#40

I'm fully aware this is nothing out of the ordinary but having just completed a 5000 mile solo journey in my KR-2 I wished to let others share my experience. Many homebuilts are viewed as "pattern" or local type ships. I've never thought this of the KRs and certainly don't now. On this recent trip my fuel stops averaged over 500 statute miles apart. Twice take-offs were made with a gross wt. of 920 lbs at airports 5000 MSL, in one case 102°F. Climbout was adequate considering a density altitude of nearly 9000'. Oil consumpsion was nil, nothing added but was changed at other end. I carried a considerable amount of luggage in the right seat, usually sat from 3 to 4 hrs at a stretch and was quite comfortable with no sore spots. In time & distance checks I posted ground speeds ranging from 124 to 168 MPH, TAS generally seemed to fall between 145-150. I used 3100 RPM cruise. At 12000' MSL full throttle would yield 3600 RPM indicating my Warnke prop needs more bite; however, my static at sea level is only 3100 RPM. Maybe a different blade? Cylinder head temp ran about 300°, oil at 205°. I ran my engine to 38 hrs between valve clearance checks one time and had one down to .002, another to .003 indicating a definite need for 25 hr checks. Upon return a friend asked if I had encountered any problems. Yes....allow extra time for gas stops. Numerous pictures were taken and in one case a small town newspaper picked up on it. Enroute I was amazed at the hospitality given by total strangers. At one point while waiting out thunderstorms 6 miles to nearest town a "free" car was furnished In all cases free overnight hangers were offered. A crowd never failed to gather even at seemingly small airports. FAA and FSS personel were all very accommodating. At this point, I'm near 200 hrs total time with no problems. I'm quite satisfied with the KR-2 and continue to find it better as I "grow" with it. As Ken maintains, it is definitely a good traveler. So, you dreamers, finish your craft and allow it to show you these dreams. The KR-2 is up to the task.....Murray Rouse, 2112 Crest Dr., El Cajon, CA 92021.

From Barnaby Wainfan, 315 S Division #1, Ann Arbor, MI 48104.....I had a chance to run throught the tail incidence numbers for the KR-2. These numbers are for a gross weight or 800 lbs and CG in the center of Rand's specified range. The stabilizer incidence is with respect to the wind chord line at the root. The incidence with respect to the fuselage datum line is determined by adding the incidence angle of the wing chord line with respect to the fuselage datum to the tail incidence shown in the table. The rounded off valves are close enought to use. There's no pay-off in trying to measure .01°. Notice that a variable incidence stab would only need about 4° or 5° of travel to handle all trimming tasks.

V CRUISE IN MPH	EXACT INCIDENCE WITH RESPECT TO WING ROOT CHORD	ROUNDED OFF TO ½°
100	−6.47	−6.5
110	−6.35	−6.5
120	−5.51	−5.5
130	−5.15	−5.0
140	−4.76	−4.5
150	−4.35	−4.5
160	−4.14	−4.0
170	−3.92	−4.0
180	−3.30	−3.5

NEGATIVE IS L.E. DOWN

How do you like the new logo for the Newsletter? KR Club members will recognize it as the club emblem on their membership cards.

I have been contacted by a firm that makes brass belt buckles with assorted designs cast in relief (including aircraft). They want to make KR-1 and/or KR-2 belt buckles but want someone else to come up with the money for the molds and then order a minimum of 150 buckles. My question is this, are there 150 guys out there who want the belt buckles? Cost will be in the $5.00 to $6.00 range. Let me know if you are interested.

While you're at it, consider the new logo as a possible design for the buckles or jacket patches for KR builders. I think it would look great but I have to know how you feel about them before I would order them. Drop me a line soon!

BUY SELL TRADE

FOR SALE: KR-2 project...fuselage complete to step 3.18, plus assorted materials, plus two VW engines, one set dual part heads, plans, all Newsletters....$600.00. Jim Dillner, 2603 SW 9 Ct., Fort Lauderdale, FL 33312 or phone 305-791-3421 home or 305-581-3772 bus.

