 2016. Today, we are working on the second phase of our project, which is securing funding to build a new hangar learning center at Eisenhower National Airport. Construction begins January 2018.

5. The Wichita Aero Club announced that it had selected you as the recipient of its Aero Club Trophy. How does it feel to now be on that impressive list of those honored?"

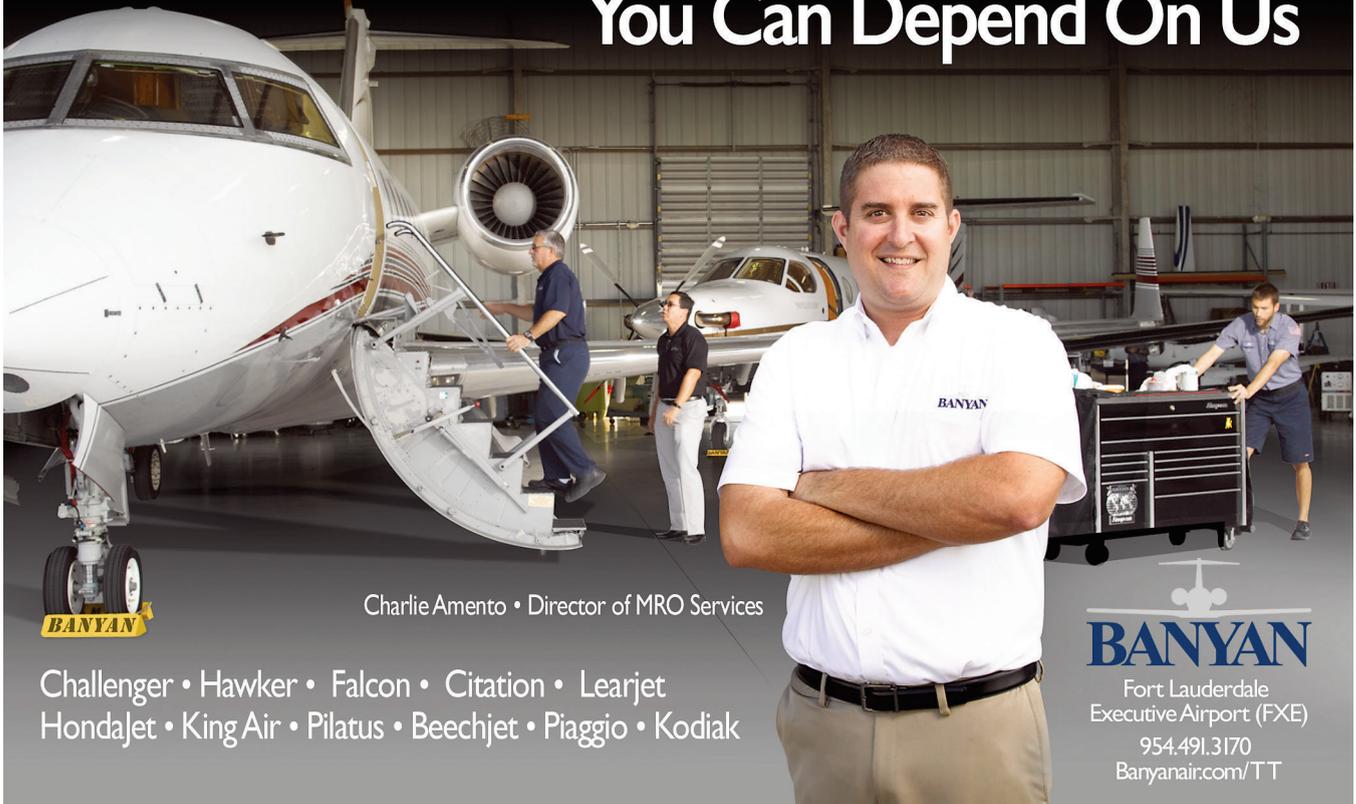
I really don't know how to answer this question, other than I am humbled and surprised. I owe it to a great management team and group of employees. Reconstructing Yingling Aviation

over the last 18 years was not a task completed by me alone. My part was to instill the vision of what we could become, hire the right people and provide the space and resources they need to make it come together. To be added to the recipient list of other people like Velma Wallace, Russ Meyer, Jr., Jeff Turner, John O'Leary, and Paul Bowen is just a sincere and humbling experience. It is clearly an "aw shucks" kind of moment. 

