Issue 00.10 October 2000

HOME WING

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

Randall Goes To Oshkosh

I had big plans for Oshkosh. The plan was to take off several days early with my wife Jeanne, and make short hops with several stops along the way to visit relatives. We hoped to arrive at OSH the day before the show started, and stay for most if not all of the show. Fate, however, had other plans.

My dear mother had been suffering from lung cancer and the treatment thereof for nearly a year, and she died a few days before I was planning to leave. Of course my big Oshkosh adventure kind of lost its appeal during that very difficult time, and I came close to canceling altogether. I did in fact cancel our room, and skipped some other things like getting the plane all spiffed up and putting together a "presentation board" for judging.

After the memorial however, getting away and doing something — anything — seemed like good therapy, so I went ahead and threw my tent and sleeping bag in the plane and headed off for an abbreviated trip.

Jeanne decided to give it a miss, since this was not going to be the leisurely few hours per day of flying with plenty of rest stops and a nice room at the end that we had originally envisioned. I got into the air mid-day Thursday and switched to 122.75, and lo and behold, there's Jerry VanGrunsven on the frequency, about 50 miles ahead! We stopped and had lunch together in Hamilton, MT, then went our separate ways, as they had

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Events Calendar

Meeting coordinator:
Randall Henderson
503-297-5045
randallh@home.com

MONTHLY MEETING:

(2nd Thursday every month, various locations, 7:00 pm)

Place:	Steve Householder's hanger Hillsboro Airport (HIO), NE tees
Date:	Thursday October 12, 2000
Time:	7:00 pm
Phone:	503-539-1295

The October meeting will be at Steve Householder's hangar at Hillsboro Airport. Steve is building an RV-6A (slooowwww build version), and has the fuselage on the gear.

DRIVING DIRECTIONS:

From Portland and Beaverton: Take Sunset Highway (US 26) west to the Helvetia Road exit. Turn left (south) off the exit, turn right where it Ts onto Cornell Road. Turn right into the airport, and right again to go to the NE T-hangars. Someone should be at the gate to let people in between about 6:45 and 7:30. If there is no one there, call 503-539-1295 (be sure to write this number down or bring the NL with you in case you are late and get stuck outside the gate.) The hangar is # B14 at the far end of the middle bank on the left as you're driving in. (second row on your right if you fly/taxi in). *Remember that this is an ACTIVE TAXIWAY* so drive slow and watch out for airplanes as you drive in. Please park no more than 3 deep on the hangar ends, or one deep between the moveable hangar door sections, and do NOT block hangar doors or taxiways.

Tentative future meeting schedule:

Nov: Robin Wessel's house
Dec: We need a meeting place, call Randall!
Jan: Randy Lervold's house (or hangar)

Meeting places are always needed; if you'd be interested in hosting a meeting please contact Randall Henderson at 503-297-5045 or randallh@home.com

EAA CHAPTER 105 Pancake Breakfast:

First Saturday of every month at Twin Oaks Airpark, 8:00 am, $5.00 (always lot's of RVs to look at too!)
This month: 10/7/2000

EAA CHAPTER 105 Monthly Meeting:

Third Thursday of every month at the EAA 105 hangar/ clubhouse, Twin Oaks Airpark, 7:00 pm. See www.eaa105.org for details
This month: 10/19/2000

EAA CHAPTER 902 Monthly Meeting:

Second Wednesday of every month at the Mulino Airport in the OPA building. For info call Gary Sparks at 503-251-0843
This month: 10/11/2000

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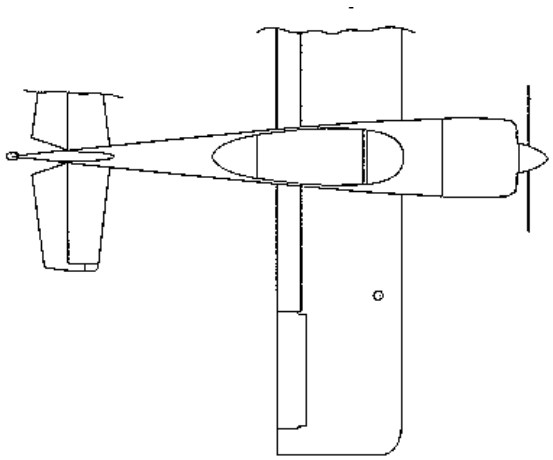

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destinations further north than I. I made it as far as Linton ND by nightfall, a lonely spot out in the farm country, and perfect for airplane camping. Tented in the grass next to the ramp with a couple of granola bars for dinner, and a friendly airport cat for company.

