



The ThunderWord

Thunderbird Field EAA Chapter 1217

January 2021

Scottsdale, Arizona

PRESIDENT'S CORNER

Greetings from my corner of the hangar. This month's update doesn't offer any predictions on when things will get back to normal. Most folks are staying healthy and locking themselves in their workshops at the airport and at home. Hopefully many of you are making quantum leaps on your projects.

My Wickham twin is slowly getting painted. To get the job done right takes talent, time, and money so it is moving slowly toward completion.

With the help of Chapter member John Davis, the motorglider is rewired and approaching completion. The crazy Germans that built it use a two-wire electrical system because the wings and tail are made of an advanced organic composite material, wood. In an interest to complicate things, the electrical system switched to a one wire negative ground system, like most planes, behind the instrument panel. It then switches back to a two-wire system in the wings and engine compartment. Since the Volkswagen Transporter/Bus factory is in the same town I have to wonder if some of these engineers couldn't get hired at VW and went to work for Scheibe Flugworks.

A lot of you have discovered Mike Paty's videos on Youtube and realize the only way he gets things flying is at the end of each show he has a quote "back to work". It's probably time to think about diving headfirst in your projects so you can get back in the air.

Stay healthy and keep a positive outlook. See you around the hangar!

Curtis

CHAPTER MEETINGS

RESTART IN 2021

As much as we would like to announce in person meetings starting up, Chapter 1217 Officers President Curtis Clark, Vice President Terry Emig and Secretary/Treasurer Jack Polack reached a unanimous decision that we would get back to regular meetings sometime in 2021 when the COVID risk will be at hopefully a more manageable level.

Another big hurdle is location. Our home in the Thunderbird Room at Scottsdale Airport currently is closed, due to health risks, to gatherings of more than ten people.

Several people have inquired about doing online meetings on a forum like Zoom. Chapter member John Warner even graciously offered his services to set it up. Right now it is our opinion that it would be a bit narcissistic for a Chapter officer to talk for the sake of hearing their own voice and then show a YouTube video. The plan is to keep everyone updated with the newsletters, e-mails, the facebook page and Chapter website. You can also drop by my hangar anytime or drop an e-mail.

Rest assured that for 23 years we have been having monthly meetings and we will get back to it when life gets back to normal.

FAA APPROVES COVID-19 VACCINE

Pilots and air traffic controllers can receive the COVID-19 vaccine, but they cannot fly or control air traffic for 48 hours after each dose, the FAA said in a statement earlier this month.

SCOTTSDALE AIRPORT CLOSING

Scottsdale Airport has plans to resurface the runway and will be closed starting July 1 for 45 days.



Curtis Clark's Wickham Twin is slowly getting Painted

HOMEBUILDERS ONLINE

Pilots already building their own airplanes or giving it serious thought won't have to wait for AirVenture 2021 to do their research. The Experimental Aircraft Association has announced a week of online events called the Homebuilders Week, starting Jan. 26.

"EAA members and the homebuilt aircraft community have always been generous in sharing information and knowledge when it comes to constructing a safe and fun aircraft," said Charlie Becker, EAA's director of chapters, communities, and homebuilt community manager. "Homebuilders Week is a tremendous learning opportunity that celebrates our legacy of, as EAA founder Paul Poberezny often said, using hand and mind to create aircraft that allow us to enjoy the personal freedom of flight."

Presentations start at 1 p.m. Central time and include a range of topics from buying a used homebuilt to deciding on which kit, engine or avionics to buy. According to EAA, "New and experienced builders will also find in-depth talks on panel planning, engine selection, FAA certification, flight testing, and selling a
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homebuilt aircraft. The live sessions will also allow plenty of time for attendee questions. Recordings will be archived and available to EAA members for review after the week's presentations are completed."

"Homebuilders Week is an excellent opportunity for aviation enthusiasts and EAA chapters to gather to learn more together, or for individuals to acquire the knowledge they need to be confident, successful aircraft builders," Becker said. "These presentations add to the resources EAA already makes available to anyone who wants to participate."

