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EAA AirVenture 2018 Preview

Tips for Flying into Oshkosh Tales From the Flight Line Five on the Fly: Kirby Chambliss NBAA Focus

VOLUME 22 NUMBER 7



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editor's briefing by Rebecca Groom Jacobs



Aviation Tapestry

s EAA AirVenture approaches, I find myself reflecting on the many varying threads that bring more than half-a-million people together for the world's "Greatest Aviation Celebration." In particular, I wonder about the attending pilots who, for one week, are surrounded by like-minded and passionate fellow pilots. Certainly, a unique setting given that only .002% of the U.S. population are active pilots. This leads to a question I often contemplate: what ultimately led the members of this miniscule group to become pilots – a family influence? A discovery flight? A school course? A longtime calling?

My husband falls into the latter category. Though he was raised without direct exposure to aviation or pilots, he saw airplanes in the sky and instinctively knew it was where he needed to be. My own story I feel is much more common in our industry; I was influenced by someone I knew. In my case, it was my family. I was born into an incredibly aviation-centric family; my father, mother, sister, uncle and grandfather are/were all pilots. I grew up in general aviation, regularly flying to family events and vacations. For me, aviation was a completely normal facet of life – but not a career path.

It would take until I worked toward my own pilot's license eight years ago, essentially living at my local airport, Stearman Field (1K1), that I realized, "Oh! This is what it is all about." Even after all of those years in the back of a Bonanza, it was as if I had crossed an invisible line. I suddenly understood the appeal. Perhaps more importantly, I learned that I myself was capable of flight. So, I changed my major (from animal science!) upon returning to college that Fall and never looked back.

The threads of backgrounds and stories that weave our pilot population tapestry is fascinating to me, but what can we do to strengthen it? To ensure its continual growth? How can we reach the next generation of pilots, drawing from those with no exposure or clear access to aviation? Or support those with a lack of means to pursue a pilot's license? How can we positively influence not only our industry, but their lives? I learned of one model idea just recently.



Sean Tucker, aerobatic pilot and co-founder of the Bob Hoover Academy, stands with two of the program's students.



My sister Elizabeth Allenbaugh and I pose with actor and general aviation advocate Harrison Ford following his acceptance speech at the R.A. "Bob" Hoover Trophy Awards.

Bob Hoover Academy

In late March, my sister and I had the pleasure of attending the 2018 R.A. "Bob" Hoover Trophy Awards hosted by AOPA in Washington D.C. Actor and general aviation advocate Harrison Ford was the recipient. In just its third year, AOPA President Mark Baker noted that the event's trophy is presented to an "aviator who exhibits the airmanship, leadership and passion for aviation and life demonstrated by Bob Hoover."

For years, Ford has been a voice for our industry, using his spotlight to promote general aviation and spread awareness of its impact on communities. He has volunteered for the Young Eagles program, testified before Congress on behalf of airports and served closely with AOPA on a number of other initiatives. But during his acceptance speech, Ford said little of himself, and instead swiftly transitioned the attention toward aerobatic pilot Sean Tucker (last year's trophy recipient, and the presenter of the 2018 award). Ford spent his time on the stage discussing Sean Tucker's brainchild, the Bob Hoover Academy in Salinas, California.

"Using the metaphor of aviation and flight, Sean is using Bob's legacy to create social justice," said Ford. "He's helping kids one at a time pull themselves up out of dire circumstances and it's an amazing thing to see."

The Bob Hoover Academy is a non-profit organization which provides a high school curriculum geared toward STEM and aviation. The program merges education and flight in an effort to change lives of at-risk teens living in the surrounding area. And the privilege of flight is not just handed to them; students must excel in the ground curriculum and earn their spot in the flight training program.

"We've got to help out here," Ford added. "This needs to be a program that can be replicated and used to advance aviation, social justice and humanity."

Ford's passion was evident and spurred me to find out more through further research. Subsequently, it is now one of my goals in my new position to help spread the word of exceptional efforts and programs like this. I believe we can all find a way to use aviation to positively influence our communities and promote the growth of future aviators. I encourage you to support the Bob Hoover Academy, or programs like it, and let us collectively add threads to this great tapestry.

(To learn more about the Bob Hoover Academy, visit www.bobhooveracademy.org).



Airmail

In Response to Kevin Ware's "It's All About the Ice"

I just wanted to say I enjoyed Kevin Ware's excellent and informative piece regarding icing in the Pacific Northwest (May 2018 issue). We may have passed in the dark at altitude in years gone by. I was the aviation manager for GTE for many years with Citations based in Paine and Camarillo, California. Back in the day, climbing eastbound from Paine across the Cascades during a winter warm front in our earlier King Air A100 was much like your story.

Now retired in Yakima, I have a Cessna P210. My biggest transition from jets to the 210 was rethinking its lack of capability in weather and icing. Last week, I went IFR Selah-Beezr-Bandr-KPAE and Center kindly allowed me to stay at 9,000 westbound to avoid icing as you so aptly described. My P210 is equipped with FIKI, but the FAA neglected to mention that the certification is good for about 10 minutes in the moderate stuff.

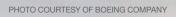
Keep up the good work, John Davis Washington

In Response to David Miller's "That's What Friends are for"

Great piece! God has provided me the talent and time to fly. He has provided an aircraft for me to "manage." There is no greater joy than serving Him by serving others via Wings of Mercy, Angel Flight and Veterans Airlift Command. Such a humbling honor and experience.

P.S. Plus a good pilot is always looking for flying opportunities and an excuse to exercise the plane.

Michael Miller Michigan



AIR FORCE

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EAA AirVenture 2018 Preview

Historic aircraft and anniversaries underline the "Year of the Tanker"

by Rebecca Groom Jacobs

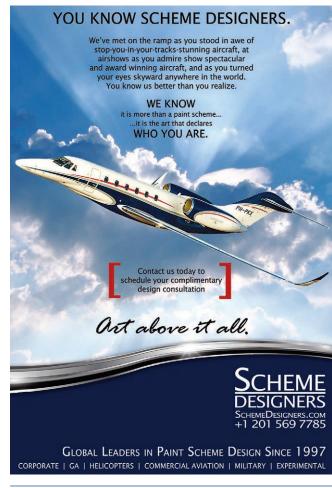
ollowing a record-breaking show in 2017, EAA Chairman, Jack Pelton claimed it was possibly the best AirVenture week he had ever seen. Between the Apollo reunion, historic bomber flights, WWII reenactments and Blue Angels performances, EAA set themselves a high bar. Scheduled for July 23-29 this year, EAA hopes to build on last year's success and host just as many – if not more – of the passionate aviators that unite to create the world's largest aviation celebration.



The Air Force Reserve will celebrate its 70th anniversary at AirVenture. The division encompasses nearly 70,000 Citizen Airmen.

"Everything came together last year – the weather, the programming, the airplanes...it was a full-house," said Dick Knapinski, EAA Senior Communications Advisor. "Weather is always a wild-card, but we are fully expecting another 500,000-plus year."

Last year's show saw such an influx in attendees that some airplanes had to be turned away from Wittman Regional Airport. Aircraft parking and campgrounds (more than 11,000 sites) either reached or were pushing capacity for the majority of the week. This year, one of the core EAA initiatives is



preventing a repeat episode of this logistical quandary. They have reanalyzed overall parking techniques, and have also carved out additional parking in the "South 40."

"One of our topmost goals is to ensure that everyone who wants the unique experience of flying directly into Oshkosh has that opportunity," said Knapinski.

Succeeding "Year of the Bomber," EAA AirVenture 2018 is dubbed "Year of the Tanker." Attendees will be treated to upclose looks at tankers and cargo aircraft including the KC-10, KC-135, C-17 and the monstrous C-5. The theme also dovetails nicely into a collection of historical anniversaries that will be celebrated throughout the week: the 70th anniversary of the Air Force Reserve (AFR) and the centennials of both the Royal Air Force and final year of World War I.

Saluting the Unseen

To commemorate the 70th anniversary of the Air Force Reserve, EAA AirVenture will be holding various programs, demonstrations and aircraft lineups throughout the week – with considerable support from the AFR.

"This year, we are saluting the folks who often carry out the unseen work, such as moving cargo or tanker aircraft, many of which are affiliated with AFR," said Knapinski. "Oshkosh is a natural place for these Citizen Airmen to tell their story not only to fellow aviators, but the general public."

Since 1948, the Air Force Reserve has played a critical role in the nation's military and humanitarian operations. The division encompasses nearly 70,000 Citizen Airmen who carry out a variety of missions such as aircraft refueling, medical services, airfield operations, engineering, weather reconnaissance ("Hurricane Hunters"), combat rescue and others.

During AirVenture, Air Force Reserve Command aircraft will participate in the daily air shows, in addition to being displayed on Boeing Plaza throughout the week. Reserve Citizen Airmen will also actively participate in forums and programs, including WomenVenture.

