



## July 18, Chapter Picnic

**Don't Miss the Chapter Picnic from 11 am to 2 pm.** This is your opportunity to see your old and new friends, to demonstrate your cooking prowess, and to brag about your flight exploits.

Guests are encouraged, but let Rick know how many! Thanks. Sign up at <http://www.eaa393.org/>

Rick Bourgeois and Louis Goodell are doing the coordination for this event. They will arrange hot dogs and hamburgers from the Chapter, and side dishes will be potluck items from the members. Suggested potluck items include: potato salad, pasta salad, fruit salad, corn on the cob, pies, brownies, cookies, and ice cream.

Please let Rick Bourgeois know if you are coming, so he can have something for you to eat! [RicFlyer@comcast.net](mailto:RicFlyer@comcast.net) or 925 432-9076.

### Upcoming Speakers/Topics

Dates and topics may will change!

August 26: Bill Reining, Ken McKenzie and others: The view from AirVenture  
Bill is seeking input regarding speakers for our meetings. If you know of an interesting, willing and available speaker, let Bill know. Our members represent another untapped resource. If you are doing something interesting that you could talk about, let Bill know and get a talk arranged.

**Are you pilot material? Capable? Able to lead?** Then consider being a Chapter officer!  
Contact Guy Jones with your qualifications

**Picnic Saturday, July 18, 11am to 2 pm**  
**Are you coming? Let Rick Bourgeois know!**  
[RicFlyer@comcast.net](mailto:RicFlyer@comcast.net) or 925 432-9076

### Presidential perspective:

#### Aviation in A Carbon Neutral World...part 3

In the last installment we saw how much energy went into our various daily activities. We further discovered the actual cost of these different forms of energy in dollars.

Since my goal is to move my personal aviation from fossil fuel to something more renewable, now is the time to outline some parameters.

I don't want to give up performance, so the power to weight must remain approximately the same. But does anyone really know what the average power system weighs in any given plane? I'm talking about the combination of fuel, tanks, lines, pumps and Fire Wall Forward engine.

The engine is by far the biggest, so let's begin with that. I have reliable reports that a Lycoming O-320, FWF weighs approximately 355 lbs. with normal accessories. If I expect the same performance I am now enjoying, that means that I will expect our new power system to deliver approximately 5 hours of flying time. That means I need 40 gallons of fuel at 6 lb./gallon, which is 240lbs. I'm guessing that tanks/pumps/hoses weigh in around 25 lbs. So now we have:

355 lbs.

240 lbs.

25 lbs.

**Total 620 lbs.**

I have, as my goal, 620 pounds for my new power system.

I will now examine a renewable option I can see in the very near future - **Bio-fuel**. This is a most likely candidate and one requiring the least amount of back-to-the-drawing-board changes. There are several advances in the lab, currently making their way to the pilot plant stage, that hold the promise of taking ethanol to the next

level. By that I mean something called cellulosic ethanol. This is ethanol made from any plant material. This includes, but is not limited to, wood chips, straw, corn stover and many fast growing grasses. The challenge ahead for the researchers, at present, is coming up with an enzyme that can break down the plant fibers, as well as be economically produced. As the price of oil continues to increase, this will become easier. However, this technology is currently attempting to replace the existing corn and sugar based ethanol technology, and is perhaps 1 or 2 years away from scaling up to industrial levels. Keep in mind that ethanol has roughly  $\frac{2}{3}$  the energy content per gallon that Avgas has, so you would need 50% more fuel on board for the same distance. Not so good for take-off weight.

However, there is another renewable process under development that will turn cellulose (all those things mentioned above) or algae (a more efficient alternative) into ordinary hydrocarbons that are the basis of the current oil industry. The Canadians are currently scaling up this technology, and I believe that it will be only a matter of a few years before it will begin to have an effect on fuel supplies. This technology applies to diesel and Jet-A, as well as Avgas.

If this technology works out as I believe it might, then our existing refinery and distribution system will continue as now, and only the source feed stock (crude oil) will change. If anything, the refining costs may decrease, as they will have a lighter feedstock to begin with, which means less processing. A great side benefit is a reduced appetite for foreign oil.

Next month we will examine a few more exotic and longer term options - **electrical** and **fuel cells**.

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### **The Menu** by Rick Bourgeois

Come to the picnic and enjoy hot dogs, hamburgers, soft drinks, and condiments, courtesy of the chapter. Side dishes will be potluck items from the members.

Rick thinks a **pancake breakfast** would be fun. Do you? **Would you attend? Let Rick know!**

## **Congratulations to Duane Allen and Bill Call on the first flight of their Lancair ES !!! Way to go !**

Congratulations to Eric Schuldts on taxiing his beautifully restored Volksplane. Yes, that is real Mahogany on the side!



