



# The ThunderWord

Thunderbird Field EAA Chapter 1217

August 2016

Scottsdale, Arizona

## **PRESIDENT'S CORNER**

Greetings from my corner of the hangar! At the June Chapter meeting, Chapter 1217 member Richard DeWitt talked about how he installed ADS-B equipment in his RV-6. He had what looks like a simple, cost-effective solution for meeting the 2020 requirement. Richard in no way was selling or representing the equipment he used. He told us his reasoning and how he did the installation, and answered a bunch of questions. As the time gets closer, I am sure a lot of people will be asking him to run through that installation talk one more time!

Last month was our annual pilgrimage to the EAA AirVenture Oshkosh Fly-In. This year was my 31st consecutive year of attending. By far the coolest thing this year was the Martin Mars flying boat dropping 8000 gallons of water on a pass down the flightline. Original plans to drop 8000 gallons of Spotted Cow Beer were shelved, and they went with lake water. Imagine how it felt to be a big old lake perch swimming along, and the next thing you were sucked up and deposited at Wittman Field!

Some other really cool things were hearing and smelling an exact replica Fokker Triplane with a rotary engine and its castor oil fuel mixture run. This year the Spartan Executive was one of the featured planes. There was an entire row of these polished beauties. An interesting fact was Spartan only painted four planes; all the rest were originally polished. Another featured plane was the DeHavilland Chipmunk, and there were 26 in attendance; 25 were on display, and one modified plane was sky writing overhead earning its smoke oil. One of the unusual things to come out of Oshkosh is a resurgence of Part 103 legal ultralights. There were several new designs

that incorporated emerging technology to make them safer and perform better. In my opinion, still the biggest Ponzi scheme was Icon Aircraft who was taking orders. It's a cool, well thought-out plane that performs as advertised, but relies on a huge production rate in order to keep the unit cost down. I wouldn't be surprised if they were back next year with a new name, a reorganized company, and lots of deposit holders left on the beach!

One of the big topics was what will the hard fought battle for getting rid of the third class medical going do to Sport Pilot. The requirement to have a medical doctor sign off that you are fit to fly is going to have some problems, like finding a doctor who has the liability insurance to cover him if you have an accident after he signs you off. I think Sport Pilot will be around for a while since the medical requirement is more in line with gliders and balloons which has worked well for a long time.

Congratulations to Chapter 1217 member Rodney Jarrell for winning Grand Champion Kit Built for his RV-10.

See you at the August meeting!

*Curtis*

## **AUGUST CHAPTER MEETING**

The next meeting of Thunderbird Field EAA Chapter 1217 will be held on Thursday, August 18, starting at 7 pm. The location is the Scottsdale Aviation Business Center, 15041 North Airport Drive. This month's guest speaker is Charlie Spinelli who has spoken to our Chapter in the not too distant past. He owns a Rutan Vari-Viggen based at DVT and is the head of Unmanned Aerial Systems for Boeing. The topic before was

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### **Martin Mars Dropping 8,000 Gallons of Water**

drones, and this time it is going to be on **the history of Scaled Composites in Mojave California**. Charlie has prepared this presentation for a QB meeting in Mojave next month and is going to use our meeting as a dress rehearsal for that presentation. Guests are always welcome.

### **AIRVENTURE HAPPY HOUR**

It is now been an 18-year tradition of Chapter 1217 members attending the Oshkosh AirVenture Fly-In to get together one evening and compare sightings and stories. This year we invited folks from EAA Chapter 538 at Deer Valley Airport to join us and a good time was had by all. Besides members from Arizona, Don Lindholm flew up from Iowa, and Ron Landon made the trip from New York. Attendance was at around 30 happy people.

### **OSHKOSH AIRVENTURE 2016**

*Source: EAA news release*

The number-crunchers at EAA have released the final accounting for AirVenture 2016, and the numbers of attendees, warbirds, showplanes, homebuilts and exhibitors all

increased. "It was a magical week at Oshkosh this year".

AirVenture premiered their annual Founders Innovation prize and celebrated the flight of our two millionth Young Eagle with thousands of EAA-member pilots who made that remarkable achievement possible. Our industry partners conducted more than 70 news conferences at Oshkosh, launching countless new products and technologies that benefit the aviation community

According to EAA, approximately 563,000 people came through the gates, an increase of nearly one percent over 2015. "Our attendance was particularly outstanding, since we had some weather challenges mid-week compared to seven perfect days in 2015. Our grounds crew and our volunteers, who number more than 5,000, did a superb job keeping the site ready for visitors and campers who arrived by ground or by air."

On the hardware side, more than 10,000 aircraft arrived at Wittman Regional Airport in

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Oshkosh and other airports in east-central Wisconsin. The number of show-planes was up seven percent over 2015 with 2,855 on the grounds.

