

WIND IN THE WIRES

The Newsletter of Chapter 26, Experimental Aircraft Association The Seattle, Washington The Volume XXXIII No. 1 🛠 January 2025 **President's Letter**

Terminal **Building at Boeing Field** 7259 King County Airport Access Rd, **Seattle, WA 98108**

Second Thursday At 7:30 PM

This fall/winter weather can make it difficult to get a chance to fly. Since I have lived on this airport forever (over 45 years), I can watch the weather close (if I am home) and fly on short notice. As the weather gets worse the lead time gets less. This past several weeks have been a bit challenging finding good weather to fly. The other day, it was raining and yucky all day. About 3:30 I realized the rain had stopped and the clouds were letting up. When I got in the air about 4:00pm, the sun was shining to the west and it was gorgeous from Covington to the west! It looked clear over the sound. The temperature/dew point spread was only about one degree centigrade, so I was watching for fog. When I took off, there were little patches lying in the low areas. Not much, just enough to give warning. When I came back to land, it was so pretty I had to take a few pictures first. The colors in the clouds, the sun setting with the rays coming through...! We live in a very beautiful area and when it has been cloudy for a while, we enjoy seeing the sun even more. Being a native-born Washingtonian, I do not see the sun a lot, so it is especially nice to enjoy when you hit the timing just right.

(Continued on next page)

Program: Flying the Geoduck and **Risk Management**

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If you no longer wish to receive the newsletter, email me at <u>ron@wanttaja.com</u> or just reply to the notification email.

President's Column - Continued

(Continued from Page 1) All the rain has made my taxiway soft and it took extra power to taxi in and keep from slithering around. I had better give it a few days to dry out. I watch the forecasts closely to try to get 2500'-3000' ceiling and good visibility. From the weather forecasts you can maybe shoot for the morning or later in the day depending on what they are predicting. I almost sound desperate ... but I like to fly as often as I can!

We are starting to think about Oshkosh already; getting on waiting lists for housing, etc. We look forward to seeing friends there every year. I had better quit rambling so here is the program for this month: Ross Mahon will talk about Risk Management as applied to seaplane operations and flying the Geoduck (an experimental 50' wingspan fiberglass version of a Grumman Widgeon).

See you Thursday, January 9 at 7:30 at the Boeing Field Terminal building, our usual time and place.

~Dave





Christmas Party Photos







News From National

Homebuilders Week – Online Event Starts January 27th

30 online sessions to expand your knowledge of building your own aircraft

By Charlie Becker, EAA Homebuilt Community Manager

Homebuilders Week is an online opportunity to carry on the founding mission of EAA by sharing as much knowledge and information about building your own aircraft as possible in five days. We start on Monday, January 27th, 2025, and end on Friday, January 31st, 2025. Each day, we offer six live webinars running back-to-back, starting at 11:30 am central time and running every hour and a half until the last session at 7pm central. The sessions are live and allow time for questions. To sign up for the sessions, visit www.EAA.org/HomebuildersWeek

The topics cover something for everyone, whether you are just considering the idea of building an aircraft, are knee deep in a project or getting ready for test flying. We even have EAA president Jack Pelton lined up on, January 30th, to talk about EAA's Advocacy efforts on behalf of the homebuilt members.

EAA Homebuilders Week follows immediately after the anniversary of the founding of the Experimental Aircraft Association on January 26th, 1953. I can't think of a better way to recognize our organization's founding than to spend 5 straight days learning about homebuilding.

EAA Homebuilders Week is made possible through the generous sponsorships of Aircraft Spruce & Specialty Co., Dynon, Scheme Designers, and Van's Aircraft.

Visit <u>www.EAA.org/HomebuildersWeek</u> to sign up.





