



# The ThunderWord

Thunderbird Field EAA Chapter 1217 September 2014

Scottsdale, Arizona

## **PRESIDENT'S CORNER**

Greetings from my corner of the hangar! At the August meeting, Chapter 1217 member Adam Rosenberg spoke to us about his 2000 + hours of trying to fly to as many different airports as he can. His videos of operating into backcountry airports in Utah were fantastic.

This month's aviation lesson was a Cessna 421 last month that was headed from Las Cruces to Sky Harbor. While the passengers were loading, the FBO added 40 gallons of Jet A. Unfortunately 421's don't run for long on jet fuel, and it ended up in a big smoking hole off the end of the runway. Always be present when your plane is fueled to make sure the correct quantity and type of fuel is being put in your plane. And when you check the caps or drain the sumps make sure it has the correct color and smell.

The fall flying season is almost here so start making plans for the Copperstate Fly-In which is just a month and a half away.

See you at the September meeting!

*Curtis*

## **SEPTEMBER CHAPTER MEETING**

The next meeting of Thunderbird Field EAA Chapter 1217 will be held on Thursday, September 18, starting at 7 pm. The location is the Scottsdale Aviation Business Center, 15041 North Airport Drive. This month's guest speaker is Deer Valley Airport Manager Ed Faron, who is going to bring us up to date on all the construction projects at Deer Valley and what the future holds for us. Topics he said he would touch on are Super Bowl planning and the FAA's controversial new hangar storage rules. Ed is a fellow EAA

member so it will be good to hear how he is going to interpret the new rules. Guests are always welcome!

## **COPPERSTATE FLY-IN**

Since 1971, the COPPERSTATE Fly-In & Aviation Expo has been a great place to see a diverse blend of aircraft in action, attend informative workshops and check out the latest, greatest aviation products. This 42nd year of the fly-in - scheduled for Thursday, Oct. 23 to Saturday, Oct. 25, 2014 at the Casa Grande Municipal Airport in Casa Grande, Arizona - promises to be no exception.

Over the years, COPPERSTATE has grown to the point that it attracts about 500 aircraft and 5,000 attendees per year representing 10 countries and 40 U.S. states.

Attendees particularly enjoy the wide variety of aircraft on the ground and in the air — from ultralights, to WWII fighter jets, to "micro-jets" and much more. And, they receive many compliments on how family-friendly the event is: Over 1,000 people attend COPPERSTATE's workshops and forums every year, and several dozen kids participate in the youth activities, including a wing rib building workshop.

The annual aircraft judging awards banquet, held on Saturday night of the event, is another crowd-pleaser, attracting about 100 participants per year.

Last (but certainly not least), COPPERSTATE also plays host to about 50 diverse exhibitors. In their "big tent," a pilot or aviation enthusiast can find just about anything they're looking for. Check out [www.Copperstate.org](http://www.Copperstate.org) for all the latest updates.



Photos by David Roberts

### **Don Pellegrino with His One-of-a-Kind Fairchild XNQ**

#### **FAIRCHILD WTF**

Every year Don and Ann Pellegrino make the journey out to Casa Grande for the Cactus Fly-In, usually flying Don's Rose Parakeet or, more recently, their Piper Arrow. This year they decided to make the trek from Texas to AirVenture with their very rare Fairchild XNQ.

Pitched to the Navy, the XNQ also received Air Force consideration as a replacement for the T-6 Texan, under the designation T-31. But the Fairchild's tailwheel versus the Beechcraft T-34's tricycle-gear stance contributed to the selection of the latter trainer for production.

One of the three XNQ's was written off in a landing mishap; another airframe gave itself for structural testing, and only the Pellegrinos' plane remains.

The Pellegrinos rebuilt the XNQ in a barn in Iowa over the next 10 years. The airframe's previous moves and storage had taken a toll. The Pellegrinos determined that "the basic

airplane was hurting, but restorable." The bottom of the center section, the wings, the horizontal stabilizer, and the cowling were reskinned. That big fishbowl canopy was replaced, as was the radial Lycoming R-680-13 engine. The first post-restoration flight was in 1992.

It has appeared at Oshkosh a few times, but not so often that it is routine. It still prompts questions and double takes, with a huge clear canopy reminiscent of a T-28 or even a P-51, plus the tailwheel stance of a T-6.

The surviving XNQ had about 1,000 hours logged by the time it quit flying in 1956. It passed through several institutional and individual hands before the Pellegrinos breathed life into it again. Like any vintage airplane, this one takes maintenance to keep it flying the 50 to 60 hours that the Pellegrinos put on it each year. They've logged more than 680 hours in their trainer since rebuilding it.

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### **Don and Ann Pellegrino in Their Fairchild XNQ**

The XNQ burns about 15 gallons of gas an hour in a noisy demonstration of internal combustion. It tanks 80 gallons. At 1,950 rpm, the Lycoming delivers an indicated airspeed of between 135-140 mph. Well-planned as a trainer, it has good forward visibility on takeoff and landing. A wide main gear track, plus a locking tailwheel, helps keep it rolling in the right direction. Pushing the stick full forward unlocks the tail wheel.