As a tribute to the centennial of the Royal Air Force, some of the oldest and rarest of British aircraft are expected to arrive to AirVenture from all over the world.





Dual Centennials

2018 marks the centennial anniversary of the Royal Air Force (RAF) and the final year of World War I. Many of the aircraft participating in the week's activities will be connected to both anniversaries.

Formed toward the end of WWI, the RAF was formally founded in 1918 with the merger of the Royal Flying Corps and the Royal Naval Air Service. The service later became internationally recognized and revered following the heroism demonstrated throughout the Battle of Britain. The RAF also gained notoriety with the development of many early fighter jets. As a tribute, some of the oldest and rarest of British aircraft are expected to arrive to AirVenture, including the Gloster Meteor, the world's oldest flying jet, and the rare de Havilland Venom and Vampire.

Additional World War I commemoration activities will include flying demonstrations on Monday, Tuesday, Thursday The extremely rare and unique XP-82 Twin Mustang is expected to make AirVenture its first public appearance following a 10-year restoration.

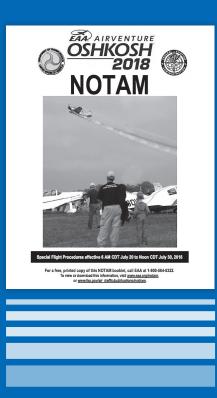
and Fridays evenings. WWI programs will be ongoing throughout the week, and will largely take place in the vintage aircraft parking area on the flightline. Among the aircraft expected to be on display is a newly restored Dayton-Wright DH.4 Liberty biplane.

Special Debuts

Two aircraft have caused rumblings throughout the industry and enthusiast base, as their debuts have become highly-anticipated AirVenture features this year: a one of a kind Yak-110 and an extremely rare XP-82 Twin Mustang.

New to the aerobatic scene, the Yak-110 is quite literally two Yak-55's fastened together. As if that were not adventurous enough, a jet engine was then mounted in between the two fuselages to accompany the airplane's two radial engines. Avid builder Dell Coller and aerobatic pilot Jeff Boerboon were the masterminds behind the project and are thrilled to bring the Yak-110 to its first AirVenture. The aircraft will be piloted by Boerboon.

Keeping in with the unique twin theme, the team behind the restoration the XP-82 Twin Mustang have been diligently working to ensure the aircraft makes its AirVenture debut. The rare aircraft has undergone an extensive 10-year



EAA AirVenture 2018 NOTAM Changes

While the overall procedure is generally similar to past years, there are a number of changes compared to the 2017 version. It is essential that pilots flying to Oshkosh thoroughly read the 2018 NOTAM for the most updated information. Some of those changes include:

- Oshkosh Taxiway Bravo has been realigned, with resulting changes to aircraft parking and camping areas;
- Oshkosh Ground Control frequency has been changed to 132.3;
- Descriptions of Seaplane Base procedures and Transient Helicopter area have been updated;
- Madison Approach Control frequencies and airspace boundary altitudes have changed;
- Two southern Wisconsin VORs have been decommissioned;
- IFR routings and the list of airports requiring IFR reservations have been updated.

Pilots can download a digital version of the NOTAM at www.EAA.org/NOTAM, or order a free printed copy via the website or by calling EAA Membership Services at 800-564-6322.



restoration after aircraft restorer Tom Reilly discovered the complete airframe on a farm in Ohio. The XP-82 was originally designed as a long-range fighter escort to accompany B-29 bombers for thousands of miles on missions over the Pacific Ocean. Fewer than 300 of the airplanes were produced with the majority soon scrapped in the years that followed. AirVenture 2018 will be the aircraft's very first public appearance.

Other Highlights

The night airshows will showcase on Wednesday and Saturday night (schedule to be announced). To occupy your other evenings, consider taking a stroll down to the ultra-light area – they will once again hold a "twilight flight fest" on each non-night airshow evening. There you can find STOL aircraft, drones, paragliders and others "playing" on the grass strip as dusk settles on the grounds.

For the Warbird fans, other special aircraft to look out for this year include: Grumman F8F-1 Bearcat, Douglas A-26K Invader, Boeing B-29 Superfortress "Doc," several Curtiss P-40s, multiple Grumman F7F Tigercats, North American F-86 Sabres, Lockheed T-33 Shooting Stars, a MiG-17 and Supermarine Spitfires.

"One of the really neat things about Oshkosh, it's everything in flight – from the ultralight to the C-5," said Knapinski. "It is all right here."





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Are You Good Enough to Fly into Oshkosh?

by Thomas P. Turner

lying into Oshkosh, Wisconsin's Wittman Regional Airport (KOSH) for EAA AirVenture is an amazing experience. But it's one that requires special expertise, and for you to be at the very top of your game. Come to think of it, we need to be at our very best every time we fly. Here are seven tasks you must

master to be good enough to fly into Oshkosh.

Task 1: Know the NOTAM

It's a big, busy, 30-page document...and you need to know it well to be safe flying into what becomes the world's busiest airport. It provides rules for visual and instrument arrivals and departures. It gives instructions for making and displaying parking signs so ground handlers can send you in the right direction after you land. The NOTAM includes procedures for outly-ing airports that serve as alternates to Oshkosh arrivals. The NOTAM has changed in some



details since last year, so prior experience may not translate directly to safety this year without further study (the 2018 AirVenture NOTAM can be found on EAA's website, eaa.org).

As you prepare to fly into AirVenture:

a) Download the NOTAM and begin studying the portions that apply to you. If you're planning to arrive IFR you still need to be fully up to speed on the VFR arrival – controllers can terminate services and direct you onto the visual arrival at any time.

b) Keep a copy of the NOTAM in the cockpit. Review it at your last stop before Oshkosh, and when getting ready to depart the airshow.

An aerial view of the EAA AirVenture grounds.

- c) Consider what you'll do in the event of circumstances such as:
 - a. Electrical failure;
 - b. Radio failure;
 - c. Other systems failures;
 - d. Adverse weather at or near KOSH or the arrial corridors;
 - e. Sudden closure of the Oshkosh Airport (aircraft emergency or other);
 - f. Arrival near or during air show times or other holds, such as mass arrival reservations;
 - g. Diversion to another airport with its own special NOTAM procedures;
 - h. Parking saturation some years Wittman Field fills up and non-show airplanes are turned away;

Task 2: Fill 'er Up

Do not plan to arrive at Oshkosh with minimum fuel. We all want to get there with as few stops as possible, and we all want to help the Oshkosh FBOs prosper during the event by buying their fuel. But for safety's sake, fly to an airport within one hour of Wittman Field and top off the fuel tanks before flying the rest of the way in. It's possible you may have to divert or hold. The last place you want to be declaring a fuel emergency is in the traffic pattern with a couple dozen other airplanes. Arrive at Air-Venture with plenty of fuel if for any reason you can't land immediately at Wittman Field.

Task 3: Airspeed Control

Now is the time to brush up on the special skills needed for a safe arrival. One is proper airspeed control. The AirVenture NOTAM calls for most aircraft to fly the visual arrival at 90 knots indicated airspeed. You must know precisely

what combination of power, pitch attitude, flaps and landing gear position (as appropriate) and trim setting results in level flight at 90 knots. Get comfortable with this configuration (and any visibility or engine temperature management considerations that coincide) so you can fly it while scanning outside for traffic inbound to Oshkosh. If you fly a faster airplane, the NOTAM gives you the option of a slightly higher altitude and 135 knots indicated. If you plan this entry, practice the configurations for both 135 and 90 knots. The "highspeed arrival" will eventually have to descend through the "normal" speed as you arrive in the traffic pattern. Practice precise airspeed and altitude control using NOTAM arrival speeds so you can fly them without thinking about it...freeing you up to handle the traffic and workload of your AirVenture arrival.

Task 4: Spot, er, Dot Landings

Getting so many airplanes into the same airport in such a short time



calls for unusual procedures. One is that there are multiple touchdown zones – the normal end of the runway, and the "white," "orange," "pink" and "green" dots farther down (the specific color depends on the runway in use). You will be directed to land on a specific dot in your landing clearance.

Be extremely proficient at "spot" landings before flying to Oshkosh. Hit your spot in a short-field technique to avoid rolling into the touchdown zone of an airplane aiming for the dot ahead of yours. Use a high-angle, constant-descent, obstacle clearing technique (not "driving level" then chopping power for the last 50 feet). You may be overflying another airplane on the ground or one ahead of you but aiming at a spot closer to the arrival threshold. Make your approach as tight (close to the airport) as safely possible. Nothing throws a wrench in the arrival works like an airplane that extends for a three-mile final. Practice short-field landings to a designated spot plus no more than 100 feet (commercial pilot short-field standards) so you can pull one off even with a crosswind or a quartering tailwind.

