

February 1980
Issue No. 56

NEWSLETTER

RATES
1 Year \$9.00
O/Seas Airmail \$15.00
Back Issues .75 each

**** A monthly publication for communication between KR builders and pilots world wide.****
Edited & published by Ernest Koppe, 6141 Choctaw Dr., Westminster, CA 92683 714-897-2677

I am excited! You know the E.A.A. fly-in at Chino is coming up soon (Apr.26-27). Well, this year it is going to be special. KRers from across the country are planning on attending the Chino show en-masse. Flight planning is being worked out by Ray Ellis, Steve Bennett, and Dan Diehl, all planning to make the trip as a group. Others are planning on joining them along the way. There will be more KRers at Chino than ever before!

Bill Defreze is driving his motorhome to Chino and has offered his extra bunks to the KR pilots looking for a place to stay. If everyone shows up that said they would Bill's RV might get a little cramped....so I approached Jeannette Rand about having a second motor home available. Affirmative! Not only will we have the additional bunks, she has also promised to buy banquet tickets for all the KR-owner/pilots that fly their KRers to Chino.

This is the tentative flight plan so far....Ray Ellis, Steve Bennet and anyone else who wants to make the trip from that area will leave Ames, Iowa Wednesday, April 23rd, destination Tulsa, OK. At Tulsa they will spend the night and Dan Diehl will join the group along with any other KRers from his area. Thursday morning the KR group will leave Tulsa, destination Albuquerque. A fuel stop is planned at Amarillo, TX.

Arriving at Albuquerque the KRers will settle in for the night. Next morning (Fri.) our intrepid airmen will leave for an as yet undecided airport in Arizona, probably in the Phoenix area due to lower terrain. There they will re-fuel & re-group as needed and hopefully pick-up another KR or two. Then on to California! Next stop is Corona airport, about 6 miles southeast of Chino. Corona is a 3200 ft paved strip and has fuel available for those who want to get to the fly-in with full tanks. It also is an uncontrolled airport w/unicom (122.8) so KRers with no radio can get in and call ahead to Chino if needed. I plan on being at Corona to meet the group and help make any last minute arrangements if needed, then its off to Chino.

Let me say again that this schedule is only tentative and will be finalized later. If you want to get in on the fun, contact Ray Ellis, 2416 E. Douglas, Des Moines, IA 50317 phone (515)265-3007 or Dan Diehl, 4132 E. 72nd St., Tulsa, OK 74136 phone (918) 492-5111 or myself at the address and phone number of the Newsletter. Lets get it going!

KR CLUB NEWS

Ron Bath sent the following letter....."My home town is Lakeland, FL and I plan on having my KR-2 at the Sun & Fun. If any KR club members are interested in camping while at Lakeland I can arrange for some camping tents, and cooking utensils for those on a tight budget and for the affluent I can arrange for several motorhomes to be set up at the campground, the deposit and rental would be paid by the user. If anyone is interested they can contact me." Ronald Bath, 658 Pleasant Loop, Fayetteville, NC 28301 phone (919)488-7422.

How about that? Now....if someone can do the same at Oshkosh please send me a note.

The Kansas area KR builders are having their next meeting at the home of Robert Brice-Nash, 324 Kansas Ave., Kutchinson, KS 67501. Phone (316)663-6554. Time 7 p.m., March 8th.

LA area club members will meet at Richard Shirley's 636 Balboa, Seal Beach, CA Phone (213)431-7407. Meeting time is 7:30 p.m., Feb. 11th. Richard has almost completed the re-building and re-styling of a fixed gear KR-1

KR Club News
(cont.)

From Emmett Dignon, 2975 Walgrove Way #2, San Jose, CA 95128..."The group here is San Jose is still going strong. Looks like our group will have approx. three aircraft in the air by mid-summer. After reading your item about, shall we call it "departure stalls", in Dec. Newsletter, I felt I should add my "two cents" on this matter. Too many of our pilots today are not pilots for our homebuilts, higher speed aircraft. If you haven't had training in tail draggers, done spins, rolls, loops, etc., you best get with it. I don't say you have to be good at this type of flying but at least you would realize when a stall is near. Also I feel that too much training is in using meters and radios. Don't use the airspeed instruments to tell you if your aircraft is flying...feel it!! Go up and do stalls, power on and power off. If you will do power off stalls you will get the feel of the stall. Sometimes this feel gets covered by the running of the engine which is the condition on take-off, but its still there. Don't feel that each take-off has to be a "max climb-out." Forget about noise abatement and climb out easy. This is what the first fly off hours are for. Don't be a hot shot and don't retract your wheels on climb out until you have a few hrs in your KR. Try it at higher altitudes. Remember you will be pushing the gear retract handle forward which will make you push the stick forward. Try it one the ground and you'll see what I mean. I hope to beat this problem with an electric motor for the retract. I know this will add weight but feel it will add to the safty of my craft."

