

Winds Aloft



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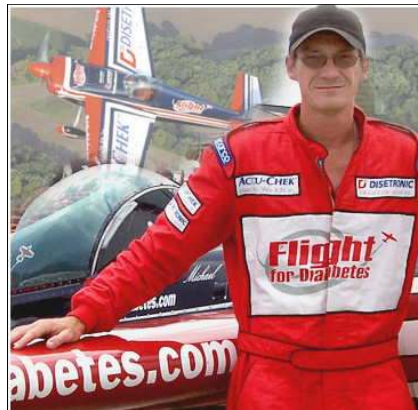


Dana Holladay Attempts World Record Flight

Many of you have heard about the record flight that Michael Hunter and I, along with a Cirrus factory pilot, will be attempting during Sun-N-Fun, and I thought I would give you some additional details. Last year Michael was looking through the flight record book for a world record that we might try to break in order to bring some publicity to his charity, Flight for Diabetes. During this search we noticed that the record time for touching down in all lower 48 states is 5½ days. We thought that if we had a fast plane and a little luck from the weather gods, we could perhaps break this record or have a ton of fun trying!

While we were at Airventure last summer, I approached Cirrus Design of Duluth, Minnesota about the flight and asked if they would be interested in sponsoring our flight by providing an airplane. Interestingly enough, they said "Yes!" without hesitation and we were of course delighted, as the Cirrus SR-22 was first on our short list of aircraft to use. They took it one step further and put us in touch with the folks at Chevron/Texaco who agreed to provide all the avgas we would need at no charge. Obviously we would need to plan fuel stops at FBO's that sell their fuel, but this didn't prove to be much of a problem as they are sprinkled along our entire route.

So a couple of weeks ago I purchased 28 sectional charts and spent the better part of 2 days doing the "mother" of all flight plans! I downloaded a blank map of the United States and drew straight-line legs that covered all 48 states in the shortest distance I could determine. Then with the sectionals I chose 48 airports along the route, many of which are within just a few miles of state borders. I confirmed their locations and identifiers using airnav.com and when I was done, I had planned a trip that will cover over 6,500 nautical miles! This actually turned out to be a considerably shorter distance than I had imagined at first, but you'd be surprised how



APRIL
2004

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tight you can fly around the country and still hit all 48 states. If we can average 150 knots groundspeed, our total flight time should be around 50 hours, figuring in time for climbs, approaches, and taxiing.

We plan to depart Lakeland, Florida in the morning of the first day of Sun-N-Fun, which is April 13th, and return by the following Saturday afternoon. We are not sure how long we will be

(Continued on page 4)



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From Dana.....

by Dana Holladay



Greetings!

I'd like to start by thanking everyone who helped organize the Chapter 790 banquet, especially Ron Liebmann who took care of the reservations and collection of the money. It takes a lot of work to put everything together and it's nice to know that we have people who are willing to make it happen. Once again Emmett's Restaurant provided a great atmosphere for us and it was a wonderful evening. The highlight for me was the presentation of an EAA Aviation Academy scholarship to Bryant Gruenwald. Bryant is another of our young, rising aviation stars who is most deserving of this honor, as he rarely misses a Young Eagles Rally and is always helping out in some way or another. Nice job, Bryant! Have a great time at the academy!

Next, it seems that the flying season is getting into full swing. I will be traveling to Ft. Lauderdale on April 5th to attend the National YMCA Swimming Championships as my daughter, Nikki, qualified in three events this year. Conveniently, Sun-N-Fun opens the following Tuesday and this will be my first visit to this event. On Tuesday, April 13th, Michael Hunter, Cirrus factory pilot Cary Bouchard, and I will depart Lakeland and attempt to break the world record for shortest time to land in all 48 lower states. The current record is 5½ days and if the weather cooperates, we hope to complete the flight in 4½ days. Cirrus is sponsoring the flight and is providing a new SR-22, and Texaco is providing our fuel. My flight plan shows a total distance of 6, 445 nautical miles! Wish us luck and I'll have more on this flight later! See you at the meeting!

(See more about Dana's record attempt on page 1 of this edition!)

