



OCTOBER 1979 ISSUE #52

# NEWSLETTER

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O/Seas Airmail \$15.00  
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\*\* 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

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## ACCIDENT REPORT

Fred Palmatier, 21 Minnacote Ave., West Hill, Ontario, Canada M1E 4B2 is recuperating from an accident in his KR-2 and took some time to relate the incident to me. He had just purchased the KR-2, an award winner at the Orilla fly-in, with 50 hrs on the aircraft. Fred's first flight went well, he was up for an hour and twenty minutes and thoroughly enjoyed it. His next flight, a week later, did not go so well. At about 150 ft., just after take-off...."there was a loud "Bongf" and the right wing dropped"... left stick and rudder wouldn't correct it. Still at full power (Revmaster 2100) the KR-2 could not maintain altitude, even though Fred was able to gain some pitch control. The impact came at about 80 to 90 mph, right wing down, fuselage level. The right wing tip imbedded into the ground and broke off and the aircraft cartwheeled another 75 ft. before coming to rest. Cause of the accident?...6" x 10" metal inspection plates were installed on top of the wing, over the gear legs. The one on the right wing popped loose along the forward edge and acted like a spoiler, it also blanked out a good portion of rudder control. Result...a totaled aircraft. Fred had another KR-2 under construction when he bought this one and now says he will sell all....very reasonable. The moral to this story is this...minor modifications are not always minor. Be sure you examine all the possibilities before you modify your KR in any manner. A seemingly innocent change here or there may have drastic consequences.

## TIPS FROM OTHER BUILDERS

Since the KR-2 was placed on the "approved to build" list in Australia it has probably become the most popular homebuilt there. I receive regular correspondence from many of these builders and I find they are as enthusiastic as their counterparts here in America. Occasionally we will get a visitor from Australia who wants to get a look at how we build the KR here in the States. Bob Rawlins of Kirrawee, Australia is going to be in the U.S. in October and November and would like to talk with someone with a flying KR. He will be in the following cities during his stay: Los Angeles, Calif., St. Louis, MO, Billings, Mont., and Prescott, AZ. If you live in one of the aforementioned cities and would like a chance to compare notes with a builder from "Down Under", please drop me a line.

I just finished reading Rex Taylor's book on VW aircraft engine conversions. It is the most complete, concise, easy to follow book on this subject I've seen yet. Should be considered mandatory for you guys building your engine. The book takes you thru, from start to scratch, with pictures. It is \$10.00 from H.A.P.I., Box 5951, Calexico, CA 92231, phone 714-357-6342.

## BUY SELL TRADE

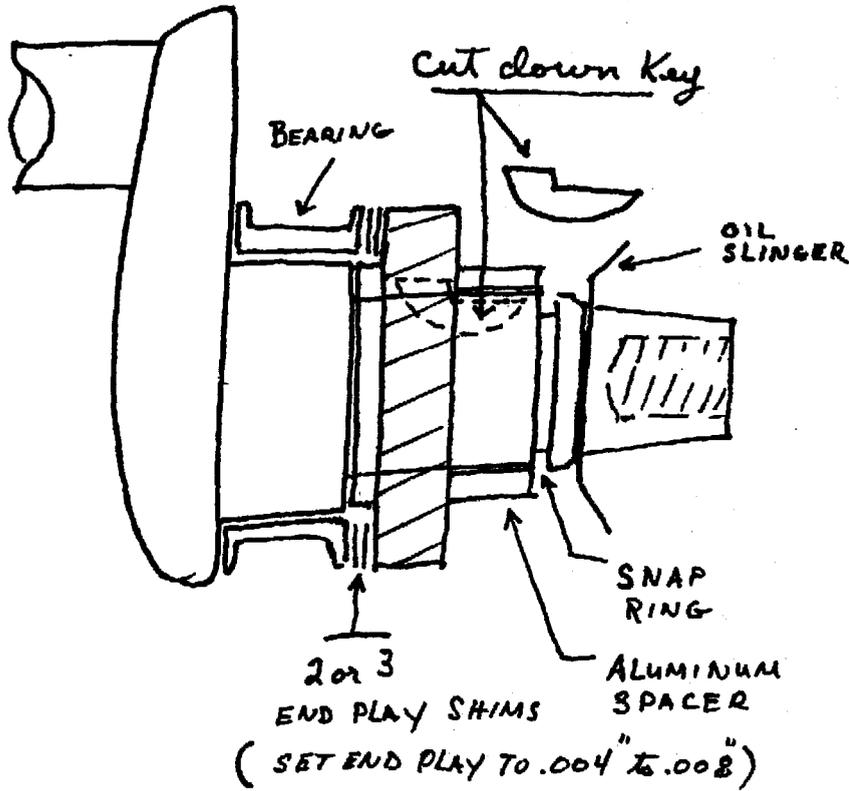
FOR SALE...Tri-cycle gear KR-2, throw-over control wheel, Kevlar construction, sliding canopy, turbo-charged Revmaster, Maloof prop...\$6000.00. '75 Traveler (4 place) "O" S.M.O.H., full IFR panel, encoding altimeter...\$14,000.00. Don Land, 906 Manzanita, Los Angeles, CA 90029 or phone 213-666-2869.

