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

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## THE KR FLY-IN

If you haven't made your preparations to attend the First National KR Fly-in you had better start now! It's on the 13th and 14th of this month (June) and judging from the amount of effort put into it by Bill DeFreze and Lisle Knight its going to be a real success.

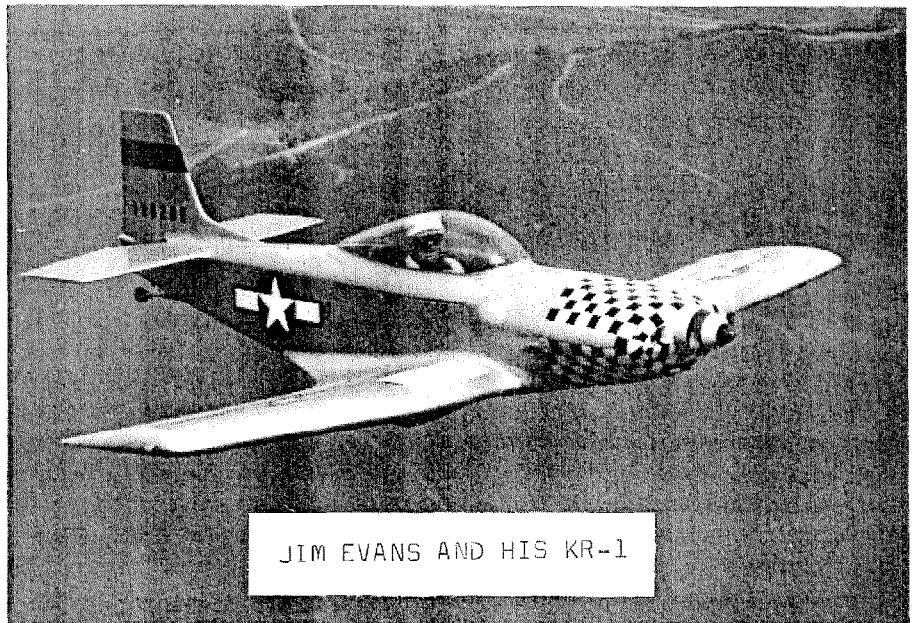
The majority of KR builders I've talked with have said they will be there so I expect we'll see a good turn-out of people and planes. Just in case this is your first Newsletter, the First National KR Fly-in is being held at Pope Valley airport, a 3700' paved strip in the heart of California's "green country". Pope Valley is on the San Francisco sectional, 23 miles from Santa Rosa VOR on the 55° radial or 68 miles north (true) of San Francisco International. It is a privately owned airstrip that has been turned over to the KR group for the week-end. A "fly-by" pattern will be set up so we can see how well our KR's fly. Forums and workshops have also been planned. We'll all be able to see the latest techniques in building a KR.

If you plan on going but need more information, call Bill DeFreze at (415)828-2111 or Lisle Knight at (415)239-0536. See you there!

## THE "C.A.F.E. 250"

The week-end following the KR fly-in will have another "first". The first C.A.F.E. 250 Air Race will be held at Santa Rosa, a few miles from Pope Valley. The C.A.F.E. 250 is not a "wing tip to wing tip" race, but more in line with the Oshkosh 500, where efficiency, as well as speed dictates who the winner will be. The entrants are required to complete a 250 mile course at their most efficient weight, speed, and fuel consumption. Altitude is left to the discretion of the pilot. A KR has a very good chance at winning this competition. Jim Evans has entered his KR-1 and will surprise a few people with a new wing and wing tip he has built. He still uses the RAF 48 airfoil but reports a 20 mph increase in cruise and a 400 FPM increase in rate of climb over the figures he had with his old wing.

Rex Taylor of H.A.P.I. had entered a KR-2 but dropped out due to an increasing demand on his time from his ever-growing business.