Dana

Minutes

EAA Chapter 790 Board Meeting April 6, 2004

1. Directory will be available at the next meeting courtesy of Ken Kresmary. The board agreed about a year ago to sponsor the printing.
2. Dean May's Velocity home workshop visit will be held July 10, 1 PM at his home in Woodstock.
3. Dwight Zeller will proceed with a 4' by 8' Young Eagles banner printed on both sides.
4. We now have 151 paid members, the largest roster our chapter has ever had.
5. Lon has consolidated our two chapter checking accounts into one.
6. Dean May has three new program possibilities: XP-70 Valkerie (Mach 3 bomber) presenter, Dean May, FAR review, Delta Hawk update by their president.
7. Milt Ciarlariello from California will present his flight experiences at the May meeting.
8. Where have all the airports gone – airports of the past – June meeting.
9. Bald Eagles rides July 4 at Poplar Grove sponsored by Ken Kresmary.
10. Chapter logos will be voted on at a future meeting.
11. A discussion was held on the idea to sponsor a scholarship to EAA Air Academy or other training, which will be further discussed next month.

-- Mike Perkins (for Nancy Blazyk, Secretary)--

Recognizing Our Members

New Members - the following individuals recently joined Chapter 790 --

Wally Draxler	Robert O'Quinn	Donald Puls
George Reynolds	David Smith	James Wertz

Welcome Aboard!

(Wally Draxler is in the early stages of building a Bearhawk and lives in Arlington Heights. Next month you'll read about Wally's home workshop visit which was held April 17.)

First Flights - Tom Barnes flew his new RV-6 at Kenosha on 4/4. See his article on page 5.

Training/Ratings - Jim Bertoglio soloed on 4/9

Congratulations!

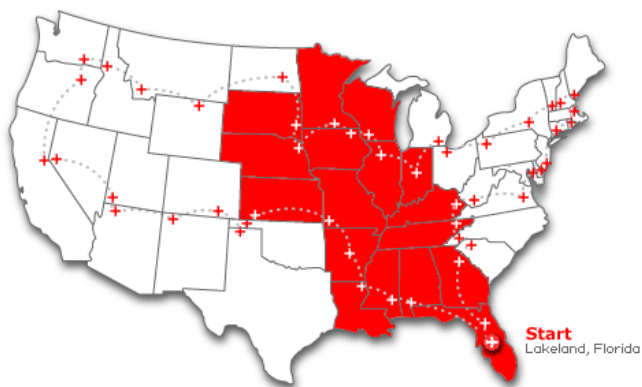
(Our apologies if any were missed. Please let the editors know of any errors/omissions, for correction next month. We would also appreciate hearing of member accomplishments, for inclusion in this section. Eds)

(World record continued from page 1)

able to fly before fatigue sets in, and I have asked Michael and our other pilot, Cary Bouchard, to make sure that there are always two people awake at all times or we will land to catch up on sleep. Our other stipulation is that we will not fly over the mountains at night, and this will no doubt slow us down a bit, but safety comes first. I am really looking forward to this flight and the scenery that comes with it, but I have no earthly idea how it will turn out. I am sure, however, that I will have more details on how it turned out in another newsletter! Wish us luck!

Dana

(You can obtain the daily status of this historic flight by visiting the EAA Chapter 790 website in the "news and events" section. Access is via the URL www.eaa790.org. No member ID or password is necessary for the "News and Events" section. Dana provided Rob Strickland with daily updates and Tom LeGates entered that information on the web site. Although Dana and crew missed the record on this attempt, they had a safe journey and will have many tales to tell!)



Last Chapter Meeting

In the March meeting, Lee Hilbert and Mike Monreal told us about their snow-ski exploits in a pair of mismatched Champs - Lee flies a 65 hp Champ and Mike flies a 85 hp Champ, but Lee certainly made it clear that in an airplane, having fun has very little to do with horsepower, but getting home in a headwind can have something to do with airspeed. Their excellent presentation was amid a back of a silent video showing some of their frozen-lake and snow experience. They brought with them two different-sized skis - it was nice to see bare aluminum at a meeting again!

Right-Sizing Your Engine

Bigger Doesn't Always Mean More GPH

by Ole Sindberg



Over the years, I have made some observations and come to certain conclusions:

1. Pilots love to fly airplanes with sparkling performance.
2. Most pilots believe that more

engine power invariably means higher costs.

More money to buy the engine and more money for higher fuel consumption.

3. I disagree with item 2.

Sparkling performance for a given airplane generally comes down to its power to weight ratio. There are a lot of both certified and homebuilt airplanes out there with power-to-weight ratios of 1 to 14 (one horsepower for every 14 lbs. of max. gross weight). This is not the kind of ratio associated with sparkling performance. If you fly a fairly fast airplane with either retractable gear, or gear that is really well faired, a ratio of 1:10 would be my choice. For airplanes with low wing loading and cruise speeds less than 120 mph, a ratio of 1:12 will be adequate. This will yield good take-off and climb performance, but don't expect significantly increased cruise speeds for the slower airplanes because of the fast drag rise.

