EAA Mount Rainier Chapter 326 Newsletter

Thun Field – January 2013 169

Meeting Notice

Tuesday, January 8th, 7 PM
CAP Building, Thun Field

Program: Glen Cawley.

Many of you know Glen as the founder of Cawleys South Prairie, the residential grass strip near Buckley. But did you know this: Glen was a member of the Air Group 47 on the U.S.S. Bataan. He was the turret gunner on a TBM Avenger and their mission on March 18,1945 was to take out the Izumi Japanese Naval Airbase. Their TBM crashed into the waters off Kyushu, Japan. Rescue operations were conducted for the downed airmen, but to no avail. Ensign Loomis and crewman Glen Cawley were declared KIA by the Bataan, but actually they were picked up by the Japanese and spent the remainder of the war in a Japanese prison camp.

Come to the meeting and be prepared to hear this story first hand.

Refreshments: Norm Pauk

Randy and Kerry Albritton

With Randy as our new president and Kerry continuing as secretary and now our biographer too, this is a good time for introductions.

Randy was born on January 7, 1951 in Farmerville, Louisiana to Della and John T. Albritton. Growing up in a small farm town, Randy loved to hunt and fish and said his dad would eat anything he brought home. If it moved he would shoot it, but only if it was to be eaten.

Randy rode his bicycle everywhere and since there were a lot of hills in the area he developed strong legs and became a basketball player of some fame. He left his graduating class of 100 and moving on to college with a basketball scholarship. Randy not only played basketball, but graduated from college with a BS in Civil Engineering and went onto become a project manager for a major chemical company.

Born with the need to fly, Randy took his first flight in his cousin's Cessna 150 at the age of twelve. Boy, was that hook set! Later Randy got his Private pilot SEL. Somehow, he could never convince any of his family to fly with him, except for one cousin who became ill during the flight and swore he would never do that again (fly with Randy that is). Randy has flown in various small planes: Cessna and Piper, Bonanza, RV-8, Kitfox,… all different planes, but all his favorites. Lets face it, the boy loves to fly!

Randy's first airplane project was a Kitfox. He also built an RV-8, and later a Super 8 (an 8 with an IO-540). He is currently building an RV-9A and when that project is finished there's an RV-7 waiting. Among this fleet is a Cessna 120 and "old blue," Skinner's 172. He manages to find room and keep all these airplanes flying at his place. Still, he can't seem to resist picking up a new project whenever the price is right.

Randy is best known by friends and family as the "Engine Whisperer". When he was just 6 years of age his daddy traded a pig for an outboard motor that was in a million pieces. His daddy told him then if he could fix it he could have it. That set the wheels turning for figuring things out and he rebuilt that outboard motor all by himself. Since that first motor, he has rescued so many gasoline and diesel engines from scrap heaps and put them either back on the road or in the air that he has lost count.

Ask him about his most interesting flying adventures and he will be glad to tell you all about his three cross country flights over the Rockies to Texas and the annual Formation Flying Clinic in Madera, CA.

Randy lives in Buckley with his wife, Kerry, on their own airport that they have been working on and improving for years. The airport call sign is 9WA7. If flying in you may be greeted by their airport dog, Tank. Together, they have four fine sons, three living in the area and the fourth in Hawaii. Randy has too many hobbies

to mention, but narrowed down to his favorites he would say building and flying airplanes and traveling about the country.

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Kerry was born in LaMarque, Texas in December of 1957 to Cliff and Virginia Burks. Her father was a naval veteran of WW2 serving in both the Pacific and Atlantic theatres. He was appointed Admiral of the Texas Navy.

Her mother was talented in so many ways. Besides raising five children, she was a professional wedding singer and artist.

Kerry graduated from nursing school in 1977 and worked the Intensive care, Coronary care, and surgical units. Needing a change, Kerry went to work on a commercial fishing boat and after a year became captain of her own shrimp boat working the waters in the Gulf of Mexico. She ran the boat for eight years and left the waters to raise her kids.

Kerry remembers when she was a little girl, her folks would take her to the Houston airport to sit on top of the parking garage and watch all the planes go in and out. Her dad loved to fly and that love seemed to trickle down. She would dream of one day flying around herself.

