

Issue no. 70
 April
 1981



KR NEWSLETTER

	RATES		
USA	\$12.00	Yr	
CANADA	\$15.00	Yr	U.S.
OVERSEAS	\$20.00	Yr	Funds

A basis for ideas and food for thought only. Use of any of the idea material is at the user's discretion. Not affiliated with Rand/Robinson Engineering Inc.

We made it!!! Winter is officially behind us and it's FLY-IN SEASON again.

The Lakeland Sun-N-Fun has become the lead off show and is taking place as I am writing this. I couldn't get to Sun-N-Fun myself so I'm counting on a report from some of the KR people who did attend.

Coming up real fast is the El Mirage Fly-in April 24,25, & 26th. This will be the first year at this location as previously this fly-in was held at Chino, CA. El Mirage airport is off the beaten path so there probably won't be much of a general public turnout. Fly-ins are for us flying type people anyway. Dedication of the fly-in this year is to Ken Rand and his contribution to sport aviation. This should bring out even more KR's than last year's record breaking number. Jeannette Rand is buying tickets to the Saturday night banquet for all KR pilots flying their KR's to El Mirage. See you there!

Next on the agenda is the 1st National KR Fly-in. Scheduled for June 13th & 14th at Pope Valley Airport. This fly-in is going to be one not to miss. Check out the poster in this issue and then get a post card off to Lisle Knight (or call) and let us know you're coming. This is important! We need some idea of how many people will be there so we can make sure there will be enough facilities for everyone. If you can help out at the fly-in and/or if you're planning on flying your KR there, be sure to get that post card off as soon as possible.

And then....after a suitable period of recuperation....OSHKOSH!! August 1-8, each year the annual EAA convention gets bigger and better and this year should be no exception. Get there if you can, if not, read about it here. I wouldn't miss it for the world.

Later on in the fall is the Kerrville, TX Fly-in, Sept. 18-20 and to finish off a great year...Tulahoma Sept. 30-October 4th. Catch one or catch 'em all. You'll be glad you did.

SAFETY ALERT

A phone call from Bill DeFreze last week should be passed along. Bill was working on his wings when he discovered a serious problem....dry rot!! The rear spar on one wing was affected about one foot each way from the balance weight hole. "Soft as balsa" was Bill's description. Apparently, the spar was not sealed properly when the hole for the balance weight was made even though Bill had thought it was. The aileron spars were not affected. Check your installation NOW. Make sure there is no place moisture can enter. "Dry rot" is really a fungus that requires moisture in order to spread. This is the reason all wood surfaces should be sealed.

Three or four Newsletters back, I mentioned an engine failure in a KR-2 that was attributed to the failure of a "phenolic" magneto drive. The following letter from Rex Taylor of H.A.P.I. points up some important facts we should all know.

"In regards to the failure of phenolic magneto couplers mentioned in KR Newsletter #67, perhaps I can help clarify the coupler problem. Phenolic is an all encompassing term that covers only the binder or resinous material used in making several different types of products. Most of these products are not capable of tolerating the environment or mechanical loads imposed upon magneto couplers.

In the past, Continental has used a hard rubber coupler and they were found to become brittle and fail after a couple of years' service. The F.A.A. issued an A.D. note requiring replacement at every annual. We have seen two of these hard rubber couplers used on old Barker conversions fail, yet you can still find these things new in the aircraft surplus parts stores. They were not suitable for safe use in the certified engines, and are no more safe in an experimental.

When designing the H.A.P.I. engine, I contacted Slick Electro and consulted with their engineering dept. to get their recommended ideal coupler material. They recommended "mechanical grade micarta". This material is made of many layers of canvas bound together by the phenolic binder. It is virtually impossible to break, and is capable of absorbing shock loads between the crank and magneto. It presents very good wear qualities without the necessity of lubrication in this application. We have built and sold over 300 of these on our engines and mag kits without a single instance of failure reported.

The coupler material is indeed one of critical importance and should be selected with the greatest of care but let's not be confused by the term "phenolic"...Rex Taylor, Box 5951, Calexico, CA 92231 Phone 714-357-6342.

There have been hundreds of VW engine conversions over the past few years and many of them have used the Posa carburetor.

Several of these engines have changed owners and, for one reason or another, instructions for adjusting the Posa have been lost in the shuffle. While the Posa is extremely simple, it does require some knowledge of its mechanism to use it properly. This fact was brought home to me recently while I was watching two fellows (on different occasions) try to adjust the mixture on their Posa carbs. They weren't having much success. Each had acquired the carb second hand, and neither one had received any instructions with it.