Rebecca Groom Jacobs can be contacted at rebecca@groomaviation.com.



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From the Flight Deck

by Kevin R. Dingman



Renewal

An Orwellian Replica

re·new·al noun: The action of extending the period of validity of a license, mandatory in order to verify identity, trustworthiness, competence and compliance with mandates.

We get an email or text every time we leave the store, doctor's office, movie theatre, bank or a restaurant. Someone is always probing us to doublethink our recent visits and activities. George Orwell (Eric Arthur Blair) would say I told you so. In our monitored and regulated society, thirtysome years after his dystopian Ministry of Truth forecast for 1984, it seems we need a permit, license, certificate or authorization to do just about everything.

One to drive a car, bus or big-rig, skipper a boat, captain an airplane or to ride a motorcycle. There's one for scuba diving, hunting, fishing, trapping and to carry a concealed pistol. One to extract teeth, one for removing a gall bladder, one to practice law and another for performing surgery on our pets. There's one for adding a deck, roof or a water heater to our chateau. And don't forget the "till death do us part" license and certificate.

It's a New Year and time to get our taxes ready, work on the New Year's resolution and to submit reams of renewal documents to The Ministry.

"Who Are You?" The Who, 1978

Add to our Library of Licenses the need to renew and carry a bazillion ID and membership cards, the longevity of which varies from document to document but most expire annually and renewal is compulsory. There's one for the union, Sam's Club, AOPA, EAA, the aircraft-type club, health club, country club, the gun range and the marina. There's a license plate or registration sticker for every machine from our cars, boats, RV's and airplanes down to our four-wheelers, Wave Runners, snowmobiles and trailers, with a proof of insurance document required for all the above.

There's a hang-tag for the employee parking lot, hangar, gated community and the time-share. And a passport or visa to enter another country and return to our own. There are company IDs to access the secure area around airplanes, ships, submarines, fissionable materials and corporate secrets. We then add eight-character, alphanumeric passwords, door keys and codes, biometric screening and sometimes, old-school security guards with varying levels of touching, scanning and intimidating weaponry. There's a transponder for the toll road and the new-fangled ADS-B in our airplane transmits who, what, when, where and why to The Man.

"Who'll Stop The Rain?" CCR, 1970

mo·ron noun: a stupid person. Synonym: idiot, dunce, imbecile, simpleton, dip.

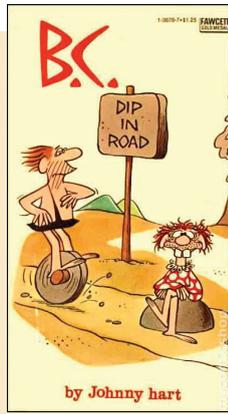
Our lack of trustworthiness and the current multitude of regulations that govern registration and licensing began with the bite of an apple, self-awareness, some coverings and expulsion from an idyllic Garden. It appears this was just the beginning



of our mortal, Orwellian odyssey. The long list of licensing has become a necessary evil, and I've discovered the reason: there are morons, dips and all manner of synonyms among us.

Some of these folks are not only those colorful words, but are dishonest cheats and are not qualified, competent or proficient in the simplest of regulated nor unregulated activities. Some don't even stop at the stop line at intersections, can't tell which fork to use first and leave participles dangling when they write. When I see one of them in a public, while driving, or hear one on the radio when flying (typically an infantile comment on guard), I can't help but mumble the old Mickey Mouse TV theme song in which they sing the individual letters, "M-i-c-k-e-y, M-o-u-s-e." I substitute M-o-r-o-n for Mouse and make it fit the jingle. It's a great stress reliever once the words or actions of the offending moron have been recognized and pinned to their dairy-air.

