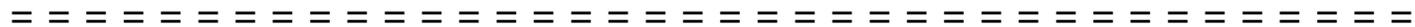
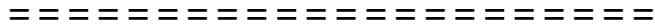


The Newsletter of the Home Wing of Van's Air Force; Builders and Fliers of Van's RV Series Aircraft



SEPTEMBER MEETING

The September meeting was held at Flight Dynamics in Tigard. Thanks to Mike & Dean Psiropoulos for arranging a tour and snacks for us. We went through several areas of the company...looking at their shop and research areas. They showed us a couple of their heads-up displays, and true to RV builder form, no one was daunted as much by the \$250K price tag as by the 125 pounds. We had the chance to see an RV being built there by one of the guys (sorry, I don't remember the name) on his free time. He had about the space of a 3/4 car garage (if that). We held the regular meeting in the lunchroom. Kevin Lane told us about his experiences with buying a used engine. Several people shared their Oshkosh experiences. Etc...We all had a great evening.



SUBSCRIPTIONS DUE

Look at the date under your address on the cover. THAT IS THE DATE YOUR \$10 IS DUE. Use the form at the back of this newsletter to subscribe or renew. If you are paid up but the date doesn't reflect this, please give the Editors a call so they can correct it.

EVENTS CALENDAR

EAA Chapter 105 Monthly Meeting

Thursday, October 16th (third Thursday of every month), 7:00 pm at the EAA 105 Hangar/Clubhouse, Twin Oaks Airpark.

EAA Chapter 105 "Breakfast at the Aileron Cafe"

Saturday, November 1st (first Saturday of every month) at Twin Oaks Airpark, 8:00 am.

**MEETING NOTICE - Frank Justice, Meeting Coordinator
(503) 590-3991 Frank_K_Justice@ccm.ssd.intel.com**

Place: Jerry Van Grunsven's House
33770 NW Bagley Rd, Hillsboro
Date: October 9th (2nd Thursday of the month)
Time: 7:00 pm

The next meeting of the Portland Area RV Builders Group will be at Jerry Van Grunsven's place out at the Olinger Air Strip. Stan just completed and painted his RV-6 project. He used the club paint sprayer, so we'll get to hear the whole story on that.

The easiest way to get there if you are not familiar with the area is to start at Glencoe Road. From Hillsboro downtown take First Ave. heading North; this turns into Glencoe Road. Follow it to where it takes a full 90 degree bend to the left then another to the right; make the left part of the turn but not the turn back. This leaves you traveling West on Wren Road.

If you will be going out highway 26 take the North Plains exit and turn left at the light; you are now on Glencoe going South. Go about two miles to where the road forks; one goes straight and the main road makes a shallow 90 degree turn to the left. Go straight instead of turning, continue on to the stop sign and turn right on Wren Road.

Go 1/2 mile west on Wren Road to Leisy Road and turn left. Go 1/2 mile South and turn right on Bagley which is the road paralleling the airstrip. This road is very rough. Go to the last house on the left.

Parking is very limited here so carpool if you possibly can. There will be signs or someone directing you. Definitely do not park on both sides of the road.

FROM THE "BIG MESS"*by Kathy Hall, Co-Editor*

Greetings everyone! Well, the plane is moving right along slowly but surely. As Jerald puts it, "it looks like a dead duck." I prefer to tell people it's simulating a roll! In other words we put the wings on the fuselage in order to drill the gearleg mounts, so it's sitting upside down with it's wings spread out and it's feet sticking straight up in the air. Thanks to Mike Wilson for coming over and helping put the extremely heavy wings on. Now to get them back off again...

Last month, I mentioned that I was ready to take flying lessons. I still am (and I got some interest from others as well), and my busy/procrastinating self is still getting there. I'll be attending the 99's meeting this month with Marcy Lange to talk to them about instructors, etc.

But I better get on it, because I'm happy to announce that we're having another little riveter (ie baby) in May. Aye yi yi!!!!!!!

