

# KR Newsletter

SUBSCRIPTION RATES

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JULY 1978

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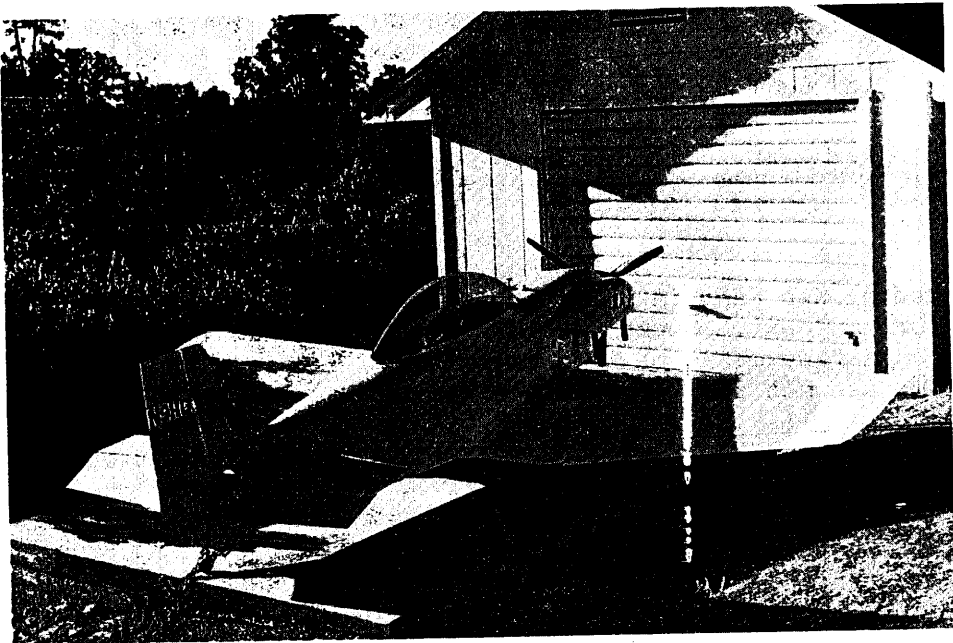
The recent flurry of fly-ins attended by Ken Rand in the turbo-charged KR-2 has started much speculation on where he will turn up next. Looks like Ken is out to show everyone the KR-2 isn't just a toy, but is a bona-fide means of transportation. Here are some figures Ken was getting on his recent midwest tour to Ohio via New Mexico and return: Altitude...13,500 ft. Temp...45°F I.A.S...140 mph T.A.S...176 mph. This was at an economy cruise setting of a 23" M.P. at 3000 rpm with a fuel consumption rate of a miserly 3.6 gal. per hour. Almost 50 miles to the gallon...that is real economy! The engine gauges showed how much the Revmaster engine appreciated the low power settings, oil temp ran 190°F and CHT stayed at 380°F. An interesting side note, Ken was curious as to how the KR-2 would perform at the same power settings but with the gear extended so... down went the wheels. An immediate vibration and noise at first had him believing he had dropped more than just the landing gear but a check of all systems proved otherwise. Gear down, the airspeed stabilized at 118 IND (TAS 148) but immediately the oil and cylinder head temps began a steady rise. When they reached a red line of 220° and 450° respectively Ken raised the gear. As the airspeed increased, so the engine temps decreased until all stabilized at the previous readings. The rise in engine temperature was attributed to less airflow over and thru the engine at the slower airspeeds. Ken will be the first to admit his baffling is not the most efficient. All in all, the turbo-charged 2100 D Revmaster purred like a kitten the entire trip, just as it did on the previous trip to Oklahoma.

Are you running a turbo-charger on your engine? If so, you will be interested in averting a possible failure of this expensive little blower. The problem area here is one of lubrication and cure is a matter of technique. Let's say you've been static testing your engine maybe adjusting the carb, checking the pitch on the prop, or whatever. You've run the rpm up around 3000rpm, decided it's running OK and then you shut it down. Now, unless you let the engine idle for a least one minute before you cut the power, you have a turbo charger scroll turning at several thousand rpm with no oil pressure in a housing super heated from exhaust gasses. You can see this isn't conducive to long trouble free service from your turbo. Next time you run your engine, give that turbo-charger time to slow down before you stop the engine. A one minute idle isn't much and it can save you hours of time and many \$ later.