There are two adjustment screws on a Posa. One is small and has a spring under it. This screw adjusts idle speed only and does not change fuel/air ratio. The other screw is actually part of the needle valve assy. This screw is located under an aluminum dust cover on the end of the Posa carb. Turning this screw adjusts the mixture or fuel/air ratio to the engine. Mixture adjustments are made by full complete turns of this screw, (clockwise to lean, counter clockwise to rich). Reason for this is that the mixture needle is flat on one side. THE FLAT SIDE SHOULD ALWAYS BE OPPOSITE THE INTAKE OPENING, APPROX. 90° TO THE AIR FLOW. This is easy to check on the Posa as there is a corresponding flat side on the adjustment screw.

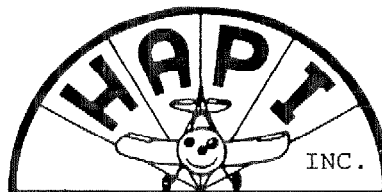
There are five (5) needles available for further adjusting the fuel/air ratio. They are numbered 1 thru 5 and the lower numbers indicate leaner mixture ratios. Our VW conversions seem to operate best on the needles numbered 3 to 5. The needles are changed by turning the adjustment screw counter clockwise and removing the needle assembly. There is an allen head set screw holding the needle. MARK THE NEEDLE SHAFT WHERE IT JOINS THE ADJUSTMENT SCREW BEFORE YOU REMOVE IT.

The length of the needle extending out of the adjustment screw is important. Gauges to measure this length are furnished with the Posa carb when purchased. If you didn't get a gauge with yours, make sure the needle you put in is installed the same depth in the adjustment screw as the one you removed.

This should give you enough information to adjust your Posa. Best bet would be to get the factory supplied instructions and gauges where possible.

Now...if you have a modified Posa, either by H.A.P.I. or by Revmaster, I recommend you contact the company doing the modification for further information...good luck!

Rex Taylor has been working on a complete engine installation kit & will have it ready next month. The kit will consist of everything you need to properly install an engine on your KR. Fittings, cables, templates, etc. Its' all there. If you're ready to hang your engine, H.A.P.I. or any other...get the kit. Call H.A.P.I. now!



BOX 5951, CALEXICO, CA 92231
714-357-6342

AN INVITATION TO ATTEND



KR NATIONAL

FLY-IN

#1

DATE: JUNE 13TH & 14TH

LOCATION: POPE VALLEY AIRPORT

SAN FRANCISCO Sectional - Lat. 37-38°

Long. 122-3°; Runway 10-28, 3700', 618msl

SEMINARS!

WORKSHOPS!

FORUMS!

ALL THE ANSWERS, RECOMMENDATIONS, AND PROBLEM-SOLVING TECHNIQUES YOU ASKED FOR THRU THE NEWSLETTER WILL BE WORKED ON, DISCUSSED, SHOWN, FLOWN TO YOUR SATISFACTION.

AWARDS:

OUTSTANDING AWARD
BEST STATIC DISPLAY
BEST ENGINE INSTALLATION
FARTHEST-TO-TRAVEL

DONATION OF \$2⁵⁰
WILL BE APPRECIATED.

NOTE: ALL KR AIRCRAFT
FLOWN IN TO EVENT WILL
BE EXEMPT.

R.S.V.P., PLEASE JUST SEND A : LISLE KNIGHT
POSTCARD TO : 33 FARNUM, S.F. 94131

THIS WILL HELP US TO ORGANIZE, PLAN, & SCHEDULE MORE EFFECTIVELY. ANYONE WILLING TO HELP OR PARTICIPATE, PLEASE CONTACT:

