

story... (The ARMY forgot to tell ATC that they were activating the MOA...as if the weather wasn't enough of a challenge, eh?)

Well, gotta run for now. I hope some of this info is useful. As I write this, my wife Donna and I are planning to bring our new Baby to the Velocity-West Fly-In, June 12th, at Lincoln, Calif. We're looking forward to meeting new family.

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VELOCITY + 100 RACE = FUN

From Don White, Orchard Park, NY

This story began as a challenge tossed at me by airport friend, Rich Jankowski. Here at my home base of North Perry (Hollywood) HWO, Florida, Rich has a beautiful and very fast RV-6 which he flew in last year's race. "Don, how about entering your Velocity in the Sun-N-Fun 100 mile Race, it is REALLY a lot of fun." My log book showed about 55 hours since first flight on Aug 8, 1998, with virtually no time at full throttle, low level, so seemed to be a good time for a REAL TEST. Mailed my \$20 fee check to Aircraft Spruce and requested entry in 4 seat canard class.

The course was take-off 27L, turn to 220 heading for 38 miles, turn at high smoke stacks on edge of a lake to 095 heading. At 30 miles, cement plant, turn to 356 heading and 32 miles back to Lakeland, Runway 27. Rich gave me all info and said second turn, cement plant, is a little hard to find from the air. So on my way to Lakeland, I scouted both turning points which helped me for the race. If you believe in problems that come in "3's" then here were mine. Was late for my first briefing, as misread info, was late for second briefing, as was at my plane talking and lost track of time, misplaced keys and had to disconnect mag wire and jump starter to start engine.

Fortunately Aircraft Spruce briefer gave me late private briefings and allowed my entry to stand. Finally I added a big number "5" with black tape on pilot side of fuselage for turning point observers to spot.

Race day, Monday April 12th, dawned with some fog so our take-off time was delayed till about 10 am. Was quite exciting to line up and prepare for take-off surrounded by legends such as Klaus Savier and his VariEze. Was also a little nervous time as my N19DW had never flown full power for any length of time. We were lined up 3 abreast on 27L, then every 20 seconds, a flag was dropped and timer started for the next take-off. I firewalled throttle and mixture and prop were already at firewall. Immediately retracted gear and turned to 220 heading just after campground. Throttle and mixture remained firewalled for whole race, but backed off on prop to just under 2700 rpm to stay out of red. Originally MT prop maxed out at 2670 rpm so I had adjusted governor up to 2730 max. My altitude was 800 to 1000' above ground and seat belt real tight. Still hit the ceiling twice with my head due to rough air. At two turning points and crossing finish line I announced my plane number and race number on the race frequency. The timer stopped when I crossed starting line at 500' agl and full throttle. My airplane performed flawlessly with every gauge in green and oil temp max 200F. (Have only one large oil cooler in the nose). You burn a LITTLE more fuel at this speed, fuel flow reading was 24.5 gph. So I was very happy with the airplane performance.

My elapsed time from standing start to crossing finish line was exactly 27.00 minutes for an average speed of 182.22 knots or 209.82mph. As you may have guessed, my plane was the only 4 seat canard in the race so I was placed in 250-300HP class with a Questair, two SX-300's, a Berkut, and a 260HP RV-6. I believe the only other 4 seater in the whole race was a White Lightning. A little ironic since I picked the name for my

plane over 25 years ago," WHITES LIGHTNING", so am often confused with that "other" Lightning. The Questair was overall winner at 298mph, Claus Savier's VariEze did 234mph and friend Rich was happy with his 220mph in his RV-6.

This story is ending with a CHALLENGE. Let's see how many Velocities we can have in the S-N-F 100 race in 2000???? The rule is there must be 3 or more entries to have a class, and therefore a trophy awarded for the winner. Hope the NACA engine cooling scoops on top of fuselage being tested by factory work out. Eliminating air scoops under wings should increase top speed. So start planning now and hope to see you at the drop of the flag in 2000.

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Update on my Ivo Prop and Franklin engine

From Rick Lavoie, St. Augustine FL

Having just completed yet another long cross country trip, I now have 320+ hours on my Ivo prop / Franklin engine combination. Both are performing to my expectations. Ivo Prop:

Ivo Zdarsky is now confident that he has the bugs worked out of the motor that turns the Magnum blades. He now uses new larger hardened gears. Also, they now use epoxy to prevent a wire from coming loose due to vibration. My present motor has been working just fine, but to be on the safe side, I sent it to Ivo to verify that all the new mods had been installed. Ivo recommends that you do the same with yours.

Ivo also has a new method of securing the leading edge protectors. I also sent my blades in for this upgrade as well and recommended you do the same.

Regarding the brushes wearing out, Ivo has addressed this with a lighter spring that slows down the wear greatly. The "lamp shade" wire has been replaced with aviation grade wire as well.