FLIGHT REPORT.....For an update on my KR-1 (first flight report to you published in your Issue #20, Feb 77) I'll keep it brief. I flew first with a 36 hp engine which did fine until warm weather arrived. With OAT up around 80-90° I found my rate of climb was down to 100 FPM or so, so I decided to hang a bigger engine in it. Beefed up a 40 hp case with 83mm jugs and 50 hp heads (with Corvair exhaust valves) and after waiting about 9 or 10 months for a new prop, finally got it flying. Now have about 55 hrs on it, cruise prop gives me about 500'FPM climb on a 90°+ day, cruises at 135 mph indicated at 3200 RPM. Still flies beautifully but is somewhat squirrely on the ground. All in all, I'm having a ball with it. Hope someday I can fly it out to the west coast.....John Shippey, Rte 3, Box 270B Henagar, AL 35978.

KR-1 N9HD FOR SALE

The aircraft has been flown a little over one hour and handles like a dream. Engine is the 2100cc Revmaster. \$5500.00. Harry Downard, 1727 Old Oregon Trail, Redding, CA 96001. Phone- 916-241-5470 NO COLLECT

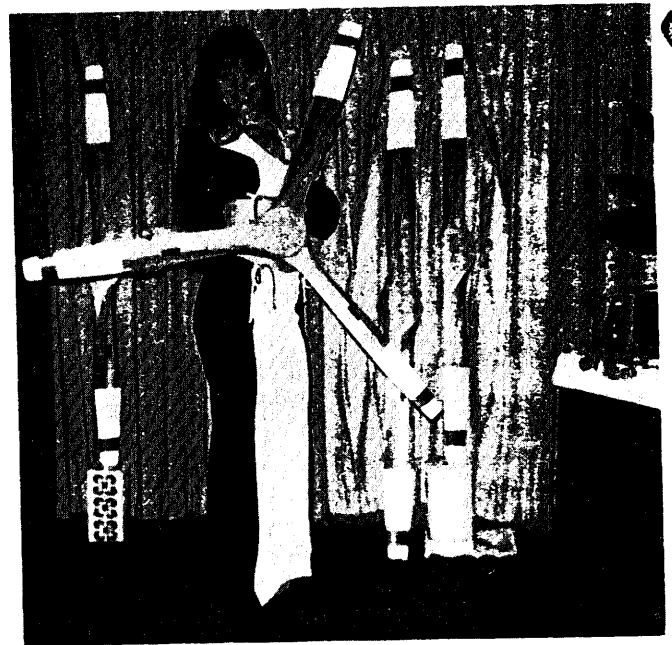


One of our KR builders is a prop maker too. I saw a sample of his work at Oshkosh 77 and was impressed with the fine workmanship. As the picture testifies, the props come in a variety of shapes and sizes. Write to Harlan Anderson, Box 237, St. Ansgar, IA 50472.

FOR SALE.....1977 fuel injection unit for VW engine. Fits any dual port head engine...\$100.00. Ken Byrd, 235 Belmont #7, Long Beach, CA 90803 or phone 213-434-5102.

FOR SALE.....KR-2 project, all materials to finish, on gear, all metal parts have been made. Canopy, engine mount, etc., everything but the engine. \$1700.00 or best offer. Steve Meltsner, 51 Arnoldale Rd., West Hartford, CT 06119 or phone 203-523-9351 after 6 pm (no collect calls)

WANTED.....A Zenith side draft carb and Barker cast intake manifold for VW. H.A. Anderson, Box 237, St. Ansgar, IA 50472.



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VENNE KR CONSTRUCTION

Most experienced KR builder offers complete technical assistance, inspections, and construction. Charges to suit any budget...international inquiries welcome. 919 Grand Ave., Long Beach, CA 90804 or phone (213) 433-0520.  
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HAPPENINGS...Hollister "78" EAA Chap. 62 is hosting a fly-in July 14-16 at Hollister, CA. Ken will be there with the KR-2 on July 15 & 16. OSHKOSH "78" July 29 thru Aug. 5, the silver anniv. of EAA should be a great show. See y'all there. Paul Venne (see ad) is hoping to hitch a ride to Oshkosh from S. Cal. If you have room, give him a call.

# SAFETY CHECK LIST

Spend some time with your plane and this check list before those first flights. Thirty minutes with a pencil here may be worth the rest of your life.