Task 5: Passenger Training

It makes your flight far safer, and a lot more fun, if you take along at least one observer to help you look outside the airplane. Train your passengers to be observers. The observer's primary mission is traffic avoidance. Teach observers what to look for, and how to communicate with you. Before you take off for Oshkosh, review some basics such as:

- The "o'clock" system of identifying an airplane's position relative to your own ("12 o'clock high", etc.);
- What a typical general aviation airplane looks like at a distance of one mile and half a mile. You can do this by pointing out other airplanes in an airport traffic pattern on a pre-Oshkosh flight;
- Descriptions like "high wing," "low wing," "biplane," etc. Keep it very



basic – the Oshkosh controllers will. Prepare your observer for what traffic advisories he/she should expect to hear;

- How to help find charts, parts of the arrival NOTAM, etc., that you may need;
- Landmarks inbound on the visual arrival path;
- How to help you, with short, precise phrases like "I see the traffic, three o'clock level", "you're left of the arrival course", "your landing gear is not down", "you're 10 knots slow" – whatever you can work out with your observer beforehand;

You might even make up a one-page "observer guide," with pictures and phrases that apply to your flight, to take along for the arrival.

Task 6: Crosswinds and Tailwinds

Pressed to route as many arrivals as possible into Wittman Field, and with demands from flight demonstrations, air show acts, fly-bys and departures, the superb professionals that work Air Traffic procedures during the event are sometimes forced to route traffic to non-optimal runways, with light-to-moderate tailwind components. To be good enough for Oshkosh you must:

- Assume you'll have to go around unless things work out perfectly.
- Practice your crosswind landings. Get really good at them... and more importantly, know your limitations and the limitations of the airplane.
- Very cautiously try a few landings on a wide runway with a light tailwind component crosswind. Note that left-turning tendency of most propeller airplanes means it'll be harder to maintain control with a wind from behind your left. Get familiar with whether you can land safely with any tailwind component at all, and if so, what tailwind you can safely handle.
- Develop and adhere to a personal crosswind and personal tailwind component limitation. This is an

excellent exercise for hiring a CFI (who has experience and is current in your airplane type) to explore lowstress, controlled conditions before you're faced with the test at Oshkosh.

Task 7: Accept or Decline

When given an ATC clearance, it is your responsibility to determine whether complying is safe. If you have any doubts, it is your responsibility as Pilot-in-Command to decline the clearance and request a revised clearance. Pilots don't like to ask the tower for a runway change. You might not even get it at Oshkosh and have to divert to another airport. At the same time, it's your safety and that of your passengers at risk. Do not delegate the decision to land to Air Traffic Control.

Master the seven tasks and see if you're good enough for Oshkosh. If not, there's still time to practice, or to find a different way to get there.

Thomas P. Turner is an ATPCFII/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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Red Bull

PHOTO COURTESY OF PREDRAG VUCKOVIC

n the

WHO: Kirby Chambliss

Owner, Team Chambliss Aerobatic Performer & Red Bull Air Race Pilot

HOMEBASE:

Flying Crown Ranch near Eloy, AZ

Fleet:

Piper M600 Edge 540 (airshow plane) Two-place Edge 540T (for media/publicity) 1946 Piper J3 Cub Fieseler Storch

RATINGS & HOURS: ATP 28,000 hours

NUMBER SKYDIVE JUMPS: 1,000+ Aerobatic champion and Red Bull Air Race star Kirby Chambliss is a fan favorite at AirVenture Oshkosh. This year, he returns to showcase his signature combination of graceful artistry and aggressive maneuvers at select performances during the week.

A native Texan, Chambliss grew up with an innate desire to fly. Working odd jobs, he chipped away at his ratings and built time as an instructor and at 21, a corporate pilot. Three years later, Southwest Airlines hired him as a pilot, and he made captain by the time he turned 28.

After taking an upset training course with aerobatic legend Duane Cole, Kirby discovered his calling. He began pursuing aerobatic competitions, first owning a Pitts S2A and later an Edge monoplane. Chambliss went on to earn a spot on the World Aerobatic team, where he was a member from 1997 to 2005. Aerobatic championships fed his competitive spirit and propelled him to podium finishes including the 2000 World Freestyle Championship and five U.S. National aerobatic titles.

Kirby participated in the inaugural 2003 Red Bull Air Race and won his first championship in 2004, a feat he repeated two years later. In 2018, with half the season complete as of press time, Kirby sits at 8th in the standings, but is focused on a podium finish going into the last half.

We caught up with Kirby to talk to him about the upcoming AirVenture Oshkosh, his Red Bull Air Race season as well as the newest member of his aircraft stable, a Piper M600.

1. How did you become interested in flying?

My dad was a private pilot, and when I was young I helped him build a Davis Aircraft. It was a two-place experimental and this was long before there were kits to build from. He just showed up one day with a trailer full of sheet metal and simply said, "this is an airplane and we're going to put it together." A year later, he flew it. After that experience, I knew I wanted to fly professionally – ideally for an airline. Today, it's up to us in the industry to inspire the next generation. A lot of kids don't know the opportunities that exist in aviation.

2. You have competed in every Red Bull Air Race season since its inception in 2003. How has your approach to the race changed over the years?

It is so much more technical today. When I first started racing, it was more seat-of-your-pants flying, making splitsecond decisions as you progressed through the gates. Today, you have to be a tactician, which means I've had to change my style. Our chief tactician Paulo Iscold works with our technical team to optimize the aerodynamics of the airplane. We are always tweaking it to gain performance. He also analyzes each course to develop a simulated visualization that provides me with focal points on the course. I'll walk through the simulation and visualize every part of it, making small adjustments as the race progresses through the qualifying and follow-on rounds. As always though, my goal is the win! The competition is tough, and I always want to come out super aggressive.

3. You recently took delivery of a Piper M600, which replaced your 2005 Piper Meridian. Why the M600?

The Meridian was a great airplane for us, a very economical single-engine turboprop which replaced a Beechcraft Baron E55 we owned previously. Thanks to its range and altitude capability allowing us to get above the weather, it was a real game-changer. I could typically fly from the East Coast to my home in Arizona with one stop. So, a move into Piper's new M600 was a natural next step. The aircraft offers us even more range as it holds 260-plus gallons. I also really appreciate the new, robust wing and beefier landing gear. The aircraft has a very solid feeling. Not to mention, the Garmin G3000 avionics suite is simply amazing. The flight control system has a lot of great safety features such as underspeed and overspeed protection.

4. What mission does the M600 fulfill?

Its mission is really quite utilitarian. We use it to support our aerobatic planes by carrying parts, supplies and tools. We also transport the support crew and myself to airshows. We typically send the aerobatic planes ahead and then depart later in the M600. I have to say owning and flying the M600 greatly enhances my quality of life. I travel typically 220 days a year, so if I can get home for a night, I want to do it. The M600 provides the ability to cover a lot of miles, which means chances are better I can make it home after a show or race.

5. Beyond air racing and aerobatics, what other passions do you pursue?

I am a devoted husband to my wife Kellie, also a pilot, and father to my 13-year-old daughter Karly. I'm also passionate about skydiving, something I've done since I was young. I'm always working to perfect new skills and tricks.

> Dianne White can be contacted at editor@diannewhite.com



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On the Fence About Going to AirVenture Oshkosh? Here's 10 Reasons Not To.

by Dianne White

s the topic for my Editor's Briefing a few years ago, I penned a piece called "10 Reasons Why You Should Go to Oshkosh This Year." Being perennially passionate about general aviation's biggest celebration, the article was inspired by my efforts to convince my spouse to make the trek to Wisconsin.

This being my 26th year since my first journey to AirVenture Oshkosh, I'd like to offer up an alternative list. Here are my 10 reasons why you should NOT attend AirVenture Oshkosh 2018.

The Fisk Arrival. The starting point of the AirVenture Oshkosh VFR arrival can be a hair-raising experience for the uninitiated. If you were not lucky enough to obtain an IFR arrival, you may find yourself in the queue with a variety of aircraft types with vastly different performance profiles. Most important point: download and carefully review the NOTAM. Even if you arrive IFR, Oshkosh is a beehive when conditions are VFR and you will find yourself in the mix aiming for your assigned colored dot. Successfully navigate the Fisk Arrival and you will have the honor of being able to say you did it. And have a story to tell for the next seven days at the show.

Watching OSH arrivals makes you nervous. Once you are on the ground, one of the most entertaining and best-kept secrets at AirVenture is watching arrivals. Take a walk to the flight line Monday morning and you will find droves of nice people sitting in their chairs, fresh coffee in hand, watching as dozens of aircraft stream in to the airfield. Watching the arrivals while listening to the tower frequency doubles the fun. Sometimes a landing gets sporty or there is a go-around. Everyone prays that no one gets hurt and nothing gets bent. Still, it's the best bonus entertainment your wristband can buy.