WANTED.....KR-2 cowling and canopy, also prop hub with 3<sup>o</sup> taper. Robert Spaulding, 125 W. Hickory, Canton, IL 61520. Phone 309-647-7797.

FOR SALE...KR-2, fuselage built, excellent workmanship, all Rand parts...\$1650.00 invested....best offer...312-690-1363, Ken, evenings, Chicago suburb.

HAPPENINGS.....Oct 27th and 28th, Ramona, Calif. EAA Chapter 14 fly-in. Homebuilts, antiques, and warbirds.

# Front Thrust Bearing Installation for VW

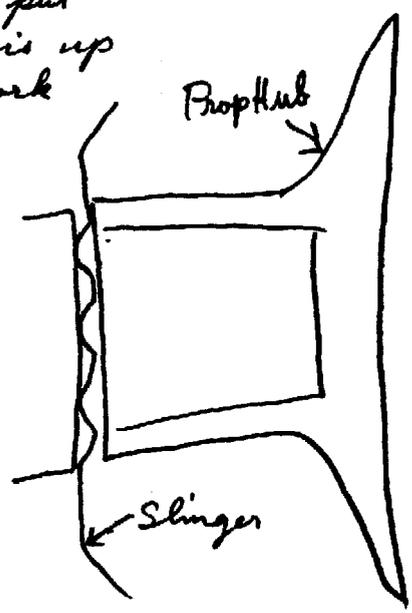
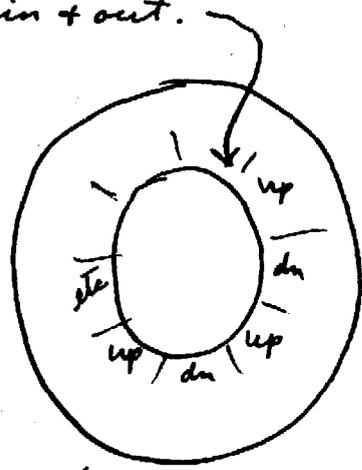
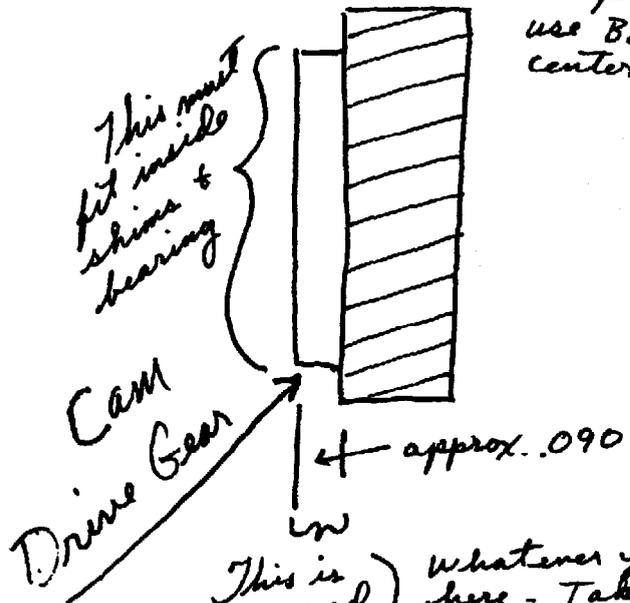


By exchanging the #1 & 3 bearings & with a little machine work you can pick up the thrust loads on your crank up front.