ERNIE KOPPE (714) 897-2677 OR, BILL DEFREZE (415) 828-2111 OR, LISLE KNIGHT (415) 239-0536

RAND/ROBINSON UPDATE

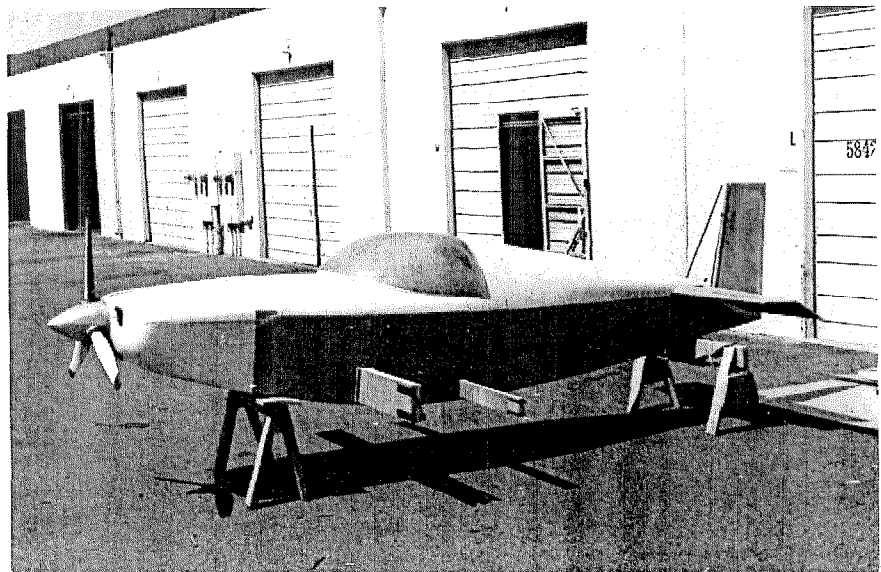
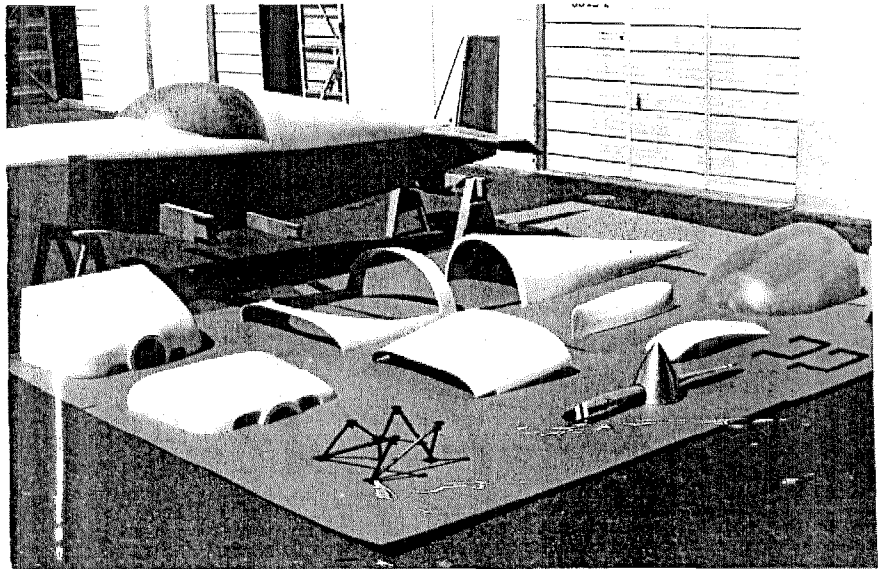
The long awaited new KR-2 fiberglass parts are finally ready. While similar in appearance to the old parts, they are not interchangeable. The obvious difference is the way these new parts fit. They really do! There were some complaints from builders using the old parts (justified) so new molds were pulled off the fuselage R/R is putting the tri-gear on. This fuselage was built per plans so the new parts should fit all other plans built KR-2s as well. Prices for the parts are slightly less (except for the cowl) than the old parts. Approx. cost will be: cowl-\$150.00, Forward deck & instrument panel-\$110.00 (no fuel tank at this time) canopy frame-\$106.00, rear turtle deck-\$150.00, & wing tips-\$80.00.

You can see by the pictures that the tri-gear system is not yet ready. Original plans were to have the tri-gear installed and the new KR-2 at El Mirage. They are going to be cutting it awful close.

Meanwhile, jigs & fixtures are being made for the various hinges, bellcranks, & brackets. They should be ready soon. Pre-drilled

wing attach fittings and the tail wheel spring are available now.

The KR-3 is complete in all but the paper work. Looks as though it will be flying in time for El Mirage. No guarantees, you understand, paper work seems to duplicate and triplicate itself when you're not looking. Seriously, it is ready according to Jim Loudon, who will do the initial testing.



BUY \diamond SELL \diamond TRADE

WANTED...KR-2 already completed,
IFR preferred. Contact Mark Stuart
202 E. Daniel, Albany, MO 64402

FOR SALE...Rand/Robinson flap
handle assembly...\$22.50. Tim
Biggs, 15920 Uppsala Ct., Wood-
bridge, VA 22191.

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.

R. D. WEBSTER AERO ENGINES

Specializing in VW Conversions

Custom built engines to your specifications....1600 to 2180 cc turbo-charged or normally aspirated. Prices from \$1595.00

R. D. WEBSTER
1424 A 1/2 N. HARPER
SANTA ANA, CA 92703
Phone 714-554-7932

MINATURE METRICS

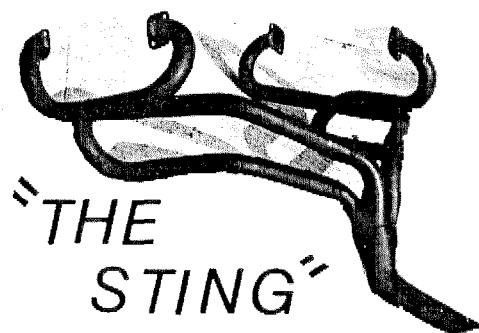
Is making hinges & bellcranks for the KR-1 and KR-2. Stick assemblies, nose gear struts, aileron bellcranks, brackets too! Prices are low, quality high, Check us out before you buy.

