

August 2020

# PROPWASH

A Newsletter of EAA Chapter 517, Inc.

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Five Valleys Flyers



EAA Chapter 517, Inc.



# From the Chapter President



**JIM YOUNKIN**

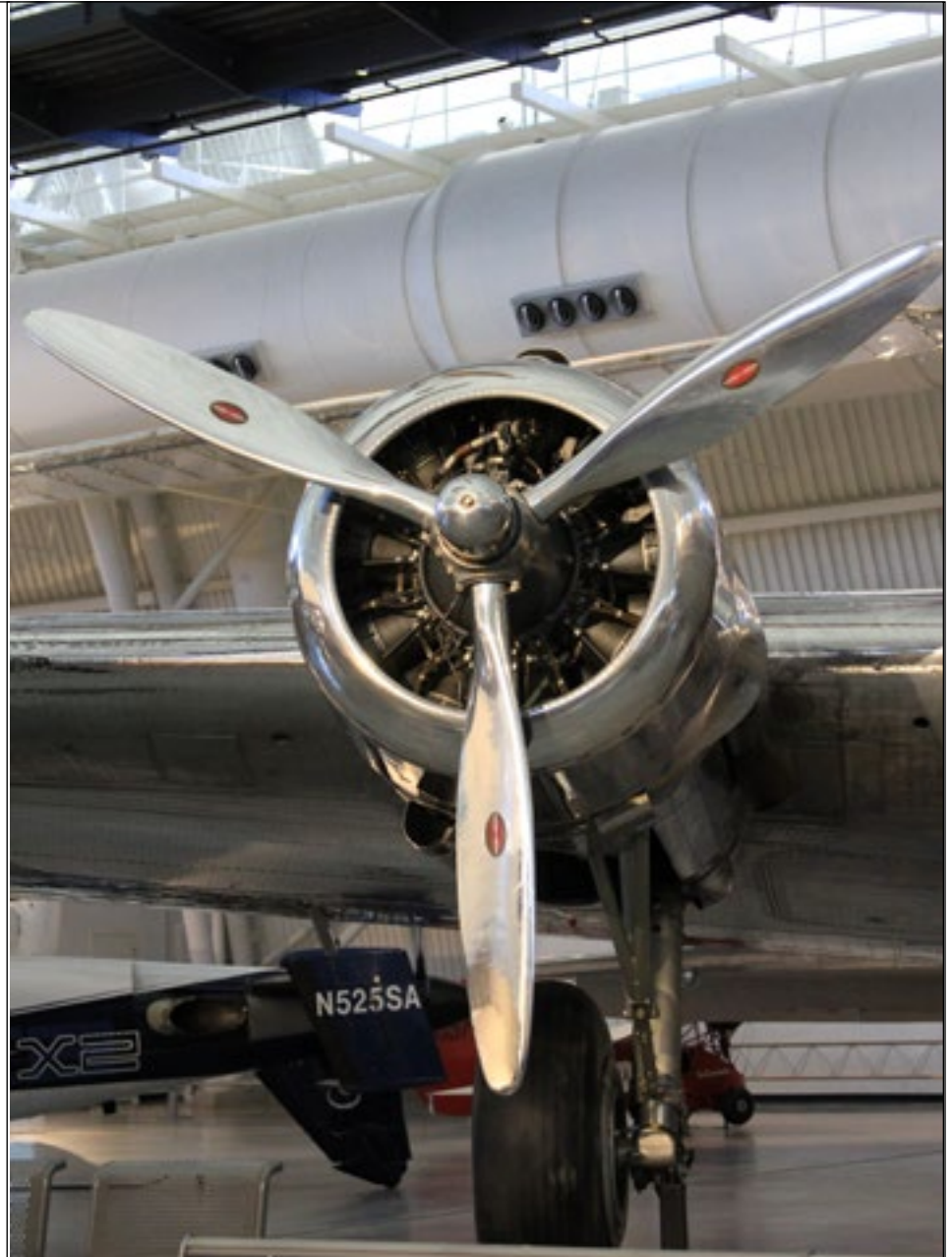
Greetings!

Our monthly Coffee & Donuts at the EAA hangar has turned out to be a truly fun event. In July we had 23 people stopping by to “talk aviation” with their fellow aviators and friends. Based on attendance, our Chapter will likely continue Coffee & Donuts one Saturday a month through next spring. Drop in anytime between 8:30 a.m. and 11 a.m. this Saturday, August 1.