Dan Diehl sent in these drawings & did his own machine work. Mine cost me \$35.00 at my friendly neighborhood machine shop & k

Drawings not to scale  
HA!

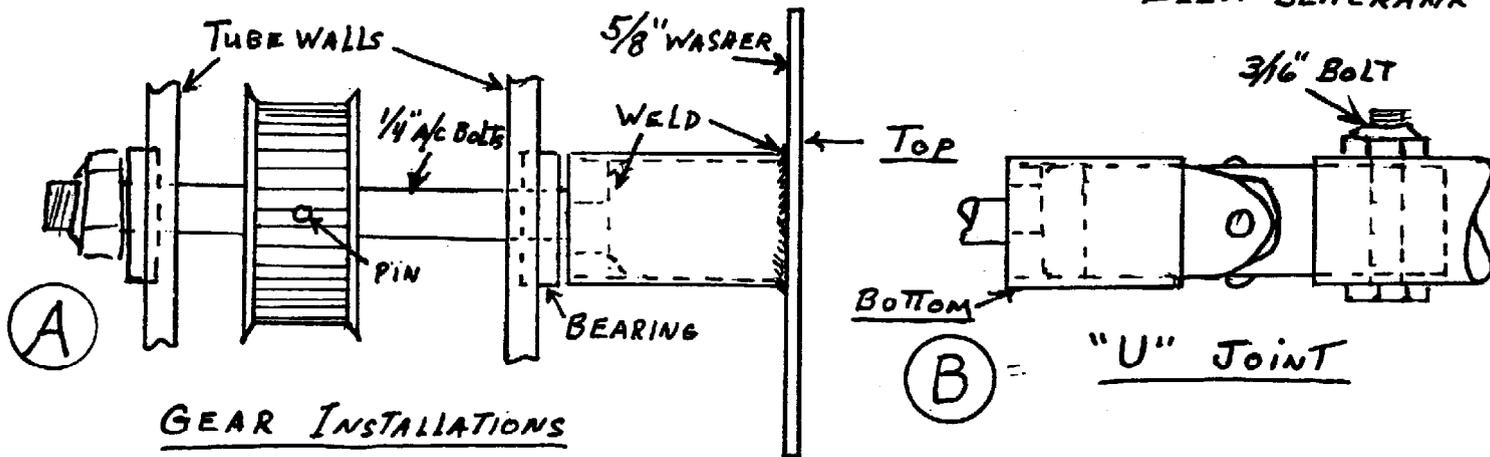