Other categories included:

- 1,124 homebuilt aircraft (up 11 percent)
- 1,032 vintage airplanes (up 7 percent)
- 371 warbirds (up 6 percent)
- 135 ultralights and light-sport aircraft
- 101 seaplanes
- 31 rotorcraft
- 41 aerobatic aircraft
- 20 non-categorized aircraft (you know who you are)

EAA says the final total of exhibitors was 891, a 10 percent increase over EAA AirVenture 2015.

Other statistics:

- Forums and Workshops: A total of 1,050 sessions attended by more than 75,000 people.
- Social Media, Internet and Mobile: More than 35 million people were reached by EAA's social media channels during AirVenture; EAA AirVenture app had 1.6 million screen views; EAA video clips during the event were viewed 957,000 times; and EAA's 1,100 photo uploads were viewed more than 7.4 million times.
- Guests registered at International Visitors Tent: A record 2,369 visitors registered from a record-tying 80 nations. Top countries represented: Canada (578 visitors), Australia (340), and Argentina (167). Media: 750 media representatives on-site, from six continents.

The planning for EAA's 65th annual fly-in convention begins now. There are people already coming forward with ideas that we'll consider in the coming weeks. Next year, for instance, is the 80th anniversary of the iconic Piper Cub airplane and the 70th anniversary of the U.S. Air Force. We also want to

continue to be the place where new aviation technology and innovations are unveiled to the world.

The evening lineups continue to provide attendees with additional reasons to stay throughout the night, and 2017 will be no different as we'll kick off the week on Monday, July 24, 2017 with an evening concert by the Canadian rock band Barenaked Ladies, presented by Ford Motor Company.

## **CARO MOTORGLIDER COMES TO OSHKOSH**

Up in the high desert of eastern Oregon, Sonja Englert has been deigning and building a special kind of dual purpose airplane. The plane is a two-seat tandem motorglider called the Caro 1. The wings are normally 54-foot in span, but there is an interesting twist. The outboard panels are easily removable, and the Caro can be flown without them with the shorter span of 30.6 ft.

The Caro is powered by a 2,276cc 80 hp VW conversion engine. The tandem two-seat motor glider has a 954 lb empty weight and a 1477 lb gross, and is certified as an experimental amateur built glider. It is constructed of carbon fiber except the vertical tail and landing gear which are glass.

The inboard wing sections are also removable by removing two spar bolts and disconnecting the controls and fuel connectors. The Caro is equipped with an updraft cooling system that has a single lower cowl inlet and dual upper cowl outlet flaps controlled by one cockpit control lever. This allows the pilot to reduce drag in cruise, soaring, or to reduce shock cooling on descent.

The trip to Oshkosh was the plane's first cross country and was done with a combination of motoring and soaring flight. Two predominant characteristics of motor gliders are high aspect ratio wings and a very streamlined shape that add to their aerodynamic efficiency. That efficiency model carries through with the Caro. Elbert said the Caro cruises at 100 kts true airspeed

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at 2.5 gph, which works out to 46 mpg at cruise.

For more information and to read about her trip to Oshkosh go to [www.caro-engineering.com](http://www.caro-engineering.com)



### Caro Motorglider

#### NEW PRODUCTION RADIAL ENGINES

In the ultralight area at EAA Airventure some of the coolest things are discovered. This year it was a new production small radial engine! Sam Watrous, the North American distributor for Verner Engines had two units on display; a three-cylinder and a five-cylinder example of a Czech built engine.

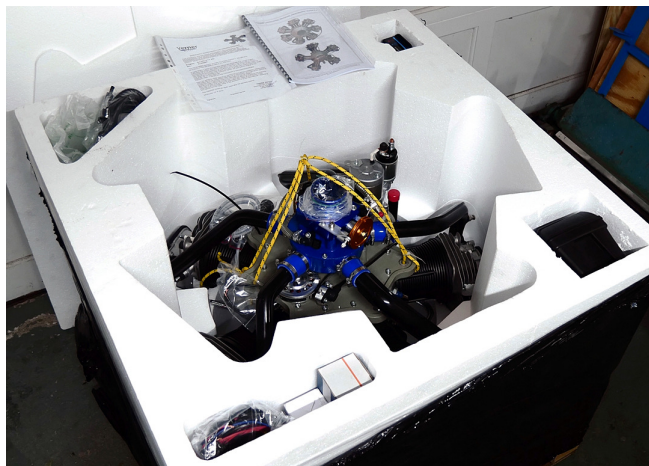
Sam discovered Verner engines while searching for a suitable power plant for his sister company, Scalebirds, which builds WWII fighter styled reduced scale experimental aircraft. Upon discussing Sam's needs Verner suggested he become a dealer and he agreed.

When asked why he chose Verner over others, Sam indicated the Verner was better suited to the size of his airframes and was more affordable than other similar output mills. Sam said the Verner product line fits the needs of his airframe project better than other engines he considered, including Rotax and VW based offerings, because they are more realistic and the radial planform integrates well into the airframes which were originally intended for radial engines. His first airplane of the line will be an F6-F Hellcat.