FINDING THAT ENGINE*by Brian Moenterich*

My budget did not include the cost of a new engine - nor did it include the cost of buying a runout and overhauling it. I decided to look for a mid-to-³/_i time engine I could bolt on & fly for a few years while I saved up enough to re-build it - sound familiar? I started subscribing to Trade a Plane and reading the classified ads in the paper. I was very reluctant to buy one through Trade a Plane - why would anyone sell a perfectly good mid-time engine? I heard about one which had been overhauled and stored (at a good price and close to home). I called the seller & he said someone had made an offer (sight unseen) on it & was coming up to look at it on Saturday. Tony Hoffman (an A&P) & I went to see it anyway (in case the original offer changed his mind). Tony said it was a good deal and I should buy it. I told the seller I wanted it - but the person who had made the first offer got it. Oh well....

Later on I was on a business trip in Arkansas and an aircraft salvage yard (Arkansas Airframe) was not too big of a detour. I saw a 1974 Piper Warrior which had been damaged in a wind storm in March (it was now June). The cowling was off, the engine was still on the airframe, and one end of the prop was bent (when the

A/C was up-ended). The engine was not running when it had been damaged. As Warriors are low wing type, the engine had a mechanical fuel pump, an oil filter, and all accessories. I looked at its logbook. It was a 150 HP O-320-E3H with 1560 TT since new (an E3H is an E3D with Lycoming's retrofit ignition kit installed on it.). It's last annual was the previous July and the compression was good in all cylinders. An auto fuel STC had been issued for it. The "E" series engines are wide deck (what does that mean?) and can be converted to 160 HP by using higher compression pistons. Nothing major had been done to the engine. Arkansas Airframe wanted \$7,500 for it. I went home to think about it and a few days later decided to buy it. It bolted onto the air-frame (an RV-6A) with absolutely no modifications to any part.

I ended up replacing the carb (at no cost) by swapping mine for one which was headed back to the factory for an overhaul. I also removed the accessory case and inspected the oil pump. I had the sintered gear which had to be replaced. I bought the Lycoming nitrided/carborized steel gear set (\$300) and installed them and had EC NW drill the oil galley hole in the case and magnetic particle inspect the oil pump drive shaft (\$60). I also had an A&P disassemble and inspect my (Bendix) mags (that's another story). After being stored in my garage and hangar for more than a year, I tried to start it. It started on the second turn of the crank - oil pressure was good and it sounded soooo sweet. It would not run on the right mag however. I re-timed the mag (the A&P did not correctly have the mark set on the nylon gear in the mag) and now runs good on either mag. Later I did a compression test and the lowest cylinder was 77/80.

THE TOOLAHOLIC*by Randall Henderson*

Maybe I just haven't learned how to keep from riveting myself into a corner, but I honestly don't know how I would've gotten as far as I have without one of these gems. This tool has helped me out of more jams than I care to count.

Actually, I only recently acquired an actual close quarters right angle drill. Before that, I used a snake drill attachment, which I got from Avery Tools. A straight angle drill attachment would be cheaper and probably almost as useful. The problem with both of these options is that you need two hands to use them, which means that you can't, for example, hold a block of wood against the back side of the work while you're drilling. A right angle drill is much easier to use by yourself. But at

THE TOOLAHOLIC...cont'd

\$275 and up, the things are pretty dear, so I never could quite bring myself to get one. Until, that is, I attended Oshkosh 1997, where I found a used Chicago Pneumatic in good shape for \$130 at the fly market (nyah nyah nyah nyah nyah!)

The fly markets and used equipment vendors aren't a bad way to go for a lot of these more expensive tools, but be sure you know what to look for. With drills for example, you should stick a bit in the chuck and wiggle it to make sure the bearings are good, and run it to make sure there's no wobble.

A nifty accessory is a 1/4" collet (Avery has them), which will allow you to chuck a Unibit in there — REALLY handy when it comes time to run wires and you need to drill larger holes through bulkheads close to flanges and skins.