JIM EVANS AND HIS KR-1

Brian Seeley, Chairman of the C.A.F.E. 250, tells me he is looking for someone with a KR-2 to enter the competition. It should be fun, and there are cash prizes to make it worth your while. Contact Brian at his home phone (707)526-3925 or office (707) 544-2720. "Gentlemen, start your engines!!"

## \*\*PROBLEM AREAS\*\*

A recent encounter with a sub-par KR-2 project left me with a better grasp of some problems the KR builders are over looking. This particular KR-2 project was not salvageable due to inferior workmanship, poor glue joints and sub-standard  $\frac{1}{4}$ ' plywood used for the firewall and other sections of the fuselage. The glue used was also suspect. All in all, the whole project was a nightmare of what not to do on a KR. The "not so obvious" problem I want to cover here is the fact that the fuselage was also out of square in relation to the center line of the firewall and tail post. This is a more common problem with the other KR's I've looked at and is usually built-in when the fuselage sides are joined to form the "canoe". Most builders will use a jig to hold everything square while glueing in the tail post and firewall. This is good and as it should be. However, many of these same builders expect the fuselage to stay square until they are ready to install their spars. They assume since everything was straight or square when the fuselage was glued together, it will stay that way. It won't! Unless the fuselage is carefully checked for alignment when the spars are installed, the odds are good that the tail, wings, and firewall of the finished aircraft are going to be pointed in different directions. This can cause problems ranging from a minor trim correction, to an aircraft that is uncontrollable in the air (and sometimes on the ground).

A simple way to check your unfinished project is with a string, a level and a plumb bob. (1) Locate the center of the firewall and the rudder post at the top of the fuselage at the longerons. (2) Stretch a string from center of firewall to center of tail post. (3) Level fuselage across firewall or seat back position. It doesn't matter which as long as the same spot is used each time. (4) Measure to the fuselage on each side of the string at various stations along the top longeron. Each side should equal the other. (5) Now plumb down from the string to each bottom cross-member and mark these points. (6) Measure to the fuselage on each side of the marks. The measurement should be the same on each side at each cross-member. After you're satisfied that the fuselage is correct, now you can check the wing spars. (7) Establish that the center of the spars are on the center line of the fuselage. (8) Use a square laid along the fuselage center line to see that the spars and firewall are square with the fuselage. (9) Measure to the end of each spar diagonally from the firewall, top or bottom doesn't matter, each side should equal the other. (10) Now if you've done all this and your measurements came out correct at each step, you have a perfect fuselage. I have never seen a perfect fuselage yet. Most were within a  $\frac{1}{4}$ " or so but some were an inch or more off on the spar measurement. Take your time to do it right at this very critical point in construction and you will be rewarded with a smooth flying, easy handling and fast KR.

