



UPDRIFT

Newsletter of EAA106
Greater Boston Chapter

We Build
Airplanes

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OCTOBER MEETING

Saturday the 4th, High Noon.

At the EAA 106 Hanger

Rain date 5th

Ernie Holms will have his GP4 at the hangar as the main program.

The meeting will start at 12 noon, and we will have the grill grilling.

The Dawn Patrol will be decided at the meeting.

Election Notice

Too many tenants of the Hanger & Tie-downs are Officers of the Chapter, therefore we will be electing 'Non-Tenant Officers' to act on the "Rate Setting Committee" for the Hanger fees at this meeting.

(See page 7 for more information)

Proposed Motion to Fund Hanger Account

Joel has proposed the following motion to be decided at the October Business Meeting, Oct 4th.

"Proposed: That we LEND to the 'Hanger Account' the remainder of the proceeds not donated to Angel Flight East and Air Life Line from the B-17 sponsorship to PAYOFF the Electric Transformer and Hook-up.

A report of the September Meeting

Gary Newsted's RV-9E

For our September 2003 chapter meeting at our LWM hanger, Gary Newsted flew his newly built RV-9 to give us a terrific "show and tell" in-depth discussion about this great airplane that cruises at 175 kts and stalls at 45 kts (how's that for the new Roncz airfoil?). Most of this article has been written for us by Gary.



Gary Newsted with a perpetual RV-grin !

You've heard of the Vans RV-9 and RV-9A, but what's an RV-9E? Well Van hasn't exactly endorsed the designation, but the people at Eggenfellner Aircraft Inc. and their growing number of customers know that "E" stands for Eggenfellner. The "E-motor" as it has become known, starts out as a stock fuel-injected Subaru engine, but is outfitted with a sturdy gear-driven Prop-Speed-Reduction-Unit (PSRU), redundant fuel and electrical systems, and a slick mounting system designed specifically for the Vans series of RV or the GlaStar airframes. Vans Aircraft actually provides a special finishing kit option for Eggenfellner users due to their popularity.

Over the years, the Subaru has become a mainstay of automotive conversions, or as Gary prefers to call them "competitive" engines. Jan Eggenfellner has been refining the entire firewall-forward package for many years, with the help of a few prolific engineers and a thriving on-line newsgroup. Currently 300 engine packages have been sold to RV builders for the full line of Vans airframes and 60 more to Glastar builders. Approximately 50 of these are already flying, some pushing 600 hours so far. Even the insurance industry is starting to take notice of this engine package and will offer relatively good rates. For this reason, Eggenfellner does not sell individual engine components, only entire packages.

Gary presented his red, white, blue, and checkered, RV-9E at our EAA Chapter 106 September meeting at KLWM to a very interested and attentive audience.



Only a portion of about 30 members and prospective chapter members listening to Gary.

The paint design and quality was outstanding, and finished off in just three days in his driveway! Gary is really accomplished - and rightly so!



Jon Engvall gave everything a close inspection and enthusiastic approval.

His aircraft was kit number 59, completed at home in three and a half years. His first flight occurred from Nashua a mere twelve days prior to Oshkosh. In those twelve days Gary logged 40 hours of, as he puts it, “flawless” flight, then proceeded directly to Oshkosh to proudly display his plane in the Eggenfellner tent, along with seven other customers. Eggenfellner is in an enviable position of having his customers do most of his marketing for free.

As Gary says, “the aircraft is so smooth and quiet that it draws a crowd wherever I go, and I end up telling people all about the engine”.



Case in point, our Chapter meeting. To simplify showing off his engine, he has created a slick “gull wing” upper cowl that opens with a few CamLocs instead of the usual series of piano hinges.



Mark Saklad looked very closely at the clean Eggenfellner engine.

A large contributing factor to the aircraft's sound, or lack thereof, is a SuperTrapp muffler tucked tightly below and behind the cowl exit. Gary researched mufflers and found the ideal solution. SuperTrapp, www.supertrappind.com offers a full line of streamlined stainless steel and carbon-fiber mufflers with a unique, tunable, resonator consisting of a series of diffuser disks. The more disks you add, the less backpressure and greater noise level. Removing disks increases backpressure but reduces noise. The perfect balance for the Subaru turned out to be twelve disks. This reduced the decibels by nearly 50% at a cost of only 25 RPM on static runup. Visit the SuperTrapp web site for more details on how this unique muffler works.



SuperTrapp exhaust reduced noise 50% with only 25 RPM reduction.

Gary said that after he installed the SuperTrapp exhaust noise suppressor, he can easily converse with his passenger during cruise flight without using headphones.

Gary's engine is a 165hp, 2.5L, four-cylinder model. Actual usable horsepower is estimated around 150hp due to normal operation below the peak curve RPM. A supercharger, or "Soobercharger" as Eggenfellner calls it, is available. The supercharger is designed to provide a "normalizing" boost to maintain 33" manifold pressure and the full 165hp from sea level to the aircrafts service ceiling. It has been test flown to 18000 feet with climb rate to spare, and a top speed of 208mph (RV-6A). Contrast this to a normally aspirated engine, which loses about 60 percent of its horsepower at 8000 feet.

Eggenfellner has recently announced a 200hp, 6 cylinder model designed for the RV-10 and also being fitted into a Lancair.

You can learn more about the E-motor at: www.eggenfellneraircraft.com

While there, click on the "Installation" link to view the very thorough on-line installation manual, written by Gary.