From Robin Butler, 1841 Michigan Ave., Manitowoc, WI 54220....."Forgive the delay in answering your letter. I was down to Headquarters Dec. 19, and in the press of other matters, completely forgot to ask Tom about a KR tent at Oshkosh '80. I'll send him a copy of this with a ring around this paragraph as a reminder and get back to you as soon as possible on this. While I was at Headquarters, Ron Scott showed me the broken-off side of a KR landing gear casting. I don't know whether it was a KR-1 or -2, nor who the pilot/builder was, but apparently there had been an accident and Ron said that first "blame" seemed to be the casting itself. I looked at it closely and disagreed. The axle hole was $\frac{1}{2}$ inch in diameter--twice the design dimension--leaving about an eighth of an inch of metal between the hole and the bottom edge of the casting. There was also a gouge of about 1 inch diameter circling the hole, where something turning had worn away the metal deeply on one side only.. I think it was the forward side. The point I made is that the axle installation was sloppy and not square, which means the casting was subjected to a "twist" force at all times, aggravated when the weight of the airplane was on the gear. Sooner or later the casting had to snap. The break showed good metal all the way. I would caution builders in the Newsletter to make sure the axle installation is at least square, preferably the way the plans have it. I suspect the Rand gear casting is getting blamed for poor axle installations more than we are aware. Its' not the casting's fault the builder bungles the axle!"

Ray Ellis just put me on to a new item that seems to be made just for our KR's. Its a Stewart-Warner Mini-Panel, a cluster of gauges (oil temp, oil pressure & volt-meter) that fits in the same space as a $2\frac{1}{4}$ " single instrument, the quality of this cluster is the same as the standard size instruments. Price is just under \$60.00 at your local S/W dealer. Ask for the "Mini-Panel".

REMINDER.....There are five KR Designees... all willing to help you with your problems. We've all built and flown at least one KR and we've helped on dozens of others. Below are our names, addresses and phone numbers. Call or write the designee nearest you (or all of us for that matter). We can help!

Bill DeFreze
7530 Ironwood Dr.
Dublin, CA 94566
(415) 828-2111

Dan Diehl
4132 E. 72nd St.
Tulsa, OK 74136
(918) 492-5111

Ray Ellis
2416 E. Douglas
Des Moines, IA 50317
(515) 265-3007

Ron Sorrell
6505 Sassafras Dr.
Independence, KY 41051
(606) 356-6242

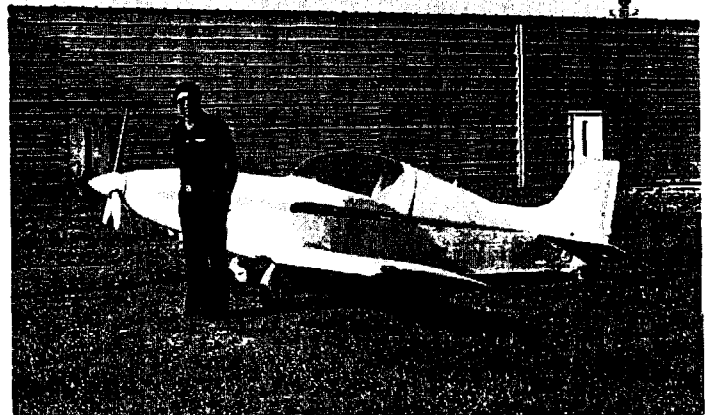
Ernest Koppe
6141 Choctaw Dr.
Westminster, CA 92683
(714) 897-2677