## QUESTIONS & ANSWERS

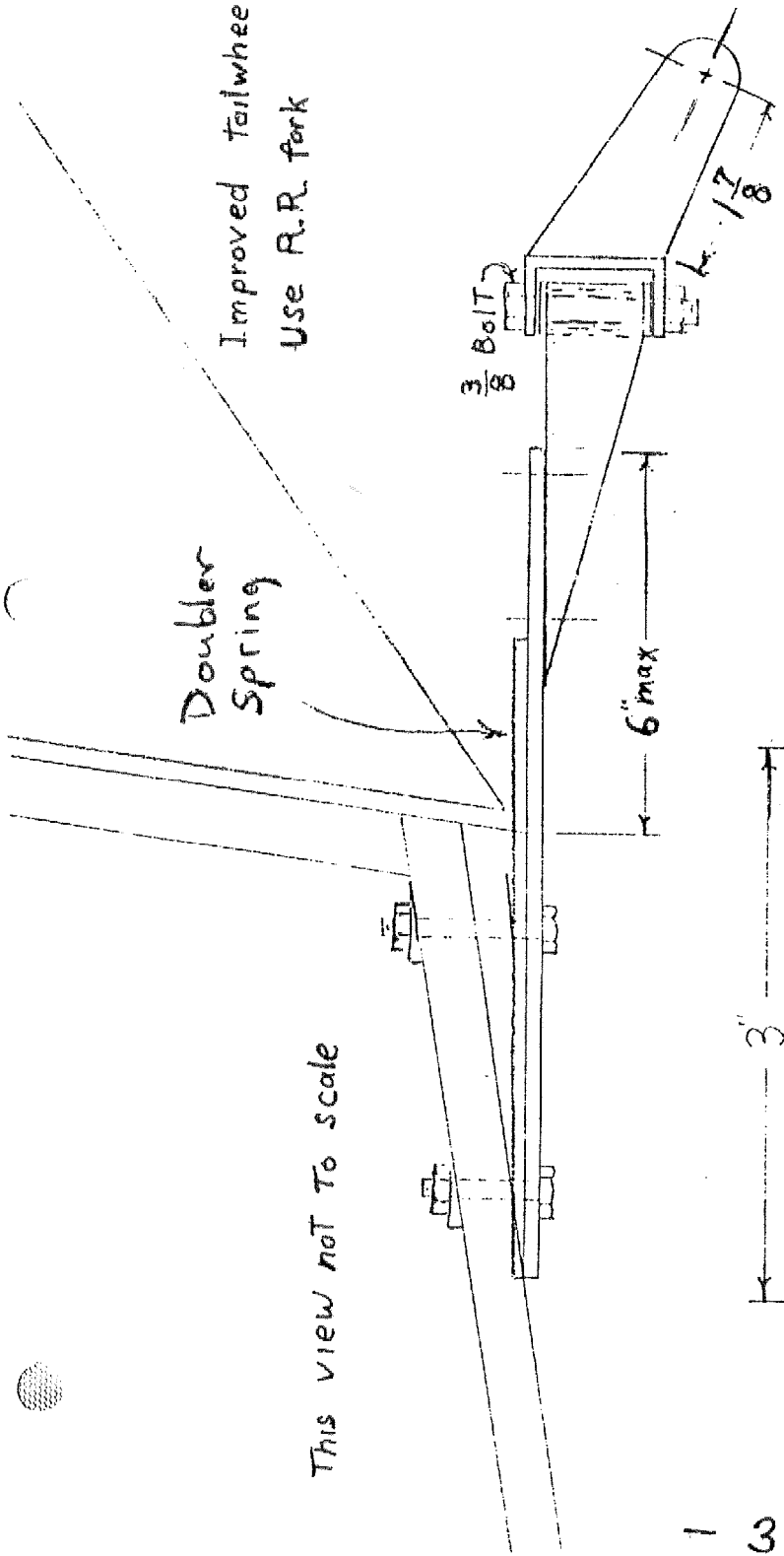
- Q. I was told that an 1835cc VW conversion did not have enough power for a KR-2. Is this true?
- A. An 1835cc engine will be enough power for most KR-2s. Unfortunately there are a few 600 lb. plus KR's out there and for those an 1835 would indeed be marginal.
- Q. How many subscribers does the KR Newsletter have?
- A. The Newsletter started off 6 yrs ago with less than a hundred subscribers. Today there is about one thousand current. There have been just under three thousand subscribers over the six years.
- Q. Do you have any idea how many KR's are flying, being built, plans sold?
- A. I don't have a definite figure on the amount of KR's actually flying but I have heard estimates ranging from three hundred to eight hundred KR-1s and KR-2s. My guess would be closer to the three hundred mark. There are probably three thousand KR's under construction and that is a conservative estimate. Almost twice that many kits have been sold. Over twelve thousand KR-1 and KR-2 plans have been sold.

A quick note from Bill DeFreze.....the peel ply he mentioned in an earlier Newsletter will be available at the KR Fly-in. Get it there and save shipping cost.

