

# EAA Mount Rainier Chapter 326 Newsletter

Thun Field – December 2008

120

## Christmas Party

**Tuesday, December 9<sup>th</sup>, 6PM**  
**Kevin Behrent's Hangar, Thun Field**

**No gift exchange.**  
**Bring the family.**

This being a potluck and volunteer affair, there is no charge to attend. Kevin's hangar is #6, at the north end of the row of new blue hangars on the left of the entrance drive.

**Food:** The Chapter will provide ham and turkey and soft drinks. As for the potluck part, please bring: last name beginning with:

A-F (43) bring a dessert.

G-M (45) bring a favorite dish.

N-Z (38) bring a salad. No Macaroni please!

**Decorating and set up will be Sunday afternoon, Dec 7th, 3PM. Cleanup will be immediately afterward to include returning tables and chairs. That means a few trucks would be nice.**

## From the Secretary

November 11, 2008

Jeff called the meeting to order at 7 PM.

No refreshments in sight.

Treasurer Norm Pauk reported good response on dues.

At this meeting we have always voted in our new slate of officers for the next term starting in January. Not this time. We have over 100 members and no one ready to take the lead. Now what?

Arlington campsites for next July 8 – 12, Weds thru Sunday. Kevin reserved 10 in our usual location. All 10 are already taken. Prices went up. \$95 to Kevin for campsite and one armband.

Kevin discussed new jackets and pullover. You will have a final chance to confirm your order at the Christmas Party.

Jeff reported on the good news that the Washington State Appeals Court overturned the \$10.5 million judgment against Arlington and EAA for the 1999 RV-6A crash.

Ed Shadle gave an update on the North American Eagle project:

They had a good test results at El Mirage dry lake in June: A Canadian company donated a \$35,000 coverall shelter, 64 X 32 X 18. Takes all day to erect it but it's worth the trouble. Temperatures were 110 to 115 deg and that caused problems with computers and an airflow valve. They made four test runs. From 198 mph at the one-mile mark, Ed kicked in the afterburner and was doing 400 at the two-mile mark 5 sec later. The magnetic brakes worked good and the high speed chute worked good.

Biofuel was donated but it wouldn't work in the jet so they used it in their semi-truck. It cleaned the engine real good; they had to change fuel filters three times before the truck would run right.

At the Tacoma Dome Motor Sports show in November, the NAE was on display along with 250 race cars and hydros. Ed was surprised by some guy that showed up with a picture of the bird in its former life as an F-104. Another showed it taxiing alongside an SR-71. More good war stories and memorabilia for the project.

Ed and crew will be going to Edwards AFB and using Rogers dry lake for more tests. That will give them eight miles of track. According to Boeing engineers doing the computational fluid dynamics, they will be limited to 580 mph until some fairings are replaced. Oakridge national labs has donated time on their new Cray computers for CFD work. The Cray XT, called Jaguar, has a peak performance of 1.64 petaflops (quadrillion floating point operations, or calculations) per second.

Other projects:

Jim Triggs has started building a Xenos Motorglider.

Doug Hicks working on Minimax.

Paul Wescott working on RV-7 canopy.

Our monthly gatherings at the RAM for dinner will be cancelled for November and December. Be there in January.

## Xenos Motorglider

Jim Triggs

John asked me to contribute an article to the newsletter about my Xenos motorglider building project, so here goes.

I first became interested in soaring while in the Air Force in 1972. At that time I was ferrying fighter aircraft from the U.S. to South East Asia. Each trip resulted in a three-day layover in Hawaii and I began soaring at Dillingham Airfield on the North Shore of Oahu.

There are three ways to soar without power. The most common is utilizing the energy from the sun as it produces

pockets of rising air called thermals. The second is by riding the air being forced up along a ridge or hill by the wind, which is called ridge soaring. The third is called wave soaring, which again is caused by the wind cresting over a mountain or mountain range. Some locations allow you to soar using two or more methods at the same time. Everyone has their favorites.

My favorite soaring areas are:

Thermals:	South Africa
Ridge Soaring:	Hawaii
Mountain:	Swiss Alps
Mountain Wave:	Minden, Nevada

The popularity of a motorglider stems from its ability to be self-sufficient because it does not require a ground crew or a tow plane to get into the air. Once airborne it can fly under its own power until it has found the soaring condition desired. The second advantage occurs if lift has been lost and an off-field landing would otherwise be necessary. The engine may be restarted and either a climb to new lift or a return flight back home under its own power. The third, which I am very interested in, is the ability to explore mountain wave lift. Wave tows require very high "expensive" tows and often in extreme turbulence "mountain rotor". These conditions demonstrate the unique versatility of the motorglider. Being able to climb 10 to 12 thousand feet and fly until the wave is found gives a much better chance of soaring into the Flight Levels.

One of the main reasons I decided to build a motorglider was because I had finished building my RV-7 and I really missed the fun and recreation of building. I also wanted something to fly in the future that would not require an FAA medical certificate.

The criteria for selection were metal construction, side-by-side seating and aerobatic capability. Motorgliders are very few in number and very expensive. I searched for a company with a good reputation and reasonable price.

I selected the Xenos motorglider from the Sonex Company. The kit is very basic, with mainly raw materials from which parts are fabricated. Only 38 kits have been sold in ten years so very little manufacturing of parts can be justified. The drawing plans are very good, but there are no building instructions.

The Xenos has a 48 ft wingspan with its soaring wingtips and 44 ft with the aerobatic wingtips. Empty weight is 760 lbs with a gross weight of 1260 lbs. The L/D is 23 to 1 and minimum sink rate of 200 ft/min.