CHAPTER MEMBER FLIES WEST

Chapter member Jim Berdick passed away just before the holidays peacefully at his home in Cottonwood. Jim had a career working for the Phoenix Police Department as a helicopter mechanic and later as their director of maintenance. After retirement Jim ran the maintenance side of an air tour business in Sedona keeping their fleet of helicopters and a Waco biplane in the air. With his background as an A and P mechanic with IA authorization he was a natural to serve diligently as our

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Chapter Technical Counselor for the Chapter. One of Jims legacies is that each Christmas he

would bring several cases of large calendars for us to give way as door prizes, Tailwinds my friend!



Chapter John Rippinger is doing his Commercial Helicopter add-on rating and has Soloed the Mighty Schweizer 300

AIRCRAFT vs AUTO ENGINES

The subject of using traditional aircraft engines vs. auto conversion engines in experimental aircraft can be a sensitive subject for some people. A study based on NTSB data a year or so ago compared the accidents or failures of the traditional aircraft engines versus auto conversion engines in Experimental aircraft. The charts in this study, when looked at carefully, reveal some very interesting and useful data.

The first metric shows that the great majority of aircraft accidents due to engine failure within the first 10 hours of flight are from auto

conversion engines. For the first 100 hours of flight, there are still more accidents from auto conversion engines than from traditional engines.

From 0 to 200 hours, overall, auto conversion engines still show more accidents, but the great majority of these failures are from the 0 to 100-hour range. So that would have to show that from the 100 to 200-hour range, almost certainly auto conversion engine accidents are on a par or less than for traditional engines. But if the specific NTSB numbers were analyzed that this information was derived from, it shows this to be true or not.

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Jack Pollack is making great progress on his Bakeng Duece restoration project.

Jack had a great idea restoring a vintage homebuilt. It is already certified, all the parts are usually there, and lots of the expensive specialized fabrication like welding is already done!

Aircraft vs Auto Engines Continued

However, from that point forward, the auto conversion engines show a lower accident rate than for traditional aircraft engines.

What is the upshot of this? From NTSB data we may justifiably conclude that if your auto conversion engine can make it to 100 hours or more, that from that point forward you will be just as safe or most likely SAFER from an engine failure (on the average) than for a traditional aircraft engine.

But the trick then is to make it to 100 hours, safely, in your auto conversion engine. There are two paths that builders may take to install an auto conversion engine in their homebuilt. I am certain that one path is safer, and the other much more risky.

The first path is where a builder gets his own auto engine, and does the install and related engineering tasks on his (or her) own. This is the more risky path, as there are so many unknowns. "Unknowns" can lead to unforeseen problems, and risks of accidents.

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For example, an acquaintance of mine installed a Subaru "boxer" engine in his RV-9A. Everything was fine, except for an unforeseen problem with the fuel system, which resulted in him having to make 2 or possibly 3 different dead-stick landings from engine failure due to fuel starvation. The fuel pump in each event had failed. So he consulted with an aeronautical engineer, who determined that his fuel line to the pump was too restrictive, causing the pump to work too hard, and consequently fail. So, he replaced his fuel line with a larger diameter (and a new pump of course), and the problem went away. So now he is at significantly more than 100 hours in his plane, and presumably well above the first 100 hour "danger zone" in his homebuilt. But you might say that he got lucky, being able to accomplish safe dead-stick landings, with no damage to his plane. Not everyone, unfortunately is as lucky to accomplish a no-damage dead stick landing.

If you are going to follow this first path, it might mitigate a lot of the "first 100-hour danger" if you work closely with another builder who installed the same engine in the same plane. The lessons learned and tips from the accomplished builder can point out things that you might not know about beforehand on your own.

The second path to install an auto conversion engine in your homebuilt would be to acquire your auto conversion engine from a reputable company who specializes in specific auto conversion engines for aircraft.