My future airplane might spot me. And start singing its siren song to me. For those interested in checking out the offerings from Textron Aviation, Piper, Daher, Embraer, Pilatus and every other manufacturer under the sun, AirVenture Oshkosh is the place to sit in the pilot's seat of the newest aircraft on the market. I love my current aircraft and have no intention of trading up, so I'm not listening. Really, I'm not.

Too many opportunities to spend money. Everywhere you turn, there are newer, nicer, faster gadgets, gizmos, tools and toys. In fact, there are four hangars' full plus acres of exhibits. Like offering heroine to an addict, it's hard to say no. Ask me, I know. Last year, I was resolute to NOT spend money, and somehow came home with a new tug from Best Tugs. Is it the best tug I've ever owned? Of course, but that's beside the point.

All that walking. For a girl with a hip replacement and the other needing replacement, this is no stroll in the park. The length of the massive convention site is at least 20 miles. I'm



exaggerating – it's actually more like 5.2 miles. Fortunately, it is the most entertaining walk on earth with so many aircraft to view, from vintage to warbirds to experiementals and everything in between. Plus, you'll have major bragging rights when you review your Fitbit results at the end of the day.

Airshow overload. The daily air show at AirVenture Oshkosh features many of the world's outstanding aerobatic performers, including my favorites Sean Tucker, Kirby Chambliss, Mike Goulian and Patty Wagstaff. Their jaw-dropping performances never get old, and result in hours of neck-craning at the skies above Oshkosh. It's hard to get my shopping, talking and walking done when I'm constantly having to stop and watch the airshow.

Too many friendly people. AirVenture attracts more than a halfmillion people over its seven-day run. Many of them are owner-pilots, just like you. And most of them are nice, just like you. You may find yourself engrossed in conversation with any one of them while sitting in the new M600, drooling over Garmin's new flat-panel offerings or shopping for a new tug. The bad news is that the great conversation with your new friends may drown out the siren song of your new aircraft calling you. But one thing it won't drown out: the Jet Waco "Screamin' Sasquatch." Nothing drowns that out.

SOS Brothers Beer Tent. What's a person to do after a long day of walking, shopping, and neck-craning? Oftentimes it involves a trip to the SOS Brothers Beer Tent for a cold refreshment and a fresh, roasted cornon-the-cob. You'll most likely meet old friends and the new ones you made at the Garmin and Piper booth. Oftentimes that results in missing your

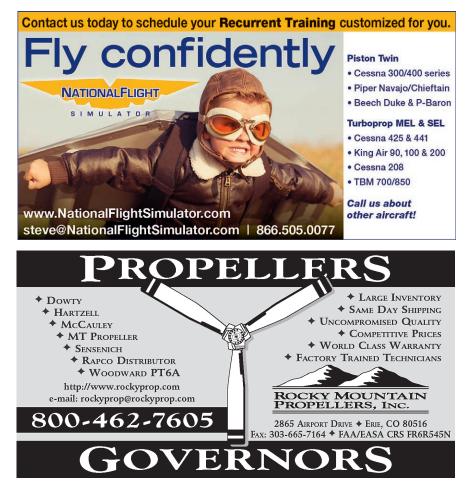
ride back to the hotel and making you late to dinner. It can be a stressful choice, but thankfully only comes around once a year at AirVenture Oshkosh.

The weather. With Wisconsin weather, you know what you're going to get: heat, sun, humidity, clouds, cold, rain and wind. You just don't know in what order and when. (We'd all like to forget Sloshkosh 2010.) But hey, it's summertime in Oshkosh! More often than not, Oshkosh offers up temperatures in the low 80s and sunny weather – 2017 was a prime example with near-perfect conditions six out of seven days. The best strategy is to roll with it and be

prepared for whatever Mother Nature serves up.

Too much to see in too little time. Unlike Vegas, three days is never enough. There is so much to see and experience that it's easy to devote the entire week to this huge airshow. Even then, it's nearly impossible to see everything. But there's always next year.

Despite this list, will you be at Oshkosh this year? If so, come say hello and tell me about all the gizmos you resisted purchasing. I'll be hanging out at the MMOPA tent near Piper. See you there!



Jet Journal

And other tales from the flight line.

by Kevin Ware

e land, call ground control and then head for the FBO keeping a sharp look out for the "line guy," who is usually some young fellow wearing a uniform shirt and holding a set of orange wands. With signals practiced at home in front of his bathroom mirror, he expertly directs us to a tight spot on the crowded ramp, chalks the tires and gives us a fists-together sign that the brakes can now be released.

Next, he places a red carpet by the airplane's door and while the engines are spooling down, waits patiently for the door to be opened. Later after happily unloading our passenger's heavy suitcases, dealing with our fueling needs, and seeing us depart in a rental car, he tugs the aircraft to long-term parking or into a hangar. As we depart through the security gate and our airplane disappears from view, we tend to assume it will be returned in the condition we left it. But that does not always happen.

Although most line personnel are excellent, reliable people, experienced pilots have stories about the afterhours adventures and mishaps their airplanes (and other vehicles) have suffered at the hands of the line guys. Here are three of mine, all true.

Flying Adventures of Jim

Jim was a recent high school graduate and a 10-hour, recently soloed student pilot with professional aviation aspirations. At about the same time he was employed, a new maintenance customer brought in a pristine Cessna 180. He was an older fellow and the airplane was his highly cherished baby.

It was Jim's job to reposition the various aircraft in the hangar, placing those scheduled for an early flight near the door. Because the owner intended to fly the 180 in the morning, it was the last aircraft to go back into the hangar. So, after all the other aircraft were safely put away, the 180 was still sitting out there on the ramp with the key hanging from the magneto switch in an extremely inviting way. With no one else around on this moonless night, and in a moment of youthful insanity, Jim decided that having never flown a tailwheel before, perhaps just taxiing it around a little bit would not hurt anything. Besides, no one would ever know.

The Cessna's carbureted Continental started immediately and so down the taxiway he went with great care. Compared to the tailwheel horror stories he had previously heard about, he was surprised how easy it was. This led him to think that since he was obviously gifted at this, maybe he should try taking off. His takeoff was indeed a bit wobbly but with the prop pulling forward and the airplane very light, he was airborne before anything too scary happened. Once airborne, he discovered that the tailwheel airplane behaved exactly like a normal one, causing him to have yet even more confidence in his outstanding abilities as a pilot. So around the pattern he flew, setting up for a long final with the airplane's landing lights off, partly because he couldn't find the switch, and also because he did not want to be noticed

The touchdown was main gear first with a huge bounce. Following what seemed to Jim as an eternity, the airplane finally returned to the runway, but this time the wings were not quite level. The left wheel touched first probably because Jim in his now suddenly anxious state had his arm muscles flexed tight pulling the wheel slightly down on the left side, while his feet firmly found their way to the brakes. When the left wheel touched down first with its brake locked, a 720-degree ground loop immediately occurred with the outboard wing making two very artistic circles of scrapped paint on the runways pavement.

Desperately hoping no visible damage was done, Jim slowly taxied back to the hangar and carefully put the airplane away. In the morning, the fastidious owner arrived to fly his airplane, and soon noticed the damaged wing tip. Jim was the obvious culprit and duly confessed his sin. He was fired, but the sheriff was not called nor anything reported to the FAA. We did not see much of Jim at the airport after that. As it turned out, he used the time to attend an out-ofstate aviation school. Today, he is flying Embraer jets for a commuter airline and prefers that his life as a line guy not be discussed.

The Unforgivable Sin

A new line supervisor (age 23 and recently out of the Army) was hired to specifically watch out for Jim's kind of behavior. One morning as I was driving to the airport for a 9 a.m. Learjet 40 departure, Gary, the head mechanic, called me and asked, "Hey Kevin, did you pre-flight the Lear 40 before you guys left Reno last night?"

Gary's worried tone of voice suggested something was wrong. I replied, "Yes I did, Tim was PIC, he was filing the flight plan, I supervised fueling and did the preflight."

Gary cleared his throat a bit, waiting long enough to significantly increase my anxiety, then says the airplane is damaged, and they are trying to figure out who did it. As a result, it is not flyable for the trip.