Regarding the cost of the engine, a good example of more horsepower for the same money is the Lycoming O-360 or even the IO-360 vs. the O-540. The 360 series engines are very popular and hard to find. It is much easier to find an O-540 and the price could well be very similar. For my own airplane I knew I needed 225 hp delivered to the propeller to get adequate take-off performance. Keep in mind that with a fixed pitch prop, you don't get rated rpm for take-off and therefore less than rated horsepower. 225 hp would be available with an IO-360 with 10:1 compression pistons, and polishing and porting, and a constant speed or in-flight adjustable pitch propeller. If I installed an O-540 with a good fixed pitch prop, I would likely have 240 hp delivered to the propeller for take-off. And weights for the two packages were not all that different. Price

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Tom Barnes RV-6 Takes to the Air!

by Tom Barnes



After more than nine years of "just doing something every day" my airplane has proven again that aerodynamics is here to stay. I performed the maiden flight this morning from Kenosha Airport and the airplane performed flawlessly.

In preparation, three weeks ago I spent three days in the Dallas area undergoing what is referred to as transition training. I flew under the supervision of another pilot who has an exact type and configuration as my RV-6. That is, an RV-6 (tail dragger) Lycoming O-360 engine and Hartzell constant speed prop. Prior to my training, I had arranged for a test pilot to take my airplane up for the first flight, but after the training, I felt totally confident to do the honors myself.

This morning's flight plan was to take off and circle the airport while gaining altitude to 4000 feet, then level off and make two race track circuits turning to the right, followed by two to the left. I wasn't paying much attention to my speed, but to give you an idea on how fast these things are, I once noticed the air speed indicator at 186 mph at quite a bit less than full power. After the four circuits, I reduced power to landing configuration; around 110 and later below 100 and repeated the two circuits to the right and two to the left. Afterwards, I powered up a bit and did some steep turns just for fun. I had completed the test plan. I called the tower and told them I was ready to return for landing. They told me the airport was all mine and to enter downwind for left traffic runway 32.

I was amazed at how well I pegged the traffic pattern altitude upon entering downwind. I enter at the exact speed (110) as I had been trained. Then abeam the numbers, I backed off two inches manifold pressure and put in ten degrees of flaps and look for 100 mph. I turned to base and backed off two more inches of MP and dropped the nose and looked for -500 ft/min rate. On the turn to final, I added more flaps and kept watching airspeed, not allowing it to fall below 90. Over the numbers, I rounded out, pulled the power, and bled off the speed until she finally stalled and fell 1-2 feet into a three point landing. The left wing dropped a little earlier than the right, probably because of the 12 knot, 20 degree quartering head wind from the right.

The tower gave me a congratulatory statement along with taxi vectors back to my hangar. The main thought going through my mind was that everything had occurred *exactly as planned* and practiced.

April Chapter Meeting

Our next chapter meeting will be held in the Elgin Workshop. Ron Liebmann and Tom Solar will give a presentation on the reconstruction of the chapter's T-Craft amid the pieces and parts. Pizza and soda will be provided free by the chapter, so come around 7 PM and bring your appetite. Also, bring a folding chair as the workshop is not stocked with chairs. The meeting will start about 7:30. If you've not yet seen the T-Craft, this is a great time because in a few months it's beautiful innards will be covered with fabric.

Also, we'd like to see a show of hands of people interested in helping at the Oshkosh work weekend planned for June 5 - 6. Those of you who've not spent a work weekend in OSH do not yet know how much fun it can be, not to mention the worthy things you get done. Most of the work we've done in past years are construction-related and become part of the permanent airshow infrastructure.

Chapter directories are now ready and can be picked up at the meeting. Ken Kresmary has done a terrific job getting the directory up-to-date and ready for printing, so I'm sure you'll want a copy for yourself.

The workshop is 1/2 block west of Route 31 on Highland Avenue in Elgin. See the map on page 7.

When I got back to the hangar, I parked and pulled the engine cowl looking for any problems. I found two oil leaks. One was at the oil pressure transducer and another in the constant speed prop oil system.

The next two flights will be a repeat of this program, but will be stretched out to an hour each. Once I have flown off twenty-five hours in a restricted geographic area, I will be free to roam the skies (of course not violating any airspace restrictions). Boy, this is going to be fun.

