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6 mo. @ \$2.50  
1 yr. @ \$4.50  
Back issues-50¢ ea.

KR-1 KR-2  
N E W S L E T T E R

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Issue #9

March 1976

O.K., you guys. This is the ninth issue of the newsletter and I still haven't had a flight report from any of you. I know some of your planes were well along in construction when I received your subscription so how about sharing a few performance figures and flight characteristics with the rest of us. Ken is going to check me out in the turbo-KR-2 so I'll give you a flight report soon probably in the next issue.

I sure can't complain about the input of information and tips from current builders. There is an extremely interesting idea from Fred Richen this month plus all the other hints and tips.

Now, down to business! The last two newsletters were mailed bulk rate. It takes more time getting them ready to mail but with the increase in postage this year, I'm doing it to avoid raising subscription rates. As long as I'm kept informed of any address changes, you should receive your newsletters with no problems. If you haven't received the newsletter by the 15th of the month it is probably lost somewhere in our fabulous mail system. Drop me a line and I'll send you another. Also, I've stopped listing subscribers so I can utilize the space for more tips, modifications, etc. If you want to know the builders in your area, send me a S.A.S.E. and surrounding zip codes and I'll mail them off to you.

One thing I would like to clarify about the modifications suggested in the newsletters. Modifications take additional building time and usually add unwanted weight. If you are planning on using any ideas suggested in the newsletter, consider the idea from all sides first. Are they worth the extra time, extra weight and extra cost? While some modifications are definitely beneficial, others need careful thought. Don't let this discourage you from trying out a new idea that looks promising. That's what homebuilding is all about.

Odran Benson is installing a Continental A-75 in his KR-2. He has drawings available for the engine mount if anyone needs this info. He also is using a 15 ga. fuel tank from an Aeronca Chief; says it fits perfectly. You can write to him at: 14602 Fancher Ave. Fair Haven, New York 13064.

Bruce Gilinsky owns a VW shop and has worked with VW engines for several years. If you run into a problem with your VW, drop him a line. He says he will be happy to help. His address is: Box 289 Lakeview, Ore. 97630.

William Lee reports he has mailed over 30 of the full size rib tracings (RAF 48). If you send for them, be sure to enclose a LARGE S.A.S.E., they will arrive in much better shape. His address is: 114 Indian Ave. Tavernier, Florida 33070.

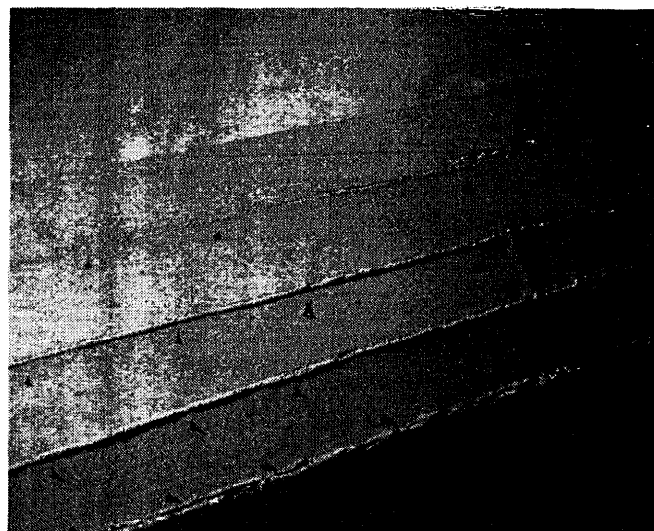
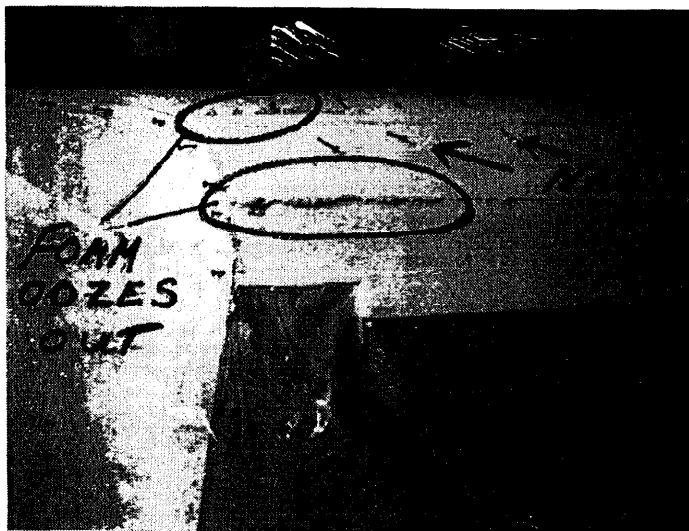
#### FOR YOUR INFORMATION