Twenty minutes later, I arrived to the maintenance hangar where the Lear 40 was surrounded by concernedlooking mechanics. I walked around the airplane and when I looked up at the



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30	ASTRA 1125SP
53	ASTRA 1125SPX
42	BEECHJET 400
244	BEECHJET 400A
126	BOEING BBJ
373	CHALLENGER 300
53	CHALLENGER 600
41	CHALLENGER 601-1A
112	CHALLENGER 601-3A
52	CHALLENGER 601-3R
295	CHALLENGER 604
9	CHALLENGER 800
183	CITATION 500
298	CITATION 525
269	CITATION BRAVO
155	CITATION CJ1
84	CITATION CJ1+
206	CITATION CJ2
169	CITATION CJ2+
360	CITATION CJ3
63	CITATION CJ3+
222	CITATION CJ4
146	CITATION ENCORE
46	CITATION ENCORE+
299	CITATION EXCEL
	CITATION I
249	CITATION I/SP
463	CITATION II
60	CITATION II/SP
163	CITATION III
44	
140	CITATION M2
377	CITATION MUSTANG
126	CITATION S/II
256	CITATION SOVEREIGN
	CITATION SOVEREIGN+
	CITATION ULTRA
238	CITATION V

29	CITATION VI
94	CITATION VII
254	CITATION X
24	CITATION X+
210	CITATION XLS
205	CITATION XLS+
1	DIAMOND I
46	DIAMOND IA
3	DORNIER ENVOY 3
230	ECLIPSE EA500
41	EMBRAER LEGACY 500
133	EMBRAER LEGACY 600
60	EMBRAER LEGACY 650
235	EMBRAER PHENOM 100
239	EMBRAER PHENOM 300
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22	FALCON 100
21	FALCON 200
174	FALCON 2000
21	FALCON 2000EX
68	FALCON 20C
16	FALCON 20C-5
24	FALCON 20D
2	FALCON 20D-5
30	FALCON 20E
9	FALCON 20E-5
71	FALCON 20F
68	FALCON 20F-5
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150	FALCON 900
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9	GULFSTREAM G-500
462	GULFSTREAM G-550
70	GULFSTREAM G-II

24 GULFSTREAM G-IIB

140	GULFSTREAM G-III
	GULFSTREAM G-IV
	GULFSTREAM G-IVSP
172	GULFSTREAM G-V
36	HAWKER 1000A
	HAWKER 125-1A
5	HAWKER 125-1AS
6	HAWKER 125-3A/RA
11	HAWKER 125-400A
22	HAWKER 125-400AS
12	HAWKER 125-400B
12	HAWKER 125-600A
6	HAWKER 125-600AS
107	HAWKER 125-700A
56	HAWKER 4000
193	HAWKER 400XP
33	HAWKER 750
191	HAWKER 800A
34	HAWKER 800B
352	HAWKER 800XP
35	HAWKER 800XPI
80	HAWKER 850XP
148	HAWKER 900XP
7	JET COMMANDER 1121
4	JET COMMANDER 1121B
1	JETSTAR 6
6	JETSTAR 731
12	JETSTAR II
10	LEARJET 23
17	LEARJET 24
2	LEARJET 24A
14	LEARJET 24B
39	LEARJET 24D
10	LEARJET 24E
7	LEARJET 24F
16	
	LEARJET 25B
10	LEARJET 25C
	LEARJET 25D
4	LEARJET 28
29	LEARJET 31
	LEARJET 31A
33	LEARJET 35
380	LEARJET 35A

13 LEARJET 36

33	LEARJET 36A
29	LEARJET 40
194	LEARJET 45
174	LEARJET 45XR
99	LEARJET 55
4	LEARJET 55B
12	LEARJET 55C
261	LEARJET 60
478	PILATUS PC-12/45
111	PREMIER I
7	SABRELINER 40
19	SABRELINER 40A
2	SABRELINER 40EL
1	SABRELINER 40R
24	SABRELINER 60
1	SABRELINER 60AELXM
19	SABRELINER 60ELXM
3	SABRELINER 60EX
68	SABRELINER 65
15	CARDELINED 20

- 15 SABRELINER 80
- 6 SABRELINER 80SC
- 75 WESTWIND 1
- 5 WESTWIND 1123
- 32 WESTWIND 1124
- 65 WESTWIND 2

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2	CARAVAN II
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132	CHEYENNE I
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- 18 MERLIN IIIC 5 MEBLIN IV
- 9 MERLIN IV-A
- 9 MERLIN IV-C
- 66 MITSUBISHI MARQUISE
- 1 MITSUBISHI MU-2D
- 26 MITSUBISHI MU-2F
- 18 MITSUBISHI MU-2J
- 33 MITSUBISHI MU-2K
- 11 MITSUBISHI MU-2L
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- 55 TURBO COMMANDER 980

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Count Aircraft

- 39 BARON 56 TC
- 1 459 BABON 58
- 3 BARON 58 PA
- 351 BARON 58P 112 BABON 58TC
- 3 BARON A56TC
- 301 BARON G58
- 197 BEECH DUKE B60
- 176 CESSNA 340
- 531 CESSNA 340A
- CESSNA 402B 90
- 140 CESSNA 402C
- 29 CESSNA 404 TITAN
- **CHANCELLOR**

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- 488 PIPER CHIEFTAIN
- 24 PIPER MOJAVE
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- 47
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COMMANDER 15 BOCKWELL 560A COMMANDER

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21	CESSNA P210R
54	CESSNA T182
1	CESSNA T206
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Damage caused by a lineman on a Learjet 40.

elevator to count the number of static wicks, it was pretty clear that about four inches of the tip of the left elevator was bent down, almost at 90 degrees. The mechanics already had a tall ladder in place to look at the damage, and after climbing up I saw that in addition to the bent part, there was a scrape of red paint along the upper surface of the horizontal stabilizer.

Gary surmised the line guys at the Reno FBO did it when they pulled the airplane out of their hangar for us the day before. But if so, how did I miss it? I told him I don't think I did – counting static wicks is a standard preflight procedure on a Lear 40, and I am almost certain I would have spotted that bent elevator. Besides, the airplane handled fine on our trip back, and I could not imagine that would be the case if the damage was done in Reno.

From his expression, it was evident that is not what Gary wanted to hear because it could only mean one of our two line guys who were working last night (neither of whom were saying a thing), must have done it.

This prompted Gary and I to take a trip to the hangar where the Lear spent the night. It was a rather tight fit that requires turning the airplane once the wings are inside the hangar door. We inspected the red metal beams at the level of the Lear's elevator. Lo and behold, we found a smear of white paint that matches the Lear's color on one of the cross beams at the exact height of the Lear 40's elevator.

Now the question was which of the line guys put the airplane away and why did he not say something about it? It turned out it was the new line supervisor, who after being specifically queried said he thought he heard the Lear's tail it hit something, but he did not think any visible damage had occurred, therefore he had not mentioned it. Later that day, the Lear's left elevator was removed and the factory contacted which estimated the repair to be more than \$80,000 with a down time of three weeks. Thankfully, the Lear's owner is a patient, considerate fellow, and his insurance agreed to pay for the damage. As for the line guy, he immediately lost his job. Damaging the airplane was forgivable, but failing to be up front about it was not. We have not seen him since, but rumor has it he is now working at a Part 121 airport moving airliners.

The Flying Cadillac

José was the next line guy to suffer a similar fate. He was a college-bound high-school senior with high grades, a good work ethic and a great interest in all things mechanical. What more could you ask for?

Shortly after José was employed, a CJ owner-pilot decided that it would be handy to keep a spare vehicle in his private hangar to be used on the rare occasion he had no other transportation. And so, he purchased a brand new \$80,000, big-engined black Cadillac. Our CJ owner parked this impressive machine, with 78 miles on the odometer, in the corner of his hangar with the keys left on the seat so he would not have to look for them.

Late one night, the CJ owner returned from California and asked José to put the airplane away in his somewhat distant hangar. Although José was relatively new to the job, he was known to be fastidiously cautious when moving airplanes, so the owner



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This brand new black Cadillac was totaled following an unexpected first flight.

was not in the least worried. And, consistent with his conscientious reputation, José moved the CJ over to the owner's hangar, even carefully positioning and chalking the tires exactly on the marked positions on the hangar floor before disconnecting the tug, just as he had been trained to by the FBO's owner.

But then, on his way to push the button that controls the hangar door, he could not help but notice the brand new black Cadillac eying him in a most seductive manner from the hangar's corner. Out of youthful and innocent curiosity, José opened the door and sat in it. He had heard that you could hardly hear

the engine run on these luxury cars, and with the key sitting right there on the passenger seat, his mechanically oriented mind could not help but wonder if that was really true. So, he started it up. Once that far, with the engine silently running and the hangar door still wide open, he thought a little drive in and out of the hangar would certainly not hurt anything. Once on the ramp with no one around, he decided it might be harmless fun to just take a short drive down the empty, unlit taxiway. Having safely accomplished that, the next inevitable question was, how fast does this thing go? And so, our sober, straight-A

student line guy, sets off like a drunken drag racer down the unlighted taxiway with the throttle floored.