11 piece hinge & bellcrank set..\$55.
8 piece aileron bellcrank and bracket set..\$65.
Control stick gimbal w/bearings.. \$17.00.
All items post paid in U.S.

MINATURE METRICS
7801 14th STREET
WESTMINSTER, CA 92683
Phone 714-894-4875

POWER PLUS

A 12 volt, 35 amp battery in an impact resistant case. Weighs only 18 lbs. wet. \$36.00 plus freight (shipped dry only) Send a cashiers check, money order or call for C.O.D. to: COUSINS BATTERY SHOP 920 LINCOLN AVE. SAN JOSE, CA 95126 Phone 408-292-6054



A Performance Tuned Exhaust for the VW Aircraft Engine!

*"The Sting" will give you a 5 to 15% increase in engine performance over the customary "straight pipes":

*Fuel economy is increased: You get more power from less fuel due to the efficient design.

*Exhaust valve life is prolonged due to the long tubes creating a "buffer zone" between the valves and rapid temperature change.

* Will fit 1600cc to 2200cc conversions. It's ready to bolt on your engine, nothing to fabricate.

*"The Sting" is designed specifically for Revmaster, Diehl, and HAPI VW conversions as installed in a KR. Will fit most other VW powered aircraft also.

\$150.00 ppd. in U.S.

Ernest Koppe
6141 Choctaw Drive
Westminster, CA 92683

THE DIEHL SUPERCASE

The only accessory case on the market designed to fit either of Rand's engine mounts. Provides electric starting and 20 amp solid state alternator. Now available with starter on top to allow clearance for tri-gear.

Current Prices

ACCESSORY CASE.....\$125.00
RING GEAR ASSEMBLY.... 85.00
20 AMP ALTERNATOR..... 100.00
MAGNETO DRIVE..... 40.00
STARTER..... 65.00

We also have the special tailwheels for the KR's. These are \$15.00 and will fit the Rand fork. And... TRANSISTORIZED FUEL TRANSFER PUMP for \$25.00. Price on wheels and pumps include shipping....Dan Diehl, 1855 N. Elm, Jenks, OK 74037.

BUY*SELL*TRADE

FOR SALE...KR-2 spruce wood kit and 3½ sheets of mahogany plywood from Wicks. Fuselage sides completed.... \$480.00. Allan, 805-528-1102 (200 miles north of L.A.)

FOR SALE...KR-1, 2 hrs TT, needs some work. 1600cc Duty VW engine, new Great American prop. Please call for details. Toll free 800-255-6518 days or 913-831-1403 in Kansas, 913-831-1403 nights. Alan Stewart. (plane in Kansas City).

FOR SALE...KR-2 with 1834 Rev-master, full electric, starter, alternator, radio, lights, Warnke ground adjustable wood prop. No FAA restrictions to flight, must sell by June (possible trade).... \$5,500.00 or best offer. John J. Kerekes, 5794 Calle del Ciervo, Tucson, AZ 85715 phone 602-299-9098 Tucson or 312-452-8379 Chicago.

FOR SALE...Wicks KR-1 spruce kit, unused...\$190.00 F.O.B. Emil Switzer, 1510 Camelia Dr., Lewisville, TX 75067 phone 214-221-3857.

WANTED...KR-2 cowling, also would like to hear from other KR builders in my area. Raymond C Bergeron, 328 Kepner Drive, Ft. Walton Beach, FL 32548.

FOR SALE...Dual intake manifold (Monett) new-for Posi carb. For installation NOT using accessory case. \$50.00. Frank Geddes, Box 62 RD2, Tioga, PA 16946 phone 717-537-2288.

WANTED...One pair aluminum wheels, brake drums, brake assemblies with or without tires. Write or call Herb Spies, Pointer Hills, Middlebury, VT 05753 802-388-7443 weekends.

FOR SALE...Heli-arc welded 4130 steel engine mount, complete with rubber bushings (fits VW case) new...\$75.00. Kenneth Brown, 449 Seabee Ave., Naples, FL 33940.

ERNEST KOPPE
6141 CHOCTAW DRIVE
WESTMINSTER, CA 92683
ISSUE #70 APRIL 1981

