

**Important
Upcoming
Items:**

1. **Sunday Meeting October 16**
2. **Update on fund raising for the Legal Eagle and progress report.**
3. **Third thursday burger burn at Doug's hanger. Oct 20th**
4. **Further news on the Legal Eagle project.**

**Sunday Meeting
Roger Mulcahy
Charles City, Ia**

**2:00 pm
Airstrip
on location.**

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EAA CHAPTER 94 MINUTES AND NEWSLETTER

VOLUME 2011, NOTES -9

PAST MINUTES AND NOTES OF INTEREST— NOT PUBLISHED

EAA Chapter 94 Monthly Meeting
September 18, 2011

The annual September Potluck and Meeting was held September 18, 2011, at Forest City Municipal Airport (KFXV), and hosted by Dick and Theresa Trimble. Broasted chicken, pulled -pork, and beverage was provided by Dick and Theresa, with those attending bringing a side-dish and dessert. Dinner started at 1pm, with short meeting following at 2:30pm. Nineteen members, spouses, and guests attended. Thank you to Dick and Theresa for hosting.

Minutes

The monthly meeting was called to order by Ken Asbe at 2:30pm. Motion to waive reading of minutes from previous meeting was made by Craig Draves, with second by Curt Miller. All approved, and motion was passed. Bill English gave treasurer's report. Motion to approve treasurer's report was made by Myron Leraaen, with second by Craig Draves. All approved, and motion was passed.

Old business

Ken Asbe gave a brief report on chapter hangar. The roof tin has been installed, with ridge cap and some edge time yet to be put on. There is still some tin siding to put on the west gable end.

Class project update

Ken Asbe also gave a brief report on the Clear Lake High School project. The Clear Evening Lions have donated \$1000 directly to the school for purchase of the computer-aided drafting (CAD) program. This will allow the class to have ten computer stations for the CAD software. Ken also presented plans drawn by Scott Weinberg for the fuselage, fuselage materials schedule, and plans for a metal wing-rib jig. Ken also thanked all those who have come forward to help with this project.

New Business

No new business to report.

Announcements

Myron Leraaen mentioned the passing of Amos Wood, a longtime member. Those who knew him passed along a few stories remembering him. Theresa Trimble mentioned that it would nice if someone could do a fly-over for the funeral.

Guests

Vi Kapler, member of Chapter 100 in Rochester, MN, attended. He originally joined Chapter 94 six months after it was founded, and was president during the 60's. He remembered that meetings were at one time held in an old chicken coop on Albrecht Brothers farm by Rudd. He is currently working on a Peitenpol.

Motion to adjourn was made by Craig Drave, with second by Morris Trimble. All approved. Meeting adjourned approximately 3:15pm.

Next Meeting

The next Chapter 94 meeting will be October 16, 2011, 2pm, at Roger Mulcahy's workshop, located on his acreage/airstrip near Floyd, IA. He will have a Harmon Rocket project that he has been helping someone build.

Please note my new email address, Bill

english.eaa94@mediacombb.net

Legal Eagle XL build project, a trip for further education.

A couple of Wednesdays ago, Ken Asbe and I decided this was about the last time I would have free from harvest to go down to Independence MO to view/study and pick the brains of Joe Engelman and crew on the building of 5 Legal Eagle XL's.

As always, good flying plans are met with poor weather...so I was making plans from Waverly to Lee Summit MO, with 200 ft ceilings present, Ken was sitting at Mason City with almost clear sky conditions, when I was having 600 ft, he scud run to CCY with 900 or so. One last check at Waverly was calling for lifting sky conditions, from Waverly to the south...and Ken made one more hop to Waverly...

I was ready to roll. With the exception of me driving a block or two, the wrong way on a one way, in MO, Low scud for the the first 100 miles down and super hazy for the first 100 miles back home after dark, it was a pretty excellent flight. ;-) Some call that *experience of the adventure* trip.

Picked up a excellent "crew" car at the airport for a simple \$8.00 and sign my life away...but not bad. A retired cop car, so Ken was in heaven.