It's not you and I that are being singled out for registration, monitoring, licensing and harassment. It's the morons, dips, imbeciles and fungus among-us. And through the permit, passport, certification and licensing processes, they are filtered and blocked and the honest, intelligent, non-morons pay the price. Admittedly, with a large basket of humble at the ready, I make plenty of occasionally moronic mistakes. But I try to not make them out loud, in public (especially not



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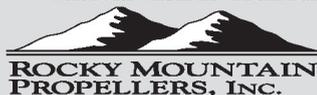
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over the PA on the plane) or on purpose, and I try to never repeat them. When I do make one, the Mickey song pops into my head and I feel a humbling, reflective and head-shaking sense of disappointment. You may even hear me, in a submissive and apologetic moment of Orwellian double-think, hum the Mickey song and say, Kevin you moron.

"Up, Up and Away" The 5th Dimension, 1967

A mile of road will take you a mile.

A mile of runway will take you anywhere.

Author Unknown

Pilots are by nature an intelligent, independent and free-spirited bunch. An Orwellian existence rubs us the wrong way. The morons and dips in our group are extremely sparse, and if any segment of society can recognize the trade-off between licensing, monitoring and freedom, it's us. We recognize the value of professionalism, accuracy, relationships, careers, hobbies, the freedom of flying and the use of proper grammar in a sentence, often to a fault. We voluntarily submit to a long list of regulatory controls and ID verification in order to facilitate our ability to ride our motorcycle to the airport with our concealed pistol, fly to just about anywhere on the planet and partake in almost any activity that our hearts desire.

Whether in a beautiful balloon or airplane, on the water with a fishing pole, in the woods hunting or camping or on a secluded ski slope or golf course, it's one of the reasons we became pilots: the freedom to get up, up and away. We enjoy engaging our surroundings unmonitored, unsupervised, oftentimes even unobserved. Most of us still enjoy both the up and the away parts of aviation. But for some it's more the up, and for some it's more the away.

After a career of interacting with 400 people every day, a few of them badly in need of that Mickey song, I still enjoy the up part while at work and in the Duke. However, the away part is becoming appealing. The up part, looking down on the world, has a very different meaning and implication than the common



Few will ever know our perspective: the vistas, the phenomenon and freedoms we are blessed to experience as pilots.

admonishment of "looking down on." Few will ever know our perspective: the vistas, the phenomenon and freedoms we are blessed to experience when we're up. The away part, whether while airborne or at our secluded destination, provides solitude and time for thought, appreciation, retrospection and a Zen like awareness of, well, everything those anchored to the ground can't see or feel.

Non-Morons

Pilots are in a self-motivated, high-achiever and often philosophical, almost transcendentalist, cluster of apple-biting, clothing-wearing, non-moronic mammals. And with our

One of the reasons we became pilots is the freedom to get up, up and away.

hobbies, side occupations and social visibility, we're some of the most certificated, licensed, stickered, hang-tagged, evaluated, monitored, regulated and taxed of all segments in society. In Orwell's Oceania language of Newspeak, this is ungood to our freedom.

But even with all of the regulations, licensing and certification that we endure, it's mostly painless because we're not morons. But we need to start early on the renewals in case we run into one of those dips in the road that sees things differently or doesn't see reason at all. So unless we want attention from the Ministry for evading taxes, concealing our pistol, unauthorized removal of a gall bladder or to get caught with our particules

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dangling, it's time to purposefully negotiate the recurring regulatory gauntlet.