With some differences in radio gear, the rest of the aircraft "is all back original," Don says. The Navy Bureau originally assigned it the Number 75726, the XNQ flies with civil registration N5726, the closest available registration Pellegrino could get.

The XNQ has a wingspan of 41 ft., 4-1/2 inches, a length of 28 ft., 1-7/8 inches, if one can really measure it to the last eighth of an inch on a hot day. Empty, it tips the scales at 2,974 pounds; its maximum weight is 3,898 pounds.

### **OSHKOSH VIDEO**

If you want get an inside look at what went on at this year's EAA AirVenture Fly-In, check out this great Oshkosh video for 2014 by Slick. It lasts 6 minutes and captures the energy of the show. Crank up the music and select 1080p HD, you'll like it.

<https://www.youtube.com/watch?v=hmOPgYEBwEw&feature=youtu.be>

### **HERMES UPDATE**

Morris Jarvis is an east valley homebuilder who is building a very ambitious project, a homebuilt space shuttle! In his latest update he had the following things to say:

A lot great stuff is happening in the space exploration department these days. Most impressive to me is SpaceX and Elon Musk. Outstanding achievements and progress to make spaceflight affordable to where it should be. Well done SpaceX!

As for us, you may, or may not, have noticed a slowing in our progress. I assure you, we

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### **Hermes Hybrid Test Engine**

are still working on the project. Probably the biggest slow-down has been due to my "day job" being in Ireland for the last several months. I have been trying to support from abroad and while being a wonderful place for an assignment, it does slow the rocket work a bit. Others are working on it steadily while I support remotely and then I work, hands-on, when I'm there for vacations and home leaves. However, my assignment will be coming to an end soon and we will be back in full force

Meanwhile, special thanks to the folks that have continued working in my absence, most notably Weston Knop. Thanks! Sincerely, Morris Jarvis, STAR Systems Founder

#### **Large Test Stand Structure**

##### **Nearing Completion**

We have been working on a mobile test stand capable of handling the large hybrid rocket engine that we are building under the Kickstarter funding we received.

The large engine stand started life as a fifth wheel, multiple car carrier. We've done a lot of modeling and structural simulations to get the structure to an acceptable safety factor before modifying the trailer into a test stand. Recently we have been building all of the extra bracing, struts, gussets etc. required, and before welding it all together. After all of  
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the structural mods are complete, we will install the oxidizer tanks, the plumbing, and the new control system, (which is based on the smaller engine stand/test bed).

Once complete, the large mobile test stand can transport the large engine out for testing at the range in the desert, be attached to the stationary pylons, and enable us to conduct all of the testing at a safe location. It will also allow us to do all of this in a single day as opposed to spending many hours setting the engine up on a leased test stand and paying for the downtime. It is a horizontal test stand where the engine is attached to a "floating tray" and force/thrust measurements are taken at the head end. It will also have an array of thermal, stress, and pressure sensors scattered through the length of the motor so we can collect the data for later analysis. The configuration of the test stand also allows it to be versatile enough to test many different engine sizes and types affording us the possibility of experimenting and/or leasing it out to others.

#### **Large Hybrid Engine**

The large engine is approximately 8 feet long and 10 inches in diameter. Being a test engine we needed the ability to pull it apart for interim inspections between firings. We

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also wanted to eliminate any possibility of a flange failure and "remove the flanges from the equation." That is the reason for the oversized flanges, and clearly this is not meant to be a flight weight engine. Once we have some engine testing done and validated a few things, then we will work on shaving the weight off to get to a flight ready engine.

### **Hermes Launch Video**

This is a first cut of a video rendering that Kraemer Design Services, LLC made for us of what a Hermes launch could look like. Many thanks to Kraemer for their continued support in our efforts! Click on the link to see the video: [https://www.youtube.com/watch?v=\\_Nk9AwhEbe0&feature=youtu.be](https://www.youtube.com/watch?v=_Nk9AwhEbe0&feature=youtu.be)

## **SCOTTSDALE AIRPORT**

### **SUPER BOWL INFO**

The big game is coming to Glendale in just a few months, and Scottsdale Airport is going to have some big restrictions that you should know about if you intend to fly or attempt to gain access to the airfield during the Super Bowl weekend. The airport is going to a Prior Permission Request (PPR) Required status.

Due to the high volume of traffic anticipated during the event, and in conjunction with other airports managing traffic during the Super Bowl over the last few years, the Airport has developed a reservation system that will be managed by the FBOs to comply with the FAA's mandate. Expect to have special event handling fees put in place.

- Reservation system will provide the FAA with essential information such as tail numbers and names of operators using the airspace during the Super Bowl.