**You are invited** to join Vi Egli and her family during AirVenture, when they will celebrate the life and accomplishments of Fred Egli by dedicating a plaque on EAA's Memorial Wall. This year's ceremony will be held on the last Sunday of AirVenture, Sunday, August 2 at 11 a.m. Guests should arrive no later than 10:30 a.m.

[http://www.airventure.org/attractions/memorial\\_wall.html](http://www.airventure.org/attractions/memorial_wall.html)

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### **Fly-outs** by Tom Howard

Fly-outs are usually scheduled on the Saturday following our regular monthly meeting. If the weather's not conducive for flying, the event is often postponed to the following Saturday. Watch for email from Tom [TurnPrez@SBCglobal.net](mailto:TurnPrez@SBCglobal.net); and be sure to give us your email if you haven't been receiving fly-out information.

**We are seeking ideas for new fly-out destinations.**

[Editor's note: Informal fly-outs also occur on irregular Wednesdays. Email [HarvardHolmes@comcast.net](mailto:HarvardHolmes@comcast.net) to get on the list if

you are interested. Often there is a spare seat for wingless aviators.]

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## Young Eagles by Dick Sperling

### STOP, LOOK , LISTEN (& read)!

You guys and gals that made our Father's Day & First Annual Concord Airport Open House "Young Eagles Rally" a success Sunday, are without a doubt; MY HEROES!

The spirit of cooperation that made AMERICA the greatest country that history has ever known, was epitomized on Sunday in your selfless giving of your time, skills and energy!

While we receive superb support from EAA National HQ for the Young Eagles Program, you are the ones that work at the proverbial "where the rubber meets the road" level, making it all happen!

We flew 33 flights, in near flawless weather, giving 66 Young Eagles an opportunity to experience; "The high untrespassed sanctity of space"! (From John Gillespie Magee Jr's poem "High Flight").

The youth that participated ranged in age from 8 to 17 years, were from various ethnic backgrounds, and all came back with a wide grin on their faces! Our common denominator; A SUCCESSFUL DAY for EAA Chapter 393!

Thank you so much to new volunteers: Vi Egli, Harry Heckman, Jeanne Robinson, and Crosby Sperling. Returning volunteers: Rick Bourgeois, Charles Hester, Guy Jones, Pete Mitchell, Bruno Motta and Marilyn Sperling!

My pilots were Scott Achelis, Bob Belshe, Harvard Holmes, Phil Jenkins, Pat Peters, Ron Robinson, Tony Tiritilli, Bob Weiss, and Bill Wheadon.

While we ran the YE program, our leader Ken McKenzie and Linda McKenzie manned the separate EAA 393 booth, fielding hundreds of questions from Open House attendees! Wow!!!

Our "Carbon Footprint" was estimated to be about 170 gallons of Aviation LL fuel and unknown gallons of auto fuel to accomplish our mission.

THANK YOU SO MUCH FOR ALL YOUR HELP AND SUPPORT! Have a great summer.

All the best, Rich Sperling  
EAA Chapter 393, Young Eagles Coordinator

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## EAA Supports the June 21 Buchanan Field Open House

In addition to the Young Eagles flights described above, Ken McKenzie and others set up a non-flying VariEZ for kids to explore. We didn't get a picture of the VariEZ in action, but it was reported to be a great success.



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## EAA – National Six-Month Free Trial Membership by Bill Reining

In an effort to generate more interest in the EAA among prospective members, EAA headquarters has instituted a six-month trial membership program. Each prospect will receive all EAA member benefits during this time with no cost to them, or to the local chapter. This complimentary six-month period is intended to build a bond between prospective members and the local chapter, resulting in a higher member recruitment and retention rate. Let's all reach out beyond the usual crowd around the airport (church, other clubs, co-workers) to connect with people unaware of our chapter, or those who just need to be asked! When a prospective member is identified, let one of the board members know – all it takes to enroll them is a simple entry on the EAA web site.

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**Take Flight for Kids: Aug 8, 2009** From:  
[dean@dmccully.com](mailto:dean@dmccully.com)

Take Flight for Kids is a hugely popular flying festival series at Northern California airports. We recruit up to 100 volunteer pilots of small airplanes and helicopters, and provide free flights for about 750-1,000 young people with disabilities, at risk youth, homeless kids, foster kids, etc. Most of the kids get to take the controls of the plane during their 30-minute flights, to experience the empowerment of being in absolute control of a complex flying machine.