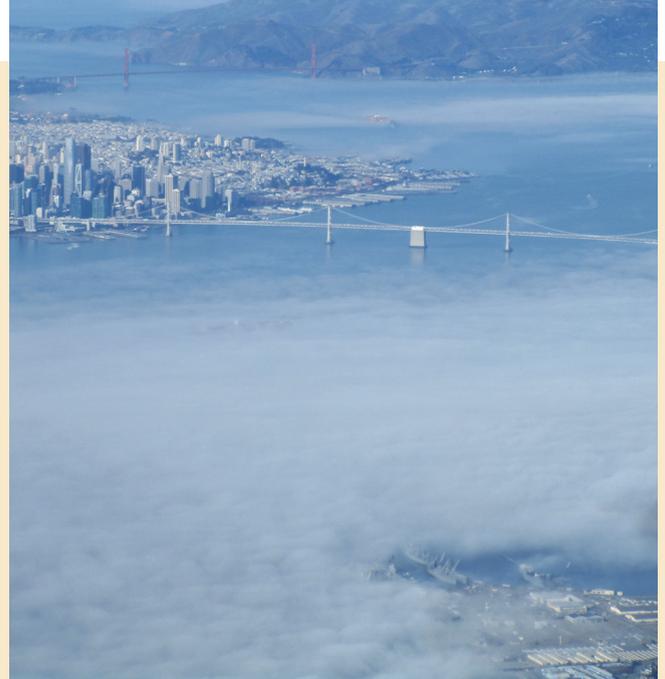
And so we begin the renewal process: the airplane's inspection, our flight physical, recurrent training, license plates and registration stickers for all of our vehicles, insurance policies, updating ID and membership cards, changing passwords and completing our training, evaluations and qualifications.

"Jump!" Van Halen, 1984

Twin & Turbine is a boutique publication tailored to your airplane and your flying. Not only are we all similar because we are type A, high-achievers and pilots, but we fly similar airplanes on similar missions. We relate well to each other, we nod to each other in an acknowledgement of pilot-respect. We are a family. On my list of New Year renewals is this note expressing my gratitude for the time you spend reading news, our stories and the offers from our advertisers.

Also, a thank you to the folks that ran into me while out-and-about this past year and stopped to say hello. Whether at Oshkosh, an FBO, on my airline or at the hotels, it's gratifying when I meet you in person. Thank you.

And yes, my mustache is greyer in real life than in my bio pic; thank you for noticing. I hope you enjoyed this classic rock and Orwellian infused to-do list for 2018. Turn up the tunes, jump on that list and don't forget to watch over your shoulder for dips, morons and The Man. Have a happy and safe New Year. 



Kevin Dingman has been flying for more than 40 years. He's an ATP typed in the B737 and DC9 with 23,000 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 employed by a major airline, and owns and operates a Beechcraft Duke. Contact Kevin at dinger10d@gmail.com.

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NBAA Will Continue Fighting ATC Privatization, SMO Restrictions in 2018

by Ed Bolen NBAA President and CEO

Without question, 2017 will be remembered as a year that brought many challenges to our shared aviation community.

The most significant example of these concerns has been the continuing effort on Capitol Hill to push for privatization of the nation's air traffic control (ATC) system, and our industry must remain engaged in this fight as we look to the New Year.

Although Congress has yet to vote on legislation to replace congressional ATC oversight with an airline-dominated board, that hasn't stopped big airlines and their surrogates from continuing their push to wrest control over ATC and assume power to control taxation, access and other policies to their advantage.

It's clear that privatization would be a big win for the airlines, but a loss for most everyone else. Consumers, and the small communities that rely on general aviation for all manner of services, will likely be left with fewer choices, reduced competition, decreased access and higher costs for flying, as the airlines increasingly run the system for their own benefit.

That's why businesses, consumer groups, community groups and a host of other voices across the country – including tens of thousands of industry stakeholders, including readers of *Twin & Turbine* – have spoken out against the House proposal.

Another fight over access to vital aviation infrastructure will also continue into 2018. On Nov. 13, NBAA filed its final brief before the U.S. Court of

Appeals for the District of Columbia Circuit challenging the legality of the unprecedented settlement agreement reached earlier this year between the FAA and the city of Santa Monica, CA over the future of Santa Monica Municipal Airport (SMO).

The filing – submitted in response to the FAA's and the city's challenges to NBAA's initial arguments about the agreement – reasserts NBAA's position that the agency failed to comply with numerous federal statutory requirements in reaching the controversial January 2017 settlement, and it did not provide the required public comment period or establish a benefit to aviation.

Make no mistake; this fight is far from over. Oral arguments in the case will begin next Spring, with a final ruling anticipated near the end of 2018. Nevertheless, Santa Monica has already started to reduce the length of SMO's sole runway to 3,500' in a shortsighted effort to curtail access by larger, predominantly turbine-powered aircraft. NBAA is working to ensure that action is a temporary one.