<u>PROPELLER</u>	Yes	No	<u>ENGINE &amp; ENGINE COMPT.</u>	Yes	No	<u>FUSELAGE — HULL (Continued)</u>	Yes	No
<b>1. Blades</b>			All stacks in good condition — no cracks or rusted-out areas? .....			All pulleys of proper diameter for bends, proper size for cable, and guarded? .....		
Laminations not separated? .....			Carb heat and cabin heat mufflers removed and manifold inspected? .....			All cable of proper size (1/8" min.) and condition? .....		
Breaks, scratches, nicks, tipping? .....			<b>5. Controls</b>			Any parts in system subject to rotation for any reason properly secured and safetied? .....		
Loose rivets in tipping? .....			All secured and safetied? .....			Return springs on rudder pedals? .....		
Drain holes in tip clear? .....			No excessive play in any linkages? .....			No interference between any control part (cable, tube, or linkage) and any other part of the structure throughout full control movement? .....		
<b>2. Hub</b>			No interference between any control and the structure throughout the full operating range? .....			Adequate room for full control throw when aircraft is occupied? .....		
Any cracks or corrosion? .....			Carb heater gate open & close fully? .....			Controls arranged to minimize danger of blocking by foreign objects? .....		
Hub properly seated and safetied? .....			<b>6. Mount</b>			Grip properly secured to control stick or wheel? .....		
<b>3. Control Mechanism</b>			Secured and safetied? .....			<b>4. Electrical System</b>		
Oil leaks? .....			All joints inspected for cracks? .....			All grommets, particularly in firewall, snug fitting and in good condition? .....		
Worn bearings? .....			Any bends in mount tubes? .....			All wires of proper gauge, insulated, and secured? .....		
Secure? .....			Bushings in good condition? .....			Wires do not rest on abrasive surfaces? .....		
<b>4. Attachment</b>			<b>7. Cowlings</b>			Battery installation of sufficient strength? .....		
All bolt & nut threads undamaged? .....			Secured and/or safetied? .....			Battery properly ventilated and drained? .....		
All bolts & nuts secured & safetied? .....			All latches or fastenings working properly? .....			No corrosion at or around battery or its vents? .....		
<b>5. Spinner</b>			Any cracks properly checked or reinforced? .....			Fuses of adequate amperage? .....		
Cracks? .....			Cowlings clean? .....			<b>5. Fuel System — Tanks</b>		
Properly secured? .....			<b>8. Power Plant in General</b>			Drains properly located to discharge clear of aircraft? .....		
Is spinner chafing into prop? .....			All necessary safeties, palnuts, locknuts, etc. in place? .....			All outlets properly screened? .....		
			No fuel or oil leaks? .....			Breather inlets clear? .....		
			All accessories secured & safetied? .....			Fuel shut-off valve installed? .....		
			<b>FUSELAGE — HULL</b>			Fuel shut-off valve easily reached by pilot? .....		
			<b>1. Structure</b>			All fuel lines of proper approved type? .....		
			All welds sound? .....			All fuel lines secured against vibration? .....		
			All tubing straight and uncracked? .....			Is tank located so that sufficient head is available in maximum climb with minimum fuel? Placard if necessary? .....		
			No rust or corrosion? .....			Has tank sufficient expansion area? .....		
			All attach fittings sound, no cracks, elongation of holes or worn threads? .....			Any tank overflow discharge clear of hazardous areas on aircraft? .....		
			All rivets properly installed? .....			Is tank support sufficient to meet strength requirements? .....		
			Inspection openings for all vital areas? .....			Does tank clear surrounding structure? .....		
			Fuselage properly drained, that is, no built-in moisture traps? .....			Do tank supports minimize strain and chafing? .....		
			Firewall of proper fireproof material? .....					
			<b>2. Cover</b>					
			Properly attached? .....					
			No tears, distortions, or abrasions? .....					
			Any breaks or ruptures properly repaired? .....					
			<b>3. Control System</b>					
			Properly secured and safetied? .....					
			Controls stops provided & adjusted? .....					
			All fittings of proper thread & size? .....					

To insure its safe construction and operation, and to further emphasize the vital necessity for thorough consideration of every item which goes into your airplane, the following working check-list should be used, and it is suggested that it be made a part of the aircraft records.