I want to say THANK YOU to Don Lorenzen for a really interesting presentation at our July 20 evening meeting. Don’s program was about his flying trip to the East Coast and into Canada in 1999 with four other Kitfox pilots. The terrain they flew over in eastern Canada was so different from what we Montanans see on our flights.

Our two Ray Foundation Scholars have been flying a lot this summer. Michael Zielinski is very close to completing his private pilot certificate and Denton Wulff just soloed in a Cessna 172. (See article elsewhere in this newsletter.)

You may have already heard that



Montana Aeronautics has canceled the state aviation conference for 2021 due to the uncertainty of COVID-19 restrictions. The main issue in making the decision to cancel was the hotel contract. If they signed a contract now, but had to cancel later, the cancellation penalty would have been a significant amount of money.

Almost every fly-in and other

aviation activity scheduled to be held this summer has also been canceled due to COVID-19 restrictions and concerns. I’m really hoping that next summer we will be able to go back to enjoying our usual summer flying activities, including some pancake breakfasts. In the meantime, stay safe and stay healthy!

Until next month...

# Ray Scholar Denton Wulff Solos!

By Steve Rossiter

## First Solo Takeoff

It was a magnificent Montana Saturday afternoon (7/18/2020) when Denton Wulff, EAA Chapter 517's second Ray Scholarship winner, accomplished his first solo flight. Sherry and I waited with great anticipation along with Denton's grandmother, Carolyn, on the East LZ tower observation deck to watch this much anticipated event. After a few trips around the MSO pattern with Northstar Jet's flight instructor, Sam Giese, Denton landed, taxied back and deposited his flight instructor back on the ground. Sam and Denton's mother Darcy then proceeded out to the self-fueling tanks to observe Denton's flight.



## First of Five Solo Landings

We then watched Denton complete five circuits of the MSO traffic pattern, which included one 360 degree turn on downwind for traffic spacing for a landing airliner. Based on our observations, each landing was classically smooth as silk. After the flight, Sherry and I hooked up with Denton, Sam Giese, his mother Darcy, and Grandmother Carolyn for the ceremonial clipping of his shirt tail.



## Denton and Sam Losing Denton's Shirt Tail

Denton can now claim his status as a pilot since he has successfully navigated his way around the traffic pattern five times by himself, keeping in mind he needs considerably more experience to become an FAA Certificated Private Pilot. It would be cool if he is able to complete his training and take his certification check ride on his 17th birthday in September. Congratulations Denton.



# When Did You Decide to Become a Pilot?

**Bill Schertz**

I had an interest from a young age, and flew U-control models through grade and high school. In the early '70s I graduated to radio control models, but could not cover the costs of 'real' flying even though I still wanted to do it. In 1994 my two girls finished college, and it was like getting a pay-raise. At this time I was making frequent trips to DOE (Department of Energy, not Education) as part of my job, and met a program manager who talked about flying and Oshkosh. As we talked he invited me to go flying someday. We eventually hooked up in April 1994, and at the end of the flight, he commented that I was "dead meat on a hook" with respect to interest in flying. I came home and signed up for lessons, and took my check-ride on Christmas Day, 1994. Many trips to Oshkosh followed since I lived in Northern Illinois, and in 1997 I began construction of my airplane (N343BS) which was finished (first flite) in 2009.

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**Cal Geyman**

I am a new member here and responding to Steve's query of how/ why we each became pilots or aviation buffs. I became a pilot because of my father's deep love of flying. Astigmatism kept him from military flying, but 7,000 amateur flying hours later, CFII/glider/ tail wheel and floats, etc., he is still flying a Piper Cub at age 89. He has always been my biggest inspiration.

# The Photography of Chapter Member Jay Schweitzer



# EAA AirVenture Oshkosh 2021 Tickets Now On Sale

By EAA

Advance purchase admissions, camping, flight experiences, and merchandise are now available for what promises to be a great aviation family reunion at EAA AirVenture Oshkosh 2021. The 68th Experimental Aircraft Association fly-in convention is scheduled for July 26-August 1 at Wittman Regional Airport in Oshkosh.

The opening of advance presale for AirVenture 2021 coincides with EAA's Spirit of Aviation Week, the virtual and online aviation community gathering organized following the cancellation of this year's AirVenture event.