KR-1 Fiberglass Components...cowling, fuel tank, turtle deck, instrument panel. For more info write to Danny McCormick, 16902 Happy Hollow, San Antonio, TX 78232 or phone 512-494-6832.

Converting a VW yourself? Make it better with bolt on parts. Send a S.A.S.E. to Dan Diehl, 4132 E. 72nd St., Tulsa, OK 74136 or phone 918-492-5111.

VENNE KR CONSTRUCTION

Most experienced KR builder offers complete technical assistance, inspections, and construction. Charges to suit any budget...international inquiries welcome.

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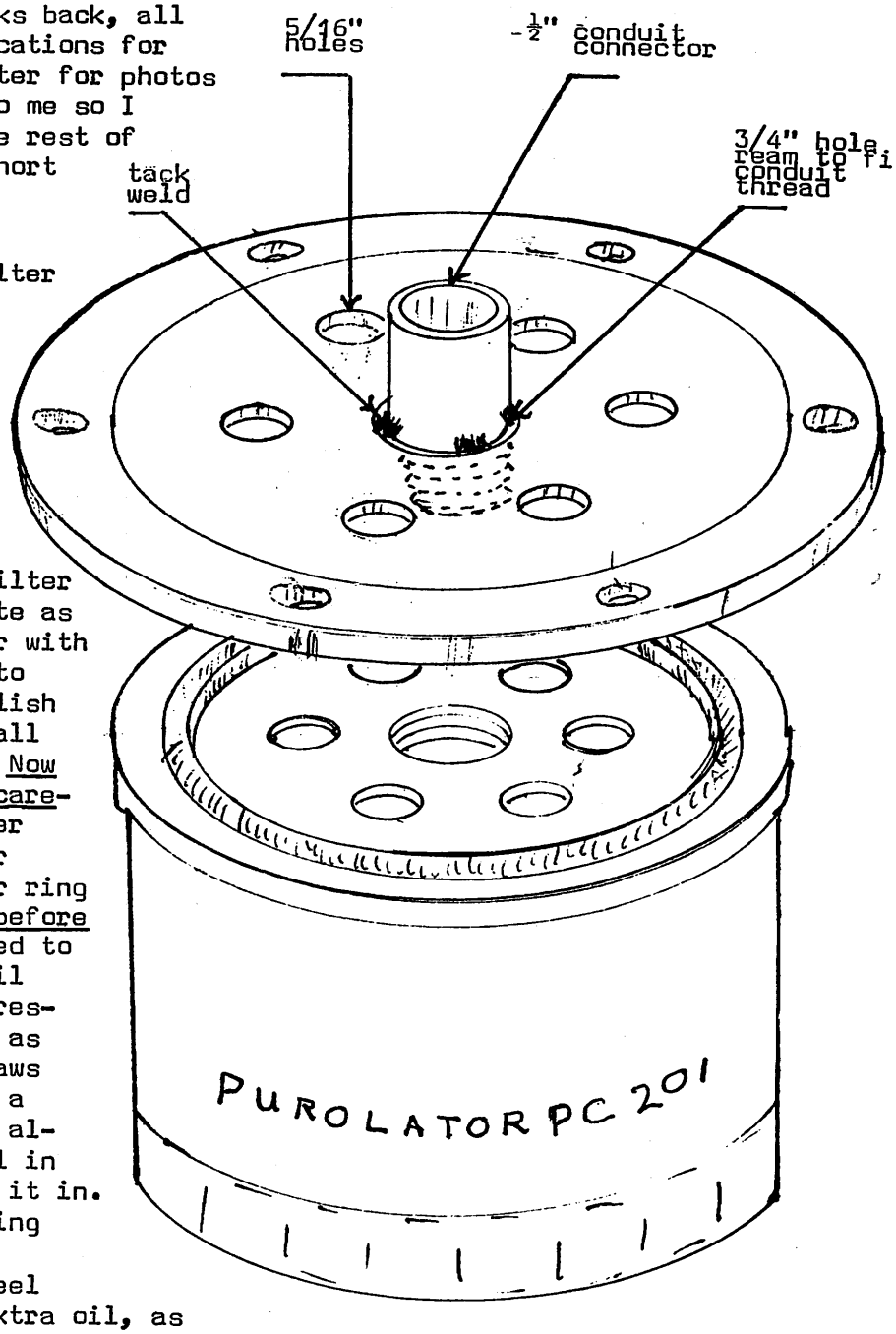
QUESTIONS & ANSWERS

