

# HOME WING



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

JULY 1998  
Issue 98.7

## Editor's Hangar

Well, I've got good news and bad news. The good news is that I'm employed again and therefore be able to continue to fund my RV-8 project. The bad news is that I can no longer get up every morning, make the tough selection of which t-shirt to wear, grab a large cup of coffee and a pop tart, and head into the garage for a full day of building. Bummer.

For those of you who don't know I just went through a job change and had about two months of off time. The first month I was too paranoid about finding something by the end of the summer and spent all day on the phone networking. About a month into it I started to develop some solid possibilities and began to relax a bit. Then I signed a deal and built in a two week delay until I started... heaven! I worked all day every day on the airplane.

Now I'm back to work and haven't had time to even look at the thing all week. Saturday is consumed with this newsletter and finishing some things at the office which means I will probably get to finish my flaps tomorrow on Sunday. Oh well, I guess we can all dream about having BOTH the time and money.

Summer's here and this the time of all the events. We've just finished the Home Wing fly-in (a spectacular success!) with both Arlington and Oshkosh coming up. Have fun!

Hope you enjoy this issue, and thanks again to all the contributors.

...Randy Lervold

## The Seventh Annual Northwest RV-Fly-In

Well, the weather was perfect, and we had a great RV fly-in at Scappoose this year!

I don't have the exact count but it was very close to 60 RVs, including one customer-built RV-8 (I believe it was Dick Colliander of Boise, ID.) Mike Seager was there with the RV-6 "trainer", and spent most of the day up in the air, evidently doing flight instruction and demo rides. The factory RV-8A, RV-9, and RV-6T were all there as well.

The Blackjack Squadron flew TWELVE RVs down from Puget Sound, and did some perfect formation passes over the field before peeling off one by one overhead to come in and land. What a sight!



The t-shirts were a big hit (artwork below, on ash gray shirt), — too big in fact, they sold out very early. But if you didn't get one, you are in luck, as we will be doing another run.

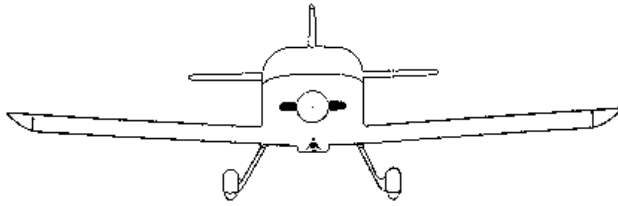
If you want a shirt, just send email to [randall@edt.com](mailto:randall@edt.com) and let me know how many and what sizes, and I'll send you a confirmation and payment details. Price will be \$14 plus shipping (\$2.00 for 1-2 shirts, \$3.00 for 3-5). Or if you plan to attend the next Home Wing meeting, skip the shipping, and just send me email to reserve the shirts and I'll bring them to the meeting.

Several Young Eagles rides were given from various RVers. Dennis Jackson was spotted going up with one, and Don Wentz with another, and I'm sure there were several more.

Janet Wentz and the kids from church did a great job on the food as usual. Other than that, it was just a nice, casual, no-frills RV flying, watching, and BSing event. Just the way we like em.

Thanks everyone for a great fly-in!

...Randall Henderson



## Calendar

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### Meeting coordinator:

Frank Justice, 503-590-3991,  
frank\_k\_justice@ccm.ssd.intel.com.

### MONTHLY MEETING:

2nd Thursday of every month at various locations, 7:00 pm.

### This month: 7/9/98

The next meeting of the Home Wing RV Builders' Group will be a fly-in to Independence Airport on Thursday, June 9th at 7:00. We will join the meeting of the Salem-Independence EAA chapter as we have done several times in the past, and there will also be an RV-8 project in advanced stages to see. After landing at Independence, go to the row of hangars just north of the restaurant and look for the EAA group.

Members are encouraged to arrange air-planes or cars together.

Remember, the August meeting will be held at Pacific Coast Avionics at the Aurora airport on August 13th.