Friday I awoke to a beautiful day, filled the plane with gas, and set my GPS for Oshkosh. Flying was smooth with a bit of tailwinds, all the way to Wisconsin. The total distance from Hillsboro to Oshkosh is 1,680 miles, and the weather was fabulous for the first 1,660 of those miles. Unfortunately just west of Ripon it changed to 1000', 2.5 miles visibility, rain and haze. So I was forced to turn around, land at Wautoma Wisconsin, and wait with a dozen or so other stranded travelers until evening, hoping the weather would be good enough to get in after the airshow.

I was up in the air and over Ripon at 6:50 pm, and soon found myself in the middle of a bunched up line of airplanes holding over Rush Lake, all struggling to maintain 90 knots and 1,600' in what was claimed to be 3 miles visibility (uh-huh), a 1,500-1,800' ceiling, with haze and areas of rain. The controllers were telling us to wait just a little longer while they got the departures out, someone in line could barely make 80 knots forcing the whole gaggle to do the same, except the poor Glasair who couldn't go that slow and had to keep pulling out and passing... it was quite an experience. Finally about 7:15 they started letting us in, and thank god for GPS — I couldn't even make out the runway until I was on about a 1.5 mile final. The Glasair in front of me had trouble understanding some part of "land midfield" and instead put it on the numbers, forcing me, and likely everyone behind me, to do the same. In spite of all this, they somehow managed to get everyone on the ground safely in the approximately 45 minutes that the airport was open that evening.

By that time it was threatening to thunderstorm (and get dark), so I threw the canopy cover on, jumped in the welcome wagon, and hustled out to Camp Scholler to find a place to pitch my tent. The driver didn't know any better than I did what the protocol was for camping, so I just picked the only spot I could find next to a bunch of tents and set mine up. It wasn't until the next morning that I discovered I'd parked myself right in the middle of the South African EAA's camp! They were friendly folks however and didn't have any problem with me staying there.

Saturday morning bright and early (well hey, it was only 7:00 Oregon time) I got up and hustled out to the plane. First things first I thought, and set to work cleaning the bugs off and making it look pretty. About an hour into this, I suddenly found myself surrounded by

TOP: Judge me! BOTTOM: Randall's tent after moving down to the Lang Hilton

guys with "EAA Judge" signs on their hats. One of them said to me "I don't see a 'Judge Me' sticker — you do want this judged, don't you?" I said "Yeah I guess so, but I've got to get it all cleaned up first." He said "Forget that, you'd better get it registered or you're out of luck — there's only a day and a half of judging left!". He was nice enough to drive me over to the registration booth and get me all straightened out, then back to the plane.

The individual judges had pretty different ways of going about the process. One guy was quite gregarious and basically wanted to BS with me about RVs. Another guy went around peering and poking and pointing out nit-picky issues, all of which, while technically valid, were things that I had done strictly according to Van's plans. Another guy just sat there, kneeling, directly in front of the plane and peering at it with one eye or the other, for a good five minutes. I finally couldn't stand it any longer and asked him what he was doing. "Judging your plane" was the terse response.

I spent most of the day Saturday hanging around the

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On the flightline getting ready for the homebuilt review, Bruce Bohannon's Exxon Flying Tiger and the Stewart S-51 in the background.

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plane and the RV area, talking to other RVers and wannabbes and waiting for more judges. A few more did show up for a total of 9 I think, which I'm told is a good thing, the more the better. Finally put the canopy cover on and wandered out and got some food, and spend some time at the displays. The weather was pretty good — in and out clouds which seemed like they wanted to rain but didn't, though they did keep it relatively cool.

That evening I hooked up with Harmon and Marcy Lang. Being from Wisconsin, they're old hands at this Oshkosh stuff, and they have friends who still live there and who go early, get the best camping spot, and set up some nice awning style tents and campers beforehand. They really had some posh digs and plenty of extra room, so I accepted their invitation to move my tent down there and take advantage of their beer, bratwurst, cookies, and many other luxuries that I hadn't been able to pack into my little baggage compartment.

Sunday was much the same as Saturday, although I was able to spend a little more time wandering around the booths, buildings and flightline. It would have been nice to have gotten there earlier as I missed some things I wanted to see — the museum, the warbirds, the fly market, building C. It was unfortunate that the Concord had to cancel, and I'd been looking forward to seeing the Vickers Vimy too. But the Super-Guppy was quite a sight. Man that thing is big! Up close it looks like something from a Disney cartoon, but I can attest to the fact that it really DOES fly. The Eclipse/Williams display was one of the fanciest. There's gotta be a ton of money behind this stuff. I guess there'd have to be to be able to develop all these new jet engine technologies. One of the mock-ups was particularly compelling — a turboprop version with more power than my O-360, comparable fuel burn, much smaller and weighing about a third as much. I'm not holding my breath, but if this technology really goes as promised I wouldn't be surprised if we start seeing RVs migrating to turbine power in the not too distant future.

