

KR CLUB NEWS.....On Oct. 1st some members of the KR Club in the Southern California area met at Corona Airport for an informal get-together and picnic. About two dozen people (members and their wives) were on hand to enjoy some sunshine and talk about airplanes. Butch Crafton flew his KR-1 up from San Diego to be there and I'm sure glad he did. Seems as tho all other parts of So Cal had a bad case of "low clouds and fog", typical weather for this time of year. Butch's KR was the only flying specimen to make an appearance. Ken Rand was present but he drove in because of the weather situation. Paul Vennes's KR-2 is based at Corona but Paul was in the middle of doing a valve job on his engine and wasn't able to fly that day. All in all, everyone enjoyed themselves so we will set up another day for a KR Club picnic here soon and hope the weather co-operates a little better.

Why don't you take a look around your neighborhood airport, see if there is a park, hangar, or whatever that a few KR club members might meet for a picnic or bull session.

Pick a date, tell me about it 45 days or more in advance and I'll put a notice in the Newsletter.

The last issue (#40) suggested using the new logo for a patch and buckle. Response has been very much to the affirmative so I am having some made. Might be available by next issue, I'll let you know then.....E.K.

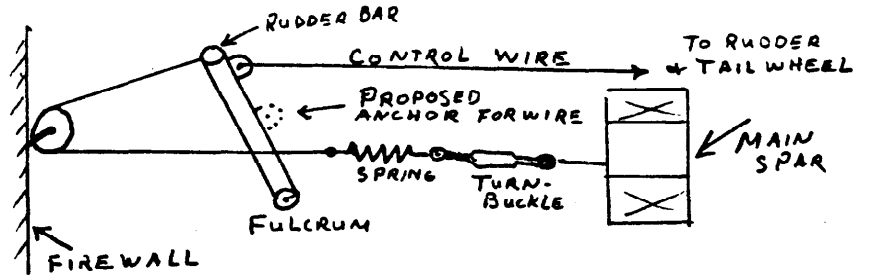
P.S. Ken Rand just made the 1st flight in Warren Vicents KR-2 at Santa Paula airport. The flight was cut short by an over-heating problem, but was very successful in all other respects. Warren's phone number is 213-882-6173.

The newsletter editor for EAA Chapter 588 is a Mr. Robin Butler. Robin takes this duty seriously and turns out a fine newsletter each month, of which I sometimes borrow for the KR Newsletter. These latest tips are especially for KR builders and I'm sure you will find them interesting....."My KR-2 is coming along steadily, mainly because I'm spending every spare moment on it. Painstaking care in building the fuselage side frames and equal care in bending the sides to complete the fuselage pays off. My center section spars square and parallel without shaving, cussing, or other finagling. I used a piece of oak 3/4" x 2 1/2" x 60" in place of the landing gear spring bar to get all fittings correctly placed and drilled. Then the oak board served as a drill template for the spring bar. Eliminates the possibility of making mistakes on the costly spring bar! Also, since my spars rested perfectly in the fuselage, I did not glue them in until after all landing gear pieces, etc., had been aligned and drilled, including wing attach fittings (center spars only). Drilling could be done on the drill press simply by disassembly, removal, and re-assembly outside the fuselage. Takes a little more time but results in truer holes. I fell in love with E.H. Nelson's tip in KRN #38. Best I could find, however, was a 5" swivel caster from Fleet Farm, so I am doing a little tailoring but it's still worth it in time saved making the stick assembly. Another way to really polish those aluminum fittings is to use a cloth buffing wheel and the proper buffing compound. I am using a Sears compound kit which has 4 sticks of different compound including 2 grades of jeweler's rouge. Just follow the directions on the box for a super shine job on any metal fitting. One caution however, excessive heat caused by the friction of the cloth buffing wheel can anneal (soften) aluminum. Best to hold pieces in bare fingers and as soon as you feel the aluminum becoming warm, put it aside to cool while you buff another piece..... I used a spray can of Rustoleum #960 primer on my steel fittings. According to the manufacturer's specs, it is zinc chromate, even tho the label does not make that clear. I am told that the same item, sold by aircraft suppliers, does specifically say on the label that it is zinc chromate. Just another tip for the shrewd.....Here's something I picked up from a Designee's Newsletter on the shoulder harness plate-tail wheel assembly. I cut another wedge block with the same angle as the block above the tail wheel spring plate and installed it inside the fuselage, under the 4130 plate which is my shoulder harness attach. That eliminates any need for tapered washers and gives the harness attach plate a nose-high pitch more in line with pull forces from the shoulder harnesses. Two quarter inch bolts (instead of 3/16) hold everything together. (Yes, the carbide-tipped masonry bit is the only way to drill spring steel!).....I have located expert help to assist me in building up the 95 hp Corvair engine. We are going for high performance--except that our goal is not high performance but rather, super reliability. It will be direct-drive, single sparkplugs, and breakerless electronic ignition. Already smooth-running, we are balancing even further. That's about all I can say for sure now but will keep you informed."....Robin Butler, 1841 Michigan Ave. Manitowac, WI 54220.