## June Meeting Recap

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The May meeting was held at Bob Haan's house, the site of his RV-6A project. Following are some highlights:

- Everyone got an up-close-and-personal look at Bob's project and his impeccable garage/hanagar/shop.
- Don Wentz reviewed details for the upcoming fly-in.
- A motion was made and approved to buy a large crimper from Steve (sorry, forgot his last name) for the club. Steve, please contact me so we can arrange it.
- Frank Justice gave us a recap of his RV trip to Alaska... sounded pretty rugged! He promises us an article soon with the details.

Thanks very much to Bob and his wife Sherry for their hospitality!

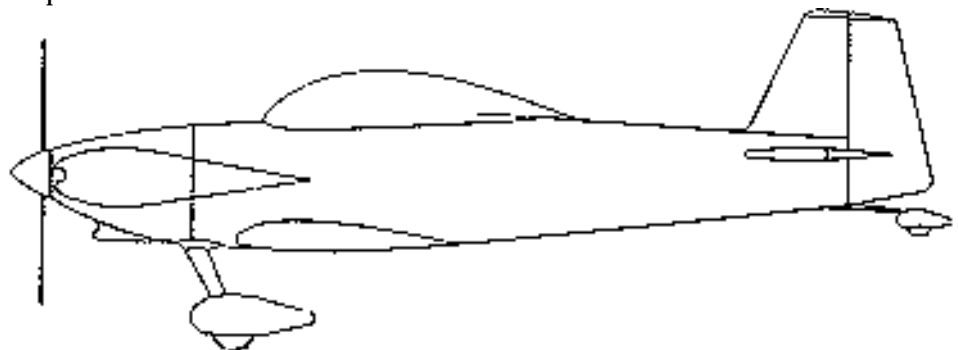
## EAA CHAPTER 902 Fly-In:

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E.A.A. 902 will help out with the O.P.A. Pancake Breakfast at Mulino on July 18 and 19 and then add its own agenda featuring a rib barbeque on Saturday. While some details are still in progress, Saturday will include Young Eagle flights, and Aircraft judging, on the airport camping and lots of hanger talk. Sunday will include more young eagle flights and also a brief worship service.

We hope this will become an annual event. Other things being talked about are a fly-out for lunch and a display of some home builds in progress (or at least parts). The chapter just acquired a Christavia project, for example.

For further info contact Ed Downs chapter Pres. at [Skyfarer@aol.com](mailto:Skyfarer@aol.com)



### EAA CHAPTER 105 Pancake Breakfast:

First Saturday of every month at Twin Oaks Airpark, 8:00 am, \$4.00 (always lot's of RVs to look at too!)

**This month: 7/4/98** (yes, a holiday breakfast this time)

### EAA CHAPTER 105 Monthly Meeting:

Third Thursday of every month at the EAA 105 hangar/club-house, Twin Oaks Airpark, 7:00 pm

**This month: 7/16/98**

### What would I do different on my 'next' RV?

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by Don Wentz

Our new editor came-up with some good topics for possible articles, and I've been thinking of something like this for awhile, so here we go.

This will not be in any specific order of significance, just as I think of them. It will also be a continuing theme, spanning several newsletters. My RV now has about 500 hrs on it, so I feel somewhat experienced in the post-building area and willing to share some ideas.

I think the best advice I could give would be to NOT try and hit a specific completion date. I had a sabbatical (2 month vacation) scheduled for June/July of 94, and felt I could be finished by then. Due to 'whatever', as I entered May, I wasn't done yet. This caused us to rush the painting and a few last minute things, which reduced the quality of some of these items. I did get the thing flying 3 weeks into this vacation and had a ball flying it almost every day, but ever since I have been 'fixing' or 're-doing' some of those items that I rushed.

Conversely, I have seen other builders who had hopes of 'flying this year' but when they realized that it was not going to happen (without a hurculean effort), they have backed-off, taken their time, and proceeded with the project, resulting in continued high quality workmanship and good thought processes. I admire that restraint, and know that these projects are going to be fine additions to the RV family.

**Cowl problems.** I have had 2 instances of cracking or separation of the air scoop on my -6. Both were caused by use of a low-tech epoxy to bond 2 polyester pieces together. Be sure that you either use Polyester resin or one of the high-tech resins to do the cowl work (check with the suppliers) on the old-style polyester cowls and other parts. I re-did the cowl with polyester and have had no problems in that area since (2 years).