So Sunday evening I wandered back to the plane to put the canopy cover on, and there's this envelope on the seat that someone had apparently slipped under the crack in the canopy. Hmm, what's this? EAA letterhead? My heart skipped a beat as I read the note inside: "You have been selected as an EAA AWARD WINNER". I somehow managed to make it over to Van's tent, waving this thing around "wha... award... ceremony..." I had been planning to leave the next day and was kind of anxious to do so since the weather forecast was worse for the day after, but the consensus of Vans crew was that such a thing doesn't happen every day and of COURSE I should stay.... I stumbled back to my tent in a daze.

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Sunday evening was Van's banquet, and although I hadn't ordered a ticket, there were some no-shows so I managed to get in. I'm glad I did; after eating camp food for three days it was really nice to take a break and go out to a real restaurant for a change. The banquet is held at a very nice club and cocktails are served outside on a large grassy area next to the lake. That was where we were, drinking and chatting, when all of a sudden this M*A*S*H style Bell 47 helicopter thumped on over our heads and lands, and out stepped Van. Apparently the EAA had booked him as a speaker for the homebuilt dinner which was at the same time as the banquet, and their solution was to run him over in a helicopter as soon as his talk was finished. No doubt he was hoping we'd all be inside getting ready for dinner by then, but no such luck; he got a good round of applause. He handled it graciously however, saying "Now for my next act..." as he strode up to the crowd.

Once we all got seated at the banquet, I noticed this guy a couple of tables over with no one sitting next to or across from him. I kind of felt sorry for this solitary soul, so I made my apologies to Harmon and Marcy and went over to give him some company. I introduced myself and he replied with "Hello, I'm Jon Johanson." Of course I already knew who he was and actually just bailed on my friends to go talk to him — I figured they'd understand, and it was a rare opportunity to sit down and talk at some length with this amazing man. He also introduced me to Sue, his manager, who had flown over commercial for the event — she's managed all of his flights, but this was her first time to Oshkosh.

Despite weather worries, I was glad I'd decided to stay for the awards presentation, since I still hadn't had much time to wander around the show up to that point. However, Monday ended up getting partially filled up with another event — the "Homebuilt Review". This is one of the "pre-airshow" flyby events, in which they round up a sampling of different homebuilt types to do flybys while the announcers extol the virtues of whichever model it is as they fly by. I got recruited for this, so at 9:00 am I gathered with the rest of the pilots for a briefing and interview with the announcers so they'd know what to say when we went by. Come 2:30 pm, I found myself out there behind Bruce Bohannon in his record-breaking Exxon Flying Tiger, doing 200' buzz jobs down the runway at OSHKOSH — with an airshow waiver even! It was just a couple of passes, but what a thrill looking over and seeing every head turn (okay, some of them) as I flew by. Hey look at me, I'm in an airshow!

You'd think a person who receives an award at Oshkosh would be able to make it to the presentation on time, wouldn't you. Well, for reasons I won't go into, I managed to show up for the thing about one minute after they'd called my name! Van said something to someone (its nice to have friends in high places) and they called me back up, so I got my 10 seconds of fame ("Congratulations, here's your Outstanding Workmanship award", run along to the back now and get your picture taken".)

TOP: Captain Henderson sports an oxygen moustache at FL120. BOTTOM: Fire in the Bitterroot mountains, just west of Hamilton, MT

Because of my late entrance (or maybe in spite of it), that part of it was a bit of an anti-climax. They shuffle everyone but the Grand Champion winners off the stage pretty quickly, and the biggest thrill was really just finding the note in my plane. I really hadn't had too high of hopes about getting an award due to my late arrival and lack of preparation, sign board, etc. So the surprise of that moment was honestly the best part of the whole thing.

Tuesday morning, contrary to the weather prognosticators' dire predictions, the weather was the best it had been all week — nice bright sun with just a few mid-

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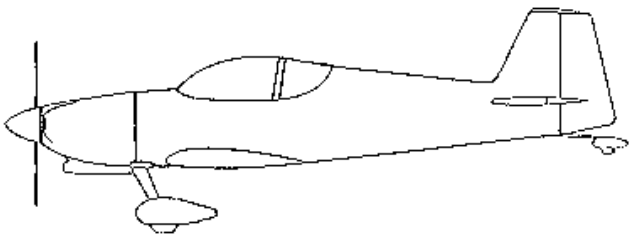
level puffy clouds. I was anxious to get off the ground because I wanted to try to get back in one day, so I committed a pilot sin — I didn't get a current briefing before I took off. Regretted my mistake soon after takeoff — there was a line of BIG NASTY clouds only 20 miles west, cutting directly across my route. Thunderstorms in the morning — what's the deal with this midwest weather anyway? I quickly called up flight watch and asked for an "update", and got an earful about a large line of thunderstorms from central through southern Wisconsin. The briefer sounded grim: "The only way around those would be to go way up north — all the way up to Rhienlander. Quick check of the map — sheesh, that's only 120 miles, I can do that standing on my head! As it turned out I only had to go about 80 miles before clearing the storm, and it was good weather all the way west from there.