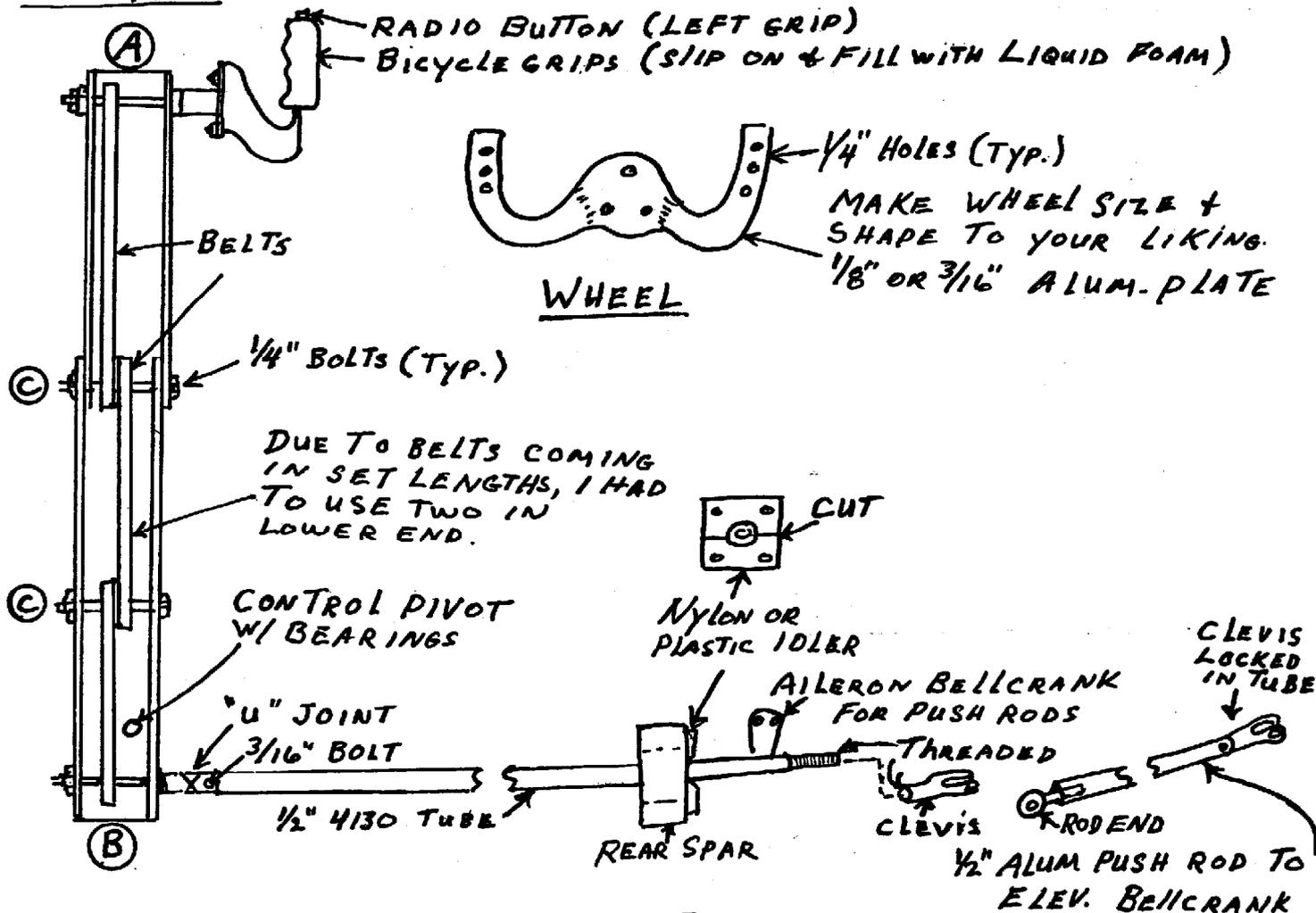
The oil slinger may want to turn when the Prop Hub is put in place. To tighten this up use Ball Peen Hammer & work center in & out.