Doing well over 100 mph, and with the paved terminus of the taxiway not at all visible in the dark, he runs onto the grass. Fifty feet off the taxiway and not at all visible on this dark night, there is a four-foot high berm of grass covered dirt. The berm launches the high-speed, black Cadillac about 20 feet into the air vertically, and sends it flying down range nearly 100 feet before it finally touches down with a very high-G landing. The vehicle's undercarriage was not designed to handle this kind of load, and so the car bottoms out, tearing off the exhaust and breaking the suspension.

José also suffers a high G-load impact, which takes him 10 minutes to recover from. Once again alert, he discovers the previously spotless car is covered with grass, clods of dirt and white mud. With the optimism only youth can provide, he decides that if he takes it back to the FBO's airplane



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wash rack and carefully cleans it off, and quietly puts it back in the hangar exactly where he found it, then maybe everything would be okay. Unfortunately, while the wash is underway, an arriving pilot noticed the wheels were splayed and the frame was scraping the pavement. The \$80,000 brand new black Cadillac was trashed on its very first flight.

The next day, the owner was quite gracious, provided that it is the FBO's insurance that replaces his black Cadillac with a brand new one. Josés employment was terminated, and on his way home, he missed a stop light and rear-ended another new vehicle, this one incredibly belonging to his uncle. Since no aircraft were damaged, the FAA was not notified, and out of consideration for José's outstanding future, neither was the sheriff.

José of course has not been back to the airport even for a visit, but story is he has a scholarship to attend a big university next year with plans to major in mechanical engineering. All the pilots at the airport wish him well. From these events over the past several years, those of us with plenty of experience and some grey hair have concluded that we never want to be 18 years old again. We have also learned it pays to very carefully preflight the airplane anytime it has been moved by the line guys and to never leave keys in a unique airplane, or for that matter a fancy car, particularly a flying black Cadillac.



Kevin Ware is an ATP who also holds CFI, MEII and helicopter ratings, has more than 10,000 hours and is typed in several different

business jets. He has been flying for a living on and off since he was 20, and currently works as a contract pilot for various corporations in the Seattle area. When not working as a pilot he is employed part time as an emergency and urgent care physician. He can be reached at **kevin.ware2@aol.com**.



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From the Flight Deck



Aviation Adjectives, Adverbs and Accolades

With Plenty of Petroleum and Properly Positioned in Perfectly Peaceful Air, Pilots Pine to Promote the Purposeful Pleasures of Piloting

The difference between the almost right word and the right word is really a large matter—'tis the difference between the lightning-bug and the lightning.

– Mark Twain

have become sensitive to the use of "wrong" words. "We'd like to welcome you aboard." But then they don't. "Your fuel is going to be \$750." Ok, but when? "We're done with the tire change." Not finished?

Modern dialog is often inaccurate if not ineloquent. As a prelude to this, during my first article with our new Editor-in-Command, I re-read a couple of the classics for writers: "On Writing Well" and "The Elements of Style." These and my stack of aviation periodicals got me thinking about how important it is for us to use effective words when talking about flying. This summer we will be traveling on vacation and business, to fly-ins, airshows, owner-conventions and Oshkosh. You may meet folks seeking advice about becoming a pilot and they will want to hear it from the horse's mouth: A pilot. And better from us than GA's detractors buzzing around the horse's other end. When talking to newbies, passengers, politicians and the press, it's important that we use premium words to describe and promote flying.

Are You a Pilot?

We've all heard it: Are you the pilot? Enthusiasts will watch you taxi up to the ramp and may look to you for stories, opinions, advice and your feelings about flying. They presume you to be electronically savvy, articulate, at least semi-approachable and

above all, truthful. Whether you enjoy being a spokesman for GA or you would rather not, they will ask about your "airplane feelings" including your airplane fears. With kids, the first questions will often be: Is it hard to fly an airplane? How do you work all those buttons? Do I need to know a lot of math? Then the adults: How did you get into it? When did you first start flying? Where do you fly? How much does it cost?

Put on your Mr. Rogers sweater, engage some Mr. Spock logic, emulate Henry Kissinger's tact then accurately, but simply, explain aviation using plenty of passionately picked adjectives and adverbs.

Can You Say, There I Was? (I knew you could)

When we are with other pilots, it's customary to discuss close calls, brilliant saves, stupid mistakes and to use hand gestures as we lay it on thick: "There I was, fuel leaking from the left main, inverted on the glide slope (palm-up gesture), the right prop feathered and an inch of ice on the wings (index finger and thumb showing *two* inches). My coffee spilled as I rolled upright while hand-cranking



the gear (cranking motion), but I still made the second turn-off and last call at the Happy Bottom Riding Club." Great Caesar's ghost and jeepers Mr. Kent! Pull up your pant legs boys and girls, it's getting deep in here. I know we like to embellish so as to keep the attention of the other storytellers in the room, but super-pilot bravado is like Kryptonite to newbies and will cause gasps and gastrointestinal grunting if used around fearful mortals, fanatic politicians or the frenzied editor of The Daily Planet.

What's the Scariest Thing?

It's easy to endorse aviation when we have runway ahead of us, altitude below us, fuel in the tanks and expenses in check. In fact, when all is well, our passion for flight often causes the exuberance reactor to lose containment as our aviation adjectives, adverbs and accolades pepper anyone within earshot. But it's a tight rope when we talk to potential students, passengers or the media if they ask, "What's the scariest thing that ever happened to vou?" And no Gordo, that's not your cue to tell them who is the best pilot you ever saw (with respectful acknowledgement to the passing of author and journalist Tom Wolfe).

Most of us are spring-loaded to "The Right Stuff" mode and answer with a modicum of exaggeration like the Happy Bottom pilot above. But we'd like to win friends and influence people here, not cause a stampede to the emergency slides or the desire to snuggle up and watch "The Lion King." After we've covered the fun stuff about flying, questions about risks and operational challenges, training and expenses will come up. When we talk to these folks, tell them what you love about flying first. They will hear it in your voice and see it in your eyes. Then maybe gently give them the "how we sometimes have to save the world" part. Try to use any superlatives sparingly.

A Talk with Jesus

Speaking of superlatives, before you say that flying can be like a religious experience, there's a difference between the "sunrise, blue sky, smooth air, great view of Monument valley, the Rockies or New York skyline" feeling that we might claim is "like a religious experience," and the "engine failure to a 400/1 approach in which we actually talk to Jesus at the marker" type of religious experience. So, unless your storytelling is riding on the shirttail of common metaphors, perhaps we ought to tone down the use of that and "best pilot you ever saw" superlatives while around newcomers and the Perry White's of the world.

How do we delicately answer the sometimes-tough questions from nonpilots? Well, it's not always a beautiful day in our neighborhood – we're not a pointy-eared science officer or the U.S. Secretary of State. But here's my take on promoting the pleasures, freedoms and efficiencies of GA.

Passion

Writers are counseled to write about what they like and not to be afraid of how it sounds, and to not call the editor "Chief." Some of the audience will like what they read, some will not. But through the use of words, syntax and individual style, passion for the subject should be clear. The same is true when you talk to non-pilots about flying. Our passion for flight will show in our faces and inevitable use of hand gestures. We apply all of our skills and all of our energy into every flight. We don't just feel passionate about flying, we put passion into it. When you have passion for something, you love it even when you hate it. During my time in a dozen

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- Richard Bach

GA singles, three military jets, four different airliners and one Duke, I've tried to put passion into flying them all. Sometimes a small crowd may gather as you weave your passionate tales about flying – especially if "Danger Zone" is playing in the background. Trust that your knowledge, experience and passion for flying will carry the conversation.

In the eyes of aviation newbies, you can do no wrong because you are a pilot. You should take comfort in your level of aviation knowledge. Pilots are a fastidious group of high achievers bent on the study and promotion of facts, precision, safety, the truth and pulling our bacon out of the fire if that's where we find ourselves. And we're passionate about being in the air. It's best that newbies and any greenhorn media types hear and see that right from the start. We are trained to take whatever measures are necessary and prudent in order to ensure the safe completion of a flight. We are in command with the authority to do whatever it takes. This means we also have the responsibility to know exactly whatever it takes is; no more, no less. To face this responsibility, pilots must study, train, learn from others and practice constantly. Then, if all goes according to plan, we can indulge our visceral senses by looking out the window at sights, sounds and smells that no other ground-bound mortal will ever see or feel - and occasionally, we save the bacon.

A Horse is a Horse

In the Beginning.... Call me Ishmael.... It was the best of times.... In 1926 I was enrolled as a student airline pilot.... As we pass between layers of cloud...