There are also some problem areas with the hinge pins on the cowls. For the most part, I like the hinges for clean looking, quick methods of attaching the cowl to the airframe. However, at the base of the firewall on either side of the air outlet area, many builders have had problems with the pins breaking-out. At their recommendation I used countersunk screws in this area with good results. One caveat: some builders have installed TOO MANY screws here. Remember that removing screws is time consuming, especially under the airframe. 3 or 4 at most per side are plenty.

The other area that I would use screws instead of hinges is the front center of the cowl just aft of the prop. I had problems with the hinges breaking, the pins being difficult to remove, and the pins working against the baffles and digging-in to them. I would recommend using 2 to 3 screws per side here, instead of hinges. In all locations on my fiberglass parts (excepting the spinner) where I used countersunk screws, I machine countersunk the fiberglass, just enough that the screws

fit flush without using the special countersunk washers. I have never had a problem with a screw pulling thru using this method, and prefer it from an aesthetic point of view. Your call I guess.

...The Duck

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*Most of you will probably remember the story by Ken Scott from the RVator about his -6 getting crushed by a car which crashed through his hangar. Following is Ken's recount of getting it back into the air*

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### Flying Again!

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by Ken Scott

In August, 1996, I cranked up my RV-6 and headed south to see The Violinist. She was playing in the Peter Britt Music Festival in Jacksonville, OR, so I dialed up Medford on the Loran and set sail. The weather was fine, the airplane ran great at 10,500' and I made Medford in an hour and fifteen minutes. My friend Butch Milani helped me put my airplane in his hangar. I patted it on the cowl and headed for J-ville.

Two hours later the airplane was a crumpled wreck.

How can an airplane be destroyed when it is sitting in a locked hangar? Easy. Take one '71 Chevy Impala, and leave it idling on the taxiway. Let it "slip into reverse" and sit back and watch the fun. Aluminum hangar doors aren't much fun when 3500 lbs. of mediocre American iron comes calling. The car punched its way into the hangar, hit the airplane on the intake scoop and drove it backwards and wrapped it around a 300 lb. steel desk. It kept pushing until both the airplane and the desk were driven through the rear hangar wall.

Butch's exact words when he called to tell me were "Ken, I don't think your airplane will ever fly again..." When I got there, it was easy to see why he said that. A survey of the damage showed: cowl smashed, spinner cracked and split, prop gouged, landing gear and wheel fairings wasted, both ailerons shredded, both wing tips mangled, the aft fuselage crumpled and every tail surface destroyed. What a mess.

Three weeks later, with the generous help of Steve Harris and his Suburban, towing Bill Kenny's trailer (I am fortunate in my friends) the disassembled wreckage was back in my hangar at Hillsboro. It stayed there for a couple months. Every few

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days I'd go down and look at it, kick the floor and walk away. I just didn't have the heart, after so much time and effort over so many years, to start over. Finally, I asked Van to come over and look at it with me and give me a little advice.

As I saw it, I had four choices:

- Part it out, walk away with the insurance money and rely on Van's generosity when I needed or wanted to fly.
- Part it out, save the engine and other salvageable items and start over with a new airframe kit. This would be another big project, but would give me a completely new airframe for a moderate cost.
- Part it out, spend a great deal of the insurance money on a QuickBuild kit and have a new airframe much quicker, but at a considerably higher cost.
- Repair the airplane.

Van's counsel was to repair the airplane... the wing panels were not badly damaged and the "heart" of the airplane; the F-604 bulkhead and the fuselage between the firewall and F-606 was undamaged. After thinking long and hard about what I wanted in an airplane and what I wanted to spend my time on over the next few years, I decided to follow his advice.