- A set number of reservations for arrivals and departures have been equally distributed to each FBO for their customers. All aircraft (based or transient) intending to access/depart SDL either VFR or IFR from halftime of the Super Bowl on Sunday, February 1, 2015 through Monday, February 2, 2015 must have a reservation with their preferred FBO. Please contact your preferred FBO to discuss your service needs prior to

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your arrival (this applies to ALL traffic during the above referenced timeframe).

- You will be provided with a confirmation number by your preferred FBO which must be added to the comment section of your flight plan.

- According to FAA Air Traffic personnel, the Airport will have approximately 30 – 32 departure slots per hour available and two arrival slots per hour during the PPR Super Bowl event time frames, so place your reservation with your preferred FBO as soon as possible.

- Under the proposed TFR, Scottsdale Airport will be allowed to accept IFR arrivals and departures during the times that the Super Bowl TFR is in effect.

- There will be limited access for arrivals (estimated two per hour) starting half time of the game through Monday due to the high amount of departing traffic from the region.

To learn more about the restrictions go to <http://www.scottsdaleairport.com>. In addition there will be restrictions to airport access and operations. Each valley airport will have similar restrictions. The Transportation Security Administration (TSA) will also be imposing flight restrictions (TFR) on aircraft "not in direct support of game day activities and transportation of VIP attendees."

## **AERO ENGINES**

### **CLOSING DOORS FOREVER**

As many of you may have heard, Aero-Engines, Inc. closed its doors for the last time on August 29, 2014. They will be using the month of September to prepare for the auction of equipment, tools, engines, accessories, etc. The auction will be held by Starman Bros. on the weekend of October 3 and 4.

They told us: "We want to thank you all for allowing us to be of service to you for the past 59 years. Best wishes to all of you and may our competitors and friends, Tulsa Aircraft Engines and Covington Aircraft, fulfill your future engine needs."





**Rolls Royce Gypsy Major Mk 2 engine**

**JACK'S NEW ENGINE**

Jack Pollack is having a Rolls Royce Gypsy Major Mk 2 engine built up in the UK by a

company that specializes in antique British aircraft engines from rotary's to Merlins. It will replace the current engine in Jack's DHC 1 Chipmunk.



**Jerry Lane is Making Progress on His Taylorcraft**

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# ThunderAds

## **FOR SALE, ETC.**

### **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)

### **MISC. INSTRUMENTS**

New Rapco Vacuum pump RA215CC-9, \$250.; New Electronics International oil pressure and temp, \$400.; New Elec. Int. carb temp and outside air, \$250.; New Elec. Int. volt amp gage, \$250.; New Elec. Int. single cyl head temp, \$250.; Ovh. RC Allen Horizon RCA22-7, \$400.; Ovh. Edo Air DG 4000B-8, \$400.; Repaired Cessna turn coordinator, \$200. Jerry 602- 663-2432, or e-mail: [JerryLane90@aol.com](mailto:JerryLane90@aol.com)

### **PULSE AUTOCYCLE**

FAA got you grounded? Want a fun project that captures the thrill of flying? Jim Bede designed Pulse Autocycle for sale \$22,000., Arizona title and current registration. Curtis 602 710-4494 [azskybum@aol.com](mailto:azskybum@aol.com)

### **TAYLORCRAFT BC12 D**

Beautifully restored BC12 D. TT: 2635 hrs. 255 hrs since total restoration. C-65 255 hrs smoh. Have all aircraft records & FAA data since new. Annual inspection with purchase. \$24,500. Steve Trieber, Located in Casa Grande• Telephone: 207-853-6060

### **LYCOMING O-360 A1A**

Engine built up for RV project that never got off the ground. Invested \$50,000. Price is very firm at \$25,000. Martin Del Giorgio [delgiorgiopels@gmail.com](mailto:delgiorgiopels@gmail.com)

### **ESTATE SALE**

Chapter member Marty Williams has flown west and his family is selling his Zenith 701 kit. Contact his son Keith at 480 998-4873.

### **CURTISS REED PROPELLER**

Model 55511. 82" SAE 1 taper shaft. (Warner, Ranger, Maytag 604) \$4,000, Patrick McGarry: 602-430-0140

### **PROJECTS FOR SALE**

Protech, PT-2, folding wings & trailer, 82 hp Mosler engine. & Gere bi-plane, about 75% complete, built from magazine plans, circa 1932, completely rebuilt Model A engine. Pat Wall 928-851-2244.

### **2009 LANCAIR 360**

Superior IO-360 engine, TTAFE 20 hours, mineral oil, every thing new including paint, GPS, loaded, must see. Mary Shragal 630-897-7706

## **SERVICES**

### **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, and ME. Lighter than Air: Private and Commercial. 602-942-2255, Cell 602-418-2045, [fgorrell2@cox.net](mailto:fgorrell2@cox.net)

### **HOMEBUILT AIRCRAFT CERTIFICATION**

ABDAR Gary Towner 928-535-3600

### **PROP BALANCING, ANNUALS, PREBUYS**

Jim Berdick AI 623-293-2708

### **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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