Kerry was a single mother for thirteen years, raising two fine boys. She was never in the military, but both sons went on to become Army Ranger Specialists.

She met her soul mate and love of her life, Randy on Sept. 15, 2001 at an Alligator festival in Texas. She will tell you he clearly "hogtied" her into moving to Washington, but doesn't regret it for one minute. Since the marriage to Randy, Kerry has gained two more wonderful sons for a total of four.

Randy introduced Kerry to the love of flying and all the wonderful folks associated with flying. She has helped build an RV-8, learning all about the process, and now assisting on the finish of an RV-9A. She is currently working on getting her private pilot license and hopes to solo sometime this spring. Kerry says she started off in a 1946 Cessna 120, but has had trouble with landing the taildragger so she's switching to a 1955 Cessna 172 (Ole Blue) to gain confidence in her landings.

Kerry is retired from nursing, but works on their forty acres, maintaining the airport and helping Randy build more hangars so they can build more airplanes. Their next project is an RV-7. Kerry loves cooking for family and friends, photography, and hiking the mountains. She will be quick to tell you that her favorite thing to do is flying with her hubby in their Super-8, no matter where they go. She says when he takes me out and we do loops and rolls, it's the most fun a person can have with their clothes on!

Thanks for the write-up Kerry

Cold Weather Engine Ops

Well sure, a heated hangar is the best way. I have been using a Reiff hotstrip oil sump heater ever since I started flying my RV-4. I usually plug it in for two hours to warm up the oil before starting. Now I find out that is pretty near useless all by itself. Here's a pretty good summary of the issue by Mike Busch.

http://www.avweb.com/news/maint/182846-1.html?type=pf

jb

Fresh Paint on their RV-9A
Back from the paint shop, Bob and Randy Brooks now have their RV-9A hangared on Thun Field and ready for final assembly.

Jim Triggs' Project

by Bob Brooks

What airplane can take off and land within 300 feet, like a single digit RV, has a service ceiling of 34,000 feet, a range of 350 miles, a wingspan of 45' 8", and can be built in a two car garage while sharing space with two parked cars? This sounds like the introduction to a David Copperfield illusionist performance, but no. The airplane in question is the Xenos motorglider by Sonex Aircraft which is being built by Jim Triggs. This newsletter article is based on an interview with Jim, a visit to his airplane factory and a bit of crawling around the internet to learn more about the airplane.

But before getting into the interview a few words about Sonex (pronounced "so-nex") Aircraft LLC and their airplane model line-up. The company was started by John Monnett who is still President of the company. He is a multi-thousand hour private pilot with both glider and floatplane ratings and is an A&P Mechanic. He has designed many different aircraft including the Sonerai sport series, the Monerai kit sailplane, Moni motorglider, Monex racer and others. He has over forty years homebuilt and restoration experience, and extensive engine development and testing experience. John was inducted into the EAA Homebuilder's Hall of Fame in 2001 and his designs are on

display in the Udvar-Hazy National Air & Space Museum and the EAA AirVenture Museum.

The company shows a sense of continuity and humor in their airplane model naming conventions. Their current all metal offerings are:
Sonex- a two plane monoplane meeting regulations for US Sport Pilot/LSA.
Waiex- pronounced ("Y-X") a "Y" tail version of the Sonex.
Onex- pronounced ("One-X") a single seat light sport with folding wings.
Xenos- prounounced ("Z-nos") a "Y" tail motor glider, notice Xenos is Sonex spelled backwards.

Their website is well designed and worth a visit especially since it contains some very nice photos and specifications of each model. The great photos are probably due to the fact that the General Manager of the company is Mark Schaible who is well known for his aerial photography and for doing photography for the EAA for years.