I decided to spend some on an engine overhaul... figuring that I would never have a combination of a dead airframe, good core and insurance cash again. I thought about overhauling it myself, but I know a lot more about fixing airframes than I do about overhauling engines, and the repair would go much faster if two things were happening at once. Eustace Bowhay (known for having an RV-6 on floats) made a lot of sense when he said, "what would you rather fly behind? An engine overhauled by a professional who has done hundreds, and does it all day, or one overhauled by a guy who has never done it before and is sandwiching the job in between a full time job and about three concerts a week?" Now, Eustace has about 26,000 flight hours, much of it IFR or at night over the wild country of Canada. I listen to people like that.

So The Violinist and I stuffed the Lycoming in the back of the Jeep and drove it up to Salmon Arm, British Columbia, where Eustace Bowhay took it and delivered it to Kamloops. Kamloops is the home of Bart LaLonde and Progressive Air. Eustace had recommended Bart in the strongest terms... and as usual, he was right.

While Bart was doing his thing, Steve Harris, who has done far more work on my airplane than I have done on his, showed up again with a truck and trailer. This time we hauled the fuselage over to my house and tucked it into my single car garage. I had the interesting experience of running a die grinder completely around my fuselage just in front of the F-607 bulkhead. Everything that fell off, I kicked out into the driveway.

I drilled off all the fuselage skins up to the back of the baggage compartment, but left the longerons sticking out. The only thing I salvaged from the aft fuselage was the tailspring, tailspring mount, and the position light, which had somehow escaped unscathed. It took about three weeks of evening work to strip down the fuselage to the point where I could think about building it back up.

I built a partial fuselage jig, inverted the truncated fuselage, windshield and all, onto it, and built a new aft fuselage,

just the way the first one was built. I used an extended shoulder harness cable anchor as a longeron splice. This part of the job went fairly quickly, as I had a pretty good idea what I was doing. Been there.

When Van decided to market the pre-punched tail kit, the first one was delivered to the prototype shop, where it was completely assembled to assure that all the parts really fit. They did, but what was Van going to do with a complete empennage...he wasn't building any RV-6s. It sat in the mezzanine gathering dust until I made him an offer he couldn't refuse. If you feel inclined to admire the workmanship in my empennage...well, it was built by Phil Duyck.

Meanwhile, Eustace and Bart showed up at the shop to take delivery of Bart's RV-8 kit and to deliver my engine. They escorted me out to the truck and whipped the tarp off my rebuilt O-320. My jaw just about hit the tailgate...Bart had chromed the induction tubes and valve covers, painted the case and generally made my old beater into a showpiece, just so he could enjoy the look on my face when I got my first look at it. I took him out to dinner that night and learned more about Lycoming engines in forty-five minutes than I ever learned from anyone.

I had planned to install a full box plenum instead of the standard baffles, change and move the oil cooler, put on an Airflow Performance injector system, install a Hobbs meter, an electronic tach, and a Electronics International Fuel Flow system. Yeah, right. When it got right down to it, I wanted a flying airplane more than I wanted a fancy one. I installed new standard baffles and left everything else alone. Well, not everything...I did convert to overhead rudder pedals in a quest for more legroom. I also found that if I cut slots in the seat back for the lap belts, a la RV-4, I could move the seat back aft another inch.

After the engine was on, Van came out with the Type S cowl, and of course I had to have one of those.... and just like the first time, fitting the cowl was one of the longer jobs. Van gave me a good price on a prototype cowl, but it needed some modifications (yours won't). The Type S is epoxy, something I had never worked with before. I found some epoxy finally, after checking half a dozen hardware stores. It mixed one-to-one, acted like cold honey, set very slowly and was generally a real pain to work with. I struggled along, slowly. Then I discovered West Systems epoxy... what a difference. It wets out glass much better, cures quicker, sands easier, and best of all comes with small pumps that mount right on the cans and give a perfect mix every time. After that things went faster.

Finally, the fuselage was back on the gear and the engine was completely hooked up... and there was even a disc player in the cockpit. It seems it is impossible to be partnered up with a professional musician and not have tunes in your airplane. There was a new spinner, spiffy new wheel pants, and new gear leg fairings. While I was working on the fuselage, I'd hired Doug Stenger to repair the damaged skin on one wing and build a new set of ailerons. I was very pleased with the results...Doug's a fine craftsman.