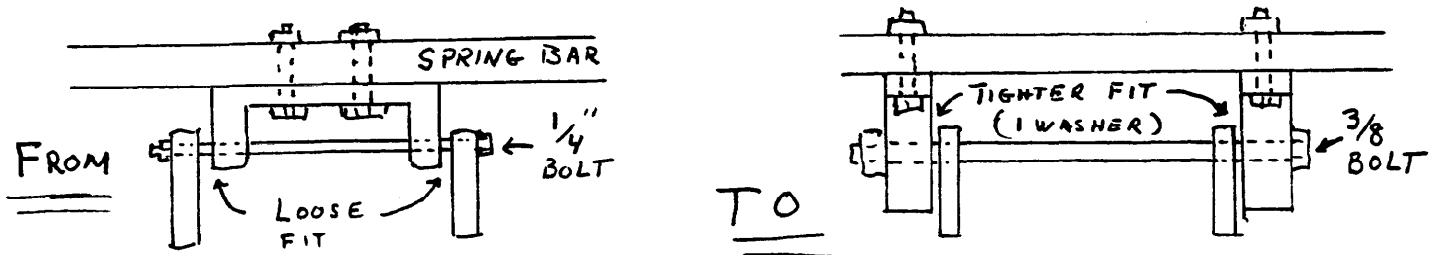
TIPS FROM OTHER BUILDERS

Couple of weeks ago I received a phone call from one very disgruntled KR builder. He was having problems with ground handling of his KR-2 to the point of wondering if it would ever fly. The following letter just came in.....

From Bob McLoughlin, 39 Forest Rd., Burnt Hill, NY 12027....."After our phone conversation about steering difficulties with our KR-2 we have tried some changes which I think are very interesting. The first thing we did was provide heavier springs to hold the inside of the firewall and cables led through the pulleys to turn buckles (for adjustment) and springs anchored on the main spar. The springs had a force-deflection ratio of 14 lbs. per inch. We immediately found with this set-up that the rudder and tail wheel would not return to the zero position when deflected,