These words were used to begin some of the most recounted and influential literature in history (well, the last two by Antoine De Saint Exupery and Ernie Gann if you're a pilot). As we preach and promote flying, we should choose our words as resolutely as we are able. "Proper" grammar is a moving target and our words don't have to be perfectly poignant, only purposefully passionate. We need only make sure that they come from the heart and with fewer alliterative phrases than this article. And as much as is possible from us exaggeration prone, story-telling pilots, not from the butt end of a horse. TET

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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NATIONAL BUSINESS AVIATION ASSOCIATION



NBAA Continues Investment in Developing Future Industry Workforce

by Ed Bolen NBAA President and CEO

B dates a viation faces an unprecedented shortage of qualified workers to fill roles in flight departments, maintenance fa-

cilities and support operations. NBAA is dedicated to bolstering the business aviation workforce of today, while also developing the next generation of industry leaders.

For example, earlier this year NBAA joined with fellow aviation stakeholders to support the Aviation Workforce Development Pilot Program Bill (H.R. 5701), a bipartisan measure that would provide financial grants to schools, businesses and other private and governmental entities that develop technical talent and encourage workers to pursue careers in the aviation industry.

Business aviation managers are also finding it harder to staff their operations, in part because of an overall decline in the number of people choosing aviation careers.

In addition to offering a wide array of professional development programs targeting both industry veterans and newcomers, NBAA and its committees are continually working to find ways to make our industry more attractive to current and potential personnel.

In 2017, NBAA's Business Aviation Management Committee (BAMC) surveyed over a thousand business aircraft pilots about their career satisfaction and quality of life concerns. The results offer a stark picture of the challenges facing the industry – but also provide insight into what business aviation companies can do to retain their talent.

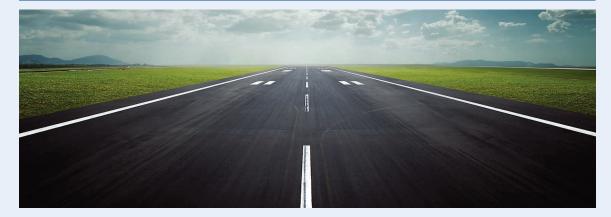
NBAA's resources, including the Internship and Career Guide, are tools that can help lead the way for future aviation professionals. NBAA also recognizes the value in exposing students to aviation, a global industry, and inspiring them to pursue successful and rewarding aviation careers, which is why "Careers in Business Aviation Day" has become a staple of NBAA-sponsored events in the U.S., Europe and Asia.

Additionally, NBAA's Young Professionals, or "YoPro" group, is dedicated to building relationships between emerging leaders across the business aviation industry. YoPro members work to connect young professionals while also increasing public awareness of new initiatives in this vibrant and growing industry.

NBAA has also launched a national mentoring network that will match qualified industry veterans with young people pursuing business aviation careers, with the aim of fostering a collaborative environment for professional growth.

Without question, the need for qualified workers, today and tomorrow, touches all aspects of the industry, and we must all work together to find effective solutions. We hope these and other efforts will help to promote aviation careers, ensuring that companies using business aviation have the professionals they need to operate safely and compete globally.

NBAA Fights to Overturn SMO Closure Agreement



BAA recently urged a federal appeals court to legally void a deal between the FAA and the city of Santa Monica, CA, which allows the city to shorten the runway and provides the option to close the Santa Monica Municipal Airport (SMO) after 2028.

While airport stakeholders await that ruling in hopes that SMO will be preserved, decades-long efforts by city officials to shutter their airport have taken a toll on yet another well-respected airport business. Santa Monica Aviation, a long-time airport tenant that provided aircraft maintenance and flight training, is closing its doors for good, another casualty of the city's long-time effort to close the venerable Los Angeles reliever airport.

Company founder Ali Safai started his company more than 20 years ago to share his love and passion for flying. Inspired to change the flight training experience after earning his pilot's license, he has taught hundreds of students, many of whom have gone on to successful careers in aviation.

Unfortunately, Safai was forced to close Santa Monica Aviation because of the pressure of trying to run a successful business at SMO. "I've invested more than \$1.5 million in the company, but all the city's rules are against me," he said, pointing to rent increases, restricted hours, landing fees, revoked subleases and the impact from the airport's now-runway. For decades, NBAA has been at the forefront of the legal battles to prevent Santa Monica city officials from closing their airport. Earlier this year, NBAA questioned the January 2017 agreement between the FAA and the city that settled outstanding lawsuits and released the city from its federal obligations to sustain the airport.

Petitioners assert that the FAA exceeded its authority when making the secret, one-of-itskind deal by defying the laws set by Congress, as well as the FAA's guiding principles. At a May 14 hearing of the U.S. Court of Appeals for the District of Columbia Circuit, Richard K. Simon, a lawyer representing NBAA and other parties challenging the deal, told the three-judge panel that asking the court to overturn a settlement is the right legal outcome, given that the agreement "runs afoul" of five legal requirements.

The appeals court panel is expected to issue a ruling in the case later this year. While any legal relief may come too late for Safai, he thanked NBAA for efforts that "have been a contributing factor in helping protect operators at airports around the country.

"I love flying and feel that I have made a great contribution to the aviation industry," he concluded. "Now it's time for me to move on."





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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.



Business Aviation Insider: Industry Moves Towards Sustainable Aviation Fuels

ake no mistake: jet fuels derived from renewable energy sources aren't a far-off dream. Multiple technology paths exist to produce such fuels, and innumerable test flights over the past decade have consistently demonstrated their equal performance to conventional Jet A.

However, a lack of widescale production facilities and distribution outlets have hindered broader adoption of sustainable alternative jet fuel (SAJF). Even as SAJF acceptance has lagged in the market, there has been extensive work behind the scenes to improve the availability of these fuels.

At EBACE2018 in May, NBAA joined with other industry stakeholders to announce The Business Aviation Guide to Sustainable Alternative Jet Fuels, which is focused on raising awareness and adoption of available and emerging alternative jet fuel options in the U.S. and Europe.

"The technology behind this concept is in place, but the limiting factor has primarily been the lack of production facilities and widespread distribution sources," said Eli Cotti, NBAA's director of technical operations. "Through this new initiative we hope that business aviation may advance the proliferation of alternative fuels at all the logical touchpoints: the manufacturers, the ground handlers and the operators, at the national, regional and international levels."

Also working toward these goals is the Commercial Aviation Alternative Fuels Initiative (CAAFI), a public/private partnership between the airlines and the FAA to accelerate development and deployment of sustainable alternatives to Jet A. This includes collaboration with other industry stakeholders, including NBAA and the military.

In 2016, AltAir Fuels earned certification from the Roundtable on Sustainable Biomaterials (RSB) to become the first U.S. source for production of renewable diesel and jet fuel at a converted oil refinery in Paramount, CA. The company joined a handful of international companies working at various stages to expand production of SAJF. "Some entities in this space have also announced plans to expand production, and new players have come onboard," noted CAAFI Executive Director Steve Csonka. "In some cases, that includes existing entities working on commercial production of sustainable alternative aviation fuels."

Operators of piston-engine aircraft may also soon find alternatives to 100LL aviation gasoline (avgas) at airports across the country as several companies work to develop a true drop-in replacement for 100LL through the Piston Aviation Fuels Initiative (PAFI.)

While that product remains in the future, some fixed-based operators are looking to alternatives. Dan Demeo, operator of Rabbit Aviation at San Carlos Airport (SQJ) near California's Silicon Valley, first explored the possibility of an avgas alternative in the aftermath of the Great Recession.

"I wanted an exclusive product to offer, and I looked to unleaded, no-ethanol automotive gasoline, as that's what I'd flown with while training for my private pilot license," he explained. "As it turned out, I'd never had such good timing in my life, as soon after SQL became one of the 17 airports chosen by the FAA for monitoring lead emissions."

In 2016, Rabbit Aviation became one of a select number of authorized distributors for 94-octane unleaded fuel (94UL) produced by Swift Fuels. While not a true drop-in replacement for 100LL, 94UL is approved for use in a variety of non-turbocharged piston aircraft engines with compression ratios of 8.5:1 or lower through supplemental type certification approval.

Demeo is now working to secure a lease for a new, larger storage tank for 94UL. "Lowering a product's cost is a surefire way to incentivize its use," he stated. "It would be great to be able to buy an entire rail tanker of fuel to drive prices way down."

An expanded version of this article appears in the July/August 2018 edition of NBAA's flagship member publication, Business Aviation Insider. Download the BAI app at *www.nbaa.org/news/insider/.*

Montana's Bozeman Airport Sets Positive Example for Airport Operators



ozeman Yellowstone International Airport (BZN) in Montana is among the busiest and fastest-growing small-hub airports in the Northwest, hosting a variety of aircraft operations, including scheduled airlines, Part 91 and Part 135 operators, helicopters, glider towing, air ambulance, cargo, military training, flight schools and light general aviation.

