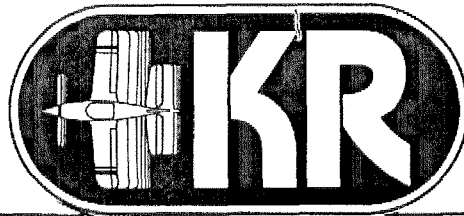


Issue no.81  
MARCH  
1982



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.

A "Close Encounter" of the worst kind.

Uh-oh..I thought its happening...a rash on my hands. One of the first signs of an allergic reaction to epoxy. I recalled the things I had read about other KR builders experience with adverse reactions to epoxy and dreaded the thought. I might have to give up using the epoxy/glass constructor method.

The rash first appeared under my watch band...and it itched. I had just finished one side of a wing and had sanded the skin where the next lay-up was to over-lap. I quit wearing my watch, thinking that it could be causing the problem but by the end of the next day the rash was on my other hand...and it itched like crazy. I decided to stay away from the epoxy/glass and just make metal parts and fittings.

The rash continued to itch and was spreading. In fact..the itch had become much worse since I had stopped working with the epoxy and fiberglass and seemed to be most painful as my wrist would rub against my shop apron. That finally tipped me off to the real cause of the rash...my shop apron!! I had worn it thru several weeks without washing and it had collected enough tiny, invisible fiberglass "stickers" to become a blue denim porcupine. Everytime my wrist would contact the apron and everytime I put my hands in the apron pockets I was getting zapped by these tiny stickers. Off came the apron and into the wash. Three or four days later the rash was almost gone and the itch has become bearable. Another three or four days and I should be completely "cured"...whew!!

#### QUESTIONS & ANSWERS

- Q. I put a Genave 200B radio in my KR-2 and I have been plagued with ignition noises in both receiving and transmission. My engine is a Revmaster 2100D with shielded spark leads, etc. Do you have any suggestions on how to stop the ignition interference?
- A. This is not the first instance of radio interference I've heard of with this particular radio. Other builders have met with varying amounts of success by using noise filters or suppressors. Contact your local avionics man and see what he recommends.
- Q. Has Rand/Robinson completed their revised plans yet? How much to exchange old plans?
- A. There won't be a revised set of plans for a least 6 months. Cost hasn't been figured yet but it will be more than the current price by a good margin.
- Q. Do you have Don Lands' address or phone number? I have an almost complete set of his tri-gear and have a few questions. By the way, if anyone needs pictures or answers to his plans, I would be happy to help. Jeff Nelson, 2589 Fisk St., Roseville, MN 55113 (612)484-9027.
- A. Don Land moved about a year ago and I don't have a new address for him. There are several people with his plans that would really appreciate your help.
- Q. What is the proper control cable tension and how do I measure it?
- A. I've found the best way to adjust cable tension is to tighten them just enough to take up any slack. I've never measure the tension on the cables at this point because I don't have the equipment so I rely strictly on feel. You will find there is a definite point where the cables will feel properly adjusted. Not too loose (no flop) and not too tight (no twang).

This is the final page of the Experimental Aircraft Test Guide that began in issue #78. Use it with care and in sequence. There is another opinion on initial flight testing on the following page.

H. General flight

1. Do all controls operate smoothly and with authority in flight?..Yes NO  
Are the controls effective in all attitudes of climb, turns and landing?...Yes No

REMARKS \_\_\_\_\_

2. During normal operations are there any signs of the following:  
Siphoning or spilling of fuel.....Yes No  
Excessive engine vibration.....Yes No  
Excessive instrument vibration.....Yes No

REMARKS \_\_\_\_\_

I. Landing

- Can the aircraft be landed safely without tendency to bounce, nose over, porpoise, or ground loop?...Yes No      REMARKS \_\_\_\_\_

VI. Engine post flight inspection

Do the following items show signs of excessive wear from vibrations, heat, or other stresses?

- |                                |                            |
|--------------------------------|----------------------------|
| 1. Cowling.....Yes No          | 5. Manifold.....Yes No     |
| 2. Oil lines.....Yes No        | 6. Controls.....Yes No     |
| 3. Fuel lines.....Yes No       | 7. Engine mount.....Yes No |
| 4. Instrument lines.....Yes No | 8. _____.....Yes No        |

VII. General

1. Are there any characteristics in aircraft control, engine operation, or any other feature of the aircraft construction, or handling that should be corrected?...Yes No      REMARKS \_\_\_\_\_

2. Does the cockpit lay-out permit clear, undistorted visibility for safe operation of the aircraft in flight and on the ground?.....Yes No

REMARKS \_\_\_\_\_

3. This test guide has covered only one c.g. position. For aft c.g. test, load the aircraft to gross weight at the most aft c.g. limit and repeat the tests in section V. Forward c.g. tests may be conducted at less than gross weight. Load the aircraft to the most forward c.g. position and do the tests H. and I in section V.