Tom



Photo courtesy Tom Barnes

Steve Marquette's Home Workshop Visit



by Ron Liebmann

On March 27th we had the opportunity to visit with Steve Marquette at his Mt. Prospect home and check out his Kolb Firestar under construction. Steve's project is well under way – he's almost ready to spray on the final colors. The Firestar is a tandem-seat, two place, high wing pusher powered by a Rotax 503 engine. It sits low to the ground on tricycle landing gear. You can see pictures of a Kolb Firestar at:

<http://1000aircraftphotos.com/Contributions/Schlifer/1637.htm>

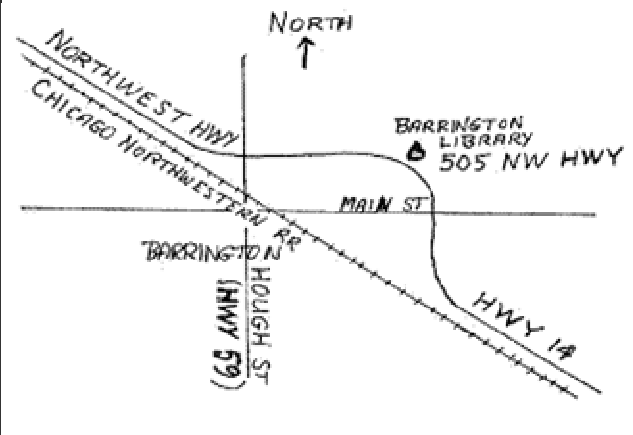
Steve is doing a superb job throughout the project from the excellent fabric job to the gorgeous wood floor. And the aluminum floor panels are polished like a mirror. Many thanks to Steve for opening his workshop to us and providing all with coffee and goodies.

Ron

Photos by Ron Liebmann and Rob Strickland



Regular Chapter meetings are held on the fourth Tuesday evening of each month (except July) at the Barrington Public Library. Meetings begin at 7:30, with a social "hour" preceding. The Library is located on Highway 14 between Main St./Lake Cook Rd, and Highway 59 (Hough St.) in Barrington, Illinois.



(Right-Sizing continued from page 4)

was identical for the two engines.

I chose the O-540 and a fixed pitch prop, saved several thousand dollars and I flew the airplane with this set-up for four years very satisfactorily. I do have a 1 to 10 power-to-weight ratio and I was very happy with my airplane's performance. (I have recently changed to a C/S prop, primarily because it solved my rpm over-speeding problems when high and fast).

There are other similar situations with engine choices. A bigger engine with a fixed pitch prop is often a better choice than a smaller engine with a constant speed prop. C/S props are expensive, heavy and complex, fixed pitch props are cheap, light and simple and if you don't fly high and fast, there really is no good reason to go C/S. The big fan jet engines are really turbine powered ducted multi-bladed fixed pitch propellers.

Regarding fuel consumption, it is a fact that typical air-cooled aircraft engines have a specific fuel consumption of about 0.5. That means that they burn 0.5 lbs. of gasoline for every horsepower-hour delivered - one horsepower *produced* for one hour. If you are good at leaning the engine, this can be reduced to 0.45 lbs. Let us take an example. You may be running an O-320 rated at 160 hp. At 75% power you would be pulling 120 hp. At 0.5 per hp-hour, you will be burning 60 lbs or 10 gallons per hour. This could be reduced with proper leaning to 54 lbs. or 9 gallons of fuel flow. If you are running an O-540, the throttle can be set for this much bigger engine to produce 120 hp. You are now running the engine at 46% of rated power. Fuel consumption is the same, but engine wear and tear is much lower. This may be an extreme example, but you get the idea.

You might say I did not consider the additional fuel for take-off and climb. Actually I did. For piston engines and modest cruise altitudes, one can generally assume that the additional (over and above cruise consumption) fuel burned during take-off and climb will be offset by the reduced fuel consumption during descent. This requires a properly planned descent at a TAS not significantly higher than cruise. This is true regardless of

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(Right-Sizing continued from page 6)

the size of the engine selected for you airplane – within reasonable limits. You just climb faster with the bigger engine and consequently spend less time at the higher fuel consumption. Look at it this way: it takes a certain amount of energy to lift an airplane to the chosen cruise altitude. That certain amount of energy requires a certain amount of fuel – the size of the engine is not relevant.

In other words, you decide how fast you want to cruise and thereby how fast the engine is burning your money. The size of the engine is not the determining factor.