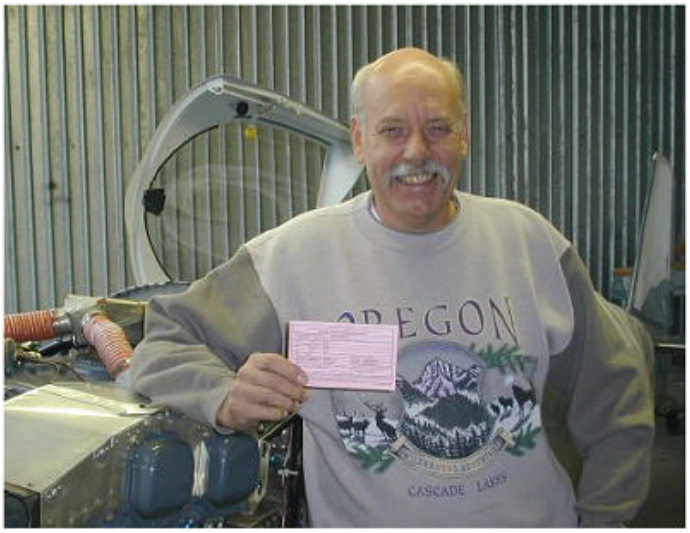
Even with the diversion, I only made 2 fuel stops — at Linton ND, and Hamilton MT. I'd had good tailwinds going over, which of course I had to pay for on the return trip. On the way out I'd flown up good and high (11-13,000') to get the best of them; coming back I played with the altitude and generally found the best groundspeeds at 4,500-6,500'. Of course I was getting slammed around pretty good down that low, but I just couldn't stand seeing those crappy ground speeds up higher, so I tightened my harness and hung on for a good 3 hours, until I had to go higher to get over the mountains. This was the second day of the big fires in Idaho and Montana, and I got a whole list of temporary flight restrictions when I talked to the FSS. No problem though, most of them were no more than 5 mile radius and 10,000' ceiling, so it was easy to fly over or around them.

6:00 PM Tuesday evening, after 9.2 hours of flying, this tired pilot gratefully touched down at Hillsboro. The tower controller, who certainly has seen my plane many times before, must have had a memory lapse because he said "nice paint job, is it new?" Bursting with pride I blurted "Thanks, no, that was back in February. But it just got a AWARD, at OSHKOSH!"

I only wish my mom had lived to see it.

...Randall, N6R





Airborne at Last

By Brent Anderson

Following is the story of the days leading up to the first flight of my RV-4, N244BA, thus ending my 11 year long building journey.

August 31 - My airworthiness certificate was granted. I elected to contract for the services of an FAA DAR (Frank Snead) for the certification process as opposed to going through the local FSDO. This cost me some $$, but in retrospect it was well worth it. Frank visited my project a number of times during these final days. He inspected the plane at my request in a sequence that minimized the amount of work for me, and he was very good about being available when I needed him. For example I wanted the critical flight controls inspected before weighing the airplane. This saved me the work of later removing floor panels, inspection panels, fairings etc. that would normally have to be on for weighing, but off for the final inspection, which requires a completed set of weight and balance calculations. Frank also was very helpful in coaching me through all of the paperwork so it would go through the FAA without a hitch. He provided a checklist outlining the final inspection requirements that I used as a guide to prepare.

One of the things I would have done differently if I had to do it again, was generation of the equipment list. The equipment list requires model numbers, part numbers, serial numbers, weights and moment arms of a significant amount of the items installed in the plane. It would have been much easier to generate this list as items were being installed, rather than at the end. Trying to read serial numbers isn't easy when the items are installed. It also never occurred to me to weigh individual components, as it makes no practical difference to the

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overall weight and balance of the airplane unless an instrument is replaced sometime down the line. At the time of replacement it would be easy to weigh the old and the new and compute the difference. Oh well, practicality is probably not a requirement specified in the FAR's. Some years ago, the FAA gave a talk to the Chapter 105 about certification of experimental aircraft. They handed out packages of documents and forms that were necessary, as well as advisory circulars that described the certification and flight testing processes. This package of documents was all very useful. The flight testing advisory circular (90-89A) has been updated since the time I got my package, but I was able to download a current copy from the FAA website (www.faa.gov).