The first time I built the airplane, I had taken it to the airport too soon and ended up doing a lot of work in a cold,

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badly lit hanger that could have been done in my much more comfortable garage. This time I was determined to avoid making the same mistake again. Everything had been assembled at least once before I headed back to the airport. You can guess who helped with that move...Right. Steve Harris, again. I owe the guy a major favor someday.

By this time it was March, 1998 and spring flying weather was approaching fast...or so I thought. I put in a couple weeks of long evenings installing the wings, tail and controls. Finally, I looked around and there was nothing left to install.

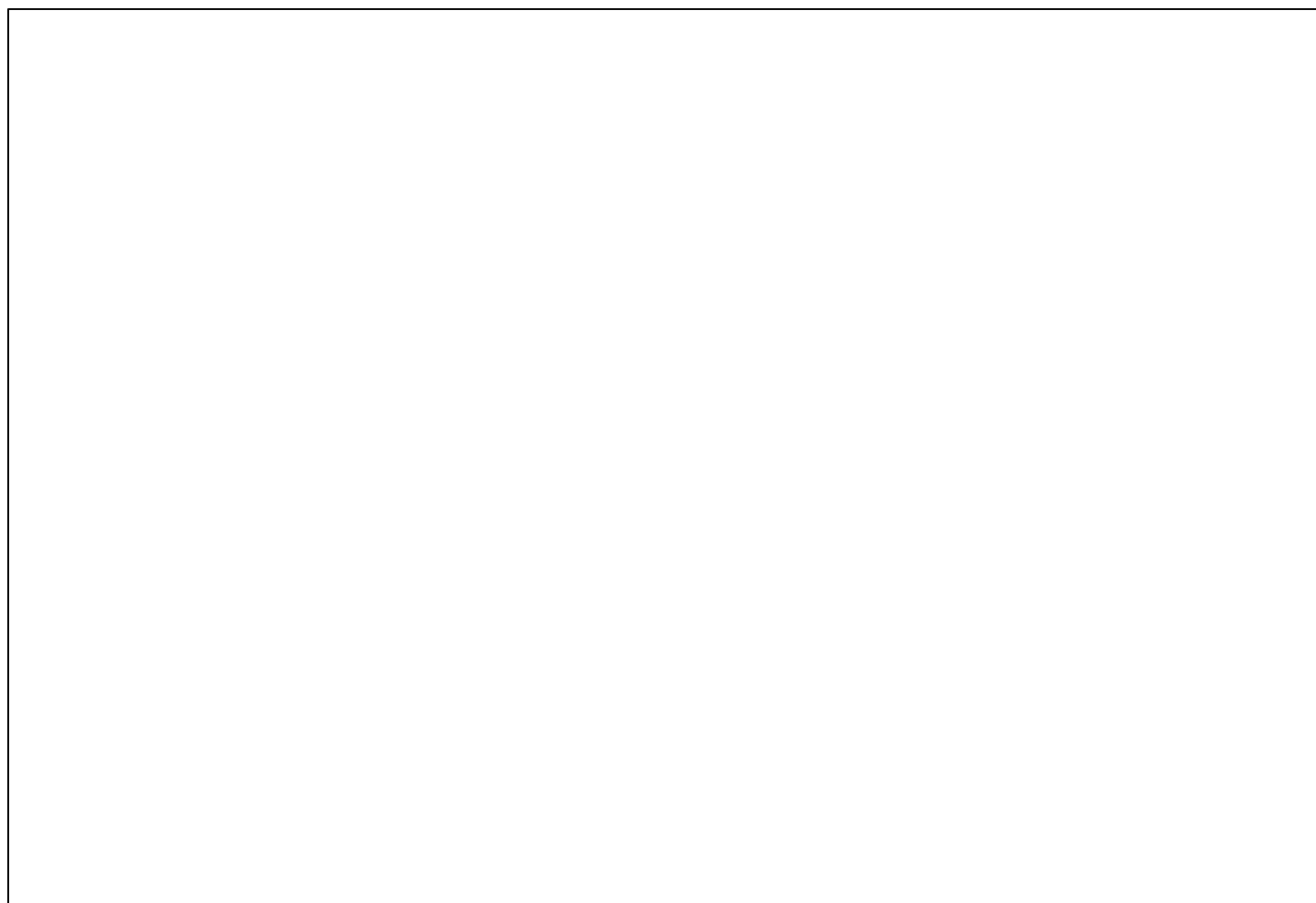
The first flight was uneventful. The Lalonde engine pulled like a train. Bart installed 160 hp pistons, cylinders, and wristpins and the increased horsepower was very noticeable. It needed more right rudder trim than I'd hoped for...I probably didn't get the gear leg fairings aligned perfectly. Typical of most RVs, it had a heavy wing as the speed increased.