EAA Homebuilder's Week Schedule

www.EAA.org/HomebuildersWeek

CST	Monday 1/27/25	luesday 1/28/25	Wednesday 1/29/25	1/30/25	Friday 1/31/25
11:30-12:45	Building an Aircraft: What You Need to Know - Charlie Becker	Wiring Basics – Dick Koehler	Flight Testing 101 – Paul Dye	EAA Advocacy Update: Top Homebuilding Issues and the Impact of MOSAIC – Sean Elliott, Rob Hackman, & Jack J. Pelton	Staying Alive: Analysis of Homebuilt Fatal Accidents – Dave Nelson
1:00-2:15	Sheet Metal Basics – Mike Dooley	TIG Welding – Charlie Becker & Shaun Walker	Composite Construction – Mark Forss	Amateur-Built Aircraft Certification Process – Joe Norris	Liability of Selling Your Homebuilt - Kathy Yodice
2:30-3:45	Fabric-Covering Basics – Nate Hammond	Getting Your Project Finished and Flying – Vic Syracuse	Buying a Used Homebuilt - Vic Syracuse	Sonex Highwing Update – Mark Schaible	Zenith Aircraft Kits & Plans – Sebastien Heintz & Roger Dubbert
4:00-5:15	The Need for Speed: Kitbuilt Options – Dave Forster	Hardware for Homebuilts – John Cox	Advanced Flight Systems – Rob Hickman	Garmin Experimental Avionics Solutions – Brad Brensing	Weight and Balance - Joe Norris
5:30-6:45	Panel Planning and Wiring – Marc Ausman	Dynon Avionics – Michael Schofield	Engine Selection Basics – Dick Koehler	Gas Welding – Budd Davisson	Working With Wood 101 - John Egan
7:00-8:15	Rotax 9 Series Installation & Operation – Phil Lockwood	Designing the Perfect Paint Scheme and Its Impact on Budget – Craig Barnett	Data–Driven Diagnosis of Engine Issues – Mike Busch	Van's RV Aircraft Kits – Greg Hughes	Common Builder & Maintenance Errors – Vic Syracuse





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Yesteryear's Homebuilts: The Thorp T-18 Tiger

Back in 1963, the Fly Baby exemplified the typical homebuilt aircraft. Built of wood and fabric, or (for the daring) steel tube and fabric, most homebuilts were pretty primitive. Their performance levels weren't that much different from the Cubs and Champs their engines were ripped from.

Then came Jim Thorp's T-18 "Tiger."

Thorp was a long-time professional aircraft designer. He'd been the principal engineer for the Lockheed P2V "Neptune" patrol aircraft, and had designed numerous small aircraft as well.

The shocking thing? In a world full of wood and steel-tube homebuilts, the T-18 was all-aluminum.

What made it really stand out was the *buildability*. Thorp didn't just whip off a design that relied on a commercial metal stamping mill and professional riveters.

All you needed was twelve sheets of 4'x12' aluminum, with the thickest being just 0.040".

The significance of the sheet size? Each wing was about eight feet long, and includes a "break" in the middle that provides the dihedral angle.



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Yesteryear's Homebuilts – Thorp T-18 Tiger (Continued)

Think about it: Each wing was in two four-foot sections. The sheets of aluminum were four feet wide.

You got it: You built the wing structure, and then just wrapped an entire sheet around it. Didn't have to make a long cut; could just use it right as it came from the mill.

No complex curves. The only major curved pieces were the wing airfoils, and the single-sheet method helped that a lot.

Thorp also pioneered matched hole drilling. You'd drill the holes in one part, then use a simple tool to line them up with the places on the sheet to be added. The aircraft produced its own jigs.

Tools? Ha! Chapter 26 founding member and longtime Tech Counselor Cecil Hendricks built one in his basement. He set the rivets with an ordinary hammer, not a rivet gun. To bend the skin of the airplane around the ribs, he "slapped" them with a bar of solder.

You might look on it as a high-performance aircraft, but didn't start out that way. The first T-18 was open cockpit...with exposed cylinder heads like a Cub!

Once the canopy went on and the cylinders faired in, the T-18 became a rocket. It was designed for the commonly-available Lycoming O-290 ground power unit that could still be purchased, nearly new, through military surplus outlets. Engines up to 200 HP have been installed.



Downsides? Well, the stock T-18 is a bit narrow in the cabin. I flew with Cecil in his airplane, and we almost had to get married after we landed.

But there are later versions with wider fuselages, and even with folding wings. Later versions came to be called S-18s to reflect the work of the modifier, Sutherland.

Roughly speaking, about 500 T-18s/S-18s were built in the US (about the same as Fly Babies), with about 230 still active.



For Sale – S-18 Project

Hi fellow EAA members,

I am currently selling my unfinished S-18 project. No engine. Considerable amount of aluminum sheet and tubing included. \$12,000. If you or someone you know who is interested, please contact me at:

Norm Pauk: Tel: 253-561-4801 Email: Npauk@msn.com



Speaking of T-18s.....





On the Wreckord

Coot - Wisconsin: According to the pilot in the amphibious airplane, during takeoff from a lake, the airplane bounced twice, but on the third bounce, the hull "gave way." Water entered the airplane, and the pilot exited through the canopy.

The pilot reported that the hull had been repaired previously, but it still had "some leakage" after the repair. Substantial damage was sustained to the forward left side of the hull where the sponson wasattached.