September 3 - Most things were now together. I wanted to crank my engine without plugs in it to get oil circulated before actually starting it for the first time. I cranked for what seemed like a long time, but was probably only 15 seconds at most. I stopped to let the starter motor cool off for a minute. The next time I engaged the starter, I heard a clunk, and then nothing. I got out of the cockpit and found the most of the starter motor hanging by it's wire. The first thought I had was, "gee I'm sure glad my constant speed prop didn't strike that". The next thoughts were best left unprinted.

I examined the starter motor. It was marked for a149 tooth ring gear. I counted the teeth on the ring gear and sure enough, there were 149 teeth. I counted the teeth on the starter motor gear and found 10. I looked at the spec sheet that came with the starter motor. Nowhere did it say how many teeth the starter motor was supposed to have. I looked at my watch. 6:45 PM on a Sunday night. Hey wait a minute, this is Van's homecoming weekend. There will be people at the plant. I got in my truck and rushed over to Aurora. Tom Green got a replacement starter motor in my hands, and mentioned that it may have been a defective casting. I spent maybe 30 seconds enjoying the homecoming, and was on my way back to the hangar. Oddly enough, the replacement motor, marked just like the first one, had only 9 teeth on the gear. Ah, now it becomes obvious… a quality control problem at the starter factory.

The next day I became aware that I wasn't the only one who had this happen. Dan Benua had the same experience, and indeed Ken Scott did too. Ken then told me about his recent article in the RVator. Oops. You know I used to study those very thoroughly, but have fallen into the habit of just skimming through and reading articles of immediate interest. I got the Skytec starter motor through Van's by swapping for the original heavy

TOP: broken starter casting… check for the correct gear! BOTTOM: about to make first engine start.

motor that came with the engine. It had been on my engine for a couple of years, and it never occurred to me that it would be wrongly labeled. After all, it's an FAA certified, TSO'd "you can bet your life on this component" type of part. I repeat this story here for the benefit of anyone else out there who might have a Skytec starter motor on their Lycoming, who hasn't bothered to count the gear teeth, or maybe missed the same article in the RVator. Apparently the motor casting is designed to be weak enough to fail in the event of a kickback to protect the ring gear from damage. At least that concept turns out also to work in case the motor is equipped with the wrong gear, and my ring gear had only minor marks in a few spots.

September 5 - With the new starter motor on, I cranked the engine again, and saw an oil pressure reading on the gauge within a few seconds. I cranked a little longer, until satisfied that the engine was oiled. Being a little more skeptical than I was the day before, I thought it would be prudent to check the timing on the engine before actually trying to start it. I know it was run in at the

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factory, but what if it was done by the same guy that built the starter motor? The timing turned out to be dead on so I put the spark plugs back in and proceeded with the checkout of the fuel system. (This involved a whole series of important things that I won't describe here. Roger Hooper wrote a good article about this that was published in the February 1999 105 newsletters). Time to start the engine. With an assistant on each side holding a fire extinguisher, I cranked it up. That engine started after just a few blades, like it had been run only minutes before! No smoke, fire or leaks, so it was time to glaze the brakes and do some taxi testing. All of this was uneventful, so back into the hangar she went for a last going over.

September 6 - The cowling was on, and I made calls to the chase pilots and arranged a tentative takeoff time. That afternoon, I felt like I'd had a butterfly sandwich for lunch with a few more butterflies than I needed. The plane was ready, and I was as ready as I could get. I'd prepared myself by first getting some RV-6A time with Jerry VanGrunsven. That plane had a constant speed, so I could get the feel of the prop on the RV airframe. I've got a fair amount of constant speed time, but all in Cessna's and Beech. Next, I had gotten some dual with Mike Seager in the RV-6, which re-acquainted me with the tailwheel. I have some Citabria time on my logbook, but none of it recent. I had never flown an RV-4, but I knew the visibility would be better than the 6, and I didn't expect a problem with the stick in my right hand and throttle in the left, although the 6 is the other way around.

The wind was relatively light, and being a weekday, the Hillsboro airport was not too busy. Before, takeoff I discussed the flight with the chase pilots (Randall Henderson and Denny Jackson). The flight was to be relatively short and close, orbiting within gliding distance of Hillsboro well above their airspace. I planned to feel out handling characteristics, check indicated airspeed against the others, monitor basic engine performance, then do a few stalls and come in to land. I planned to ignore the chase pilots, and just listen for a heads up if they saw something they didn't like.