Yes they are spendy, even used, but when you need one, you really need one! And you can always justify it by using the old "I can sell it when I'm done" ploy. (Never mind that you probably never will.)

You can get high quality new ones from:

- Avery Tools, 800-652-8379, averytools@aol.com
- Cleveland Tools, 800-368-1822,
<http://www.clevelandt.oool.com>

Or for used, try"

- Harry Paine, 805-481-2524, Hpair@thegrid.net.
- Airparts, Inc. 913-831-1780
- The Yard, 800-888-8991
- Texas Air Tool, 21 0-675-6568
- Trade-a-plane, fly markets, etc.

FAA INSPECTION REPORT FOR N381S5

by Brian Moenterich

On Tuesday, September 17th, Jerry Baas from the FAA visited my hangar to inspect my RV-6A. It has been 4 years to the month since I picked up my tail kit & plans. I had mailed my request for this inspection with all required paperwork (including weight & balance report) to the FAA on August 8th. The intervening time wasn't all

wasted though. I stayed busy working on those endless details that shouldn't take as long as they actually do. Don Wentz had come over a few weeks previously and also did an inspection. I went around looking at everything and surprised myself by finding a loose bolt on my control linkage and a missing cotter pin on an aileron hinge. Kevin Lane also looked at the plane and found a bolt in the tail which didn't have a nut on it and a control linkage bolt which had an improperly installed washer. He also noticed my throttle linkage rod end wasn't able to freely rotate. You just can't have too many people look at your airplane.

Jerry Baas went strictly by the book. He got out his inspection checklist and went down it. We looked over my weight and balance report. It was obvious had not reviewed it before his arrival (probably normal). He looked at my registration certificate and asked who had done my AD search and final inspection. Inside the cockpit, he giggered me on instrument markings (or lack thereof)- My ASI was early salvage yard & was marked for the A/C it came out of. I had not marked the oil pressure or oil temperature gauges. Also, my tach had a red line at 2700 RPM and my metal Sensenich prop is limited to 2600 RPM. I had not calibrated my fuel gauge nor had I swung the compass. I indicated there was no compass rose at Troutdale airport which made it difficult to prepare a compass correction card. Jerry seemed to accept this. I had figured on determining the proper Instrument markings during the test flight stage & then getting them marked all at once. He moved the control stick from stop to stop and operated the engine controls.

Outside the cockpit, Jerry looked at the registration data plate and all control surface bolts except the aileron bell cranks. He took a while in the engine compartment and had me operate the engine controls. He looked closely at the prop bolts. Engine cooling fins, spark plug connections, and other stuff between the firewall & back of the engine.

Jerry asked me about my desired test flight area. I had requested in my letter a box about 100 miles square. That wasn't ok. It looks like a 25-mile radius is what I'll get. I did not get The Certificate. He offered to come back later that day if I could mark the instruments & calibrate the fuel gauge. I couldn't do it that quickly as I had something else I had to do in the afternoon. He said he would try to make it back in the next two days since the weekend weather forecast looked good. He told me my airplane was "better than average" and to call him when the gauges were marked and calibrated. I marked all the gauges with colored tape and calibrated the fuel gauges. Boy, are those fuel gauges misleading! Mine registered ¼ with 2 gallons, ½ with 4 gallons, ¾ with 9 gallons, and full with anything more than 13 gallons in the tank.

WANTED *Ads are FREE*

Glstar Builder looking to purchase Sheet Metal Tools. Gary Clay 503-653-6897. 10/97

Desperately seeking workspace for RV project. Please call Don Wert at 503-295-6455. 8/97

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THE TOOL EXCHANGE

The club Toolmeister is Brent Ohlgren, 288-8197. Let him know if you have jigs, tools, shop space, etc. to loan, exchange, or otherwise provide -- at NO COST - or if you are looking for something specific to borrow. And whether your item is listed here or not, go ahead and bring it to the meeting.

