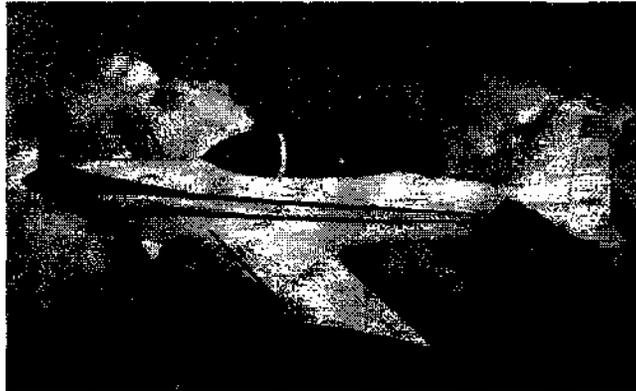


Portland Area RV Builder's Group

Issue 93.11

December 1993



November Meeting:

The November meeting was held at Don Wentz' (my) house out in Scappoose.

Where do I start? We had a very large turnout of >30 members, and many interesting things going-on.

Stan VanGrunsven brought some 3/32 dimple dies that were made by D. J. Lauritsen. They are *very* nicely made, and are intentionally not flat (one concave the other convex). I have always liked the dimples I get from a set of US Tools dies I have, so I couldn't resist a "dimple-off. The end result was extremely close, but all who were asked to pick their preferred dimples picked Stan's over mine. I agree that they leave the cleanest overall dimple I have ever seen. Interested? Contact: Cleveland Aircraft Tools 1804 First St. Boone, IA 50036 515-432-6794

(These are the dies mentioned on page 9 of the August '93 RVator).

I had a good time hosting the meeting, showing-off my project, and answering questions about the Airflow Performance Fuel Injection unit and the Oberg oil filter I am installing. Thanks to all for the kind remarks and encouragement.

Next we went in the house and watched a couple of video tapes. The first video was from a long-time float pilot up in Canada (Eustace Bowhay) who converted his RV-6 to floats and left a tape of the first taxi tests, takeoffs, flights & landings with Van. The end result looks much like a Schnieder Cup racer. We have been hearing about this project for

some time now, and were expecting something a lot different. It looked really good, actually. If this sort of thing interests you, stay tuned, Eustace may kit the float conversion, which actually allows you to switch from floats to wheels in about 4 hours.

The second video was done by Stan VanGrunsven's son during the last homecoming. It was fairly short but did a real good job of setting some of the sights and flights of the fly-in to music. Very steady and nice job on the video. Thanks for bringing the videos!

Next Meeting:

**Place: 15429 SE Piazza Ave.
Clackamas, OR 97015**

Date: December 9

Time: 7 pm

The next Builders Group meeting will be held over in Clackamas at Advanced Technical Systems, where a couple of new builders will show off their RV-6 empennage project. Dave Locke and Chris Lund were suckered in by Bill Benedict and the RV demonstrator not too long ago and became one of the more unlikely pairs to start into home-building. Dave has been into mechanical design and building of one-off and short-run parts and machinery for years; that is what goes on in the shop at Advanced Technical. Chris has not. Between the two of them

they have about the same amount of nervousness about building and excitement about flying as the rest of us more typical builders.

There are a bunch of new builders in the area and it has been a while since the meeting has been held to see an empenage; we thought it was time. Those of you who are far past this point should still come and offer advice as usual or whatever. The shop is very interesting in itself; for those of you with a little more advanced intentions you may be able to work out a deal with Dave to get time on the equipment for that special gadget you want to make.

If anyone has elevators or rudders they can bring in, especially if they don't have the skins riveted on yet, please bring them to the meeting. As always, new or unusual tools are especially welcome, as well as fixtures or templates you don't need anymore.

To get there; get on Interstate 205 and then turn east on Oregon 212. It's just a little north of Oregon City. Go about 1/2 mile and turn left on Piazza Avenue (Piazza Pizza is on the corner and if you see a Chevron station on the right you have just passed the street). Go to the very end of Piazza Avenue and then bear left to the far end of the parking area there. (Frank Justice - official mtg coordinator extraordinaire) Thanks Frank! ed.

<Map didn't scan well>

General Business:

New Name??

I have been thinking about the name of our little group, that **Portland Area RV Builder's Group** could maybe be something different.

Many similar groups call themselves things like "Bay Area RVators", or "Ontario Wing - Van's Airforce", etc. We could be Portland RVators, or Van's Airforce - Home Wing, or Hometown RV Builder's Group, or ????. If you have any ideas, including keeping what

we have, let's talk about it at the next meeting (I held this over from last month, as we didn't get a chance to talk about it), dw.

Builder's Tips: Two-Part Metal

Etching Epoxy Primer:

In the October newsletter, I had some information on our most popular primer. Unfortunately, due to changes in their business (brought-on by closing military bases), Courtaulds Aerospace Coatings has had to change where we get it from, and can no longer give us the quantity discount we were getting, unless we actually order in quantity.