VIII. Notes

1. Test flights should be no longer than one hour, so it will be necessary to carry out several flights to complete this test guide. The aircraft should be re-fueled between flights to maintain the same take-off weight for tests in section V.
2. Test flights at Vne should be done with caution and in smooth, clear air.
3. New or prototype engine installations may require a cooling climb. Don't overheat or abuse your engine.
4. This test guide does not cover spins as it would double (or more) its already considerable length.

IX. Certification

This is an accurate record of the flight tests carried out. Adjustments made to the aircraft during these tests have been logged and have been checked by subsequent ground and flight tests.

SIGNED \_\_\_\_\_ Test Pilot \_\_\_\_\_ Date \_\_\_\_\_

## TIPS FROM OTHER PILOTS

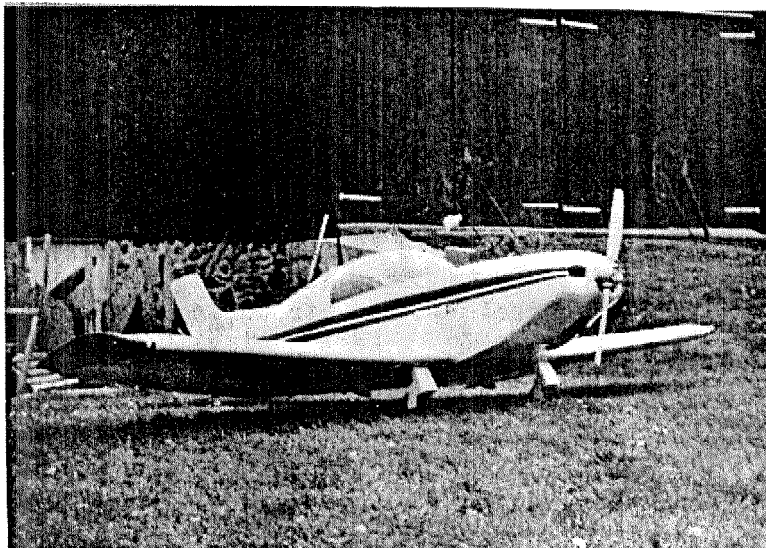
From Don Hunter, R.R. #4 Woodstock, Ont. Canada N4S 7U8...."After reading your Jan. issue about flight testing the KR, I thought it was very good and should be strictly followed. I do feel that the part on power on stalls should be modified in the interest of safety. (1) Power on stalls should be done with no more than 75% power. (2) Power on banked stalls should NOT be attempted at all due to possible spin or flat spin that this aircraft has demonstrated. (3) You mention that several ground runs should be attempted. I think several hours of slow and high speed taxiing would prevent 50% of all engine failure problems and make real pilots out of the builder. Many flight reports indicate the builder makes a few taxi runs and if he doesn't ground loop or something, he takes it up. Most ground mishaps are a case of the pilot exceeding his ability early in the ground testing. One flight report says...if you find yourself flying while practising high speed taxi tests, to take it up. I think that the pilot in question has already exceeded his ability and the aircraft has run away with him. My ground testing began by flying the tail for 1½ hours total..then low and high speed taxiing without the wings for 3 hours. Whenever I approached a speed where I was having control problems I would slow down and practice complete control before advancing to the next step. Next I put the wings on and started over with slow speed taxiing. Before long I could advance the throttle slowly, lift the tail and keep the center line of the 4000' strip right between the front wheels. All my high speed taxiing was done with negative attack on the wings and throttle only enough to get you up to the desired speed. After another 4 hrs. of this, I was taxiing at speed well above lift-off speed but always keeping negative or tail high attitude. Next all flap settings were tried and by the time I had 10 hrs. of practice I could handle the KR-2 like a Cessna. My first lift-off was with full flap and about 75% power. She lifted off straight and true, and all I had to do was ease the power back a little and I made a perfect landing on the same 4000' runway. To date I have 12 hours total taxi time and it was time well spent. I have about 136 hours in a C-150 and no tail-dragger time except for the KR during the 12 hours. I had lots of small problems to overcome including two engine failures due to a one way valve that was used because of an electric fuel pump that I installed as a back up system. I'm glad that I was on the ground and not flying before I was ready. Anyone who wants to teach themselves using this method should be careful not to overheat the engine, or get over confident. Set up a schedule and stick to it. Lift offs like this one are close to the stall speed. Keep the power on til you're down. I would have completed a circuit by now but old man winter has kept me grounded.



Don has made some good points about learning to fly your KR and his method will definitely teach you how to land and take-off. But...I still recommend that if you inadvertently find yourself in the air during taxi runs....keep on climbing! As for power on, banked stalls, this is the classic stall -spin situation and you should be aware of how your aircraft re-acts....E.K.