The more I fly it, the more I like it. For some reason it seems to have a lighter "feel" to the controls than the airplanes I fly at work. I think its lighter than it used to be, maybe because every control surface is new and better built. It also might be because I worked much harder this time to get a friction-free control system.

It's fairly light, at 1024 lbs. with a metal prop. Even with the fixed pitch prop, it climbs well...1550' / min flown solo. The new Garmin III GPS (an engagement gift from The Violinist) says the speeds are pretty good.

Wait a minute! *Engagement* gift?!

Well, that's the next project....



# Home Wing

## Classifieds.....

Classifieds are free to Home Wing members. Ads will run for three months, send to editor via e-mail or mail. Renewals ok, just let editor know. Date at end of ad is last month ad scheduled to run.

### FOR SALE

**RV-6/6A Completed Empennage** - Excellent workmanship, \$800 obo. Greg Halverson, 503-591-0105, 6/98

**RV6/6A Empennage** - Completed, excellent workmanship. Buld by Grand Champion winner. Primed & ready to install. \$1,000 o.b.o After 6:30 pm PST, John Hsu 541-752-4475 7/98

**RV6/6A Empennage & Wing kits** - Phlogistan anodized wing spar. \$3,600, Ted Styskel, 503-632-3918, 10/98

**RV-8 Fuselage Jig** - \$100, call Von Alexander at 503-362-3177

**Narco LRN-840 Loran** - Works perfectly. Includes tray, antenna, manual. Cheap navigation and a screamin deal at \$50, Randy Lervold, 360-817-9091

**Narco 841 Digital ADF** - Tellow-tagged with warantee, antenna and all the wiring. Call Larry Dennis 503-655-9236, 10/98

**Compressor** - 3HP, 110V, 90PSI, belt drive with 20 gallon tank. Excellent condition, \$150. Dan Benua, 504-621-3323. 10/98

**Misc Items** - New baffle kit for an RV-6 O-320 still in Van's package \$140., New 1" Vacumn gage \$40., Used turn key ignition/start switch \$20., Used 3 1/8' United V/S gage 2000' \$65., Used 2 1/4" B&D RPM gage \$60. Plus shipping or come to the Saturday mornings breakfast at the Albany Airport Resturant. Denny (541)259-4500 [harje@proaxis.com](mailto:harje@proaxis.com), 10/98

**Wing tip lights** - A pair of Three in one wing tip lites. Nav., Tail and Strobe, new.cost me \$350. Sell for \$250. for the pair. Denny [harje@proaxis.com](mailto:harje@proaxis.com) or (541)259-4500, 10/98

#### Hangar Sale! -

- New 0-320 chrome wide deck cylinder assembly w/valves, \$500,
  - Peltor headsets model AV7004, little use, \$150 ea.
  - Magellan Skystar GPS, little use, \$250
  - New throttle mixture bracket p/n VA149, \$7
  - New aux elec. fuel pump p/n 40108, \$20
  - RV-4 55" throttle cable p/n CT184-55, w/clevis fitting, \$25
  - Slick 4250R mag, low time, \$125, drive gear \$50
  - RV-6 Lauritsen canopy cover, \$100
  - Bendix mag p/n 10-163045-3 w/drive gear, good condition, \$150
  - New master relay p/n EX24115, \$10
  - Lycoming gear drive prestolite starter, 9 tooth pinion, offer.
  - RV-4 throttle quadrant p/n 428-1, 2 le3ver, \$30
- Butch Walters, 360-636-2483, 9/98

**Van's Air force Apparel** - Home Wing member discount, see at web site <http://www.edt.com/homewing/emblem.html>

- Limited edition VAF hats, gray crown with black bill.
- Four color 100% embroidered jacket patches.
- Van's Air Force jackets, MA-1 style, black w/red liner, VAF patches on shoulder and breast, pencil pocket, optional name patch.