Whether battling against ATC privatization in the halls of Congress, or asserting the right of GA stakeholders to utilize a vital Southern California airport, NBAA will remain committed to fighting against any effort to hinder our industry's unrestricted freedom and access throughout our national airspace system. As we look to 2018, I encourage *Twin & Turbine* readers to also remain engaged on these and other matters posing a significant threat to our industry. 

NTSB: General Aviation Fatal Accidents on the Decline



Accident rates among general aviation pilots are on the decline, as noted by the National Transportation Safety Board (NTSB) at a recent meeting of transportation stakeholders to review progress made in addressing the agency's 2017-18 Most Wanted List.

The NTSB Most Wanted List identifies the most critical areas in need of attention to reduce transportation accidents, including several affecting business aviation operations. Loss of Control In-Flight (LOC-I) has been on the list for two years, and has generated a lot of attention on issues such as stall avoidance, distraction management and situational awareness.

LOC-I also has been identified as a Top Safety Focus Area for business aviation stakeholders by the NBAA Safety Committee and the General Aviation Joint Steering Committee (GAJSC), a collaborative effort between regulators and the industry to develop safety enhancements that mitigate problems associated with fatal general aviation accidents.

"We've made some real progress in reducing GA fatality rates as an industry, in large part from the work of the GAJSC and other groups in which NBAA is actively involved," said NBAA Operations Manager Peter Korn. "There's more work to be done, but the downward trend is reassuring and we're hopeful that ongoing work will continue to prevent these accidents."

Held Nov. 15 at NTSB headquarters, the MWL Mid-Point Progress Report meeting also featured breakout sessions for the various transportation modes. NTSB Member Earl Weener and John DeLisi, director of the NTSB Office of Aviation Safety, led the aviation breakout session, which involved approximately 30 industry stakeholders who discussed a variety of topics, including the reduction of fatigue-related accidents, the safe transport of lithium-ion batteries and eliminating alcohol and drug impairment.

"This became an open discussion about what more we can do in these areas," Korn noted. "We've had some successes, including greater awareness of the side effects of medications and increased availability of angle-of-attack cockpit indicators to help prevent LOC-I, but there's still a long way to go."

Once issued annually, the MWL began to be published biennially in 2017 to provide additional time to address areas of concern and encourage stakeholders to collaborate on effective solutions.

"The Mid-Point Progress Report affirmed that we are making progress in these areas, and we expect to see that reflected shortly in updated statistics that align with the GAJSC's goal of no more than one fatal GA accident per 100,000 flight hours by 2018," said Korn. "There's value in acknowledging our successes and that these enhancements are having a positive effect, but we must also remain vigilant and continue to make improvements in safety." 

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NBAA Asks FAA to Hit Pause Button on Proposed IAP Cancellations

Following recent flight management system (FMS) software glitches that required FMS manufacturers to pull thousands of instrument approaches from their databases, NBAA recently asked the FAA to “hit the pause button” on implementation of its proposed policy on cancellation of certain instrument approach procedures (IAPs) – specifically circling approaches and circling approach minima. In one of these database issues, one manufacturer had to temporarily remove more than 10,000 IAPs in its database.

In the summary of Docket No. FAA-2017-0879, the FAA explained the need to cancel certain approaches. “As new technology facilitates the introduction of more area navigation (RNAV) instrument approach procedures over the past decade, the number of procedures available in the National Airspace System has nearly doubled. The complexity and cost to the FAA of maintaining the IAP inventory while expanding the new RNAV capability is not sustainable.”

“While NBAA generally supports the establishment of the proposed evaluation criteria for IAP cancellations,” said Heidi Williams, NBAA’s director of air traffic services and infrastructure, “several significant issues with

FMSs and navigation databases have surfaced since the industry originally provided recommendations to the FAA. This has prompted the need for further evaluation prior to the implementation of any policy changes or IAP cancellations to ensure we don’t cancel thousands of IAPs that could result in the loss of all-weather access during one of these glitches.”