The product line includes a three cylinder, two displacements of five cylinders and a seven cylinder to choose from ranging from 42hp to 137hp. Some of the specs include electronic

ignition on all units, carbureted induction on the 3 cylinder and small 5 cylinder (the larger engines use fuel injection), dry sump pressure lubrication. All engines include an integral pancake alternator putting out 15 to 20 amps.

The engines have a very low power to weight ratio (about 1:2, where many radials are around 1:1). Sam indicated that the engines are only designed for 7.5 to 1 compression ratio. This should result in very long durability and rugged reliability, and there is possible



#### Radial Engine Ready for Delivery

room for improvement by enterprising owners. Sam stated that Verner has no intentions of testing the engine to LSA requirements and is content playing in the experimental-amateur built arena.

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Although the engines were on static display only, and are slated to go into airframes soon, a search on Youtube.com found some videos of the engines running. They make that beautiful pitter-patter and throaty roar only a

round engine can. You can go to their website at [www.scalebirds.com](http://www.scalebirds.com) and look at the development of their planes. The website is not very well laid out but has tons of information if you click around.



**Fokker Triplane Running Up. Engine is Either On or Off, No Throttle**



**1929 Bellanca Tied Down in the Vintage Area.**





**Highly Polished Ryan ST on Display**



**The Only Two Flying Howard 500's in the World**



**David Kujawa Found this Interesting Super Aero at Oshkosh**

# ThunderAds

## **FOR SALE, ETC.**

### **Completed RV-7A tail kit.**

Completed and zinc chromated. Nate D'Anna  
602 891-4771 Email [Natedanna@q.com](mailto:Natedanna@q.com)

### **RACE PLANE MECHANIC NEEDED**

Someone with airplane building experience to help finish a Reno race plane. We are about 75% done building a twin engine Unlimited Reno racer. You would need to move to, or be willing to travel to, Port Angeles, Washington at least 4 days a week. At least one year's employment guaranteed. Salary negotiable depending upon qualifications. Must be a self-starter who can think on one's own. You will be working under an experienced A&P IA. Some Composite experience preferred. This is an exciting project. Contact: [jd\\_crow@yahoo.com](mailto:jd_crow@yahoo.com)

### **T-34 MENTOR PARTNERSHIP.**

This is a turn-key, established partnership in a very nice Beech T-34. Plane is hangered at Falcon Field. Contact Lynn Miller 602 448-7487 or 602 585-0795 e-mail [Lynnmillier777@gmail.com](mailto:Lynnmillier777@gmail.com)

### **CESSNA 172'S FOR RENT**

Two IFR Cessna 172s for rent at Chandler. Owned by Chapter member Pat McGarry. Contact Chris Hoel for more information and to schedule [birdganqft@gmail.com](mailto:birdganqft@gmail.com)

### **'65 MOONEY**

Very clean, 4000TT, 22 hours SMOH, \$41K with new annual, Goodyear hangar, Joe Hobbs [joseph.hobbs@cox.net](mailto:joseph.hobbs@cox.net) for more information

### **RV-4 PARTIALLY BUILT KIT**

\$13,500 Lycoming 0-290-D2 \$3,000 or \$16,000 for both. Bill Refrow 602-843-9862 [w7lov@cox.net](mailto: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](mailto:delgiorgiopels@gmail.com)

### **GARMIN GDL39 PORTABLE GPS**

ADS-B Receiver with free Weather and Dual-Link Traffic. Battery Pack with extra Battery included. Works with all Apple Products. Brand new in the box, \$400. Ken Roth 602-228-5000, or e-mail: [RothDevCor@aol.com](mailto:RothDevCor@aol.com)

### **OIL COOLER REPAIR AND SALES**

Chapter member owned. R & E Cooler Service 800-657-0977 [www.oilcoolersvs.com](http://www.oilcoolersvs.com)

### **ANNUALS**

Owner Assisted. Jim Moss 520-440-2191 [www.northside-aviation.com](http://www.northside-aviation.com)

### **FLIGHT INSTRUCTION, ETC.**

Fred Gorrell Designated Pilot Examiner: Airplane: Private, Commercial, Instrument, ATP, ME and Lighter than Air: Private and Commercial. 602-942-2255, 602-418-2045, [fgorrell2@cox.net](mailto:fgorrell2@cox.net)

### **HOMEBUILT AIRCRAFT CERTIFICATION**

ABDAR Gary Towner 928-535-3600

### **ANNUALS, RESTORATIONS, FABRIC WORK**

Eloy Airport Julie White 520-466-3442

### **AIRMEN PHYSICALS**

Dr. Henry Givre AME, Chapter member and RV-4 owner. 520-836-8701

### **MACHINE SHOP**

High quality parts fabrication for homebuilts at a reasonable price. David Leverentz 520-898-4321

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Send an E-mail to:  
[EAChapter1217@aol.com](mailto:EAChapter1217@aol.com)

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