The general specifications of the Xenos are:
Length: 19' 9"
Wing Span 45' 8" (utility wing tips) 39' 4" (aerobatic tips)
Tail Height: 59"
Main Gear Width: 71"
Primary Structure: 6061 Aluminum
Cockpit Width: 40"
Fuel Capacity: 16 US Gallons
Stall Speed: 44 mph (clean)
Maneuvering Speed: 115 mph
Never Exceed Speed: 150 mph

Jim Triggs has been an airplane builder since he was a teenager. His father was a builder and Jim picked up the skills by helping his dad. Between them they have built several airplanes from wood, metal and fiberglass. Jim describes his father as a real master-builder with standards that Jim aspires to even today. The depth of this comment became more clear to me when Jim explained the work methods he used on his RV-7 and what he is learning while tackling the Xenos. Eleven years ago Jim was working "in a phone booth". His RV-7 fuselage was parked in the front corner of his garage sharing space with two cars but still he managed to find space for three other people to provide helping hands for riveting etc. He enjoys spending time thinking about how to solve problems.

My interview with Jim was loosely based on several questions I brought with me. I've summarized and edited his responses. As we all know, when talking about anything "aviation" it's easy for the conversation to move around a bit. But it's all good, right? The first question was:

Bob: How did you choose this airplane after finishing your RV-7?

Jim: I was retiring and wanted something that was time consuming and difficult to build. Because I enjoy the building process I wanted something that would test and stretch my shop skills and problem solving abilities. I also wanted the project to take me a while to complete. These are the same reasons I built my RV-7.

I am an experienced builder having worked on several airplanes with my dad and helped half a dozen people build theirs. But I don't think of myself as a really good builder. There are a lot of people who are better builders than me. My dad was a really good builder. Although I've worked on a lot of airplanes with him he did the difficult things and didn't always teach me how to do them. So I've learned plenty from other builders and through personal research. Those early airplanes were tube and fabric, fiberglass and even a wooden glider but my RV-7 was my first all metal airplane. I prefer working with metal partly because it doesn't matter what the temperature or humidity is outside, I can still work the metal.

When I started my RV-7 I decided to make it more of a personal contest by using hand tools instead of power tools to cut and shape parts. Instead of using a bandsaw, I used a hacksaw. Instead of using a scotchbrite wheel to shape and finish parts I used a file. For me it was a matter of testing my craftsmanship. I guess it was a natural next step for me to tackle the Xenos. In fact Sonex does not recommend this airplane for a first time builder. When I got the Xenos kit, I was tired of cutting with a hacksaw though. I figured OK, I checked that box and I got a bandsaw.

A lot of people become builders because they want to fly a particular airplane. That's not why I am building my Xenos; I am building it because I just like to always have an airplane project on hand. I build to build, not to fly. Often because people are building to fly they get in a hurry especially during the last six months or so. Many airplanes are ruined during the last months of build simply because people get in a hurry to finish and get the airplane in the air. The urge to fly becomes so great they tend to cut corners. I don't like to work fast; I like to work at my own pace. If I work all day and finish one part, I consider it a good day. I know I am not the best builder out there but I don't think anybody enjoys the building process more than I do.

When the Xenos kit arrived it was just a bunch of aluminum. I didn't buy any of the finished parts but instead started making them. It took me a year to make all the parts and cut all the pieces I would need to start building the airplane. It took two years to build the first wing. Now with this second wing, it will probably take me about ten months.

I am always learning and I am always striving for quality in my building techniques and practices. The Xenos has taught me how to bend metal because there are some parts that have very complicated bends with overlapping pieces each with different radiuses. This airplane is teaching me the importance of accuracy in measurement. Here is an example of what I mean. When I look down the edge of this wing I need to see a straight line. The goal is to have more than 42 feet of straight wing with a 40 inch fuselage in the middle. My first Xenos wing was almost 1/32 inch off. Now this wing is off by 3/8 inch. The company says 1/2 inch is acceptable. I've had to pay a lot more attention to detail for example a very small error at this end of the wing turns into an

unacceptable outcome at the other end because the error multiplies over the length of the wing. I've had to spend more time planning. For instance, look at this wing. Right now it has about one thousand clecos in it. Just the clecos add weight to the wing. It takes four people to lift and turn this wing over because of its length and weight. I never thought I would have to worry about how much the clecos weigh. I had to design a special table to hold the wing and still allow me access to work on the spoiler and the under side of the wing at the same time. Because of the length of the wings the sheer number of holes drilled, deburred, dimpled and riveted is amazing. I asked for some help with riveting the wing skins and scheduled time with a fellow builder then started deburring. After the first hour of I realized it was going to take much more time than I thought. In order to be done in time for my rivet buddy I worked eight hours the first day and ten hours the second day. I also learned a metal working technique from a guy in Australia. I thought he was joking but he wasn't. He was massaging the wing skin. It gently and gradually bends the wing skin down to the ribs to keep it very flat to prevent "sunken horse" or dips in the wing around the rivets.