"The AirVenture experience means so much to EAA members and the aviation community that we have received continual requests since spring regarding when tickets would be available for the 2021 fly-in," said Rick Larsen, EAA's vice president of communities and member programming, who coordinates AirVenture programs and activities. "We are expecting an unforgettable reunion at Oshkosh in 2021 of all who love flight,



with people eager to add to the generations of memories already created each year during the EAA fly-in."

Advance daily and weekly admissions are available via EAA's secure website. Those tickets can be printed at home and brought to Oshkosh for fast access to wristbands and all the activities that are part of AirVenture. EAA members should bring their membership card to confirm their membership discount.

As was planned for AirVenture 2020, youth 18 and under will again be eligible for free admission in 2021, thanks in part to support

from The Boeing Company. Also available for advance purchase are camping credentials, Oshkosh flight experiences, and exclusive AirVenture 2021 merchandise.

"There is a feeling of being at Oshkosh that goes beyond the airplanes and programs," Larsen said. "This year we certainly miss the friends and experiences that each of us remember from AirVenture. That only builds the eagerness to get back in 2021 to enjoy those 'Only at Oshkosh' moments."

Highlights and activities for AirVenture 2021 will be announced as they are finalized.

## Insulated MSO hangar for sale

**HANGAR 8G  
45' X 42'  
Insulated**

**\$140,000  
or best offer**

**Contact Jim Younkin at  
406-240-4024.**



# Top Trip Stoppers



By Lisa Turner  
EAA Lifetime 509911

This piece originally ran in Lisa’s Airworthy column in the July 2020 issue of EAA Sport Aviation magazine.

“You can borrow my car to visit your family,” Sue said.

“Are you sure? I’ll be gone for a week.”

Sue looked at her close friend Ben.

“Look, I’m the dockmaster here, and they provide room and board,” Sue said. “Where am I going to go? Take the car. I have only one warning: It is old and could break down on you. I never know what’s next on it.”

She held the keys to her 1967 Volkswagen Karmann Ghia out to Ben.

Ben took the keys uneasily. He wasn’t sure what he was getting into. The year was 1974. Both Ben and Sue had just graduated from college.

The next day Ben left for Florida. At the first fuel-up, Ben paid the attendant and hopped back in the VW. He was starting to like the handling of the little 49-hp green convertible — but not the low power.

He turned the key. Nothing. He turned the key again. Nothing. Not being a mechanic, he didn’t have a clue what was wrong. He got out of the car and went into the station to explain his predicament.

“Hi, I’m Andy,” the middle-aged mechanic said. “Let’s have a look.”

Andy got into the car and turned the key. Nothing.

“Okay, I got it.” He lifted a large flat-bladed screwdriver out of his side pocket and slid under the car right in front of the back wheels. The Ghia fired right up and sat idling like nothing had ever happened.

“You said your name was Ben?” Andy said. “Ben, do you have a screwdriver like this one?”

“Ah, no. No, I don’t. I don’t know anything about cars.”

“That’s okay,” he said. “I’ll give you a junk one to take along. What you do is slide under the car, touch and jump the starter to solenoid is all, and that will start you. Or, never turn the car off.”

Ben looked confused.

“Okay, come on. Let me show you.”

Andy made Ben get on the ground and pointed to the starter and the

solenoid post next to it. The car was running with a loud throaty burble like the air-cooled VW engines do. Ben could hardly hear what Andy was saying. Then Andy jumped up and ran into the shop and came out with a screwdriver that was curled at the tip and handed it to Ben.

“Ah, what do I owe you, Andy?” Ben said.

“Give me \$2.”

Then, Ben was off on his trip, bewildered. For the next four hours, he worried about how he would crawl under the car to start it the next time.

He stopped for the night at a hotel. His strange dreams included getting run over by a Karmann Ghia. The next morning, he grabbed the screwdriver boldly and put the key in the start position. For the heck of it, he turned the key all the way and was startled when the car started right up.

Ben placed the screwdriver on the seat and smiled as he drove off to finish his trip.

\*\* \*\*

Remember your first car? That feeling of freedom, excitement,

independence, magic, and anticipation. Until the first breakdown. Then the exhilaration would burst, with panic and confusion replacing it. At the time many of us had little knowledge of mechanics or troubleshooting ability and relied on a phone call, a good Samaritan stopping, or us figuring it out.

Some of you reading this didn't begin with a first old car, but with a first old airplane. Even better.

Automotive breakdowns are rare now. The amazing thing is that they are rare in spite of neglect. When was the last time you checked the oil, anti-freeze level, and tire pressures in your car or truck before you left for the grocery store? I thought so.