Williams said NBAA wants the FAA to move forward cautiously. “Because the RTCA’s Tactical Operations Committee (TOC) did not assess FMS issues when they looked at providing IAP cancellation recommendations, we would like the FAA to task that body to take another look at the recent database issues to determine how they factor them into establishing approach cancellation criteria,” she said.

NBAA is sensitive to the issue of the FAA having to maintain thousands of IAPs if they truly are not necessary. In submitted comments, the association is asking FAA officials to increase their due diligence by allowing the TOC to consider the impacts of these database events and offer additional inputs to the FAA before making policy changes that could negatively affect thousands of aircraft operators.. 



Trump Administration Policies Impact Cuba Flights



New restrictions on travel to and trade with Cuba recently announced by the Trump administration have already affected business aviation operations to the island nation.

Policies created under the Obama administration allowed Americans to travel to Cuba for several specific reasons, including the “people-to-people” category of educational travel. The Trump administration rolled back the “people-to-people” category, but is still allowing certain humanitarian and business development trips providing the latter is not associated with Cuban government-owned businesses.

“Travel to Cuba is becoming much more restrictive,” said David Kang, account manager at Avplan Trip Support, an AvFuel company, “so we have seen Cuban travel requests decline recently.”

Kang cautions business aircraft operators considering trips to Cuba to expect payments to the country to be slow, as banks are wary of transferring money into Cuba, particularly in large sums. He also suggested that all parties – the operator, flight crew and passengers – retain records of all financial transactions, including restaurant expenses, and other day-to-day expenses, for a period of at least five years.

The U.S. Treasury Department recently published a list of hotels and other businesses that American

travelers are prohibited from using, creating additional challenges for lodging in a country with already limited accommodations.

Also, traveling to Cuba still requires a visa issued by the Cuban embassy in Washington, D.C. In order to obtain a visa, travelers must have a sponsor in Cuba, and finding an appropriate sponsor without the “people-to-people” option can be difficult.

Kang said he expected additional restrictions regarding travel to and doing business with Cuba in the coming months.

“You must plan ahead to travel to Cuba,” said Kang. “You can’t wait until the last minute; traveling to Cuba is only going to get more difficult over the next few years.”

NBAA recommends that all business aircraft operators considering trips to Cuba be familiar with the current policies and regulations, and stay up-to-date with changing requirements.

“We expect more changes to policies and regulations regarding travel to Cuba, as well as conducting business in the country,” said Doug Carr, NBAA’s vice president of regulatory and international affairs. “Operators should work with their flight planning providers and their passengers to ensure any flights to Cuba are operated in accordance with policies current at the time of the flights.” 

NBAA, Other Groups Oppose Capping Veterans' Flight Training Benefits

NBAA and other aviation associations are urging key lawmakers to make changes to legislation that would cap payments to veterans' flight-training programs. At issue is H.R. 4149, legislation aimed at improving the delivery of veterans' flight-training benefits. NBAA recently signed on to a letter to leaders of the House Committee on Veterans' Affairs, seeking changes to the bill.

"While the current bill contains numerous provisions to improve the program's efficiency, the proposed capping of program payments undermines the important goal of helping our nation's veterans enter a field where they are desperately needed," wrote the associations, which represent thousands of aviation businesses and hundreds of thousands of pilots.

The letter was sent to the chairman of the House Committee on Veterans' Affairs, Rep. Phil Roe (R-1-TN) and the committee's ranking member Tim Walz (D-1-MN).

"Working as a civilian commercial pilot is a rewarding career," the groups wrote. "However, it requires thorough, in-depth and complex training. Without the aid of their promised veteran's benefits, most veterans can ill afford such training."

The groups said there were good things in the bill – such as providing needed improvements for structuring veterans' flight-training benefits, as well as coverage for obtaining a private pilot license when it is incorporated into the requirements of a professional flight training program. The groups also support provisions giving flexibility to public schools in allowing them to contract for flight training.

"However, despite these positive improvements, we cannot support this bill as written," the groups said. "Unlike how other degree programs at public colleges or universities are treated, the bill caps payments for flight-training programs, which unfairly impacts the ability of veterans to pursue well-paying jobs in the civilian aviation sector.