<http://www.takeflightforkids.com>

We host simultaneous huge festivals at the airports, with 4,000-5,000 attendees expected to enjoy a big day of hands-on fun. The emphasis is on hands-accessible activities & STEM science/tech/engineering/math, with a kids-fly-free component added. Since the event is absolutely free, we expect big crowds to join us, making this the biggest aviation-based STEM science/technology/engineering/math festival in the Bay Area.

Yup, everything is FREE to all attendees, all volunteers, and all nonprofits/vendors get FREE BOOTH SPACE! Free admission, free parking, free BBQ at noon, free airplane rides to kids 8-17 years old (must be pre-registered online), free live entertainment, petting zoos, hot air balloon rides, helicopters, radio controlled aircraft, model rockets, science experiments, games, rides, and fun, fun, FUN!

I hope you can join us on August 8!  
Cheers, Dean McCully

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**Report on EAA 393 Hosted Crosswind Seminar, Wednesday, June 17, 2009 7:00 pm**

Dan Dyer, a flight instructor for four years, gave this presentation – which was eligible for FAAST Wings credit. <http://www.dandyercfi.com/> His recommendations (briefly summarized):

- Use your feet independent of your hands
- Align the plane with the centerline using your rudder
- Control drift with the ailerons
- Treat every landing the same – wind right down the runway is just a different angle of crosswind!

- There is little distinction between sideslips, forward slips, and other slips

His crosswind simulator is shown here:

<http://www.dandyercfi.com/xwindsim/>

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**EAA 393 General Meeting Report**

June 24, 2009

**Meeting**

President Ken McKenzie opened the meeting with a welcome for members and guests. Bill Trumbley and Charlie Hill (son of member Chuck Hill) were guests.

Treasurer Louis Goodell reported \$1,226.07 in our checking and \$2,651.73 in our money market account.

Dick Sperling reported on our Young Eagles flights on June 21, at the Buchanan Field open house.

A big thank you was given to Rick Bourgeois for all his work preparing our pre-meeting dinners. Harvard Holmes reported that the Chapter is seeking officers for next year. Our V.P., Bill Reining, is willing to continue, perhaps in another capacity, and Pete Mitchell is also willing to continue. All the other officers are ready to be replaced with “new blood.” Contact Guy Jones or any of the officers to get on the ticket. There are a number of appointed positions as well, so if you want to help, but fear too much work, we will find the right job for you!

Ken McKenzie gave a brief report on Golden West. Overall attendance was down, with a slight negative cash flow, but there is every intention of having the show next year. The weather was good, the Molton Taylor Aerocar was a great surprise, and there was only one incident – a landing gear collapse – with no injuries. There were two excellent speakers: Chuck Yeager on Friday night, and a manager from the Lancair company on Saturday night.

Next year Golden West is on June 11-13, 2010.

**Presentation:**

Bill Reining introduced Alan Jesmer from the Precision Airmotive Company <http://www.precisionairmotive.com>. Precision Airmotive manufactures all Lycoming fuel

injection systems and a couple for Continental systems.

Alan noted that Precision Airmotive produced fuel control systems under a number of brand names. Precision purchased the Bendix Stromburg line in 1984, and in 1988, they purchased the RSA fuel injection line of products. In 1991 they purchased the Marvel Schebler line of carburetors. Last year they lost a lawsuit related to the Marvel Schebler carburetor in which there was no evidence of their fault, but they were the “deep pockets” and their insurance company insisted that they sell the line. So the Marvel Schebler carburetor is now carried by Tempest.

Terminology: The FAA only recognizes items as New, Rebuilt, or Overhauled. The New and Rebuilt items meet new specifications. Rebuilt items may receive a new logbook. Another FAA distinction is for parts in service: either Serviceable or Non-Serviceable.

Alan talked about adjusting fuel injection systems. He noted that between 1200 to 1500 RPM is where fuel controls transition from idle jets to main jets for controlling the fuel flow. He noted that Precision Airmotive has a number of training and troubleshooting manuals online. There is also an RSA maintenance video on CD available. Precision Airmotive will send you a copy of the CD upon request.

The EAGLE EMS (engine management system): In 1966, Cessna asked to work with Precision Airmotive on a simple FADEC. This would control the throttle, mixture, dual ignition and the fuel injection system. They considered also controlling the propeller and waste gate, but did not include it in the first version. After six years in development, they had it flying and took it to Cessna. It was then determined that Lycoming wanted to do their own FADEC. So Precision Airmotive is now selling this system to the experimental market. It is available for any 4-cylinder Lycoming engine, and may be available for other engines. It measures manifold pressure, RPM, and air inlet temperature. It goes on the engine side of the firewall. At this stage in development, users are allowed to reset the timing on the system.