One unique challenge with the Xenos is building a spar that is seven layers thick at the inboard end and so long that takes up the length of the garage and up into the living room. Working in such limited space, a wing this long requires rethinking how to build it. I couldn't use a wing cradle arrangement in my space I had to figure out how to work on the wing and came up with a my special work table that goes all the way across my garage, just in front of the cars. There are only inches of space at each end of the wing to get around it.

Another thing I've learned is that if you decide to build an airplane, build a small one first, not a big one.

Bob: What engine are you going to put in the Xenos?

Jim: I am not sure yet, but I will probably use the AeroVee which is a VW derivative. I can get the parts from Sonex and build the engine myself. I'm not so stupid to think I'm a mechanic. I have a really sharp mechanic that I will have right at my elbow while I am building it. I will find the best parts I can find to put it together.

Bob: Is there a big difference between flying a conventional tail and a "Y" tail?

Jim: It depends. Generally there is not a big difference. Bonanza's in the past had some tendency to dutch roll. But generally "Y" tails have different crosswind handling characteristics, some better than others. The Waiex has a "Y" tail and has some problems with crosswind landings. A friend in Australia who is a very experienced pilot ran off the runway with his Xenos because he didn't have enough rudder. I am going to install differential breaking to help with that.

Bob: "What differences do you find between the Vans Kit and the Xenos kit?"

Jim: I learned how much a very small error can be magnified over distance. Errors are multiplied. These wings have two skins on top, two on the leading edge and two on the bottom spanning more than 20 feet on one wing. An error that you would not even see on an RV build could be a problem on the Xenos because it is multiplied by the length of the wing.

Bob: What can you tell me about the utility and aerobatic wing tips?

Jim: The utility wing tips are made for soaring and upgrade the L/D ratio. The aerobatic tips are shorter but stronger. You could probably tear off the bigger utility wingtips with the higher G loading of aerobatic maneuvers.

Bob: Do you plan to hangar the Xenos in Olympia?

Jim: Yes, it is designed to fit in a standard hangar with the wing tips off. But that only gives me three inches from the wing to the wall. The wings have a piano hinge to attach the wing tips. It's possible that I will need to get a different hanger though. I have my finished wing in the hangar now, suspended from the ceiling. We'll see.

Bob: Do you plan on doing any long distance flying with this airplane?

Jim: No. Although the Xenos has more endurance it is much slower and will burn more gas to go the distance. I figured out one time taking a trip to California that the RV is much more efficient. I can get up high and pull the throttle back to where I am doing 150 knots burning about 6.5 gph. With the Xenos I could get up high and burn 3 gph but only make 70 knots so it would take hours longer and burn more fuel. You also have problems getting in and out of airports with these long wings. If you go to airports that have snow they have higher landing lights and taxiway lights and taxiway markers and it would be easy to whack them with these long wings. It's hard to do 90 degree turns with long wings and short taxiways. If you run into high winds, first you've got to land it, and then get it tied down.

But I do want to get some good high altitude flights at 20,000 to 30,000 feet around Mount Hood and Mount Rainer and over in the Ephrata area. Another reason I built this is, at some point, I may not be able to keep my medical, or maybe I feel like my flying skills are not quite as sharp as I think they should be. This will allow me to fly in something that is way slower and something I might finish up with. I am always adjusting my minimums. I practice and challenge myself to my very best but I will raise my minimums when I feel it's necessary.

On the next page is an image of a beautiful specimen of the Xenos which was built by one of Jim's friends who happens to live in Australia.

Bob Brooks

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