While our cars hold up beautifully in the face of neglect, our airplanes don't do so well. A variety of reasons contribute to this, including lack of use. Although nearly all of us do an extra-thorough preflight before a trip in our airplane, we still may not be really ready for worry-free flying.

I decided to do an informal survey of A&P mechanics and owners to find out what they thought the top mechanical failure would be on their airplane if they were on a cross-country trip. Rather than being purely scientific, these items are anecdotal and based on experience. As I had these discussions, most of it rang true to my own experience.

The reasons for mechanical failure will vary from airplane to airplane, so I chose three categories to talk about: homebuilts, small production aircraft, and antique aircraft. Each type has distinctly different risks. These are the top trip-stoppers I heard.

### **Homebuilt Aircraft (Example: Pulsar XP)**

Homebuilts are very different

animals from production aircraft. This is one of the reasons we love them. We can experiment, upgrade, change, and be creative with everything on them. The penalty we pay, though, may be decreased reliability on operation and components because of the less experienced nature of the builder. A positive side is that much of a homebuilt is new, and we don't have the corrosion and metal fatigue issues we have with older airplanes.

### **Trip-Stoppers**

Blocked or clogged fuel system on one or both tanks. This is no surprise. New kits contain lots of debris, no matter how hard we try to clean everything up before filling the tank(s). It takes longer than you think to clear it out, and it's easy to overlook. How do you think I found this out?



Another item is a system malfunction that is either overlooked during the flight test hours or develops a little later. This is usually a component that comes loose because it wasn't torqued properly, falls off because it wasn't safetied, or chafes because clearances are not adequate. Items I've seen include an exhaust pipe that contacts wiring or the fuselage and causes heat damage, as well as a wiring bundle that wasn't secured and gets caught in another component and chafes through.

### **How to Prevent**

Have several qualified mechanics and/or technical counselors look at your airplane after your test phase and before a trip. The additional eyes will find things that were invisible to you. Make sure your checklist is as thorough as you can make it. During testing, make sure you have the correct ranges and settings in your engine monitor. Check and change filters often.

### **Small Production Aircraft (Example: Cessna 152 and 172)**

Cessna manufactured approximately 145,000 single-engine airplanes between 1946 and 1986. The average age of an aircraft in the Cessna fleet is 50 years. These airplanes are still loved and appreciate in value during ownership as long as they are maintained. What could go wrong?

### **Trip-Stoppers**

Corrosion damage and metal fatigue, hand in hand, is number one. The problem is that they sneak up on you, rather than presenting as an operational failure. The manufacturers have issued detailed guidance on how to inspect for corrosion and metal fatigue. If you're the owner of one of these aircraft, then you've already added inspections to your maintenance.



What else could stop you on a trip? The top two are electrical

connections full of dirt or not tight (like Ben in the Karmann Ghia), and plug fouling.

## How to Prevent

Use the aging aircraft inspection recommendations that the manufacturer has provided if your aircraft is vintage or classic. Attachments, fittings, and welds should be inspected for corrosion and cracks, especially the exhaust.

Rough running on a mag check reveals the fouling problem. To help prevent plug fouling from slowing you down, do a clean and gap on plugs before your trip. And your preflight needs to be extra thorough, removing the cowling and other access panels that you skip on a typical local preflight.

For the electrical connections, clean the airplane thoroughly before your trip and put a wrench on heavy electrical component attach point nuts to make sure they are tight. Use torque seal. Clean and inspect the battery and connections.

## Antique Aircraft (Example: Stearman)

The beloved Stearman is, like other antiques, a joy to fly. It offers amazing reliability considering its age. When I quizzed flyers and restorers about trip-stoppers, the number one item was the tail wheel.

## Trip-Stoppers

“Why do you think we have to repair so many broken wingtips and spars?” one restorer said. “It’s not the lack of experience on the part of the pilot — and they do get blamed — but it’s often a neglected bearing that seizes on a wheel, especially the tail wheel, and then the airplane is off in the weeds. It happens all the time on cross-countries.”

The second trip-stopper reported



is engine trouble — aging hoses, baffles and fittings separating and causing rough running or no running, and the electrical connection issue we just discussed.

## How to Prevent

Take the weight off the tail wheel when you inspect it and use the manufacturer’s recommendations for adjustment. Inspect the main wheel bearing and brake condition carefully before a trip. The preflight should also include looking carefully at the things you normally look past — like hoses, fittings, and baffles. Double-check safeties.