The F.A.A. recommends 0.015 stainless steel or 26 gage galvanized steel for firewall material. 0.016 302/304 SS weighs 0.676 lbs. per sq. ft. and 0.022 galvanized weighs 0.906 lbs per sq. ft. The average KR-2 firewall (about 5 sq. ft.) will weigh about one pound less in stainless than in galvanized if these minimum thicknesses are used. SS is approx. \$2.00 per lb. and galvanized is approx. 20¢ per lb.....Marty Rezmer California

How many of you are into the foam construction stage of your KR? If you are just starting or only have the engine cowling left to do, I have some good news. There is a better way to bond those pieces of foam together. Fred Richen sent me the following letter.....

"Here is a good tip I think a lot of the fellows will like. I have tried white glue and weldwood glue both for bonding foam together but it is not as good as poly-foam which bonds and fills any cracks or holes between foam surfaces or between foam and wood. It is strong, has a 2 lb. density when the foam is produced, sands easy, excellent bonding properties to dry, clean surfaces such as wood, metal, fiberglass etc. It comes as two liquids and these are mixed together and foaming is complete in two to three minutes. Has excellent chemical resistance and is not affected by gas or oil. When glueing foam together don't mix up too much at a time because it does foam quick. I use a small glue brush to apply to both surfaces. This method sure takes the touchy work out of trying to get good mitered joints on that foam. Have tried breaking it and foam will break before the joint, that is the foam planking. Hope you like the foam as well as I do....Fred Richen 9917 --152nd St. E. Puyallup, Wash. 98371."

If you want to try Fred's technique, see your local fiberglass or plastic products dealer. Ask for TITAN POLY FOAM or equivalent liquid poly-urethane foam.



Fred sent in these pictures to show how the liquid foam works. Really looks like a great idea!

I get letters almost every day wanting details on a sliding canopy arrangement and a different type of seat. No one as yet has reported using a sliding canopy so if you are working on one, we're waiting to hear about it. The sling seat may not look it, but it is comfortable, light and easy to make. If you have some ideas though, I'll be happy to pass them along.

Just talked to Ken on the phone. They are all set for the Fla-Bob Fly-in and are going to have both planes there. Stu Robinson will fly the KR-1 and Ken will be flying the KR-2.

NOTE...Ken said that due to the many requests he has received, Rand/Robinson will now carry the Posa injector along with the other parts they have available. Price is a low \$48.00 for the 29mm model which fits most VW engines 1300 to 1834.

## PROBLEM AREA: Balanced Ailerons

Some KR-2 builders have reported difficulty interpreting the instructions for balancing ailerons as given in the plans book. KR-1 builders have no instructions at all in their plans. The new KR-1 plans do have balancing instructions. Many builders want the safety factor available with balanced ailerons so I'll use some space here to help answer the questions most asked.

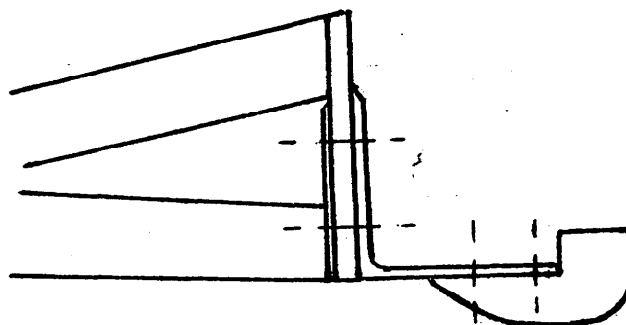
Q. Where on the aileron is the balance arm located?