TIPS FROM OTHER BUILDERS

From Keith Campbell, 1617 14th St., Boone, Iowa 50036... "Here is a few lines on winter flying of the KR-1. My aircraft is N21KC "Little Pretender" and I would like to let people know that you can fly KR's in winter. Steve Bennett and I made a 50 mile trip and back in 8° above zero and had no trouble other than cold feet. We stopped and had a cup of coffee and they were warm again. Our latest trip was about 40 miles. We ran into bad weather about 3 miles from the airport of destination and turned back needing fuel. I landed at an airport which had not had the runway cleaned of snow. There was approx. 1½ inches of snow and the temperature was 35°. It was wet and slushy. When refueling, I cleaned wheel wells of slush built up. I then taxied to runway in slush and made normal take-off. The slush had built up again in wheel wells and I could not retract gear. I left the gear down and started to make a turn and the ailerons wouldn't move. With light tapping on the stick, I broke ice and got my ailerons working and made a normal landing. When looking at the plane on the ground, the center sections of the wings and wheel wells and ailerons and push rods were covered with ice. I would guess there was about 20 lbs of weight. Everything worked out O.K. this time so I wanted to let other KR pilots in snow areas to know what to expect. I now have 58 hours on "Little Pretender" and I'm having a ball with it. I would like to thank Steve Bennet of Des Moines, Iowa for getting me over the hump on flying my KR-1."

From Don Pearsall, 2039 S. Cherry St., Cornelius, OR 97113.... "My KR-1, N74DP, "The Albatross" was completed in August of 79 after 2 years of frustrating but ultimately rewarding work. It could have been flying sooner but I just could not resist the temptation to add a few of my own modifications to make it, more of a personal airplane. Among those mods are: 1. converted 2100cc VW myself. 2. added alternator and battery. 3. 100 channel radio 4. one handed camlock gear retraction mechanism. 5. used wing tanks only (12 gal.) and made header tank into storage. 6. retained distributor ignition and mech fuel pump. 7. used automatic mixture adj. S.U. carburetor. 8. heel braked. 9. under seat storage. 10. used BID fiberglass cloth throughout. The day of the first flight, I skidded sideways in a crosswind and broke off the left gear leg. This resulted in a broken prop, cowl and center section skin. Although I now find after 50 hrs the KR-1 is an easy aircraft to fly in wind, I urge all first flights to be done in a calm wind only. It is a very quick handling plane and must be flown with quick responses. The first successful flight was three weeks later and was without a doubt the most thrilling, incredibly high point of my life. To all you builders out there, that first flight is more than worth every penny spent, every hour labored and then some. Get busy and make it happen to you. In flight, the KR-1 becomes an extension of your own self. The response is instant, and the visibility is fantastic. Only the hanglider pilots are closer to the birds themselves. Some statistics as follows: 1. empty 406 lbs. 2. TOP 178 mph 3. Cruise 150 4. 3.2 gph 5. CHT 350° 6. oil temp. 190° 7. oil pressure 45 lbs."

From Ken Ranta, 11030 Jones St., Omaha, NE... "I have a KR-2 in which I have made 2 flights. On the first one I ground-looped it and broke the prop. Probable cause was the hard rubber used on the tailwheel so I changed it to the Homebuilder special from Aircraft Spruce and change the brakes. On Dec 8 while taxiing, ran into a hole on the grass and broke the prop again. I am still waiting to get it back from R/R. I am working on a heater system at this time as Neb. is very cold at this time of year. N49849 was started in Feb of 76 and finished Aug 79. First flew Sept 79 Will send flight spec. when flown more.