Photographs provided by the Federal Aviation Administration showed long-term water damage to the plywood and fiberglass hull structure. (6/6/2018)





Not the Accident Aircraft

On the Wreckord

Glasair – Maine: While in cruise flight, engine started to run rough and lost partial power. The pilot checked the engine gauges, noted no irregularities, and unsuccessfully attempted to restore engine power by turning the fuel boost pump on. Within about 30 seconds of the initial power loss, the engine lost total power and the propeller stopped. The pilot performed a forced landing to a bog and the airplane came to rest inverted, resulting in substantial damage to the empennage.

Disassembly and examination of the engine revealed that the crankshaft had fractured at the No. 4 cylinder journal. Further examination of the fracture surface revealed fatigue striations consistent with fatigue crack propagation. These striations were finely spaced and exhibited changing or erratic thicknesses on different areas of the fracture surface, consistent with propagation through high-cycle fatigue. The reason for the crack initiation could not be determined

According to the engine maintenance log, the engine experienced a propeller strike during a landing incident about 5 years and 368 flight hours before the accident. The pilot elected not to have the propeller strike or sudden stoppage inspection performed, since it was not mandatory for non-certificated engines. (7/11/2018)





On the Wreckord

Fisher Celebrity – Indiana: The pilot was conducting a personal flight in his recently-purchased biplane when the airplane experienced an in-flight breakup and subsequently impacted a cornfield. There were no witnesses to the accident. The upper and lower left wings were attached to each other but were separated from the fuselage. Part of the lower right wing was located with the wreckage but not attached to the fuselage.

The right wing attachment fittings displayed fractures intersecting the inboard wing spar attachment bolt hole. The fracture features for each attachment fitting were rough and matte gray in appearance, consistent with ductile overstress fracture and with upward bending of the wing at the attachment location. The outboard end of the attachment fitting piece for the aft spar was also bent aft relative to the inboard end, consistent with the entire upper and lower right wings folding upward and rearward, bending and separating from the airplane. Because this airplane is a biplane, the upward bending of the lower wing attachment was secondary to a primary failure elsewhere, the location of which could not be determined due to the fact that a majority of the wing structure was unrecovered. There was no evidence of any preexisting damage on the wing spar attachment fittings. (7/19/2018)





For Sale – RV-12 Project

I have an extensive RV12 project for sale. Here's what's included:

Wings are completed, including landing light and strobes. Tail group and fuselage cone are completed

Fuselage is 80% complete, including controls, wiring, canopy. Panel completed, including Avidyne/Garmin/ELT package with 2 axis autopilot

Finishing kit includes landing gear, brakes, tires, fairings, wheel pants, control cables, seat belts, plexi, etc. (This the most expensive kit on the airplane).

Factory built fuel tank. Interior kitupholstery, side panels, sound proofing.

This is RV12 #616. It is designed for the carbureted 100 HP Rotax, and cannot be converted to the injected version. The kits were purchased 2011/2013. My cost was over \$50K. Duplicating today would be over \$75K. Price for all is \$45K.

Project is safely stored and available for thorough viewing in Anacortes.

Jeff Robinson 360-961-2482





Free Varieze Hardware

Gary Nicholas is scrapping his old Varieze, and has a bunch of free hardware to give away

Contact Gary at 206-793-3823. Leave a message, since he screens his calls

- David Clark model H10-40 headset w/mic.
- Narco HT 800 handheld transceiver
- Nose gear wheel fork for 2.80/2.50 tire
- 2 main gear wheels/brake discs for 11 x 4.00-5 tires
- Brakes, wheels and axles for 11 x 4.00 -5 main gear
- 3 inch prop extension for Lycoming 0-235
- 14 miscellaneous male thread ball end bearing fittings
- 4 miscellaneous female thread ball end bearing fittings
- Engine primer pump
- Fuel selector
- Throttle levers and cables
- Communication antenna

- Gauges: Carr tach, altimeter, airspeed, rate of climb, voltmeter, compass, oil pressure, oil temp, hour meter, cylinder head temp
- Propeller spinner (for pusher)
- Ted Hendrickson propeller
- Main gear strut
- Homemade wheel pants for 11 x 4.00 tires

He also has the Lycoming 0-235-C1 engine which he hopes to sell. From log books received with the engine, it was previously installed on a Piper PA-12. It performed well for the for him. Since he moved the Varieze to his garage in 1985 the only attention it received was an occasional turnover. As the years progressed it got steadily stiffer and it'll need some work to loosen it up. There are also various mailings from the FAA and Textron advising of needed inspections and updates to remain airworthy. Because of this, he would be happy to donate the Lycoming to someone who has the knowledge and interest to perform these tasks.