We taxied out onto runway 30 as a flight of 3 advising the tower that this was a first flight, and that we intended to maneuver close by above their airspace. The chase planes were not to take off until I was airborne. When I got onto that runway, the butterflies disappeared, and I became totally absorbed in what I was about to do. I knew I had done everything I could to make sure that airplane was going to fly and now I had to fly that airplane no matter what. If things went according to plan, it would be an anti-climax. If things started going south, my buns depended on maintaining control not matter what the cost. At that moment, nothing else in the world existed for me except flying that plane.

I eased in the throttle very slowly. With half tanks of fuel, a constant speed prop, and me alone in the cockpit, I knew I would be airborne in about 5 seconds. I stole a glimpse of the airspeed indicator to make sure it was alive before liftoff, and quickly broke ground with little more than half throttle. I eased the throttle all the way in, and up I went at what seemed an amazing rate of climb. That's when I noticed that the vertical speed indicator was indicating 100 FPM down. Ignore that. The engine felt really strong, and all gauges were in the green as I passed through 1,000 feet. I pulled the manifold pressure back to 25 inches, eased the RPM back to 2,500 and turned off the boost pump. I watched as the fuel pressure began to slowly drop right to the bottom of the green. I was expecting this, as I had seen the same thing happen in Randall's airplane.

The engine kept running strong, so on up I went. As I passed through 3,000 feet, I called for a frequency change to 122.75 and Randall and Denny were there. No problems reported, so we climbed on up to 5,000 feet where I could do some maneuvering. I knew my airspeed indicator was accurate from testing on the ground, and now I was able to confirm accurate readings against the other planes, which meant my pitot/static system was behaving as it should. After what seemed like a long time to me, but really wasn't, I watched my fuel pressure climb back into the green, and watched my oil temp creeping into the high end of the green. I began to ease off on the power a little bit at a time, but it crept right up to the top of the green. No oil was visible to the chase pilots, but I decided to begin a descent and go on in for a landing as a precaution.

The airplane handled beautifully. It flew wings level and maintained a straight heading. My elevator trim was right in the middle of the range, and the ball was very close to centered. I got back on to the tower frequency, and found they had switched the active to runway 2. We had descended North towards Cornelius Pass, so I was going to be well lined up for a left downwind entry. Slowing to approach speed, the airplane felt very good. The tower wanted me to extend the downwind for another plane, but I declined that request, advising them again that this was a first flight, and I needed a close pattern. The extension would have put me out of gliding distance of the field over downtown Hillsboro. The controller quickly advised the other plane to give way, and I flew a close pattern just the way Mike Seager had taught me. Well almost. I was reluctant to pull the power all

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the way back because I wasn't yet sure if the engine would keep running with the throttle completely closed. I teased the throttle just enough to know the power was still there, and ended up making a reasonable 3 point landing. Denny followed me all the way through the approach, and then climbed out as I touched down. I taxied back to the hangar, posed briefly for the RV grin picture, then crawled out and looked the plane over. The belly was dry, it had plenty of oil, and there was no evidence of leaks anywhere. Then it was time to let the adrenalin subside. That did take awhile.

September 7 - My first stop this day was to Pacific Coast Avionics to get an ANR headset. Dang, but this beast made a whole lot of noise. The next stop was to Van's to get added to the RV Hobbs meter. I talked to Ken Scott briefly, and told him I was planning on flying later that afternoon. I took off solo about 4:00 PM, climbed up to altitude, and began orbiting in a wide circle around the Hillsboro airport. The purpose of this flight was engine break-in, and to perform the approach stall series I opted against on the first flight. Today, the oil temperature stabilized at about 190 degrees after leveling off. I ran the engine at 75%, but kept varying the prop speed and manifold settings every 10 minutes or so. After close to 2 hours, I heard an experimental come up on tower frequency. It turned out to be Ken Scott, who happened to have Ed Hicks with him. They pulled up along side, and Ed took some air to air photos. I haven't seen these yet, but look forward to see if they came out. When they peeled off, I gradually began power reductions, and brought the speed down to slow flight. A series of stalls indicated 62 mph at 0 flaps, 60 mph at ½ flaps, and 55 mph at full flaps. The stalls felt just like the other RV's I had flown. Satisfied, I went on in and landed. This time I pulled off the cowling and looked for problems. The most significant thing I found was that the carb air box hat touched the cowling on the right side (from the pilot's point of view). I pulled it off, did some fiberglass surgery to get more clearance, and back together it went.