QUESTIONS & ANSWERS

- Q. I think the August 79 revision of the KR-2 plans show the wrong angle for the wing rib in relation to the front and rear spars. If I install it as shown on the rib template the forward spar would have to be positioned approx. 1/2" above the bottom longeron. What is the correct position for the spars?
- A. The front and rear spars should rest on the bottom longeron. This will give you an angle of incidence of 3 1/2°, not the 5° shown on the rib drawing.
- Q. Drawing 22 page 22 of the Aug 79 plans show a doubler between the center elevator ribs. What is this piece made from?
- A. 3/8" spruce, same width as the elevator spar.
- Q. I'm interested in building my own engine, where can I purchase the special crankshaft with prop flange?
- A. The prop flange (or hub) is a separate part from the crankshaft and can be purchased from Rand/Robinson or a number of other suppliers. H.A.P.I. has a very good book on VW conversion that includes a chapter on crankshaft selection. See their ad this issue.
- Q. I've heard there is a tandem seat KR-2 in California. Any details?
- A. I'm afraid what you heard was just a rumor. To my knowledge no one has built a tandem KR-2.
- Q. Can you give me any information on using a Lycoming or Continental engine in a KR?
- A. There are a couple of KR's flying that have used these engines but performance hasn't improved over the VW. This fact is due mostly to the problem of getting a prop that would match both the engine and the airframe.
- Q. What size staples (depth wise) are used for the skins?
- A. 5/16" works best.
- Q. Could you give me the address of Revmaster?
- A. Revmaster Aviation, Chino Airport, Chino, CA 91710.
- Q. Can the KR-1 or -2 be used on a dirt strip?
- A. I know of several KR's that use dirt strips. Main problems have been chuck holes and occasional prop damage due to pebbles picked up while taxiing.
- Q. Are detailed plans available for effective cooling baffles?
- A. Dan Diehl sends out baffle templates (full size) with his fiberglass cowling as does R/R. You can buy the templates separate from Dan. His address is 4132 E. 72nd St., Tulsa, OK 74136. Cost of the templates are \$5.00.
- Q. I'm interested in the KR-1B long wing. When will there be plans available and how much?
- A. Plans for the long wings are going to be supplement to the KR-1 plans and will sell for an additional amount, approx. \$30.00. The plans are being printed up now. A point I would stress....these long wings are not for the KR-2.
- Q. I want to purchase a battery for my 1600 VW conversion using R/R's Bosch starter. Will a motorcycle battery work, if so what size?
- A. A 1600 VW could get by with a 15 amp battery with a good installation. Larger engines will need 18 amp (or larger) batteries.
- Q. Last July the right gear casting of my KR-2 broke on a "greased" landing. A month later a friend's KR-1 had the same problem. Is this common?
- A. There was a problem with some of the early castings but was remedied with an improved design about 2 years ago. New castings are recognizable by the flat forward face.

BUY SELL TRADE

FOR SALE...KR-2 project, on gear, tail feathers complete, all controls in. Excellent workmanship. Outer spars complete & signed off. New 1834 engine, prop hub, R/R 3-blade prop, spinner and cowling. Dynel and some foam to finish...\$2900.00 invested. Best offer. M.D. Maraulja, P.O. Box 785, Eaton Park, FL 33840 phone (813)665-0829.

KR-2 PROJECT...Fuselage sides together, main spars complete. Foam, alum. Dynel, canopy and hardware to complete....\$800.00 (or trade ???) Stan Rutiz, 1008 7th St. #15, Santa Monica, CA 91403 phone (213)274-6786 office or (213)394-5661 home.

FOR SALE...R/R fiberglass KR-2 forward deck and fuel tank, never used...\$75.00. William Rosman, Rt. 1 Box 150, Palmyra, WI 53156 phone (414)495-4370.

KR STUFF

Embroidered KR patches for hat and jacket..\$1.50 ea or 3 for \$3.50.
Vinyl patches, stick anywhere....
50¢ ea or 3 for \$1.00
KR belt buckles....\$5.50
T-Shirts..med, large, extra large
cotton/polyester blend
\$6.50 ea or 3 for \$18.00
Ernest Koppe
6141 Choctaw Dr.
Westminster, CA 92683

TRI-GEAR PLANS...Retractable system that uses Rand's parts, wheels, gear legs and spring bar. Conversion plans..\$25.00.
Bill DeFreze, 7530 Ironwood Dr., Dublin, CA 94566 phone (415)828-2111.

KR-2 UPHOLSTERY

Six piece, custom designed, light weight upholstery kit. Available in most colors of naugahyde. Kit includes all snaps and fasteners to install.
Price\$180.00
Delivery UPS (or best way)...4 to 6 weeks
Send cashiers check or money order to:
Gary Boyd
2250 Judith Lane
Santa Ana, CA 92706
Phone 714-836-6580

FOR SALE...Bolt on conversion parts for your VW engine. Starters, flywheels, magneto drives and alternators. Over 120 "Supercases" delivered, many flying!!
***New item...transistorized fuel pump for fuel transfer, light, efficient & safe.
***Send S.A.S.E. for more info. Dan Diehl, 4132 E. 72nd St., Tulsa, OK 74136 phone (918)492-5111.

FOR SALE...R/R gearlegs, spring bar, H sections, tailwheel & spring...\$160.00.
John Shaffer, 604 Langley St., Robins AFB, GA 31098 phone (912)922-0976.