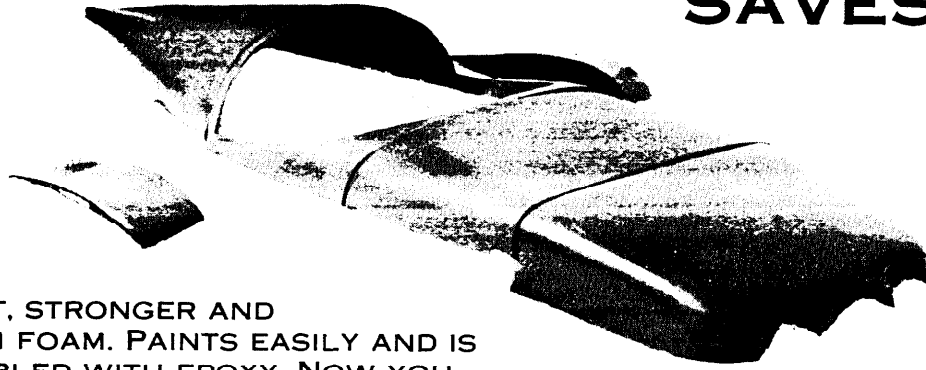


either when the springs were tight or loose. This pointed up to the real problem which was friction in the fairlead tubes which were phenolic. Upon removing the rudder wires from the fair lead tubes (which held them to the fuselage sides to pass around the pilot and passenger) the friction disappeared. The rudder and tail wheel now snap back to the zero deflection position very nicely. We tried out the no friction rudder wires and springs by sitting between them with the stick between our legs and with feet on cut-board rudder pedals. Control was much, much improved. Apparently what we had before was a stick-up situation where it was almost impossible to make small corrections. The result was a weaving course which became a more and more exaggeration and resulted in our going off the runway several times, even at speeds below 40 MPH. Talking to Rand about this, he says he used nylon tubes and did not experience this problem. However, even nylon must have some friction so after our experience I am going to re-design the rudder controls with pulleys. I will keep the spring feature and also move the anchor point for the control wires down to halfway between the rudder bar and the fulcrum in order to double the foot movement for a given rudder/tailwheel deflection. Others may be having this problem to a lesser degree even with nylon tubes. Perhaps this explains the wide difference of opinions I see in various pilot reports on ground handling. I think at the very least the plans should have specified nylon or teflon tubing, but I wouldn't use tubing fairleads of any kind now. Another difficulty we have had is with the spraddle of the landing gear legs, causing excessive tire wear on the inside edges



of the tires. We are putting larger pins in the landing gear pivots because the $\frac{1}{4}$ " bolts bend due to the poor fit between brackets on the spring bar and ears on the casting bolted to the spar. We will replace the brackets with $\frac{1}{2}$ " thick aluminum blocks bolted directly to the spring bar and $\frac{3}{8}$ " pivot bolts. Even after this improvement I expect about half the spraddle we now have. What should be done is to cock the gear legs slightly on the spring bar so they will be straight up and down when bar is deflected. I don't think we can do this without re-doing our wheel wells in the wings. It's a shame this problem wasn't pointed out by the designer because it would be easy to do if done before the wheel wells were put in. I hope the Newsletter can warn others before they make the same mistake we did. By the way, Rand suggested a fix for the above by tilting the axle in the legs. This is NOT possible with our wheels and brake drums as there is just no room to tilt the assembly. I am going to look for narrower wheels, however."

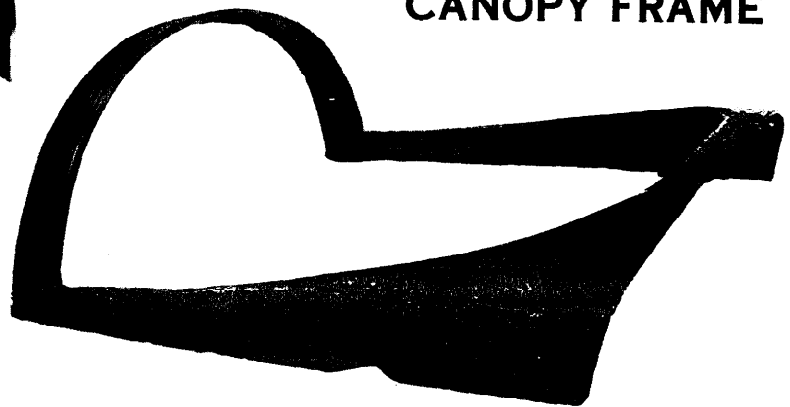
PRE-MOLDED FIBREGLASS KITS . . . SAVES TIME!