Improved tailwheel assy  
Use R.R. fork

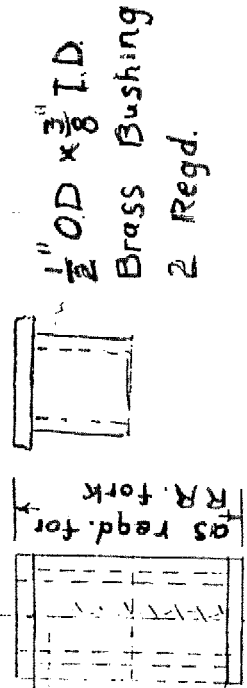
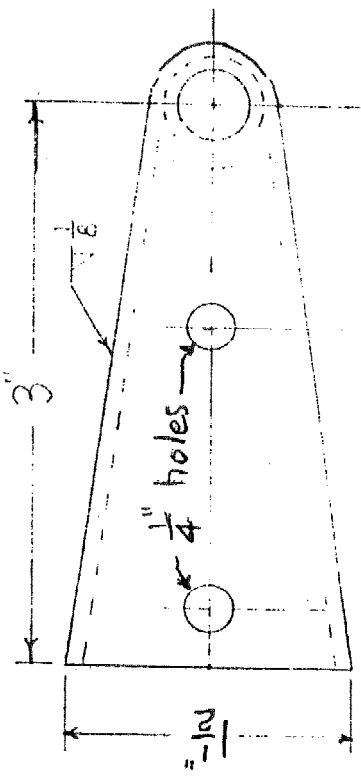
Doublers  
Spring

This view NOT To scale



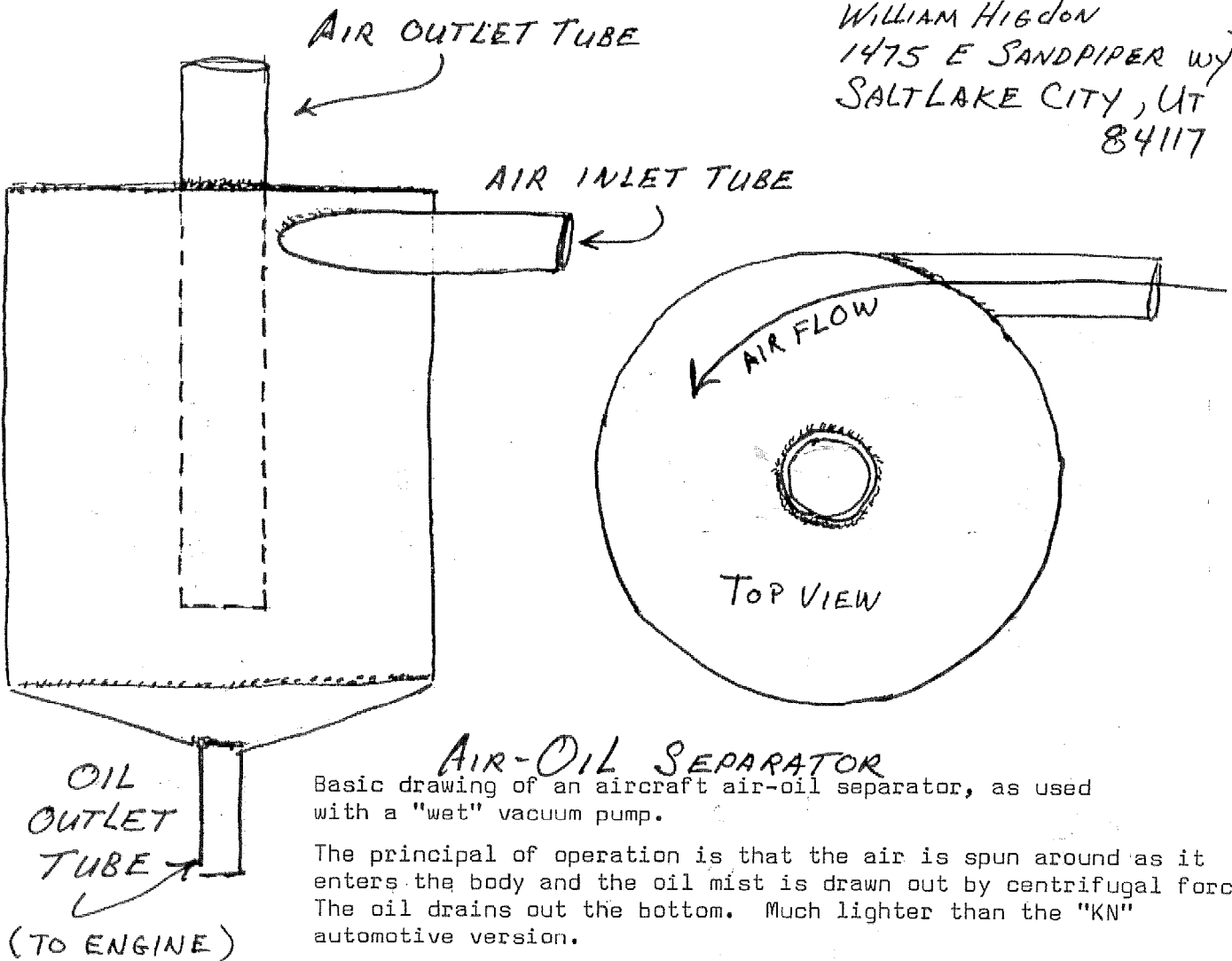
I've received several queries regarding  
a stronger tailwheel spring and bracket.  
This is the drawing Dan Diehl sends out  
with the heavy duty tailwheel he sells.