New .003" polyethylene wing tape
250 lb. tensile strength,
tested to 185 MPH. 55 yard
rolls in white and many other
colors.....\$10.00 post paid.

VNE KR CONSTRUCTION
3811 "B" Livingston Dr.
Long Beach, CA 90803
Phone (213)433-0520

Last issue of the Newsletter had an ad by G. W. Davis for a KR-2 project. His address was right but the phone number was wrong. Sorry about the error. Here is the corrected ad.

KR-2 PROJECT...On gear, tail covered, controls installed. Dual, flaps, Arc gear lock. Approved to close. Many instruments, new Revmaster 2100 D, new Maloof prop. Less that cost \$5950.00 FIRM. G.W. Davis, 2349 LaSalle Ave., Ft. Myers, FL 33907 or phone (813)936-4162 (no collect calls).

FOR SALE...Complete kits for KR-2 (less Dynel) with new Revmaster turbo 2100 still in crate. Make offer. Contact Orin Carder, 1555 Ridgeview Dr. #10, Reno, NV 89509 phone (702)331-4912 or (702)826-5176.

KR PROJECT...Approx. 2/3 completed. Remaining material included except for instruments. Excellent, balanced 1700cc VW engine minus carb & prop. Will sell for money invested...\$2075.00. Douglas Borst, 519 Union St., Niles, MI 49120 phone (616)684-0246.

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\$8.00 BOLTS - \$2.00
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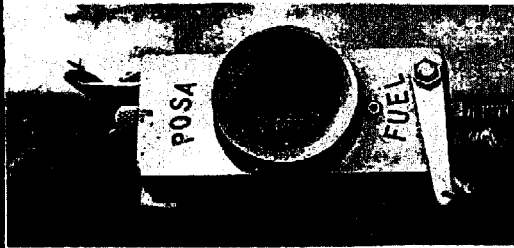
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30MM AND UP \$119.50. COMES WITH EXTRA METERING RODS, TOOLS AND INSTRUCTIONS. YOUR POSA MODIFIED TO "SUPERCARB" THROUGH 29MM ...\$50.00, 30MM AND UP \$70.00. "SUPERCARB" USE INSTRUCTIONS INCLUDED.

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DUAL IGNITION ENGINES. HAPI NOW HAS DUAL IGNITION ENGINES. USING TWO SLICK MAGNETOS AND R.F. SHIELDED HARNESS. WE ALSO HAVE AVAILABLE THE DUAL IGNITION HEADS AND DUAL MAG DRIVE ACCESSORY CASES FOR YOU WHO "BUILD YOUR OWN".

NEW-

WE ARE ABLE TO FURNISH CERTIFICATES OF MAGNAFLUX INSPECTION AND MATERIAL SOURCE FOR CUSTOMERS IN UNITED KINGDOM COUNTRIES. HAPI-ENGINES CAN BE BUILT TO COMPLY WITH THE REGULATIONS CONCERNING HOMEBUILTS IN ANY COUNTRY. WRITE HAPI FOR DETAILS!

WE HAVE SOLD HUNDREDS OF COPIES OF "HOW TO BUILD A RELIABLE VOLKS AERO ENGINE" AND BUILDERS EVERY WHERE ARE CALLING IT "THE BEST THING EVER WRITTEN ON VW ENGINES" FOR AIRCRAFT. STEP BY STEP CONSTRUCTION PROCEDURES WITH LOTS OF PHOTOS AND DIAGRAMS. \$11.00 POSTPAID IN U.S. \$13.00 OVERSEAS. WE STOCK EVERY PART OF HAPI ENGINES AND CAN SUPPLY HOMEBUILDERS OF CONVERSIONS WITH THE FINEST IN PARTS AND ACCESSORIES. WE ACCEPT MASTERCARD, VISA PHONE ORDERS. MOST PARTS SHIPPED UPS. THESE ARE JUST A FEW OF THE THINGS HAPPENING AT HAPI. SEND FOR OUR 40 PAGE CATALOG, \$3.00 IN U.S. \$5.00 OVERSEAS (REFUNDABLE ON \$25.00 PURCHASE) HAPI STOCKS ALMOST EVERYTHING YOU NEED FOWARD OF THE FIREWALL IN YOUR KR. BEING KR BUILDERS WE SHARE YOUR PROBLEMS AND CAN SPEAK "KR". TRY US, YOU'LL BE HAPI YOU DID!

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