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## EAA 393 Board Meeting Notes

July 7, 2009

Attending: Ken McKenzie, Louis Goodell, Harvard Holmes, Dick Sperling, Rick Bourgeois, Guy Jones

1. Louis Goodell, Treasurer reported \$1,255.64 in checking, and \$2,652.05 in our money market accounts.
2. Rick Bourgeois reviewed the income and expenses for the last 6 months of pre-meeting dinners. Donations totaled \$840 with expenses of \$373 and Chapter contributions of \$467.
3. Dick Sperling reviewed the “lessons learned” from the Buchanan Field Open House Young Eagles operation. Overall, it was very successful and the scheduling procedures (one briefing each hour, limited to one flight of seats available) can be adapted to other Young Eagle events. Another lesson was the surprising success of the VariEZ exhibit. Such an exhibit could be used at all of our Young Eagle events to entertain the kids while they wait and to expose them to various aspects of small aircraft. Such an exhibit would emphasize the educational aspects of the Young Eagles Program.

EAA National has broadened the scope of using our Young Eagles “credits.” It can now be used for local expenses that support Young Eagle activities. For example, we could use it to purchase shirts for the pilots, or for advertising for our Young Eagle events.

Vi Egli and Marilyn Sperling suggested that we create a flier that describes future Young Eagle and other Chapter events. This would be handed out to Young Eagle’s parents and at other venues.

4. Rick Bourgeois, our picnic chairman, reviewed plans for the picnic. He expects 35 to 40 people. He will buy hot dogs, hamburgers and drinks. Rick’s assistant picnic chairman, Louis Goodell, will supply a BBQ and will do some of the cooking, as needed. Ken McKenzie will bring some garbage cans and bags and dispose of the trash.

Rick is bringing a potluck contribution of potato salad. Louis Goodell is bringing a potluck contribution of a pot of chili.

5. Cleco input is due tonight, Tuesday, July 7 to get the Cleco out in time for the Picnic.

## Informal Fly-out to Willows

June 17, 2009



Bob Belshe makes a smooth landing.



Ron Robinson's Glastar, Phil Jenkins Glastar and Bob Belshe's Lancair



Harvard Holmes Lancair (built by Fred Egli) and Bill Reining's new transportation. His son owns this Cessna 182.



Bill Reining makes a grand entrance!



Lunch was delicious!

## Informal Fly-out to Auburn

June 24, 2009



## Fly-out to Shelter Cove

June 27, 2009

While the heat at Concord was 101, Shelter Cove was cool...



## 1966 Mooney M20E for Sale

[http://home.comcast.net/~harvardholmes/N2669W\\_Ad.pdf](http://home.comcast.net/~harvardholmes/N2669W_Ad.pdf)

Special price for EAA 393 members! The price is going down and it will be sold soon! Speak up if you are interested.

Harvard Holmes 510 526-5347

## Thanks to our Donors and Sponsors



2693 Clayton Road, Concord Ca.94519

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[www.alpinepastry.com](http://www.alpinepastry.com)

## The Experimental Aircraft Association Chapter 393 of Concord, CA

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**Thanks to our Donors and Sponsors!**



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**Meeting and Event Schedule (2009, 2010)**

Board Y Eagles General Fly-out Other

<i>Arlington Fly-in, Arlington, Washington Jul 8-12</i>			
Jul 7		Jul 25	
<i>Chapter 393 Picnic</i>			<b>Jul 18</b>
<i>AirVenture, Oshkosh, Wisconsin</i>			<i>Jul 27-Aug 2</i>
Aug 4		<b>Aug 26</b>	Aug 29
Sep 1	Sep 12	<b>Sep 23*</b>	Sep 26
		* nominations	
Oct 6	Oct 17	<b>Oct 28**</b>	Oct 31
		** elections	
Nov 3		<b>Nov 18</b>	Nov 21
Dec 1			
<i>Holiday Party</i>			<b>Dec 13</b>
Jan 5, 2010		<b>Jan 27</b>	Jan 30
Feb 2		<b>Feb 24</b>	Feb 27
Mar 2		<b>Mar 24</b>	Mar 27
Apr 6		<b>Apr 28</b>	May 1
May 4		<b>May 26</b>	May 29
Jun 1		<b>Jun 23</b>	Jun 26
Jul 6			Jul 31
<i>Chapter 393 Picnic</i>			<b>Jul 17</b>

Our meetings are open to the public. Join us for dinner at 6:30 pm (\$7) with the general meeting at 7:30 pm on the above dates in the building at 161 John Glenn Drive north of Sterling Aviation. Enter from the airport side of the building.

Chapter 393 fly-outs are open to chapter members and guests. See the newsletter for arrangements.

EAA Chapter 393  
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*The Leader In Recreational Aviation*

We are on the Web!  
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