1  
3  
1



$1\frac{1}{2}$ " O.D x  $\frac{3}{8}$ " I.D.  
Brass Bushing  
2 Regd.

WILLIAM HIGDON  
 1475 E SANDPIPER WY #6  
 SALT LAKE CITY, UT  
 84117



**AIR-OIL SEPARATOR**

Basic drawing of an aircraft air-oil separator, as used with a "wet" vacuum pump.

The principal of operation is that the air is spun around as it enters the body and the oil mist is drawn out by centrifugal force. The oil drains out the bottom. Much lighter than the "KN" automotive version.

**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.

***Revmaster*. AVIATION CORP.**

CHINO AIRPORT  
 CHINO, CALIFORNIA 91710

Please print a notice in the KR Newsletter stating that Gerhard Carlsson, who is selling tri-gear plans and using our address is not now, AND NEVER HAS BEEN, associated with Revmaster Aviation. We have been getting mail, including money orders & checks, addressed to him and we haven't heard from him. Thanks...Robert Horvath, Revmaster Aviation, Chino Airport, Chino, CA 91710.

\*Ed. Note..Those who wish to contact Mr. Carlsson can write to him at Ringvagen 16, 59042 Horn, Sweden. I don't know if he is still selling the tri-gear plans tho.

KR MERCHANDISE SALE I

I have accumulated a back log of various items and need to make room. A sale is in order. For the next 30 days the following prices are in effect:

- Back issues of the KR Newsletter....50¢ each
- Solid Brass KR Belt Buckle.....\$5.00
- KR T-shirts.....\$6.00 each or 3 for \$15.00
- Sting exhaust system.....\$150.00, last chance at this price,  
it will go up \$20 in July.
- "KR BUILDER" ballpoint pens.....50¢ each.

BUY ◊ SELL ◊ TRADE

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

FOR SALE...KR-2 approx. 90% complete, Revmaster 2100D, R/R 3 blade prop, spinner mounted, 3 tanks, all flight instruments in panel, plus wing tips. \$5,500.00 (501)666-8290 shop or 225-5368 home after 5, no collect calls.

FOR SALE...KR-2 with 1835 Turbo. 15 hrs. on plane. Needs some work, wind damage to canopy. Must sell, make offer. Paul Eskridge (714)968-3718.

FOR SALE...KR-2 project, Fuse and spars are completed, some forming done. Have all materials required to finish plus gauges, gear, wheels, and more..... \$4,000.00 Phone (312)968-1865.

WANTED...Partially finished KR-1. Send particulars to James Hardy, RR#1, Box 268-X, Sanger, TX 76266.