FLIGHT REPORT

From Bill Clapp, Alas de Socorro, Shell, Pastaza, Ecuador, South America.....  
 "Greetings to you and yours from South America. This is the letter I've been waiting almost 4 years to write. On Nov. 26, 1981 (Thanksgiving Day) I made the first flight in my KR-2, HC-BJQ, the only homebuilt aircraft in the country of Ecuador. My KR-2 was almost 4 years in the building. Those of us in foreign countries have a lot of hassles that the Stateside guys don't have. Importations, getting parts, paperwork, and letters to ask questions on various phases of construction and so on. HC-BJQ..the plane is pretty much plans built. Engine is a Revmaster with Maloof prop and full electrics. Reinforced firewall, 24 gallon fuel capacity with header and two wing tanks. I raised the turtle deck about 4 inches for more headroom. Empty weight is 613 lbs. Mark 12 VHF, Bendix ADF, emergency transmitter, turn/bank, and other normal instruments. I use a Cessna engine instrument cluster out of a Cessna 180. I used the two fuel gauges for the wing tanks and the sight tube for the header tank. First flight was delayed almost 3 months because of bureaucracy and getting the Airworthiness Certificate as well as the required insurance. Morning of the first flight was calm and cool. After all the log books were signed by the Civil Aviation Inspector and the papers put in the airplane, we were ready to go. As we get 23 feet of rain here on the edge of of the Amazon jungle, the Civil Aviation rolled the gravel strip several times to get the rocks punched back in. The inspector was demanding to go on the first flight. After about 10 minutes of arguing he consented to let me fly it solo. I climbed in and fired up, called the tower and taxied out. As I had done 3 or 4 high speed taxies before with the tail up, the take-off roll was normal up to lift-off at which time a bit of pilot induced longitudinal instability took place. Finally, just holding the stick steady did the trick and climb-out and left turn was normal. I climbed out at about 90 MPH and 35" and 3500 RPM. I leveled out at 5,500 over the airport and just flew for a few minutes to get the feel of things. Finally I got up the nerve to retract the gear and then settled down to trying the plane out. I have a switch for the prop for high and low pitch until I fix some problems with the controller. Cruise worked out to be 158 MPH indicated at 6,500' with 30" and 3000 RPM. I made two low fly-bys at 180 indicated for the troops on the ground and spent some time in slow flight and on the burble of the stall. After 45 minutes I came in and made a normal landing and the flight was over. I taxied back and when I opened the canopy everyone cheered!!! After fixing a slight oil leak and the exhaust stack which had a rust hole in it, I took the inspector for his ride and all were happy. It was truly a great feeling!!! I've put about 10 hours on my plane in the past month and a half and am looking forward to doing some modifications and improving it. A week after the first flight, I flew up to Quito to pick up my daughter from school. Quito is a 9200' above sea level but I had no problem getting up there or back. I find the airplane is much easier to wheel land that to 3-point, especially where visibility is important. I'd like to see a few improvements on wheels and brakes. I'm using a Cessna 180 rudder pedal assy, with the brake pedals cut down to size, also I have toe brakes which are easier to use. Brakes are definitely marginal and I double check each tire before each flight because of the gravel strips we have here. I like the tire size but wish there was something available in a 6 ply that would stand up better. I've got some ideas to improve the performance and will let you know in the future if they work out or not. All in all, it is a great little airplane and a real joy to fly. See ya'll at Oshkosh '82 but probably won't make the 4000 miles in the KR."



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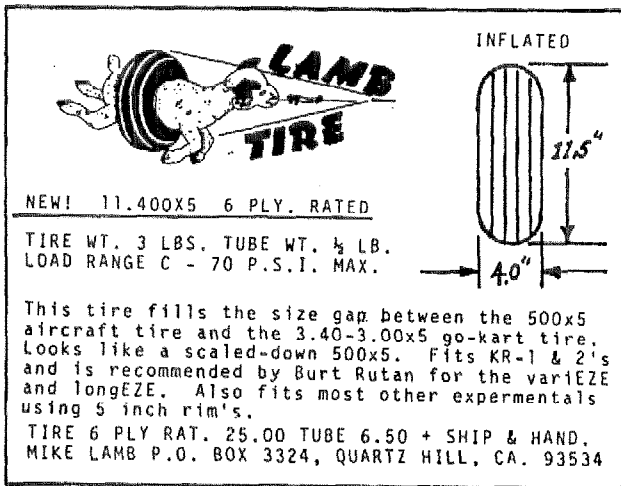
FOR SALE...KR-2, 36 hrs. TT...hard landing. Gear parts & glass work to wings needed. Revmaster 21000, Mark III Nav-com & parachute...\$4700.00 complete, as is....Roger Kramer phone 707-994-1845.