It is clear to me that Ivo has and

continues to try to resolve any problems that I (and others) have encountered. For this reason, I have stayed with my Ivo Prop. I still check the blades, tape, and torque prior to each flight, to be on the safe side.

The Franklin engine continues to perform fine. About 75 hours ago, I ended up pulling the #6 cylinder and found a busted oil control ring. The ring was probably busted during my first few hours of flight, due to the high oil and engine temps I was then experiencing. I had suspected a problem with the oil control ring for quite some time. The odd thing was that my compression was so good (79/80), that my local IA mechanic insisted that all the rings had to be fine. The signs all added up to pulling #6 for a look. I was burning 1 quart of oil every hour and a half, there was dark soot on my cowl near the left exhaust pipe, dark soot on one of three prop blades, and #6 plug kept on fouling (gap got bridged) every 25 hours or so. Prior to pulling the cylinder, I borrowed a scope and took a look inside each of my cylinders. The #6 was missing "cross hatch" marks, that show the rings properly seated. At that point, I knew that I'd find a problem with my oil control ring for sure!

On another subject, I want to share an experience that I had while running straight mineral oil. On a cold morning, immediately after take off, I noticed that my oil temps were going way up. I reduced power and landed. I shut down for a while, and gave her a good inspection. Finding nothing wrong, I re-started and took off. All was back to normal again with my oil temps. I figured out that the mineral oil was much heavier than the 50/15 that I had been running, thus increasing the resistance to the oil by-pass group. The next time this happened (next time at take off), I simply reduced the throttle all the way back for a few seconds, then when I increased power again, I noticed that in a few minutes, my oil temp was back on its way down. Sounds crazy... but the combination of straight mineral oil, plus a cold morning, increased my pressure differential enough above 19-23 psi (psi

with newer PZL spring - see PZL Service Letter published on page 10 of Vol 16), to stop the oil from flowing to my oil cooler (cold made the mineral oil even thicker). Since then, I am back to using AeroShell 15-50 semi synthetic, and I have not seen this problem again.

For those of you that have not followed the oil temp problem of installing a Franklin on a Velocity, here is a very brief summary. Unlike the Lycoming, the Franklin has no "vernatherm". Instead the Franklin uses a bypass group and has two ways to bypass oil from getting to the oil cooler and oil filter. Both are pressure sensitive (not temperature). The one we are concerned about is the "differential valve" which normally bypasses oil at or above 10-14.7 psi. The unique Velocity set up of having an oil cooler in the nose adds resistance to the oil lines, due to the length and diameter (1/2") of the oil lines. Another words, the Franklin normally has an oil cooler installed close to the engine (within the engine compartment). Thus I believe the problem is the flowing of oil measured by resistance (pressure differential of the oil leaving the engine and re-entering back to the engine). Dave Lincoln proved this mathematically! I proved it practically by measuring the differential pressure with two pressure gauges.

If you have the original spring, then this pressure differential is set at 10-14.7 psi. If you have installed the new PZL spring, then the pressure differential is set at 19-23 psi.

So the real problem is having the oil cooler in the nose... this causes the extra resistance. If you leave the oil cooler in the nose (which is what I did), then you need to address the resistance. What I did is documented in great detail in past newsletter articles (starting with Vol 12 page 16), so I will not go into much detail. But here is a summary of what I did:

- Complied with PZL-F/1/98 and changed the stiffer spring to p/n 26.11.1252
- Replaced 1/2" with 5/8" oil lines
- Replaced original oil cooler with the next larger size (1" taller).

If you are planning on installing

a Franklin, you may want to become familiar with the background on all this. Start with Vol 12, and follow the thread of information that continues with subsequent volumes. You should also download the PDF files (faxes from PZL). Instructions for this are printed on page 13 of Vol 14. Everything that I know about this problem has been documented in writing. So please do not call me with questions unless you have read all of this information first.

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Short Circuit

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provide for environmental protection"? An open shell connector exposed to the outside elements, such as in a wheel well, will deteriorate much faster than one that is environmentally sealed.

Environmental connectors get very expensive very quickly, so try to limit their use if you are building on a budget.

One of the more common locations and applications of quick disconnect connectors is in the wing root areas to allow ease of removal of the wing(s). Disconnecting position and strobe light wiring, as well as potentially pitot heat, landing light, or even taxi light wiring when removing a wing can be greatly simplified with the use of a wing root disconnect connector.

The three most common quick disconnect connectors are the Molex, D-Sub, and Circular "C" styles.

Molex connectors are generally identified as the white square or rectangular plastic housing type. These type connectors can be purchased in many different electrical and electronic supply shops, including Radio Shack. While many people tend to want to turn their nose up at these connectors, I would point out that Cessna has used these as wing root connectors in virtually every single engine aircraft they have produced since the 50's!

Molex connectors, as it is with most quick disconnect connectors,

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