Whatever you cut here - Take about .025 - .030 more off the camshaft gear.

Dan Diehl 1979

SIDE VIEW



All gears are the same size except the bottom gear so I could have more "feel" on the ailerons, so I used one 1.4 larger.

Due to there being no belt tightener, the dimension between gears must be exact.

Install in "your baby" and have at it,

Good luck,  
Bill

## A THROW OVER CONTROL WHEEL

While at the Chino fly-in with my KR-2 on tri-cycle gear, I got quite a reaction to my throw-over control wheel. Many builders asked me to draw up plans. After the expense and hassle of drawing up the tri-cycle gear, I decided I would do it anyway. But not as a "plans for sale" situation, but an article for the Newsletter. So here we go.....

The source I used for the gears and belts is an outfit called Hoffmeyer Corp. located in San Leandro, San Jose, and Modesto, Calif. The belts and gears are referred to as "mini pitch" units. You may be able to find the belts and gears through a local source that sells UniRoyal belt products.

First of all, I will only note critical dimensions so you can adapt and measure for your own need. All the bearings are from your local hardware store. They are from sliding glass door, screen and window replacement rollers, which, by the way, are very good cable pulleys. And they come in some very nice small and light sizes. I cut away the nylon wheels to get at the bearings.

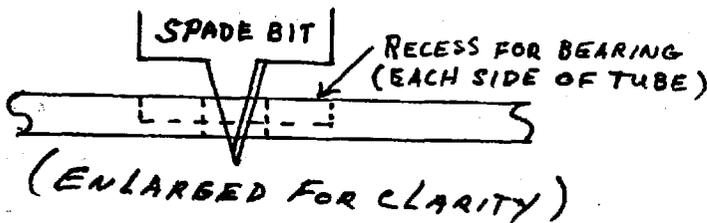
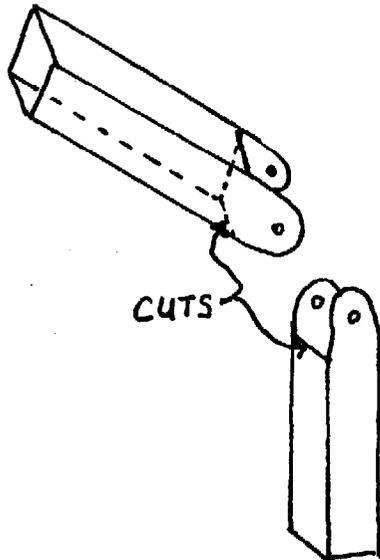
I obtained a square tube of 6061 aluminum 2" x 2". Cut and fit aluminum tube to fit each other and file or cut to get desire angle.

To make bearings stay in place, I drilled a 3/16" hole in exact locations and used a spade wood bit the size of the bearing to recess it into the aluminum tube.

Hardware stores also carry the small roll pins for anchoring the gears to the shafts or anchoring the gears together.

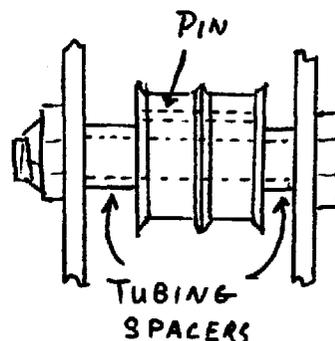
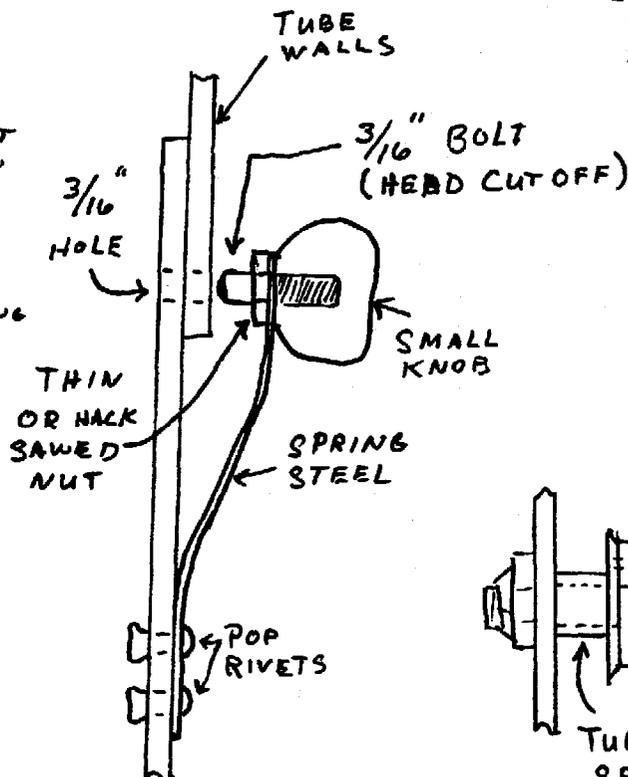
By

Bill "Reverend Billy"  
Defreze



## LOCKING SYSTEM

LOCATE LEFT  
SIDE POSITION  
FIRST, FLIP  
CONTROL TO  
RIGHT SIDE  
AND DRILL  
SECOND LOCKING  
HOLE



©  
DOUBLE GEARS  
(PIN TOGETHER)

### "THE SUPERCASE"

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Parts available include flywheel, alternator, and magneto drive.

Send S.A.S.E. for more info.

Dan Diehl  
4132 E. 72nd  
Tulsa, OK 74136  
ph. 918-492-5111

Retractable tri-cyle landing gear conversion plans by Bill DeFreze. Uses many of Rand's parts, including gear legs & spring bar.