They would be aware of all the potential pitfalls and problems associated with a particular auto conversion engine, and will have resolved these issues in advance. Most of the time they will also have a "firewall forward" kit or parts selected to help you have not only a safer install, but a much quicker one, where you don't have to figure out all the specific problems on your own. To my knowledge, generally auto conversion engine companies have a pretty safe track record, though

ultimately of course the responsibility is upon you, the builder, to have a safe and useful plane. Thoroughly check out any auto conversion engine company, and speak verbally with some of their customers.

A lot of emotion and fear in some who would war against an auto conversion engine. But through knowledge and experience, and the right solutions and parts, the NTSB data shows that IN THE LONG RUN, auto conversion engines are at least as safe or safer than traditional aircraft engines in experimental aircraft.



Chapter Member Paul Good

Paul seems to be enjoying the great flying weather after moving to Arizona full time

DR ROSS AME OFFICE MOVED

Many Chapter members use Dr. Burr Ross as their Aviation Medical Examiner. His office has moved to 3811 East Bell Rd, Suite 107, Phoenix, AZ 85032. That is on the southwest corner of 40th Street and Bell. It's easy to not verify the current address when making an appointment and there is no large flashing banner saying they moved.



Dean Gilderoy and His Cessna 175

Dean has about run out of mods for his Cessna 175. It has a new engine upgrade with constant speed prop, STOL kit, big wheels and tires. New interior and a custom paint job. It is one of the nicest 175s on Earth.

GREEN EPOXY RESIN

While this product is primarily marketed to the civil engineering and marine industries, it is going to be headed to aircraft in the near future.

There is nothing new in the pursuit of environmentally friendly resins, at least not for Sicomin. Founded in 1983, the composites arm of this French company started creating green epoxies more than 10 years ago.

“Our interest in green resins started well before it was in fashion,” explains Sicomin’s president Phillippe Marcovich. “We started working with the ski and surf board markets where the end users, who were very much aware of the importance of their playgrounds in the mountains and at sea, already understood the need for environmentally friendly materials.”

“Over time, we proved our green credentials with epoxy products that clearly worked. This helped to create a growing number of customers who understood and believed in what we were doing, which in turn led to us into other areas”.

“Because it was still early days for this type of technology, we were conscious that we had to proceed carefully to avoid being perceived as trying to capitalize on the green agenda by developing materials that were environmentally cute. For example, we had been supplying a fire-retardant Epoxy gelcoat – SGI 128 – that is 38 per cent green to the civil engineering industry for several years, but we hadn’t made a big deal of this to avoid deflecting the attention away from the key fundamental properties that make our materials the best for the task.”

The reality is that for Sicomin’s Greenpoxy range, where an excess of 50 per cent of molecular structure derived from plant material is possible among some of the products, the technical performance and the cost are the same as those based solely on petrochemical derived products.

Furthermore, the fact that Greenpoxy is available in industrial volumes and is the largest range of sustainable epoxy resins on the market today, drives the message home

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Pat McGarry and Donny Weller are all smiles after flying Pat's New Super Decathalon

that these are resins that make no compromises and are already well accepted across many other markets.

"Today we are involved in many areas beyond ski and surf including marine, automotive, renewable energy and civil engineering projects throughout Europe, the USA and Asia," he continues.

"Since 2012, we have worked with more than a dozen different Bio Resin systems. Some with Bio Contents of up to 80 per cent", explains Greenboats' founder and CEO, Friedrich Deimann. "However, from our perspective Sicomin has the most complete bio resin on the market today. But this doesn't come as a surprise because the company has also the most experience in this product category. We have been in contact with Sicomin since 2014 and the company has continuously invested in improving the product range."

Michael Thon is also well versed in the reasons why Sicomin's Greenpoxy is such a significant product going forwards. His company, Time Out Composites – Sicomin's distribution partner in Germany and Austria since 2002 –

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was established 20 years ago to help builders choose the right composite materials for their tasks.