This is the current correct information:

To order, call Sally Jansen at:
Courtaulds Aerospace 206-821-8500

Current pricing:

- 513x390 Aerospace Kit (2 gals)
\$69.96 (1-5) 6 kits or more - \$42.40
- 020x411 Epoxy Thinner (1 gal)
\$57.24 (1-5) 6 gal or more - \$31 .80

This is for 1 gallon primer and 1 gallon of hardener, and a gallon of matching thinner, plus delivery.

Obviously, if 6 of you can get together, it would save some bucks. Call me if you are interested and I will try to connect 6 of you with each other. I have one name already...

ALWAYS be sure to use with high-quality filters and/or fresh-air breathing masks. Nasty stuff if inhaled!

Pont be a jerk:

Over the life of my project, I have had occasion to talk about homebuilding in general with builders of all types/experience/abilities, etc. One was a local tube & rag builder who, being recognized as somewhat of a resident expert on a particular type, was asked to go look at a project and give his inputs on it's construction. Not only was he not offered lunch, gas money, or whatever for the drive out there, the helpee was not, how would I say it, graceful in their acceptance of his inputs, especially since some were criticisms of the work.

Another story had to do with an experienced builder and pilot of a particular type, who performs as a test pilot for hire, for those builders smart enough to

realize they shouldn't do the first flight. On one of these trips, after traveling several states away, and doing a thorough inspection of the project, he found many 'gigs' that he wanted fixed before the test flight. The owner, believe it or not, was indignant and was refusing to make the changes, that it was 'good enough'. The pilot stood by his judgment and did not do the initial flight until he felt the aircraft was ready.

I hope you are beginning to get the point of these stories: When someone who has been there offers advice about your work, swallow your pride and re-evaluate your work, don't jump down their throat.

I tried to have a demonstration of this at the meeting last month. Since it was my project, after everyone had an hour to look it over, I asked if anyone had seen anything that I should change or fix. Having just completed the engine and instrument installations, it was an excellent opportunity for prying eyes to find silly mistakes.

My thanks go to the guys that pointed things out:

Bill Kenny found some wires laying against a rib flange, in a good position to chafe. I can fix that now rather than after a failure of some kind. That one was easy and I had no problem re-evaluating my work.

Bill Benedict pointed-out a tough one, where a builder may 'want to be a jerk', rather than make a change. He noticed that my throttle cable bracket was attached to the motor mount, rather than the engine. This can be a problem since the engine can move a considerable amount in relation to the mount/firewall. Van related an incident where a builder had a similar installation and had a prop failure. The engine was jumping around so much that the throttle and mixture were uncontrollable.

I wasn't too excited about this change, because I was proud of how solid that bracket was, how it allowed no cable movement through the throttle range. Also, it had taken several hours to design and install, a lot of work to re-do.

Well, I realized they were right, so I looked long and hard at everything and was able to do new cable brackets, connecting them to my fuel injection elbow mounting studs. And I think this new installation is even better than the first.

So, don't be afraid to offer your project for scrutiny now and then, you may find-out some things that just never occurred to you. And when we do point-out some possible changes, DON'T BE A JERK!

Concerns Over RTV:

A while back I read in a couple of different places that there was some concern over using RTV on aluminum - specifically the elevator and rudder trailing edges, and that it might cause problems down the line as it contains acetic acid, which can be corrosive to metal. I read this just after I'd finished closing up my left elevator with nice little dabs of Permatex RTV at the ends of the stiffeners. How convenient. So I called Permatex (now Lok-Tite) in Cleveland, OH and asked their rep about it. He told me that the stuff I used (part #16B) can be corrosive to steel but isn't generally a problem with aluminum. Hmmmm. He also said that it contains acetic acid but no salts (he wouldn't give me the exact formula, for obvious reasons). I then asked him what other products they have that would not be corrosive, and he said the "Ultra" series - Ultra Black, Ultra Blue, etc, or "Super Weatherstrip Adhesive".

I'm no chemist, so I have to take this guy's word for it; although when I asked Van about it recently he indicated that he didn't think it would be a problem, especially if it was applied over a primed surface.

I guess I'll find out for sure some day if little holes start appearing in the skins at the end of the stiffeners. In the meantime I used some "Super Weatherstrip Adhesive" I had laying around on the remaining empennage control surfaces. I intend to stay away from RTV in the future, just to be safe. Something to think about if you're getting started on your elevators or rudder.

(Thanks Randall. Earl Brabandt Sr. showed us another nice material 2 months ago called "Velux". About 5 bucks a tube at Ace Hardware, ed.)