Q. Why doesn't Rand use polystyrene foam in place of polyurethane foam?
A. Although the polystyrence is stronger than the polyurethane foam, it is highly susceptible to fuels & solvents. If you use polystyrene <u>be sure</u> there is no possible chance of contact with fuels and solvents.
Q. What happened to the long wing KR-1B? Haven't heard anything for a while.
A. The KR-1B and the KR-3 are projects that get attention in between modifications and improvements to the KR-1 and KR-2 (which is an on-going thing) so work on them sometimes progresses slowly. The KR-1B could be flown in a couple of weeks but the KR-3 is months away.
Q. If you were building another KR-2 what wing section would you use?
A. I don't think it would be possible to get any better performance than with the RAF 48. A 160 MPH cruise and 42 MPH stall are hard figures to beat.
Q. On page 19 of the KR-2 plans book step 6.11 says to "adjust 'down stop' position bolts for maximum forward travel position of the wheels". WHAT 'down stop bolts'?
A. Even though Rand's gear retract system contains a <u>minimum</u> amount of moving parts eventually some wear will cause the latches to have more free play than desired. By installing two adjustable stop bolts some place in the system this unwanted slack can be adjusted out. The bolts are usually installed in the hinges attached to the spar so that the bolt head acts as a stop for the spring bar.
Q. How far down must the wing attach fittings be to allow for the contour of the airfoil?
A. I centered the main spar attach fittings in the spar caps. The rear spar fittings should be as follows: bottom, center in the bottom spar car; top, lower edge of fitting should be approx. 1/8" higher than the bottom of the spar cap to allow for the airfoil contour.

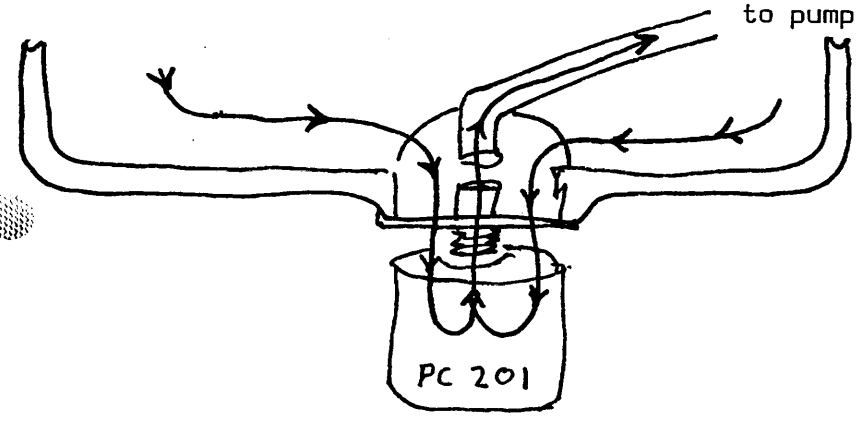
NOTICEDue to volume of mail I can no longer answer questions by mail. They will be answered in the Newsletter each month or you may telephone. Phone number is 714-897-2677, call after 5 p.m. Pacific time.