Home Wing Tools available: HVLP Paint Sprayer, Hole template for instrument panel, Wire crimping tool and die, Brake lining rivet set tool, and Tune-up and Annual Equipment (Compression check, Mag timing light, Timing dial, Mag adjustment tool, Plug gapper, high voltage cable tester, and Plug vibrator cleaner). Brent Ohlgren 288-8197.

Packaging for a Lycoming Engine - cast styrofoam case and shipping stand. Ken Scott 503-648-1594.

Cutting wheel mandrel, custom made by Stan VanGrunsven to use for cutting your canopy. Knob on the outside makes it much easier to hold steady and not screw up that expensive piece of Plexiglas. WHO HAS THIS? Call Brent Ohlgren 288-8197.

Joggle tool. Rion Bourgeois 646-8763.

PropTach (optical electronic tach, use to calibrate your tachometer). Butch Walters 360-636-2483.

Engine Stand. Don Wentz 503-696-7185.

Engine Hoist. Norm Rainey 360-256-6192.

Precision chemical scale, for measuring pro-seal. Brent Anderson 646-6380.

Surveyor's transit level -- handy way to level wing and fuselage jigs. Bill Kenny 590-8011.

Back Riveting Contraption - large, counterweighted bucking bar and suspension system, and offset back rivet sets. (See "Back Riveting Wing Skins, December 1994 issue). Bob Neuner 771-6361.

Lead crucible with electric heating element for melting lead for the elevator counterweights. Doug Stenger 324-6993. Table

saw taper jig, for tapering wing spar flange strips. Carl Weston 649-8830.

FOR SALE/ RENT Ads are *FREE*.

FYI. Prop inc is having a 30% off summer sale on all RV series propellers. Sale price only \$675. For more info call 541-265-3032. Whirl Wind Propellers Corp. 8/97

New MA-4-5 carburetor, Model A1 0-3878, removed from new Lye O-360, \$600. New engine driven fuel pump, Model LW 15472, 4-6 psi, \$80. Dan Benua 503-297-4045. 8/97

I was just in Costco Beaverton the other day and saw that they were selling a Delta bench top bandsaw for \$110. This looks like a really good deal. This is exactly the same saw I've used throughout most of my project (after I returned the %\$#@! Sears one). It's a 10" throat, single speed. The regular price in HW stores is around \$179. Since it's single speed, it's not much good for steel, but works fine for aluminum. Randall Henderson. 8/97

RV-4 tail and wings. I have made the decision to sell my RV-4 project to start the RV-8. The tail is finished except for the fiberglass. I assembled the spar from the kit. James Baker 541-884-5900 bakerv4@kfalls.net 8/97

O-360-B1A 180 hp, overhauled by A&P-IA and Premier in Troutdale. Conical mounts, constant speed capable, new fuel pump, new Slick mags (AD), new oil pump gears (AD). Engine looks great. O-SMOH. Includes starter, alternator, MA4-5 carburetor. Everything signed off and yellow tagged. \$15,250. Also have IO-360 200 hp engine O-SMOH. Same quality workmanship, out of Mooney. Call Jim at (503) 637-6621 or email at RV6Jim@juno.com. 5/97

Duckworks Landing Lights. Retro-fittable, light, easy installation. Kits start at \$69 (discount for Ptd RVators). Don Wentz 503-696-71 85.

"Home Wing" Newsletter Subscription/Renewal

Please fill out and mail to **Jerald & Kathy Hall, 32034 J.P. West Rd., Scappoose, OR 97056-2600**, along with \$10 for renewals or new subscriptions. Please make checks payable to Kathy Hall. If you are renewing, you only need to give your name, date, payment method, and any other information that has changed. Use this form for address changes too.

Name _____ Spouse's Name _____
 Address _____ Home Phone _____
 City, State, Zip_ _____ Work Phone _____

Pmt(\$10/yr) Check _ Cash _ Info change only _ E-mail Address .

Project (RV-3, 4, 6, 6A, 8) _____ Comments?

Progress:

Tail	In Progress	Finished
Wings	In Progress	Finished
Fuselage	In Progress	Finished
Finish	In Progress	Finished (i.e. flying)