FOR SALE...KR-2 turbo. Low time, signed off by FAA...\$6500.00. Fred Whitcomb, 13502 1/2 Village Dr., Cerritos, CA 90701 phone (213)926-5710

FOR SALE...Approximately 28 yards of dynel fabric...\$25.00 for all. Tom Ratliff, 3410 Brittany Dr., Ellicott City, Md 21043

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FOR SALE...Complete KR-2, 35 hrs T.T. 1700 cc engine. Slight damage-all material to repair...\$3500.00 with trailer. Levi Green, 1715 Crestridge, Mesquite, TX 75149 214-288-6062 no collect.



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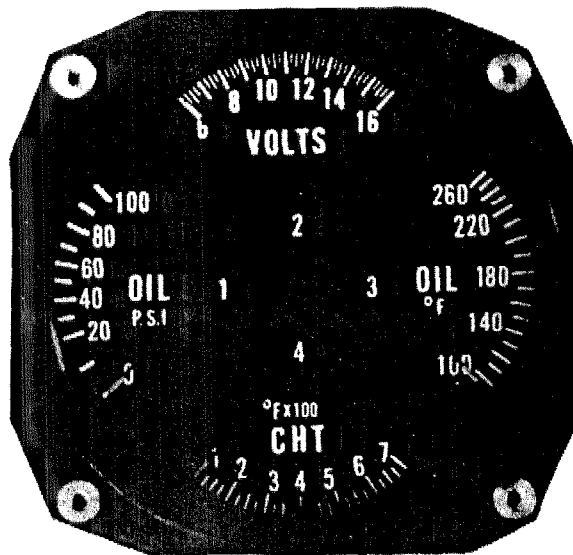
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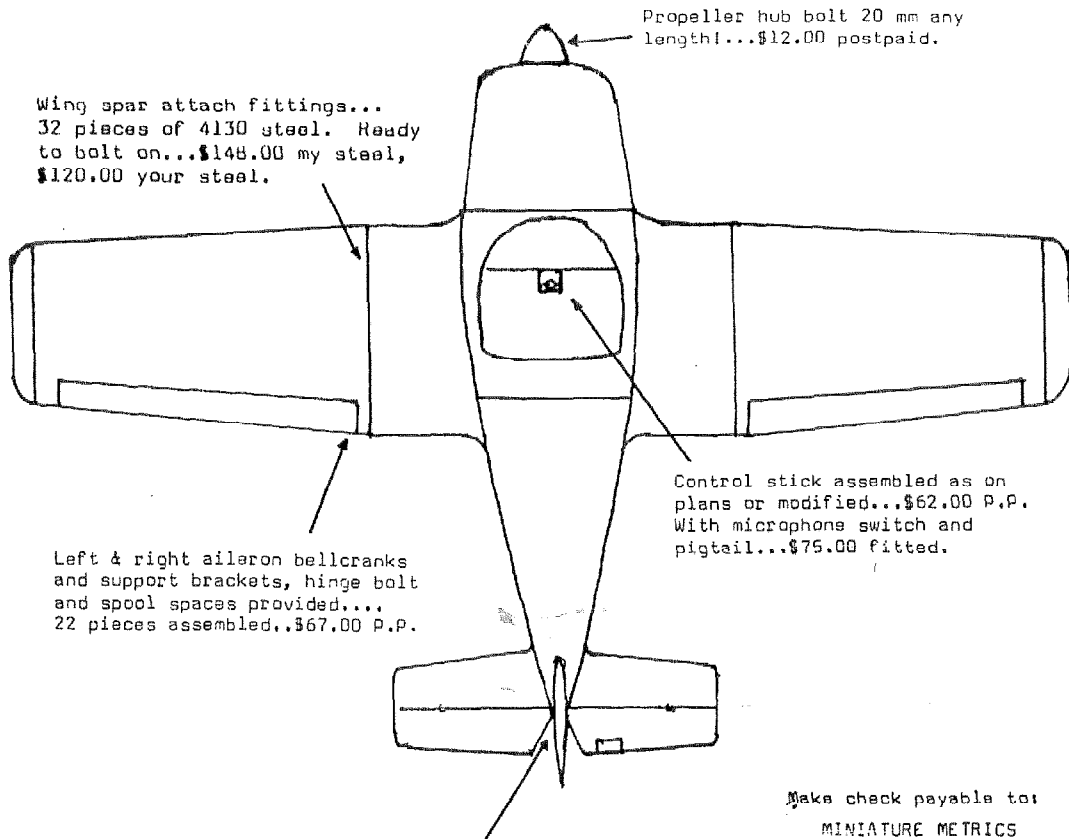
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