## Pre-Trip Tips

Statistically, it is rare to have a component failure that completely stops your flight. Most of the problems we encounter on trips are the beginning of a failure that causes us to sit up straighter and take notice. An example is a blockage or a separation in the exhaust or the intake. Engine operation will be sluggish, and we’ll wonder why. Here are some additional tips that should keep you flying without incident.

- Extra thorough preflight. I’m sure I am preaching to the choir here, but it really can’t be understated. An objective and detailed preflight will catch the things you don’t see on a routine walk-around.
- If the airplane has not flown in a while, see the first bullet. Strange things can happen to an airplane that has been sitting, including all manner of blockages in the intake and the exhaust. These include nests and insects in orifices, mice chewing through lacing, fuel and oil leaks, and loose component mounts. Clean the airplane thoroughly before your inspection.
- Right after service, right after an overhaul, right after upgrades, and anytime you’ve taken things apart and put them back together (painting comes to mind), expect a problem to pop up. If you’re lucky, you won’t have a problem, but, unfortunately, the norm is that something on the airplane gets left off, is loose, or is put on backward. Never take off on a trip right after the airplane has been in the shop. Fly it locally for a while to make sure everything is okay.
- Make a separate pre-trip checklist. Why? Because it’s different. You’ve been following the same



preflight checklist before flying. Before a trip, reorder items and add detail. This will help you discover things you might have missed with the regular list.

- Double-check your weight and balance calculations. Your airplane is going to be full of stuff. Make sure baggage is secured and accurately weighed. Not doing this has caused some nasty accidents.
- On every flight, watch the trends on your engine monitor if you have one. Trends tell a story, and you'd like to know where the trends are going, and if there's a problem emerging. Oil pressure fluctuations and rising oil temperature, in particular, may foretell an engine failure. If you are not fully understanding what your engine monitor is telling you,

study up. This device can be a harbinger of trip-stopping trouble.

- Take spare parts and a tool kit with you. This activates Murphy's law, which states, "If you have everything you need for a breakdown, then you will not have a breakdown."
- Troubleshooting. Keep Occam's razor in mind. Occam's razor is the problem-solving principle that states, "Entities should not be multiplied without necessity." The idea is attributed to English Franciscan friar William of Ockham, a scholastic philosopher and theologian. The bottom line for troubleshooting is that it is usually the simplest answer or solution that works. Remember the stickers that mechanics would place in the

upper left-hand corner of your car's windshield to remind you to get maintenance? Might that be a good idea for your aircraft? The General Aviation Joint Steering Committee thinks so.

Now get out there and take a trip.

*Lisa Turner, EAA Lifetime 509911, is a manufacturing engineer, A&P, EAA technical counselor and flight advisor, and former DAR. She built and flew a Pulsar XP and Kolb Mark III, and is researching her next homebuilt project. Lisa's third book, Dream Take Flight, details her Pulsar flying adventures and life lessons. Write Lisa at Lisa@DreamTakeFlight.com and learn more at <https://DreamTakeFlight.com>.*



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*Builders, please send updates to the newsletter editor at [cburson@gmail.com](mailto:cburson@gmail.com) so this list can be kept current.*

# SkillScore 2.0 Offers More Tools to Enhance Flying Skills

The newly enhanced 2.0 version of the SkillScore Tracker from EAA has expanded technology that makes more detailed information available so pilots can gauge their flying proficiency and take steps to enhance their skills.

The EAA SkillScore Tracker was introduced at EAA AirVenture Oshkosh 2019 as the first resource that allows pilots to measure flying proficiency on an EAA web portal or their mobile devices. Working through the CloudAhoy mobile app, pilots can track flying consistency and stability. Using this data, the EAA SkillScore Tracker will generate a comprehensive, personalized, and confidential SkillScore, confirming a pilot's overall strengths or need for additional work.

Instead of a single overall score that measures pilot proficiency, SkillScore 2.0 has individual results for specific skill areas that include:

Quality of flight (encompassing such factors as stability of landing approach, maintaining altitude in straight-and-level flight and turns, and quality of FAA-standard maneuvers such as steep turns)

Number of takeoffs and landings within the last 90 days

Number of flights with a flight instructor

Time spent in the air

The SkillScore Tracker is available now to all EAA members. More information is available at [EAA.org/Proficiency](http://EAA.org/Proficiency).

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