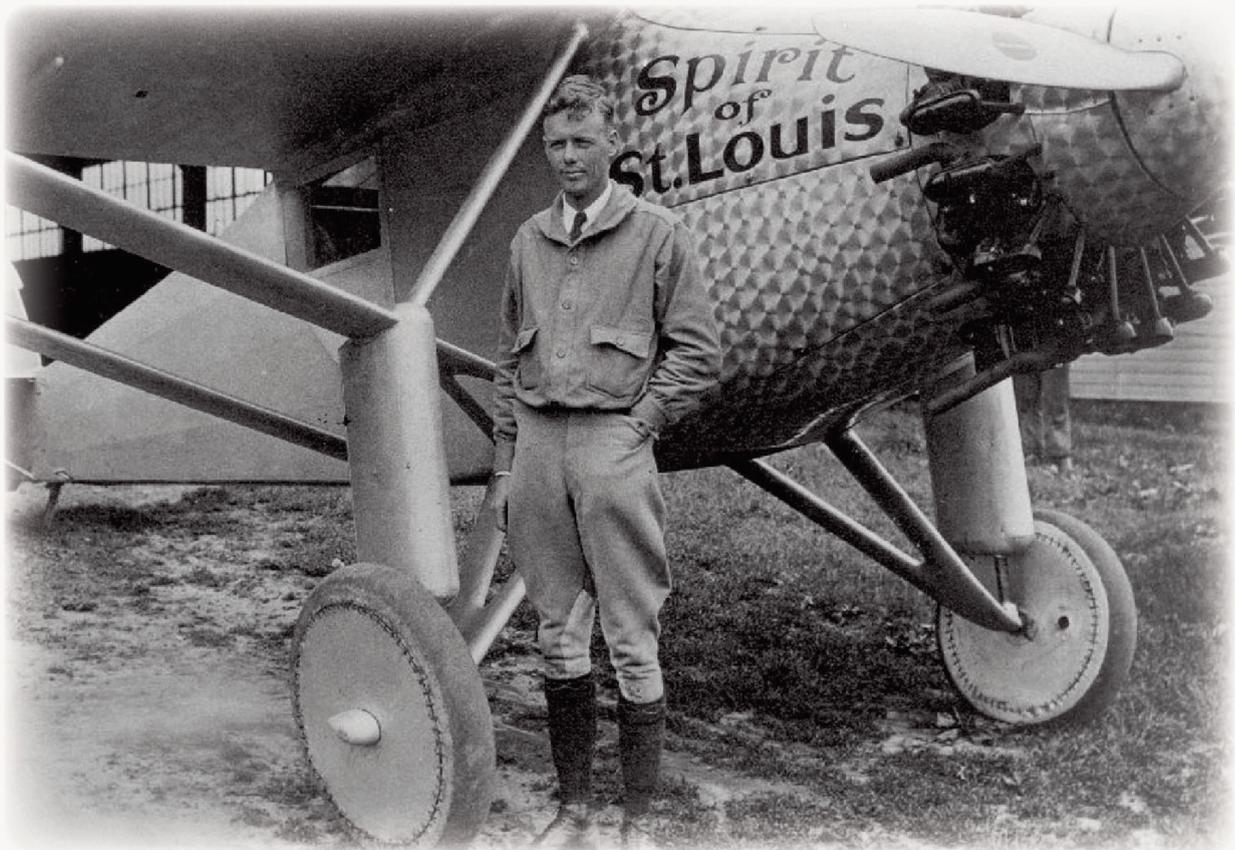


"Capping funds available for flight-training degree programs virtually guarantees that veterans seeking to use their GI Bill benefits to enter the aviation industry will have insufficient funds to achieve their goals. They will either abandon their pursuit or be burdened with significant personal debt through either expenditure of personal funds or taking on of student loans. This will harm veterans and limit their employment opportunities in the aviation industry."

The groups said that applying funding caps to veterans seeking aviation employment is "unfair and discriminatory. These caps deprive them of the ability to pursue collegiate flight training, a common path to a career as a commercial pilot."