FOR SALE...R/R 3 blade prop, new never used...\$250.00 prepaid anywhere in the U.S. Dick Nichols, 6001 Ocean Dr. Corpus Christi, TX 78412 (512)992-2844.



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.

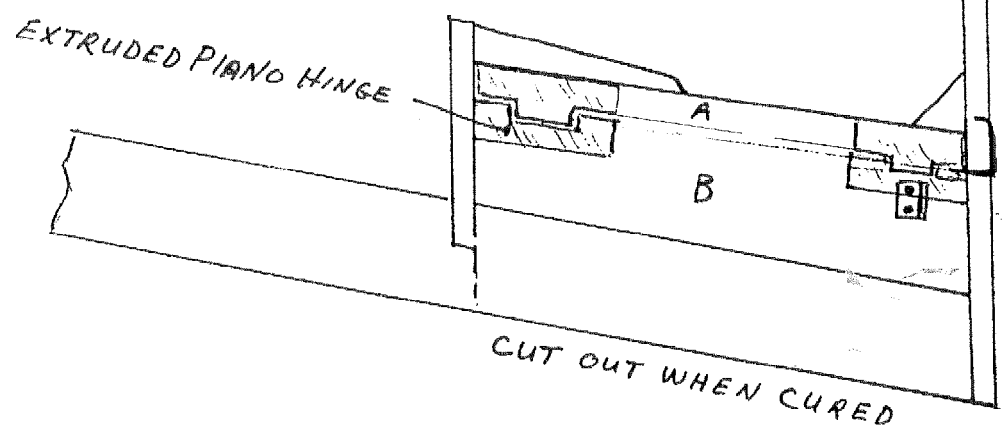
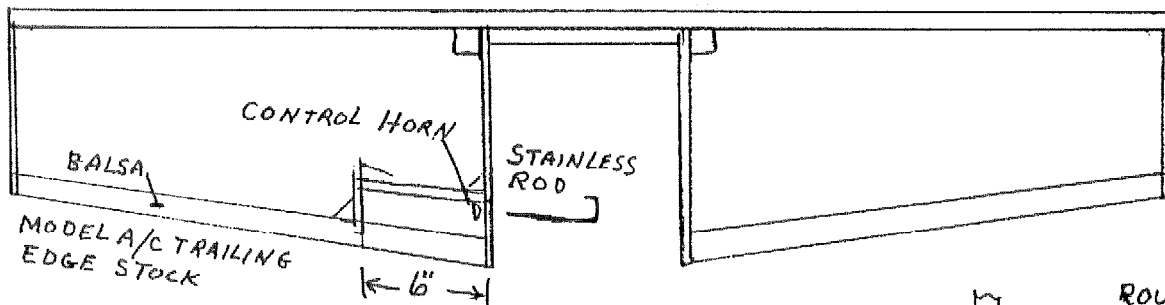
\* Will fit 1600cc to 2200cc conversions. It's ready to bolt on your engine, nothing to fabricate.

\*"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.

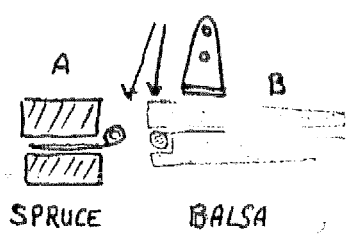
\$150.00 ppd. in U.S.

Ernest Koppe  
6141 Choctaw Drive  
Westminster, CA 92683

FOR SALE...KR-2 project. Over 50% complete. Revmaster 2100D, Maloof prop, fiberglass fuel tank, cowling, and instrument panel....\$4,000.00. Tom Zuber, Rt. 6 Box 481, Phenix City, AL 36867 Phone (205)297-4484.



ROUND OUT EDGES AND GLASS OVER



This is how I've done my trailing edges. Prevents warping during glass lay-up. Total cost for elevator and rudder is \$1.50. Scrap balsa wood is used for part "B".

By: Joe Beyer

ERNEST KOPPE  
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 WESTMINSTER, CA 92683  
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