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Epilogue - At this point in time, I have 15 hours on the plane, and I can honestly say that the RV aircraft is the most delightful plane I have ever flown. I really love it. It is so responsive and well balanced on the controls it just keeps me grinning. It's just the perfect machine for the kind of flying I like to do. I've got a lot to learn about the aircraft, and look forward to completing the test phase and seeing how some of my ideas will work out. I worked hard to get the airframe straight, and implemented a few of drag reduction ideas along the way. I arranged a visit with Tracy Saylor a couple of years back, and spent several hours talking to him, photographing his airplane, and discussing his views on how to make planes fly more efficiently. I also spent some time talking to John Peasley about his RV-4. I drew knowledge from both of these gentlemen to incorporate in my plane, and threw a few of my own ideas in along the way.

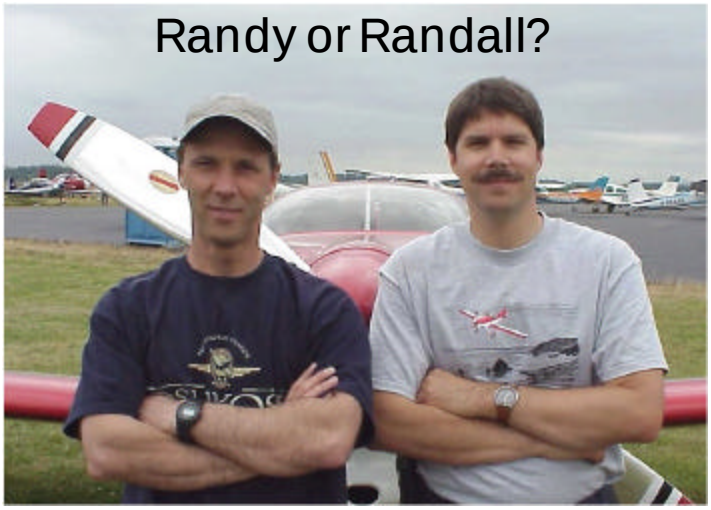
Cooling drag was one of the areas I worked on, and I decided air enclosures over each cylinder bank would be an important feature. I reduced the cowling air inlet area by 40%, and molded some inlets to mate snugly with the air boxes. I wanted to equalize cooling air pressure between the banks, and draw air from both of them for my oil cooler, hoping that this would help cylinder head temperatures run as evenly as possible. The oil cooler is center mounted on the engine mount, and gets inlet air through a pair of scat tubes that go to each cylinder bank. I can control the inlet air from the cockpit, and regardless of the control position, the scat tubes are fully open to both cylinder air boxes. The idea here was to keep the pressure balanced between the two banks as much as possible. It's too soon to tell how well this will work. Initially, #1 cylinder was running about 50F cooler than the rest. Last weekend, I added a small baffle in front of #1, and now they are all running pretty close (i.e. within 25 degrees). In cruise, the CHT's stabilize around 340F. My oil temp has also continued to come down, and is now running about 160-180F. If I throttle the inlet air, I can watch the temp needle start to move up almost immediately. This should be a nice feature during winter months when oil temperature would otherwise be cooler than what it should be. I don't think I can get realistic numbers until the engine is broken in, and I get the mineral oil out of it, so more on that with time.

At 13 hours my Mitchell tach failed and destroyed the tach cable in the process. I then found that my hangar mate has had a failure on his Mitchell tach. I quickly set the Mitchell aside, and am now running an Electronics International. This weekend I will also replace the VSI, which has an air leak in the case. After that everything should be working again.

To those of you still hugging the ground, just keep on bucking those rivets. It's a wonderful project and well worth all the effort!!

...Brent, N244BA

Randy or Randall?



Ok folks, let's clear this up. It seems there may be some confusion about those two Rand… guys that help out with the Home Wing duties. Let's see if we can clear this up:

On the LEFT:

- **Randy Lervold**
- Does the newsletter and membership database.
- Building an RV-8.
- Is NOT flying his RV-8 yet.
- Wishes his parents had named him Randall, but they didn't so the name's *Randy*.
- Can be reached at randy@rv-8.com

On the RIGHT:

- **Randall Henderson**
- Is meeting coordinator as well as the new flying activities coordinator.
- Is the guy who does the Van's Air Force stuff including the fly-in t-shirts.
- IS flying his RV-6 (finally).
- Won an Outstanding Workmanship Award at Oshkosh.
- Can be reached at randallh@home.com

Wouldn't want you to get these fine looking dudes confused.

;-)

Flying Activities

By Flying Activities Coordinator:
Randall Henderson
503 297-5045
randallh@home.com

Well, the local fly-out season is pretty much over. Looks like a group trip up to Silverwood's not happening, at least until next season. I expect the Thanksgiving Carribbean trip is past the sign-up deadline, but I'm sure we'll all be looking forward to hearing all about Mike's adventures when he gets back from that. I never got a camp-out going either -- so many destinations, so little time! But there's always the Saturday morning "breakfast club" (meet in the air at 7:30am weather permitting). See you on 122.75!