Two engines can be used: the Jabaru or Sonex's AeroVee. The AeroVee seems to be the most popular as it is proving to be near bullet proof and at \$6,000 very reasonably priced. Both produce 80 HP, which gives the Xenos a good climb rate, and an 80 mph cruise.

The wings are removable like all sailplanes and if the fiberglass wingtips are removed the 39 ft wingspan will just fit

into my 40 ft hanger. I do plan on building a trailer for both transportation and storage options.

I think I can complete the building process in the next six to eight years as I am otherwise employed nearly every day. I am looking forward to a very affordable flying machine that I can spend many hours continuing my quest to learn how to fly. My friend flew his motorglider over 40 hours this summer with less than 2 hours of engine run time. At 20 hours per gallon, even I will be able to fly in the future.

My ultimate goal is to break John Brick's altitude record without ever having to use an electronic ignition or for that matter an engine!

Jim Triggs,  
Student Pilot In Training

## To a Good Cause

My name is Scott Cutler and I'm a science teacher at G. W. Bush Middle School (named for a historical settler) in Tumwater, WA, and an owner/builder of a flying RV-6A. I'm also a ghost member of our chapter, attending only a few meetings a year due to various reasons all too lame to mention.

I'm developing curriculum for my enrichment science class that uses the subject of flight to teach physics and chemistry. I've acquired a grant that allows me to purchase materials that would otherwise be out of my reach for this class. I've purchased model aircraft design software to allow the students to design wings and aircraft that can be tested in our wind tunnel. I've purchased an R/C flight simulator for the kids to practice on before they fly the actual R/C aircraft I've acquired. I've also purchased E6B computers and plotters to plot out flights on sectionals and then have the students fly the course on Microsoft Flight Simulator. Of course, a flight in an actual airplane would be an option for those students wishing to participate in the EAA Young Eagles program.

My largest acquisition is the plans and builder's manual to the Pietenpol AirCamper. My goal is for my students to build/restore an AirCamper over the next couple of years.

What I'd like to ask of the members of this chapter is for you to look around your shop/garage/hanger for anything that has been sitting around gathering dust and taking up space that might help enrich this class curriculum. Items such as old instruments, wood working tools, parts and pieces that may work on an AirCamper, a propeller that the students could look at and study, or even an old engine that is no longer working that could be disassembled and reassembled (that's where I bring in the chemistry-combustion).

If you have any questions, please feel free to contact me. I'm very excited to be given this chance to combine my hobby of flight with the my love of teaching.

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## Look Who has Legs



N619KB is now standing on its own set legs thanks to the help of Marv. Could have gotten the motor on last night as well, but had to do some reconfiguring on the MT prop gov to get the control arm going in the right direction for the RV setup. We should be able to get the motor installed during tonight's work session. Without the weight of the engine and wings, it stands really tall!!

## And a Motor



N619KB now has a motor. Installing it wasn't easy due to the FADEC fuel distributor block location on the top of the engine forcing the mounting loop to installed forward the engine which resulted in the engine being installed at a pretty good angle. Marv & I had to but the airplane on its tail in order to lift and angle the motor mount at the same angle as the engine. Getting the bottom bolts in were also a real pain!! Attached are some photos.

Next step is to clean and reorganize the work area and start closing out from the tail working forward.

Kevin Behrent

## New EPA Program Could Threaten Avgas Availability EAA working to ensure current and future GA fuel supply

**October 16, 2008** — Announcements made by the Environmental Protection Agency today could further tighten the screws on our nation's general aviation fuel supply, making EAA's ongoing advocacy and work on fuel-related issues increasingly relevant and urgent.

The EPA announced a broad-sweeping program of air-quality testing and monitoring to enforce newly adopted, and considerably more stringent, standards for allowable levels of lead. This program entails EPA scrutiny of numerous industries and commercial activities involving lead emissions. As part of this effort, the EPA will direct state governments to examine whether general-aviation activity at certain airports contributes to unacceptable levels of lead in the air. The new standards lower the allowable amount of lead to one-tenth of previously accepted levels.

"We're encountering on two fronts increased pressure on the availability of fuel for piston-powered aircraft," said Earl Lawrence, EAA vice president of industry and regulatory affairs. "For those whose aircraft may operate on unleaded avgas, we've had to fight on a state-by-state basis to try to preserve a supply that does not contain ethanol or other additives not approved for aviation use. Now, with today's EPA announcements, we're also seeing the potential for restrictions on aircraft running on leaded fuel in a given area."

The EPA indicates that testing and monitoring must first reveal whether any such restrictions will become necessary. In cases where monitoring confirms that an airport region's air exceeds allowable lead limits, the respective state government will be required to resolve the issue...which could mean restrictions on aircraft operations using 100LL avgas.

"There isn't enough data to predict whether aircraft burning of 100LL in any airport region will cause lead levels to exceed the new limits there. That's why the EPA must do all this testing and monitoring first," Lawrence said.

Meanwhile, EAA continues its work not only to address immediate fuel concerns, such as promoting the availability of usable unleaded fuel and advocating against undue restrictions on leaded fuel, but also to help develop alternatives for the future.

"Innovative spirit, creativity, and industriousness are hallmarks of the EAA community. As pressure on the use of traditional aircraft fuels continues to mount, this community of dedicated enthusiasts who understand the value of general aviation will surely contribute to solutions," Lawrence said.

*The average pilot, despite the somewhat swaggering exterior, is very much capable of such feelings as love, affection, intimacy, and caring.*

*These feelings just don't involve anyone else.*

end

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