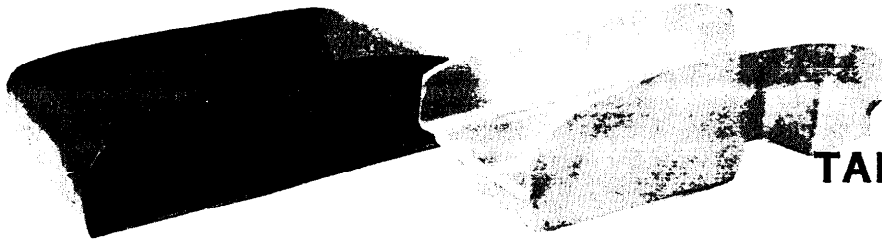
LIGHT IN WEIGHT, STRONGER AND SMOOTHER THAN FOAM. PAINTS EASILY AND IS QUICKLY ASSEMBLED WITH EPOXY. NOW YOU CAN SAVE MANY HOURS OF ASSEMBLY TIME . . . WITH SUPERIOR RESULTS.



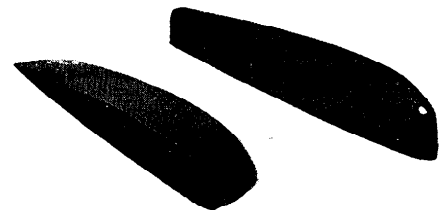
**KR-2
TURTLE DECK**



**KR-2
CANOPY FRAME**



**KR-2
TANK AND DECK**



**WING TIPS FOR
KR-1 AND KR-2**



KR-2



TURBO - KR-1

OCTOBER 20, 1978

- Please send orders and make checks payable to:
- California orders add 6% sales tax.
- Shipping is collect, best way.

RAND ROBINSON ENGINEERING, INC.

5842 "K" McFadden Avenue
Huntington Beach, California 92649
Telephone (714) 898-3811

TIPS FROM OTHER BUILDERS (cont.)

Ready to make your aileron balance weight? Here's a handy tip. Use one of the 2½ to 3 lb. pear shaped fishing weight you can buy at most any sporting goods store. Cut it in half lengthwise and you have a streamline shaped weight you can trim or further shape as needed.....Jack Moel.

Several KR builders plan on using styrofoam rather than urethane foam. If you are one of these, keep this note of caution in mind. Pin holes are almost completely unavoidable when doing cloth and resin lay-ups. Make sure all of these tiny holes are filled with a filler made up of equal parts (by volume) of epoxy and micro-balloons. This will help insure that the aromatics in the paint of your choice will not damage the foam thru these pin holes.

VW ENGINE PROBLEMS.....Baffling for your VW engine is just important in your aircraft as it was in the car it was lifted from. Recent engine failures because of overheated engines is bringing this point forcefully home. I personally know of four engine failures resulting in forced landings that could have been avoided thru judicious use of a little sheet metal. Take a good long look at factory aircraft engine baffling installation. Notice how the cooling air flow is directed to obvious hot spots around the cylinders and heads. What your VW engine needs is the same basic cooling system the factory put on their engines. I know how impatient you can get when your aircraft looks so complete. The urge to fly the project you've devoted so much time and effort is almost overwhelming. DON'T DO IT!! A week-end spent with a pair of tin snips can mean many trouble free week-end later.....E.K.

Every now and then I get a lot of response to something in the Newsletter. Last issue (#40) had two things that really evoked letters and phone calls from readers in all parts of the country. First there was a mix-up of pages during printing which led many to believe that there was a page missing. There wasn't....my apologies for the confusion. Second (and more important) was the use of a rubber hose as part of the oil pick-up on the oil filter modification sent by Bill De Freze. My phone started ringing almost the same day I mailed out the Newsletter and I have been getting letters everyday since. The theme was all the same: Rubber and oil do not mix!! Bill, I and obviously almost everybody else, know this but in case you don't: Oil, especially hot oil, is death on rubber. If you have the small VW engine which would require the use of a hose, use re-inforced neoprene.

BUY SELL TRADE

Rand KR-2 cowling. New, never used--\$75.00. Tom Loftin, 3675 Noland Rd., Suite 150, Independence, MO 64055

Wanted: KR-2, complete or project. Phone Ed Woolsey at 714-444-7161.

Wing spar drilling fixture w/drill--\$7.50 ea. post paid. Swaging tool for 1/8", 3/32", 1/16" Nico press sleeves...\$9.95 post paid. Roska, Box 57, Greenvale, NY 11548.