To their credit, airport management and the Gallatin Airport Authority understand the value that all airport users bring to southwest Montana and have worked to enhance efficiency and safety for all of them. "Bozeman is a great example of an airport understanding the value of all of its users and being proactive in supporting them with technologies and infrastructure that contribute to safe and efficient operations," said Kristi Ivey, NBAA's Northwest regional representative.

Airport director Brian Sprenger said business aircraft operations are up significantly at BZN, with February 2018 (the latest month for which statistics are available) up 63 percent over the previous record. "Overall, the airport is growing at an annual rate of 8 to 10 percent," he said.

BZN officials have moved forward on ATC upgrades, rather than wait for the often-slow-moving process of obtaining government funding. "Twenty years ago, we felt we needed a tower and couldn't wait for the FAA," said Sprenger. The airport paid to build the tower and still maintains it; although the tower is now part of the FAA's contract tower program, BZN has also for years paid for additional controllers to enable the tower to stay open longer, and recently funded a new controller position from 5 a.m. to 1 p.m.

A decade ago, BZN became the first small-hub U.S. airport to pay for its own airport radar, at a cost of \$1.5 million. Overall, the airport has spent more than \$7 million – all of it from airport-generated revenue – to upgrade its ATC coverage and facilities.

Sprenger and BZN officials also were successful in securing Airport Improvement Program monies to help fund construction of a new parallel runway, which opened ahead of schedule in October 2017. Runway 11/29 is used almost exclusively by flight schools and smaller general aircraft and helps separate the diverse mix of aviation operations.

"Planning for the future, the airport board saw the need to have it [Runway 11/29] in place prior to the rehabilitation of the main runway," said Janine Schwahn, chief instructor at Summit Aviation, a flight school and charter operator based at the field.

Ben Walton, who founded Summit 20 years ago when he began flight instructing in a borrowed Cessna 150, said that BZN "is a great place to be. They really want to see businesses on the field succeed, and they understand the pilot shortage and the needs of general aviation."

FAA Approves Extension to NBAA Small Aircraft Exemption

he FAA recently approved an extension to NBAA's Small Aircraft Exemption, allowing NBAA members that operate small aircraft to take advantage of the flexibility usually offered to operators of larger, turbinepowered aircraft. Additionally, the FAA has removed a previous limitation that restricted the use of the exemption only to operations conducted within the United States.

The latest extension, received earlier this year, conveys these benefits through March 31, 2020.

The current version of the exemption – officially known as Exemption 7897J, the NBAA Small Aircraft Exemption – provides operators of pistonpowered airplanes, small airplanes (those with a gross weight of 12,500 pounds or less) and rotorcraft a number of advantages, including the use of alternative maintenance programs and limited cost-reimbursement for certain flights in accordance with Part 91 Subpart F of the Federal Aviation Regulations.

The cost-sharing benefits of Part 91 Subpart F are typically limited to aircraft with a maximum takeoff weight of over 12,500 pounds, multi-engine turbojet aircraft or fractional ownership program aircraft.

The cost-reimbursement options of Part 91 Subpart F are useful in regards to transportation of a guest on a company aircraft, the use of the aircraft by employees of a subsidiary company and other common scenarios. Time sharing, interchange and joint ownership agreements are also permitted under Part 91 Subpart F.

The exemption is not applicable to operations conducted outside the U.S., a concern NBAA has raised with the FAA in hopes of extending this exemption to international operations.

"NBAA is pleased that the FAA has again extended our long-established small aircraft exemption, a valuable tool for businesses utilizing smaller aircraft," said Doug Carr, NBAA's vice president of regulatory and international affairs. "The FAA's extension of the exemption for 24 months provides operators with greater ability to plan for the future. Additionally, the removal of the international limitation will ensure that aircraft covered by the exemption can utilize these provisions regardless of where they fly."



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En Route Pilatus Extends PC-12 Maintenance Intervals

Pilatus engineers recently developed and certified a new "PC-12 Master Maintenance Plan" to give owners greater flexibility with regard to the timing of required inspections and maintenance. The plan applies to all PC-12 Series, and is expected to reduce required maintenance labor by 20 to 40 percent.

Based on a detailed analysis of in-service fleet experience of over 6.8 million hours, scheduled maintenance intervals have been extended from 100/150 hours to 300 hours. The new plan lists all scheduled maintenance tasks with maximum intervals, allowing operators to package these tasks according to their own specific operations. For operators who want a predefined inspection program, the new maintenance policy also provides the tasks pre-packaged in six different intervals – 300 Flight Hours (FH), 300 FH/12 Months (MO), 600 FH, 600 FH/12 MO, 1200 FH/12 MO, 2400 FH/24 MO where the flight hours or calendar time intervals are understood as 'whichever comes first.'

"We know that Pilatus can only be successful if our customers are successful," said Ignaz Gretener, vice president of Pilatus' General Aviation Business Unit. "That is why we remain intensely focused on helping PC-12 operators to get the most value from their aircraft, and on retaining that value throughout the entire period of ownership."

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En Route Daher Announces ISR Configuration

Last month, Daher revealed a new ISR configuration of its TBM 910 and TBM 930 single-turboprop aircraft. The enhanced ISR capability for Daher's current TBM family aircraft was announced during Eurosatory, an international defense and security show held in Paris.

This new TBM configuration is characterized by underwing hardpoints that enable the aircraft to be equipped with various sensors and large-format cameras. A Daher flight test campaign validated that the TBM retains its standard handling qualities and flight performance in the altered configuration.

"The new TBM ISR version brings a fast, all-weather airborne platform to the market for surveillance operations and aerial photography, with a very competitive cost-performance ratio compared to existing solutions," said Nicolas Chabbert, director of the Daher Airplane Business Unit.

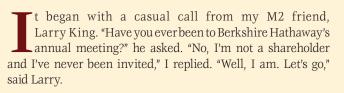
Daher claims the ISR-equipped TBM aircraft can fulfill a wide range of defense, security, medical evacuation and transport missions, capable of more than six hours of endurance and the ability to be reconfigured rapidly for its various duties. In the cabin, a quick-change console can be mounted behind the pilot for an operator to monitor the various systems and tactical situations.





On Final by David Miller

High Performance Buffet



It turns out there is a lot of planning involved in such a simple decision.

Every year, the meeting is held in the sprawling CenturyLink Center in Omaha, Nebraska. Around 25,000 of Warren Buffett's closest friends make the annual pilgrimage to visit the "Oracle of Omaha" and partake in his investing wisdom. The convention center opens at 7 a.m. on a Saturday morning and all 25,000 wait in line to grab an unreserved seat (except for Bill Gates who has his name on one).

Larry figured we should depart early enough to land, grab a rental car and get in line by 6:30 a.m., which meant wheels up by 4 a.m. I set my alarm for 1:45 and Patty made me sleep upstairs. "Have fun," she said. "Just don't wake me."

Although I stay night current at FlightSafety, I fly very little in the dark. So, it was strange trying to find the airport



in the forming dense fog. My 3 a.m. arrival at the hangar woke the security guard from his slumber. "You a friend of Larry's?" he barked in the darkness. "Yeah, we're going to Omaha," I replied. "Who in their right mind wants to go to Omaha at 3 a.m.?" he yelled. "Ask Larry," I answered.

By 3:45, our passengers arrived, the fog lifted and we were on the phone with regional departure to copy our clearance and void time. There is nothing quite like flying at night. "Cleared direct Omaha," the controller responded. The skies were empty (evidently nobody else wanted to go to Omaha at 4 a.m.) and it was crystal clear. We could see Oklahoma City to the left, Tulsa to the right and even Kansas City in the distance. It was only us and FedEx as dawn formed to the east.

As we descended from 15,000 feet, a layer of small cumulus buildups blocked our path. "I think we better get some ice protection on just in case," I suggested. Sure enough, we needed engine, wing, windshield and tail boots to shed the frozen stuff.

On the ramp, TAC Air was covered inch-to-inch with heavy iron similar to a NASCAR event. Like clockwork, we jumped in the rental van and within minutes were standing in the largest line I have ever seen. At most public events, you see all sorts of folks. But as the sun rose over the convention center, it was obvious that these folks were not your average bunch. Lots of business suits. Everyone smelled clean. Success was in air.

The arena filled to capacity within minutes. Soon, rock music boomed and eighty-eight-year-old Warren Buffett, and partner Charlie Munger, in his nineties wandered in. They sipped on Coke and chewed on peanut brittle – just like in your living room. For six hours, they answered question after question about their investing strategy. One from a six-year-old girl who amazed the crowd with her business acumen. Another from a graduate student who asked Charlie to use an algorithm to explain his success. "If you want an algorithm, I suggest you go back to graduate school," Charlie drawled. That brought the house down.

The audience hung on every word.

Later, we got back to the airport early enough to beat the departure rush of Gulfstreams, Falcons and Globals. It was quite a day at the Woodstock of capitalism.

Fly safe. (CT)

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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