"It is very important to be able to offer our clients a green epoxy that matches the mechanical properties of the conventional petrochemical products that they have been used to," he says. "They need to be able to work with the epoxy in the same way as well and in all these areas we know that Greenpoxy is a perfect match."

In a sport that has seen some big steps forward as a result of developments in materials science, the price has often meant accepting compromises in other areas. In this regard, Greenpoxy is clearly different.

Marcovich says there is still more development to come with the possibility of resins with a far greater green content. But perhaps the most interesting affirmation as to why Greenpoxy is such an exciting new resin came in a simple comment: "If we didn't label it green, you wouldn't be able to tell the difference."

Thunder Ads

ADS-B TRANSPONDER & MISC.

Appareo Stratus ESG 1090MHz ADS-B transponder, Stratus 2i 978 MHz UAT w/WiFi, RAM AV-74(-1) DME/Xsponder blade ant., rack mount, pre wired cable harness, GPS WAAS ant., GPS triax cable, \$3,000⁰⁰, Goodyear Flight Special II 500-5 6 ply tire, \$80, 4 Barry engines mounts 94510-41, \$400⁰⁰, Dynon D-10A EFIS w/ remote compass & temp probe, \$2,000⁰⁰, Charlie Spinelli, 206 678-5678, Spinellc@msn.com

CURTIS F11C-2 "GOSHAWK"

Built by John Pike. R-1340 (600 HP). Less than 120 hours TT since new. Becker com & txpdr, Garmin ADS-B, 20 gal smoke tank, 102 gal fuel, <https://CaptainBillyWalker.com> 480- 773-2823

AIRCRAFT TOOLS

I have some aircraft tools that I acquired through a friend. I would like to sell them. Dan Burdett 480-600-2865

SCHWEIZER 1-26C GLIDER

Complete restoration, new fabric and paint. New skid, new tire and canopy. Has cg hook and factor tip wheels. Trailer with new tires, lights and wheel bearings. This glider is 100 % legal and ready to tow to field and fly today. \$10,500.⁰⁰ Jerry Lane - 602-663-2432

MISC GOODIES

PARACHUTE never opened used once \$200., **Continental 0-200 case** with data tag and extras. \$500; RV-3 canopy brand new never cut \$200, **Beech Staggerwing** carved desktop model with stand, about 12 inch wingspan \$100; **Douglas DC-4 pedestal** with throttles and controls. Perfect for your man cave \$100. Curtis Clark 602 710-4494

LONGEZ AND SONEX

Tom Partin has decided to stop flying and has two airplanes for sale at Thunder Ridge air park (AZ28), a 180hp LongEz and a 120hp Sonex. Contact Bertha Partin at bmpartin@gmail.com

ALASKA BABY BUSHWHEEL

tailwheel assembly, Like new. 6x8.5 tire Used but in good shape, Jack Pollack 480 695-4441

THATCHER CX-4 PLANS & BUILDERS MANUAL

New, never used, donated to our Chapter. Curtis 602 710-4494

COOL PLANES FOR SALE

Only flown by little old ladies to church on Sundays. <http://captainbillywalker.com/aircraft-for-sale/aircraft-for-sale>

RV-4 PARTIALLY BUILT KIT

\$13,500 Lycoming 0-290-D2, kit for \$3,000 or \$16,000 for both. Wanda Refrow 602-843-9862 w7lov@cox.net

LYCOMING 0-360 A1A

Engine built up for RV project never completed. Invested \$50,000. Price very firm at \$25,000. Martin Del Giorgio delgiorgiopels@gmail.com

GARMIN GDL82 ADS-B "Out" DATALINK

Designed to work with your existing transponder. Slightly used. \$1,200⁰⁰. Ken Roth 602-228-5000, RothDevCor@aol.com

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Chapter member owned. R & E Cooler Service 800-657-0977 www.oilcoolersvs.com

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Eloy Airport Julie White 520-466-3442

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