Ole

Buy, Sell or Trade. . . .

Classified ads may be submitted by any Chapter member free of charge. They will run for about 3 months unless canceled or renewed.. Non-Chapter members and sponsors may purchase a business card size ad for \$100 per year. Ads for shorter periods are \$10 per month

For Sale: K35 Bonanza (1/3 share) IO-470-C 250 hp, IFR GPS, dual NAV/COM/GS, A/P with altitude hold, Stormscope, Graphic Engine Monitor, Tip Tanks for bladder-busting range. Cruises serenely at 150+ knots while sipping 12 gph. Based Poplar Grove (C77). \$25K **Call: Mike Mulcahy at 847-515-3585**

For Rent: New Heated Hangar. 50' x 60' at Poplar Grove, available late summer. Ideal for RV builders groups, warbird etc. Clear floor with 12 x 60 loft. Loft will have full bathroom w/shower, full kitchen and office. \$650.00/mo. plus utilities. Offered by Dan Helsper, Email Helspersew@aol.com

Wanted: Donate a 35mm Projector! – The chapter needs a 35mm slide projector for our meetings. If you have one that you'd like to donate, please talk to Dana

FAA Wings Program



Abbie Friddell, Master CFI, CFI is offering an EAA Chapter 790 special discount. 3 hours Wings Program Instruction for \$75.

Phone: 847-382-4180

Email: abbiennair@cs.com

Calendar of Events

April 27 (Tue) Chapter Meeting at the Elgin workshop, pizza and pop will be served.
219 W Highland Ave
Elgin, IL 60123
847-608-0001



- May 1 (Sat)..... Young Eagles – Lake In the Hills
- May 15 (Sat)..... Home Workshop – Jeff Wilson
- June 4-6Chapter Work Weekend – Oshkosh
- June 26 (Sat)..... Young Eagles – Lake In the Hills
- July 10 (Sat)..... Home Workshop -- Dean May
- July 27–Aug 2..... EAA Airventure – Oshkosh
- Aug 28 (Sat)..... Young Eagles – Poplar Grove
- Oct 2 (Sat)..... Young Eagles – Lake In the Hills
- Oct 30 (Sat)..... Young Eagles – Lake In the Hills

Contact John Vlasic for information, or to make suggestions for activities, i.e.: picnics, fly-outs, museum visits, etc. Phone:(847)524-1857, Email: jvlasic@lunt.com

Contact Dwight Zeller for information or suggestions regarding Young Eagle Rallies.
Phone: (847) 524-3973
Email: zellerd@worldnet.att.net

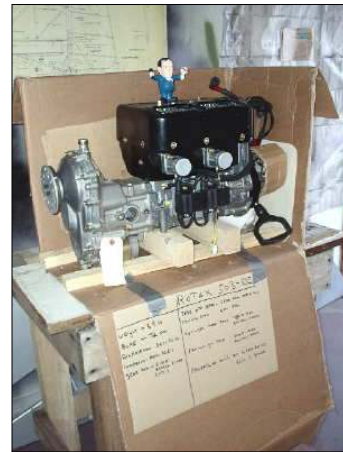
Flight Reviews

BFR Special: Ole Sindberg is offering a Biennial Flight Review for any Chapter 790 member for \$50.00. Also available are flight instruction in single and multi-engine aircraft, helicopters, as well as high performance and complex airplane checkouts. Phone: 847-426-7206. Email: oleeva@mc.net

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Here are some additional photos taken at Steve Marquette's home workshop held on March 27. Steve's project is a Kolb Firestar, which is a tandem two seater high-wing ultralight. Steve has done an excellent job with this project!

Photos by Ron Liebmann and Rob Strickland



Ken Kresmery is now the proud owner of a Republic Seabee, pictured here on the ramp at Poplar Grove. (Ken provided the photos)



Pre-meeting Checklist

Name Tags

Chapter Videos to return to meeting

Chapter Tools to return to Ole

The Newsletter is always looking for interesting articles and pictures by our chapter members. If you have written anything or would like to write something or have pictures that you believe would be of interest to the chapter members, please submit what you have. The newsletter staff prefer that you e-mail your articles to michael.perkins@rauland.com or trlegates@comcast.net. We prefer text written in Microsoft Word, however, you may submit the material any way that is easiest for YOU! We also accept hand-written copy, floppy disks (IBM format), Zip disks (IBM format), and CD's. Bring your article to the meeting or mail it to Mike Perkins at 17787 Sherwood Forest Rd, Havana, IL 62644