FOR SALE: Complete unopened KR-1 kit. Includes wing tips, all hardware, duel mag engine mount, easy eye canopy, etc.... \$1100.00 or trade for radio gear, Nav/Com, A.D.F., or C-85, C-90, O-200 parts. Will pay shipping of kit. Changing jobs, no place to build. Ron Fike, Box 53/748 ACW, Kotzebue, Alaska 99752. (907) 748-1289..no collect calls please.

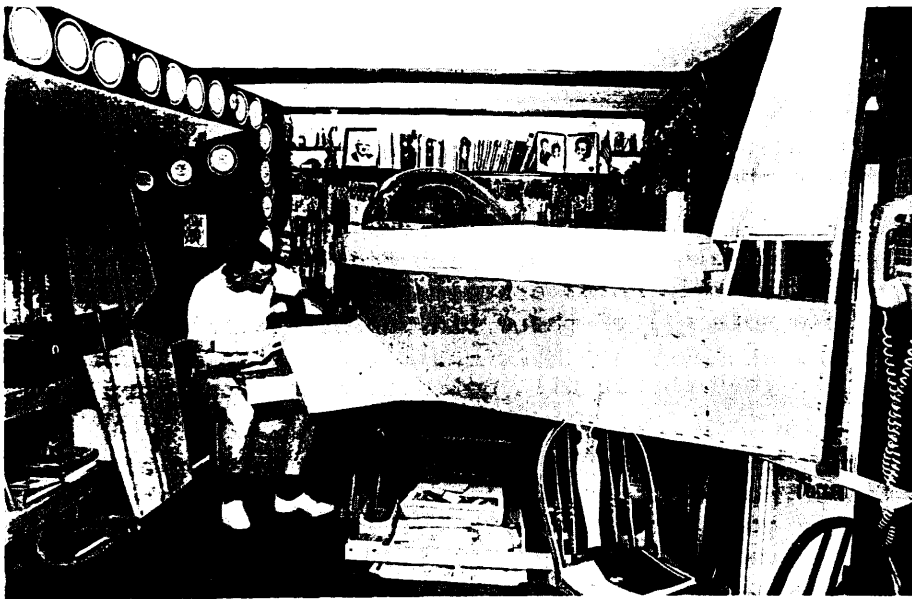
FOR SALE: Allergic to epoxy. Must sell KR-2 project complete to paragraph 12.20, plus materials to complete...\$1600.00 less engine and instruments. F.Blair Gaffney, 1403 Chico, Carlsbad, NM 88220 (505)887-3697 home or (505) 885-2121 business. No collect calls please.

WANTED: Engine mount to fit Gilbert Duty's VW conversion. Johnny Hinton, Rte. 5, Box 191 F, Florence, Alabama.

Coast Pro-seal adhesives, ¼ pint kits. Jim Snyder, P.O. Box 696, Hesston, KS 67024.

"Supercase"...bolts on to your VW engine, 1300-2200 cc. Write for details, S.A.S.E. appreciated....Dan Diehl, 4132 E 72nd, Tulsa, OK 74136.

KR-2 project, two sides of fuselage completed, part of bottom and spars. Enough wood to complete. Make offer....call 714-494-7991 after 5 pm.



Over the period of three and a half years the Newsletter has been published I have heard of KR's being built in several unusual places...bedrooms, living rooms, even in a brownstone apartment in New York. The topper of them all so far is in this picture. Bill Egner, R.R. #2, Box 99, North Stonington, CT 06359 is building his KR-1 in his house trailer, (8' x 38')....now that is dedication!

MINATURE METRICS
*MACHINE SCREWS, BOLTS, NUTS,
*WASHERS, STEEL, STAINLESS
*STEEL. ENGINE STUD BOLTS
*MADE TO ORDER. DIAMETERS
*FROM 2mm to 14mm. WRITE TO
*US WITH YOUR NEEDS AND
*SPECIFICATIONS.....
*
*MINATURE METRICS
*7801 14th STREET
*WESTMINSTER, CA.
*92683
*



ERNEST KOPPE
6141 CHOCTAW DRIVE
WESTMINSTER, CA 92683
ISSUE #41



NEWSLETTER