Purchase all from Randall Henderson, 503-297-5045 or catch him at a meeting.

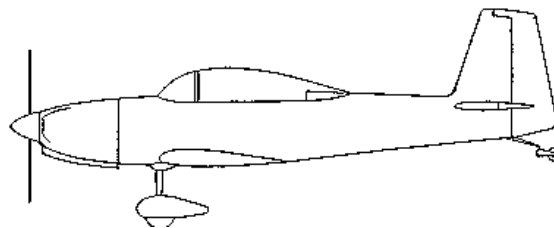
**Duckworks Landing Lights** - Retro-fittable, light, easy installation. Kits start at \$69, discount for Home Wingers. Don Wentz, 503-696-7185

**RV-ATION BOOKSTORE** - 54+ books and videos specifically for the RV builder and pilot. Call or write for a FREE catalog; (970) 887-2207, PO Box 270, Tabernash, CO 80478. Or see our web page at [www.rvbookstore.com](http://www.rvbookstore.com) Featured item: 18 YEARS OF THE RV-ATOR is now available

**BACK ISSUES** are available at \$2.00 each including postage. Limited availability, contact newsletter editor.

### WANTED

**Ride to Oshkosh** - Looking for vacant seat in RV for trip to Osh-Kosh. Of course willing to share expenses & fuel costs. Please contact Patrick Moran at 503-257-7536



Use 'em!

I'd like to encourage all you members to take advantage of the classified section. Since it's free why not take a stab at unloading that unused airplane stuff. Besides, it's kind of interesting to look at all the odds 'n ends for sale.

Please note that the date at the end of each ad is the expiration date. They run for three months and then are dropped unless you want them renewed by notifying me.

...Randy



## The Tool Exchange

The Home Wing owns a selection of tools for use by its members. The Toolmeister is Brent Ohlgren, 503-288-8197. Call either Brent or the member who has the tools to arrange use. Please remember to ALWAYS let Brent know where these tools are.

Item
HVLP paint sprayer
Hole template for instrument panel
Wire crimping tool & die
Brake lining rivet set
Tune-up & annual kit (compression checker, mag timing light, timing dial, mag adjustment tool, plug gapper, high voltage cable tester, and plug

Other benevolent members also have tools they may be willing to loan. Let the editor 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.

Item	Owner / Lender	Phone / e-mail
Custom cutting wheel mandrel (for cutting your canopy)	Stan VanGrunsven	
Prop tach (calibrate your tach)	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	503-646-6380
Surveyor's transit level (handy way to level wing and fuselage jigs)	Bill Kenny	503-590-8011
Back riveting contraption (large, counterweighted bucking bar and suspension system and offset back rivet sets)	Bob Neuner	503-771-6361
Lead crucible (for melting lead for elevator counterweights)	Doug Stenger	503-324-6993
Table saw taper jib (for tapering wing spar flange strips)	Carl Weston	503-649-8830

## 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 send the editor an e-mail.



### Home Wing Newsletter Subscription/Renewal

Please fill out and mail to **Randy Lervold, 5228 NW 14th Circle, Camas, WA 98607**, along with \$10 for renewals or new subscriptions. **Please make checks payable to either Randy Lervold or Home Wing.** 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: \_\_\_\_\_

Address: \_\_\_\_\_ Home phone: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_ Work phone: \_\_\_\_\_

Payment (\$10/yr.) E-mail: \_\_\_\_\_

Check

Cash

Info change only

Comments: \_\_\_\_\_

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**Project:**

RV-3

RV-4

RV6

RV-6A

RV-8

RV-8A

**Status:**

Empennage

Wings

Fuselage

Finish kit

Flying