A. On KR-2 with full length aileron hinge, it is centered on the aileron spar. On KR-1 it is located approx. 12" from aileron control horn. If you are using full length hinges, put it in the center of the aileron.

Q. What do I use for the balance arm?

A. Use 2" aluminum angle, 2024 T-3 or stronger, at least 3/32" thick and 1 1/2" wide. Be sure to use back-up plates. See drawing.....

A mold for the lead weight can easily be shaped in foam and an impression made in damp sand. Melt lead and pour slowly into sand mold. (1 to 1 1/2 lbs for KR-1 and 1 1/2 to 2 lbs. for KR-2 is average per aileron. Be sure when positioning lead weight on balance arm that down aileron is not limited by aft wing spar. Ken Rand reports that 100% balance is not necessary to increase red-line over 200 mph. A 1 lb. weight located 2" ahead of the hinge point is sufficient.



## BUY-SELL-TRADE

FOR SALE.....(KR-1...40% complete) Wood construction finished and signed off by FAA. Sitting on gear and all parts to complete except engine and instruments. \$800.00 or offer. Contact BILL SOUZA 714-846-2148

FOR SALE.....Foam kit from Aircraft Spruce...Styrofoam-\$90.00...7 gal. Aircraft Spruce epoxy -\$100.00 Contact MARTY REZMER 17131 Berlin Huntington Beach, CA 92649 Ph. 213-685-4050 days or 714-846 0358 nights.

DYNEL.....80 yd. roll..\$1.50 per yard. LARRY ZEPP 214 Napoleon Rd. Apt. 90A Bowling Green, OH 43402 Ph. 419-352-2357

KR-1 COMPONENTS...dynel, epoxy and wood kit from Aircraft Spruce. Also foam kit, tach, alt., T & B, cyl. head temp, 2 dismantled 40 hp VW engines, prop & hub. \$750.00 for all. Also 18 ft. hang glider \$30.00 RUSS DUNHAM 3738 Lake Grove Dr. Yorba Linda Calif. 92686

## TIPS FROM OTHER BUILDERS

I am going to use two VW gas pedal cables for my brake cables. The VW cable has an end that fits the brake lever perfectly. Cost is about \$1.20 each.....Bruce Gilinsky Lakeview, Oregon

A suggestion for new builders: when installing the plywood sides and bottom, I found by using 1/2" wide packing binding I could remove the staples very quickly with needle nose pliers. Like opening a spam can.....Jake Enns Canada

QUESTIONS & ANSWERS

- Q. I have a piece of channel aluminum 125 x 38½" long from Rand's aluminum kit. What is it used for?
- A. This channel is cut in half and used for mounting the magneto and, if electric system is used, the alternator to the VW engine. On the KR-1 it also doubles as the engine mount.
- Q. Can the Wico alternator (see issue #7) be mounted on the Revmaster 1834 or 2100, with or without starter?
- A. Yes, to either. The Wico mounts on the front of the engine.
- Q. What type glue would be suitable for use in a basement that usually stay at 62 degrees?
- A. I have not found anything as good as Rand/Robinson's 1 to 1 epoxy. Temperature range is 50 degrees to 100 degrees.
- Q. Will the inspector want to look at the rear stabilizer complete with hinges installed before the foam is glued in?
- A. The inspector will want to see any fitting before it is covered permanently.
- Q. Does scarf joints in plywood have to lie against fuselage upright?
- A. Not if you have a good 10 to 1 scarf joint. I like to have them on a crossmember anyway. It's usually a matter of a few inches.
- Q. Has anyone had any problems with water or gas getting into the wing or rear fuselage? I live in a very wet, humid climate.
- A. No more than with any other aircraft. The people at Wick's Organ recommends small drain holes at the aft inboard of each box section. Waterproof these holes with varnish or epoxy.

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