"We urge the committee to remove the discriminatory cap on flight training at public institutions and to keep the promises that will allow veterans their choice of career."

In addition to NBAA President and CEO Ed Bolen, the letter was signed by: Air Medical Operators Association Executive Director Sally Veith, General Aviation Manufacturers Association President and CEO Peter Bunce, Helicopter Association International President and CEO Matthew Zuccaro, National Air Transportation Association President Martin Hiller, Aircraft Owners and Pilots Association President and CEO Mark Baker, Experimental Aircraft Association CEO and Chairman Jack Pelton and National Association of State Aviation Officials President and CEO Mark Kimberling. 



CROSSING THE ATLANTIC WAS EASY
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When “Lucky” Lindy made his transatlantic crossing, he didn’t have to deal with an ocean of congressional wrangling (maybe that’s why they called him “Lucky”). The prevailing winds blew in his favor. But today, those winds have changed. Flying for business is more scrutinized than ever. Luckily, there’s NBAA. We’ve made a home on the Hill, so that our members can make a living in the sky. Because business aviation enables economic growth. And at NBAA, we enable business aviation.

Join us at naaa.org/join.



Just a Routine Departure

I'll bet you have departed from your home base hundreds of times. And like me, you can probably recite the procedure from memory. At my airport, Dallas Addison (KADS) however, the routine can be demanding. Addison lies just north of busy Dallas Love (KDAL). Normal departure procedures off Rwy 15 include an immediate 100-degree left turn to avoid traffic headed for Love and a short climb to 2,000 feet. If everything plays out as planned, my clearance and verbal callouts go something like this:

"November 416 Delta Mike, you are cleared to the Gunnison airport. On departure, turn left heading 050, radar vectors SWABR 5 departure, HUDAD transition. Climb and maintain 2,000. Expect FL400 10 minutes after departure. Departure control 124.3. Squawk 4134."

Cleared for takeoff.

Pitot static heat and lights on.

Power set, two good engines.

Airspeed alive, cross check.

Seventy knots.

V_r, V₁, rotate.

Positive rate.

Gear up.

V₂.

V₂ plus 10, flap retract.

Start the left turn.

Contact departure.

Engage autopilot.

Level at 2,000, reduce power to maintain 200 knots or less.

I have played this game hundreds of times. It's similar to patting your head and rubbing your tummy simultaneously. A lot happens quickly, and the departure maneuvers can be quite demanding even in good weather. Throw in a hiccup or two, and good planning goes out the window.

August 25th was a good example.

"November 416 Delta Mike, cleared for takeoff," came the clearance from tower. Shortly after, "Six Delta Mike contact departure one two four point three."

As I began my left turn, I heard "TRAFFIC! TRAFFIC!" from the Honeywell system. Immediately, my eyes left the cockpit and scanned the horizon for low level, fast-moving obstructions. Climbing through 2,200 feet I realized in horror that the airplane had not leveled at 2,000 feet. The autopilot was not engaged and my clearance limit was 2,000 feet!

In an instant, I pushed the nose over to descend to 2,000 feet as Patty and I became weightless volunteers for the astronaut program. Patty was a pro. She didn't scream or wet her pants although I probably did. Scream that is.

I had engaged the yaw damper instead of the autopilot.

Fortunately, we didn't cause a conflict with departure control. I couldn't believe I had made such a simple mistake. Actually, two mistakes. (1) In the rush to look for traffic, I assumed the reassuring "clunk" on the yoke was the autopilot instead of the yaw damper. (2) I failed to confirm autopilot engagement on the "scoreboard."

We all make mistakes. And reflecting on mine, I could have hand-flown the entire departure and been "in the loop" before the altitude excursion. But the use of automation in single-pilot operations allows us to be outside the cockpit looking for traffic that can ruin our day.

Suggestions?

Fly safe.

With 6,000-plus hours in his logbook, David Miller has been flying for business and pleasure for more than 40 years. Having owned and flown a variety of aircraft types, from turboprops to midsize jets, Patty and David currently own and fly a Citation Mustang. You can contact David at davidmiller1@sbcglobal.net.



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