Vinny Messina, with 92 years of wisdom, gives it his approval.

Gary's RV also sports a Blue Mountain EFIS (Electronic Flight Instrumentation System). Gary was one of the first customers for this product.



Blue Mountain EFIS avionics with GPS, virtual terrain, moving charts, engine monitoring, and navigation which is mounted on a swing-out hinge for easy access.

Although it has taken a long time to work the kinks out of the system, he reports that it is a “total joy to fly behind”, with it’s GPS, virtual terrain database, moving charts, and large flat-panel display. The EFIS provides the flight functions, engine monitoring, and navigation system integrated with his Apollo stack. You can learn more about this EFIS at: www.bluemountainavionics.com



One of our newest members, Dick Gersh, with that RV-grin. One of many who wanted to try out the cockpit !

Gary’s aircraft is accompanied by a very thorough web site of his own, which chronicles the entire construction process from initial kit decisions to first flight. He says he has a lot more to post, but the enthusiasm of actually flying his plane has resulted in an understandable delay for his plans to finish posting the material “while the flying weather is good”.

You can check out his web site at: www.jlc.net/~fcs/Builders_Journal.htm or get there via the “Builders Links” section of Vans Aircraft Inc. web site at: www.vansaircraft.com

Gary, EAA Chapter-106 of Greater Boston extends our many thanks for a great and engaging presentation to our members and many prospective members who took great interest in you and your plane. With our best regards, we hope that you'll come to re-visit our chapter meetings often for we are proud of your accomplishments and enjoyment with aviation.

Rental Rates and Fees History of changes

1. Workshop fees will be set by a majority vote of the Executive Committee.
(set to \$15/ day, or \$50/ month by E-board in 5/ 99)
 2. Hangar and tie down tenant lease rates will be set by a majority vote of the Executive Committee.
(Monthly rates set to \$60 and \$70 for tie downs, \$150 for ¼ hangar in 4/ 98)
(Monthly rates set to \$70 and \$80 for tie downs, \$160 for ¼ hangar in 12/ 00)
 3. Tenant lease rates may be reviewed each October for the following year
(starting January 1), but must be reviewed at least once every three years.
 4. If a majority of the Executive Committee are tenants of Chapter 106, then the lease rates will be reviewed and set by a Rate Committee composed of the members of the Executive Committee, plus enough additional members, elected from the Chapter Membership, so that a majority of the Rate Committee are not tenants of Chapter 106. The election of these additional members must be announced in the newsletter at least seven days prior to their election at a regular business meeting
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Flying Hood Award By Joel

This incident happened a couple weeks ago as I was on my way to work in the morning on Rte 93. I was traveling about 65 MPH. Suddenly, without warning the hood popped open and the safety catch failed. The hood just flipped up and tore completely off the car, smashing the windshield as it went by. It was rush hour, I was in the middle lane, and there were cars all around me. I could just see that hood going through the windshield of the car behind me, causing him to lose control, followed shortly by a chain reaction of accidents maxing out my liability insurance. But the hood just sailed up over all the cars, and landed at the side of the road, and nobody but me even got a scratch. I quickly made my way to the side of the road. The car next to me readily gave me the right of way. (The look on the driver's face was priceless.) I retrieved my hood, freed the safety catch, re-installed the hood, and I was on my way in no time. The hood was a little worse for wear however. Last month Penny made a big deal about the flying picnic table award. I think my hood is far more deserving of an award. It climbed out of ground effect, flew more than three times as far, did two and half loops, and made a nice landing in the breakdown lane (also inverted) while avoiding all cars and other obstacles in the process.

Late corrections to Alan Cate's article on Gary's RV9

Hi Alan, Thanks for adding the excellent photos and commentary to the RV article.

If it's not too late, I would like to correct a couple of points.

First, the plane will cruise at 175 miles-per-hour, not knots. Likewise, stall is 45 mph, not knots.

Also, the coolant is called "NPG" not NGL. NPG stands for Non-aqueous Propylene Glycol and is available through www.evanscooling.com where you will find some excellent technical articles on it.

Regards, Gary

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This **NEWSLETTER** is for **COMMUNICATION** and **ENLIGHTENMENT**, but should **not** be relied upon as absolutely correct in content.

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DIRECTIONS TO EAA 106 HANGER

From the South: Take Rte 128 (I95) to I93 Northbound or Rte 28 Northbound. Follow either to Rte 125. Go North on Rte 125 to Airport, (11 miles+/-) Continue past airport entrance until Holt Rd. (Rte 125 becomes 4 lane) Turn left onto Holt Rd Go to end. Turn Right. Take next Left at Locked Gate. Use the keypad, or call the Hanger (978-638-8751).

From West: Take I495 to exit 42. Take Rte 114 South, to Rte 133. Turn left on Rte 133 East. Go to junction with Rte 125 North. Continue on past airport to Holt Rd. Turn Left on Holt, go to the Stop Sign, turn right. Take next Left at Locked Gate. Either use keypad, or call the hanger.

From NorthEast: Take I495 to Exit 48. Take Industrial Ave to Rte 125. Turn Left on Rte 125 Follow Rte 125 to Holt Rd. (goodly distance) Turn right onto Holt Rd. Turn right at Stop Sign Turn Left on rd with locked gate. Use the keypad, or call the hanger.

From the Air: Fly to LWM. Land, taxi to hanger.