## SAFETY CHECK LIST

<b>EXITS</b>	Yes	No	<b>EXITS (Continued)</b>	Yes	No	<b>WING—TAIL SURFACES (Cont.)</b>	Yes	No
1. Can aircraft be cleared rapidly in case of emergency? .....			Is belt of correct size, that is, no long over-tongue? .....			All pulleys free from interference and guarded? .....		
Are special precautions available during test period, such as jettisonable doors or canopy? .....			Is a separate belt and shoulder harness supplied for each occupant? .....			All torque tubes and bell cranks in good condition? .....		
If parachute is to be worn, does it clear all controls? .....			<b>6. Heating—Ventilation</b>			No interference with fuselage or wing structure throughout full control travel? .....		
<b>Baggage Compartment</b>			Is cabin or cockpit in negative pressure area and liable to suck in exhaust fumes? .....			<b>Fuel Tanks</b>		
1. Are walls and floors of sufficient strength to withstand flight loads? .....			Is any provision made for ventilating cabin other than normal leakage? .....			See Fuselage Section Also		
Can anything escape from baggage compartment by accident? .....			<b>7. Windshield—Windows</b>			Are drains supplied at low point in tank when aircraft is in normal ground position? .....		
<b>Cabin—Cockpit</b>			Are windshield and windows of recognized aeronautical materials? .....			Fuel overflow drains clear of aircraft—no tendency for overflow to soak into aircraft structure? .....		
<b>1. Instruments</b>			Is windshield braced against positive or negative pressures in flight, either by design or extra bracing? .....			<b>LANDING GEAR</b>		
Are all instruments functioning and accurate? .....			<b>WING — TAIL SURFACES</b>			Properly lubricated? .....		
Are all instruments marked, max pressures, temperatures, speeds? .....			<b>Fixed Surfaces</b>			Proper oleo inflation? .....		
Are all vital instruments easily visible to pilot? .....			Are all interior fastenings secured and/or safetied? .....			Shock cords or springs in good condition? .....		
<b>2. Flight—Engine Controls</b>			Is interior properly weatherproofed? .....			All attach fittings uncracked and sound? .....		
Are all engine controls marked or easily identifiable? .....			Have any mice been inside lately? .....			All bolts holes not elongated? .....		
Are all engine controls smooth in operation, without excessive resistance, & easily available to pilot? .....			<b>Movable Surfaces</b>			All attach bolts secured & safetied? .....		
Are all flight controls arranged so that jamming by dropped gloves, etc. is impossible? .....			Are stops provided, either at wing or somewhere else in the control system? .....			Brake lines in good condition? .....		
<b>3. Fuel Systems</b>			Are all hinges and brackets sound? .....			Brakes operating properly? .....		
Are all gas valves easily reached by pilot? .....			Are all hinge pins secured and safetied? .....			Correct hydraulic fluid in lines? .....		
Are all gas valves marked ON, OFF, LEFT, RIGHT? .....			Is there any excessive play in hinges? .....			Wheels uncracked? .....		
Are all gas valves in such a position that accidental operation is impossible, or guarded in such a way that accidental operation is impossible? .....			Is there any excessive play in control cables or tubes? .....			Tires unworn & properly inflated? .....		
<b>4. Seats</b>			<b>External Bracing</b>			Excessive side play in wheel bearings? .....		
Are seats of sufficient strength for maximum flight loads contemplated? .....			Is the interior of all struts weather protected? .....			<b>GENERAL</b>		
Does seat "flex" enough at any time to interfere with flight controls? .....			Are all adjustable fittings locked, secured and safetied? .....			ALL BOLTS, WHEREVER POSSIBLE, HEAD UP AND FORWARD.		
<b>5. Safety Belts and Shoulder Harness</b>			Are struts undamaged by bends or dents? .....			All exterior fastenings visible from cockpit or cabin should have safetied end toward pilot, wherever possible.		
Is installation and attachments of sufficient strength to meet 9G forward load minimum? .....			Are all wires serviceable with proper end fittings? .....			A complete walkaround inspection of the aircraft should be accomplished to check that every bolt visible on the exterior is secured and safetied. That there is no visible structural damage. That all inspection panels and covers are in place and attached. That all parts of the aircraft are in proper alignment.		
Does attachment connect directly to primary structure? .....			<b>Attach Fittings</b>			DON'T FORGET TO PUT IN ENOUGH GAS PRIOR TO THAT FIRST FLIGHT — GROUND RUNNING AND TAXI TESTS CAN USE UP A LOT MORE THAN YOU THINK!		
Are belts and harness in top condition? .....			Are bolts of proper size installed? .....			OK — Kick the tires, add another coat of paint and AWAY WE GO.		
			Are all bolts secured and safetied? .....					
			Have all bolts been examined for wear? .....					
			<b>Flight Control Mechanism</b>					
			All cables and tubes unbroken or unbent & with proper end fittings? .....					
			All control attachments secured and safetied? .....					