Westside Source for AN Fittings:

When I bought my Oberg oil filter at Olson's Racing (\$112), I noticed some of AN fittings. Since I was having problems finding a couple of specific fittings (Van's didn't have the right size either), I asked Gary about them. He had some in stock and was happy to get the others by the next day. His prices are slightly higher than Columbia Airmotive, but when I can run over there at lunch and test fit the items I want, it's well worth it. Col. Air is an hour each way for me. These are the same folks that pressure-tested Ken's oil lines for free, and found one that failed under 100 lbs. Nice guys.

3110 SE TV Highway (about 1/4 mi east of Hale's). 648-5979 - Hillsboro, OR

Method of removing protruding flush rivet heads:

One reason I don't recommend machine countersinking rivets is the difficulty of getting a consistent fit. Yes, when fit properly and bucked right, they look

very smooth. However, in my experience, it requires constant fitting of a rivet in the holes as you cntrsink them to get good fits. Add to that any curvature to the surface and the best stop countersink tool in the west won't give consistent hole depth.

The extra care required makes-up for any time saved over dimpling, in my opinion. Since dimpled holes are supposedly stronger, and easier to buck consistently, I always recommend them over machined, where practical. I also try to use a #41 drill on holes to be dimpled, since they will 'open-up' slightly. Be aware that this will make clecoes and dimple dies fit a little tight until the holes are dimpled.

What to do when you have done machine cntrsinks and they have some protruding heads? Stan Van-Grunsvan offered a method where you take a strip of extremely thin stainless steel sheet (.002), place it over the rivet head, then use a fingernail to rub the outline of the rivet into the sheet. Now with a small scotchbrite wheel, dremel tool, or grinder, scrub-off the excess rivet, *right thru the ss sheet*, and the surrounding sheet will help protect the skin as the softer rivet material is removed. Obviously, if there is a large amount of rivet head protruding, I doubt that it would be wise to scrub it all off, but this sounds like a good method. My horizontal stabs have some of these offending rivets that I did before I changed to dimpling.

Maybe Stan and a few in the group can try this at the next meeting. I'll bring some shim material that Stan sent me to try. Note that Stan still considers this method 'experimental'.

Project Status:

Ken Scott has taxi tested his RV-6 at long last and has the FAA inspection scheduled for this week. Good for you Ken, we all wish we were as close. Hope the inspection goes well.

After taking a look at Carl Hay's -6, I noticed that his Airflow Performance boost pump assembly was 'cleaner'¹ than mine. Mine had a couple of rubber hoses in the assy that I was not too sure of. I called Don Rivera at Airflow and he said that my assy was Rev A, Carl's was Rev B, and they now have Rev C, which cleans the whole thing-up with a new machined piece. He said to send mine in and he would update it, for FREE! How's that for service? A lot of local builders are anxious to see how that injection unit is going to work. Me too!

Since the mtg at my place I have received my new Warnke prop. It is a new design and I can't wait to see how it works. I also have my seats and baggage cover, from Michael Henderson at Flight Tech Interiors.

Brent Ohlgren has been training future builders Joe & Char Miller how to buck rivets - on *his own wing skins!* He reports that Joe is a willing and able helper tho, and they have almost finished riveting both wings all up, in one week. Brent missed last month's mtg as he and his wife Mike were laying on a beach somewhere in the South Pacific. Miss a bldr's group mtg for that? Priorities Brent!

How are the rest of you doing on your projects?

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New T-shirts Available!

Due to popular demand, Randall ran-off another batch of the 1993 Northwest RV Fly-in T-shirts. These are the black on gray shirts that were sold at the June Fly-in at Scappoose airport. To order one of the shirts, send \$12 to:

Randall Henderson
7233 SW Benz Park Court
Portland, OR 97225

Or just give it to Randall at the November Builders' group Meeting. Be sure to specify the size and the shipping address (the \$12 will cover any shipping), or just pick one up at the December Builders' group meeting (only \$9 bucks in person). Call Randall at 297-5045.

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Need some help:

Last month I did some whining about having to do most of the group organizational work. Well, it has worked some. Frank Justice has volunteered to help find locations for our meetings, and already did just that for this month. Thanks Frank!

The rest of you can help too. Dick Anderson has promised at least one article about his RV-4, Stan brought his dimple dies last mtg, etc. Don Wentz

Don't Want Ads:

Let us know what you got but don't want. Ads are **FREE**.

Rion Bourgeois has a LARGE pneumatic squeezer that he used on his spars. Available for loan. 646-8763.

Duckworks Landing Lights. Retro-fittable, light, easy installation. Kits start at \$69 (discount for PARVBG members). Don Wentz, 503-696-7185 for info.

Builder space rent. All tools, jigs, and experienced helping hands included. Contact Dave Lewis Jr. 640-

Engine stand - I'm not using mine anymore (yay!) so if one of you wants to, borrow it! I also have a temporary spar that was a big help during my fuselage construction, both as a help when building-up the carry-thru section, and as a 'stand' to support the fuse once off the jig. I have a cradle that goes with it. Don Wentz, 503-696-7185

Looking for Tools or whatever that are no longer needed. Dexter Kincaid - 538-9535.