Bill DeFreze phoned me a couple of weeks back, all enthused over one of his latest modifications for his KR. (See issue #35 of the Newsletter for photos of his tri-gear KR-2.) Sounded good to me so I asked him to send some sketches for the rest of us. The following letter arrived in short order:



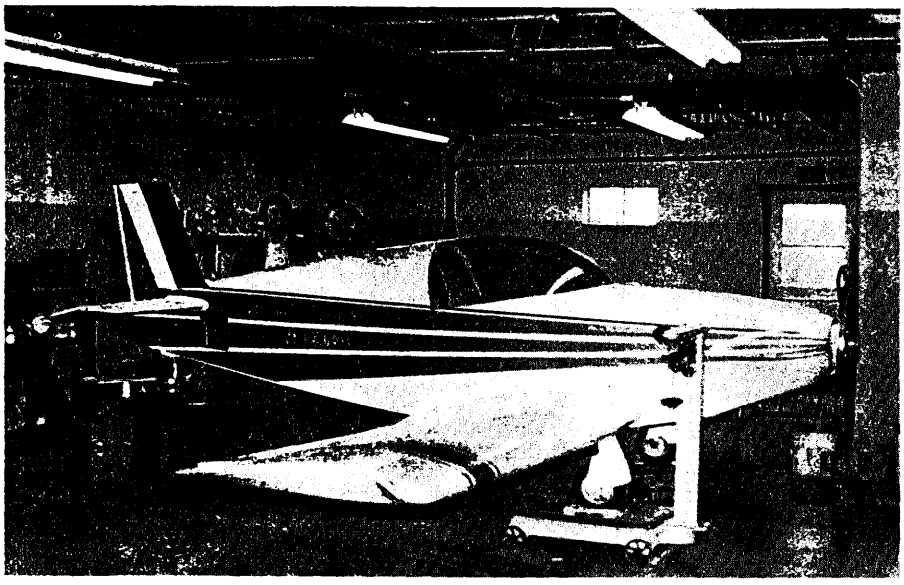
Dear Ernie,

Here is that design for a VW oil filter I was telling you about. First, go to a local hardware store & pick up a standard ½" conduit connector. From your auto parts store, pick up a Puralator PC 201 (or equal) fileter & a filter wrench to fit. Second, take a ½" pipe tap & lock it in a vise upside down. Take the oil filter and re-tap the filter thread. Be careful to get it started straight & use the filter wrench. Third, drill out the sump plate as illustrated. Install conduit connector with retaining nut & tack weld at shoulder to sump plate. Remove retaining nut & polish away all paint & slag. You can paint all areas outside of filters rubber seal. Now the important part. Warning!!! Read carefully. All oil filters of the cannister type that I looked at were designed for pressure systems. So there is a rubber ring valve inside the filter built in. So before you install the filter it must be primed to its fullest point. Let me explain. Oil drains to the pan in VWs so the only pressure is on the pump pressure side. So as the engine starts, the pick up line draws on the oil in the filter which creates a vacuum and opens the rubber valve thus allowing the oil to flow freely. The oil in my engine is as clean as the day I put it in. I'm sure you fellows have the same feeling I do about oiling our engines and know that carbons are our worst enemy. I feel this filter system gives us a little extra oil, as well as a better sight feeling on oil contamination. I would appreciate anyone trying this system out, to report to me thru Ernie and the Newsletter or direct to me. Now if you have the smaller pick up tube as in the 36 hp, then find a small pice of rubber hose and slip over the pick up tube all the way to the bell and the same procedures as before apply.



Good flying,

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



KR-2 built by Ernie Hills, 1942 Split Rock Dr., Lancaster, PA 17601

Ernie is one of our more prolific letter writers and many of the questions appearing in past Newsletters were asked by him first. The photo here is his KR-2 getting weight and balance info just prior to the first flight, which he made himself. I would like to say the flight was an unqualified success but unfortunately this is not the case. Take-off, climb-out, etc. all went fine, and Ernie was climbing away from some friends in a chase plane. The landing however did not go as smooth...an incident on roll-out cost him his prop. Ernie attributes the problem to over control and is considering changing the geometry in the controls to make the KR-2 a little less sensitive. If you have ideas of your own along this line, why don't we get some imput for the Newsletter. A little pro & con along this line might be a good idea.

ERNEST KOPPE
6141 CHOCTAW DRIVE
WESTMINSTER, CA 92683
ISSUE #40

KR

NEWSLETTER