\$20.00

Bill DeFreze  
7530 Ironwood Drive  
Dublin, CA 94566  
Ph.415-828-2111

Retractable tri-gear for KR-1 or KR-2. Stress analyzed to 3x gross by Marshall Wood, senior design engineer at Rocketdyne. Plans are now available @ \$40.00 for complete system. Material kit, excluding wheels \$250.00. Ready to install assemblies \$800.00. Free isometric view with S.A.S.E.

Don Land  
906 Manzanita  
Los Angeles, CA 90029

### "BUCKLE UP"

show off the  
KR BELT BUCKLE.....\$5.50  
and the  
KR HAT & JACKET PATCH  
\$1.50 ea. or 3 for \$3.50  
Overseas orders add 20% postage

Ernest Koppe  
6141 Choctaw Dr.  
Westminster, CA 92683

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### ALL NEW VW ENGINE LONG BLOCKS

1834s & 2100s for experimental aircraft with aluminum cylinders \*3<sup>o</sup> taper on crank \*ready to bolt-on your conversion parts \*prices from \$950.00 \*custom built to your order \*1/3 down, remainder at delivery \*30 day service on most orders.

R.D. Webster Ph. 714-636-1673  
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Go to an auto wrecker and ask if you can have some broken off antennas. The antenna is chrome-plated brass. Take the largest section, cut with a tubing cutter and deburr. The cutter leaves a nice rolled edge. Fill the tube with buck-shot (solid) seal ends with bolt and tape.

You can now hand form to desired shape, making some nice smooth bends. Allow the tube to extend below the spar 3 inches and clamp in place.

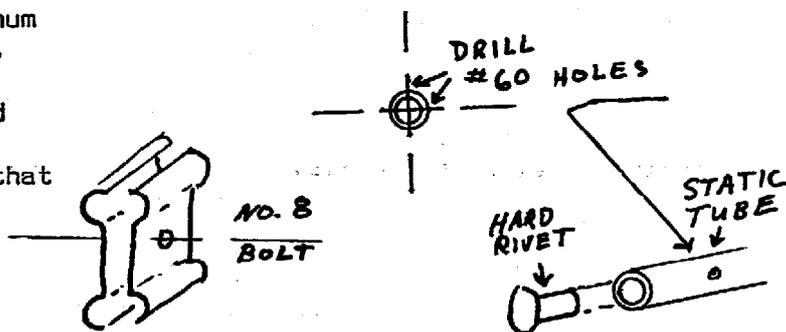
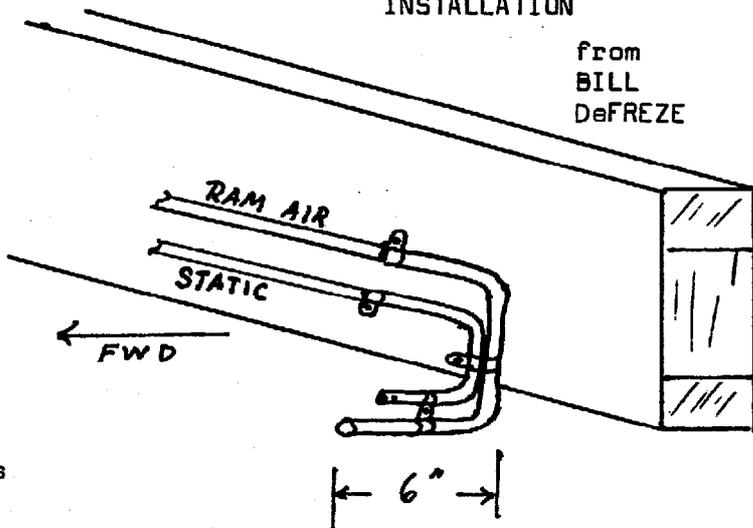
Take smaller section of antenna and bend similar to first piece. About 1/2" from leading end, drill #60 holes straight through the tubing. Jam hard rivet in this end after you deburr the inside. Dress up rivet to be flush all around.

Make a clamp out of two pieces of aluminum 1/2" X 1 1/4". Drill center for a #8 bolt. This will clamp the ends together. Clamp both units to spar, epoxy tubes to ends and run to instruments.

You now have a pitot and static system that is out of the way under the wing. A clean installation and all chrome plated.

A SLICK PITOT TUBE INSTALLATION

from  
BILL  
DeFREZE



ERNEST KOPPE  
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