Is your KR ready for the first flight? Have you checked all the various pieces, parts, and systems in your aircraft? The E.A.A. is a very safety conscious organization and the previous check list was borrowed from their service manual and recently reprinted in the E.A.A. Designee Newsletter. Many of you already belong to the E.A.A., those who don't, should. For more information, write to E.A.A., P.O. Box 229, Hales Corners, WI 53130.

A couple of months back I asked in the Newsletter for an indication of interest in a club for KR builders and pilots. The letters received were all in favor and some offered to help at whatever was needed (much appreciated). So...with the ideas suggested in your letters and with a few ideas of my own thrown in, we'll get the KR Club going.

Here is an outline of the suggested rules:

1. To be eligible for membership in the KR Club you must be:
  - A. Actively participate in one or more of the following,
    1. building a KR
    2. flying a KR
    3. owning a KR
  - B. Willing to participate in one or more club functions such as,
    1. meetings
    2. fly-ins
    3. pic-nics
  - C. Attend or participate in forums or seminars on the building and/or flying of KR aircraft.
  - D. A current subscriber to the KR Newsletter
  - E. A supporter of sport aviation in your community.
  - F. A holder of a current membership registration card (see application on back page)

The membership rules are already met by most all of you, they definitely aren't designed to keep anyone out. They are still subject to change if the membership so directs. The benefits derived from being a KR Club member will grow as the membership grows. A library has already been started and a list of books available follow next month.

There is no charge to members other than postage for the use of these books for one month from the time your request is received. After that, there will be a 25¢ per day late charge until the book is returned or replaced. You can add to the list of books available if you are willing to share from your own library. Just send a list of titles of books or manuals you have and I will keep a current listing of such for other members to select from. The response to such ideas of sharing always amazes me, I can't think of any other sport, hobby, or whatever where so many do so much for each other.

A tool crib can be initiated. A list of tools willing to be shared by their owners (at the owner's convenience and supervision) can be kept so builders with need of such tools may contact the owners and make necessary arrangements. Use of materials and utilities, i.e. welding rod, electricity, etc. can sometimes be costly so you should take these into consideration before tools and equipment are used.

KR Club members will receive a registered membership card with a number. The number must be used by you when requesting any of the services offered to club members. A list of members living in a 100 mi radius of your residence will be furnished if you send a list of zip codes for that area. Overseas members will be sent a list of members in their respective countries or provinces.

The possibilities go on and on but I feel this is a basis on which to form the club. There will undoubtedly be changes as time goes on and as a member you will have a vote in deciding those changes. Voting will be done on ballots printed in the Newsletter, one ballot per member

I spoke with Ken Rand about the possibility of him attending various meetings of the KR Club and he was very enthusiastic. He would have to be notified well in advance of such a meeting and it could not interfere with any prior commitments. A meeting scheduled during a fly-in would be best. Meeting places can be anywhere, someone's garage, an unused corner in a hanger, at a city park or at a restaurant. The whole idea is just to get together and talk airplanes.

KR CLUB MEMBERSHIP APPLICATION

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

ZIP or COUNTRY \_\_\_\_\_

PHONE NUMBER \_\_\_\_\_

I want to be a member of the KR Club. An organization for the education and advancement for KR builders and pilots.

\*I have the following books or manuals I will share:

\_\_\_\_\_  
\_\_\_\_\_

\*I have the following tools and equipment I will share (at my convenience):

\_\_\_\_\_  
\_\_\_\_\_

Please send me a registered membership card and a list of KR Club members in my zip code area.

SIGNED \_\_\_\_\_

KR Club membership dues are \$3.00 per year and will cover the period from July 1st thru June 30th. Fill out this application and mail to:

Ernest Koppe  
6141 Choctaw Dr.  
Westminster, CA 92683

\*It is not mandatory to have books or tools to share in order to become a member.

ERNEST KOPPE  
6141 CHOCTAW DRIVE  
WESTMINSTER, CA 92683  
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