EAA Technical Counselors

We have a new technical counselor — Randall Henderson. That makes three tech counselors in the group who have RV experience (that we know of):

Randall Henderson
503-297-5045, randallh@home.com

Dave Lewis, Sr.
503-690-8237

Don Wentz
503-543-2298, jwentz@columbia-center.org

Please drop a line to the editor if you know of others.

Reminder: New E-mail Address for Editor

Please note my new e-mail address for all correspondence… randy@rv-8.com (easy to remember, huh?)

CLASSIFIEDS...

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

FOR SALE

RV6A KIT.— Empennage (finished), Wing Kit with pre-finished PHLOGISTON SPAR. $5,500., I also have many high quality tools available. Bill Anderson 949-240-4842, email hobihawk@aol.com, 12/00

Misc. For Sale:

- 3 1/8" mechanical tach and cable from -6A/160hp. Cable was new, tach rebuilt, used 500hrs, works fine, went to small electric unit. $50
- Aircraft tire bead breaker, for tire removal
- Special letter drill used to ream rear spar bolts/ straight reamer for rear spar/
- 1/2" per foot taper reamer

Contact Kevin Lane, 503-233-1818 or n3773@mciworld.com. 12/00

1 Gallon PPG Concept — Changed my mind on paint schemes (again) after buying paint. Have an unopened gallon of PPG Concept acrylic urethane in #13594 Spanish Blue (dark blue). New $153, sell $75. Randy Lervold, randy@rv-8.com, 360-817-9091

Precision Steel Fuselage Jig for RV-6/6A - for loan, not for sale. Contact Bill Drake 360-687-1698, rv6134WD@uswest.net, 1/01

Lowrance Airmap 300 — For sale at $575.00. Greg Halverson 503-591-0105, 12/00

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

BACK ISSUES are available at $2.00 each including postage for hardcopy. Limited availability, contact newsletter editor. Adobe Acrobat versions free to members.

WANTED

Wanted: Wing Storage Rack — Anyone have a wing storage rack they're done with? My wife is getting tired of these two wings in the bedroom and wants them in the hangar. Randy Lervold 360-817-9091, randy@rv-8.com

Use 'em!

Members are encouraged 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

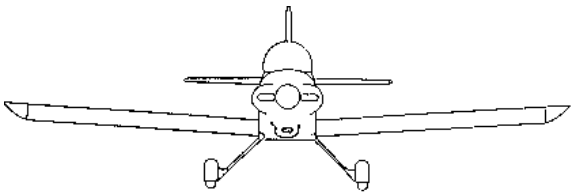
Home Wing Tool Policy

Reminder; at the recent meetings various methods of keeping our group's tools from loss and abuse were discussed. In the end we decided that we would not initiate deposits, use fees, or personal escorts. What we decided was…

- Everything goes through Brent — do not give the tool to another member.
- Brent will keep an accurate sign-out sheet for each item so he knows where it is at all times.
- Brent will inspect all tools upon their return. If there is any damage he will ask you to pay for the repair (with the threat of public humiliation if you fail to be a grown-up).
- That we are buying new aircraft weighing scales for the group.

The ability to have occasional use of these expensive tools is a real membership benefit, let's respect the group's assets.

...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 to arrange use. Remember:

- All use must go through Brent.
- You are personally (financially) responsible for any damage.

Home Wing Tools
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 vibrator cleaner.
Aircraft scales — allows you to accurately weigh your beast and also determine CG.
Oil filter cutter—custom make by Stan V.

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)	Mike McGee	503-534-1219, mpcrftr@teleport.com
Engine stand	Don Wentz	503-696-7185
Engine hoist	Norm Rainey	360-256-6192
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 jig (for tapering wing spar flange strips)	Carl Weston	503-649-8830
48" pan break located at hanger PLS D-10 at Troutdale if an RV builder needs some metal bent.	Kevin Lane	503-233-1818 n3773@mciworld.com
Lasar T-300 magneto timing tool.	Randy Lervold	360-817-9091, randy@rv-8.com

Home Wing Newsletter Subscription/Renewal

To join or renew, fill out this form 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, payment method, and any other information that has changed. Please don't forget your e-mail address and newsletter distribution method. ***Use this form for address changes too!***

Name: _____ Spouse: _____

Address: _____ Home phone: _____

City, State, Zip: _____ Work phone: _____

E-Mail: _____

Project:

RV-3 ❑ RV-4 ❑ RV-6 ❑ RV-6A ❑ RV-8 ❑ RV-8A ❑

Status:

Empennage ❑ Wings ❑ Fuselage ❑ Finish kit ❑ Flying ❑

Payment:

Check: ❑ Cash: ❑ Info change only: ❑

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