Ok, now the airplane. These guys were really ready for us, even had brought in one of the nearly complete plane frames for us to take photos and measurements off of. A few quick discoveries were made. With the most important being, I soon discovered that on the plans, the first #1 of 11 looked just like the number one. But he (Leonard the plans drawer) makes his second number one with a little hook at the bottom and I was taking it for a 16 instead of 11. Even after looking at the real thing and then back at the plans, it was hard to tell that it really should be 11. Truly that was worth the trip. The plans are just not drawn to any particular scale and to look at the numbers and then the parts, well you can not really determine the exact look correctly. (yes I am used to my CAD work)

So we find that dimension problem, which at this stage is minor, and then we study the tail, and find another problem in the plans. Yes, worth the trip. Study the cable routing and get a better look at his cable guides. I had figured Joe had machined these and come to find out there are a common part readily available in stores. (our local aviation hardware store) From there we work to the main gear. They have gone a fair bit from the plans set up...but it is fairly certain that they have made some great strides in quality gear set up. Worth the trip. This is set up a lot different and until I can post the photos it would be hard to explain. But worth considering.

A lot of changes on the aileron control set up and presently I would have to say for the better... I hope you see a pattern here. There is a reason Joe won a best workmanship award this year at Oshkosh... he has truly thought many things out.

Well we come to the engine work... and this is all on one airplane sitting on a trailer brought in just for us to view... how amazing. Good people. I don't really know where to start on the engine. Though we took loots of photos, my background in building airplane parts would not readily allow me to copy this. My instinct is that this engine (a 2 jug VW version) was not created by following anything or anyone. But rather a gather of great assortment of ideas. Great skill in machining precisely what was required and they now have it perfected. For me to say that Ken and I, even with several more trips, would be able to gather the correct knowledge to pass on the build process to the class would be a stretch. It is good to know this, but frustrating as well. More on this at the meeting.

(More on page 4)

From the editor:

I have started a yahoo group site for all of my design work and other related aircraft work. Many of you are already connected to many yahoo groups, you can join this one as well and when updates of the Legal Eagle build project happen, you can see these update posted and follow along.

This is contained under the "files section" on my site listed under Legal Eagle XL

You can get there fairly quickly by going to

*<http://groups.yahoo.com/group/IronDesign/files/Legal%20Eagle%20XL%20Case%20Study/>
And then signing in.*

This looks to be a fairly easy task to complete for all and has been working well for me to make updates, ext, without lots of web site work.

I think this was also going to be followed by a face book page, or a some other form of web site, but I have not received information to these locations.

You can consult our web page editor for further information, he is listed on the front page. (Adam)

Thank you, Scott Weinberg.

On the Legal Eagle aircraft build project. We are working on material package list and have the brakes , wheels, tires and axles on hand. Steel amounts are known, a feasible rib layout fixture is at hand, wood package on its way and possible contracts for some parts requested to made by the school for others. If your at all interested in the purchase of the Project upon completion please talk to Scott W. or Ken A.

Doug's Third Thursday Burger burn– Oct 20th- 2011 Then October third Thursday.

If you have never been, it is really simple, fly-in or drive in to the Mason City Airport. Cars park on the south side of the Rozendaal Hangar . We have paved parking up by the fuel tank farm if you prefer to fly in.

Bring something to throw on the grill, something to drink, and a dish to pass. If you are flying in and that is a problem, fear not, we always have plenty of food! Oven for Pizza, finger food has been great.

We light the grills around 6 pm.

If you drive and need through the gate, call 641-425-5432 and we will let you in.

No speeches, no meetings, just fellowship and good food with other flyers.....

Everyone is welcome; pass this along to your friends or EAA chapter mailing list

IN August, we had P-51 flights with 2 local guys getting a ride, planes leaving smoke, wall to wall tables with the best selection of food in any hanger on Thursday night. Right down to steamed crab/sausage with Mohitios (spelling, but cups with leaves, lemons, juice extracts, spirits with unknown ingredients topped with ice) Where else can you go for such a diversity of events, people and fellowship/?

<http://www.facebook.com/burgerburn> face book page.

Great news:

The Chapt. 94 hanger is now being occupied by paying air-planes again.

A huge thank you to Ken Asbe for doing a great deal of the work and orchestrating the balance of what he didn't do.

Eagle XL from page 2

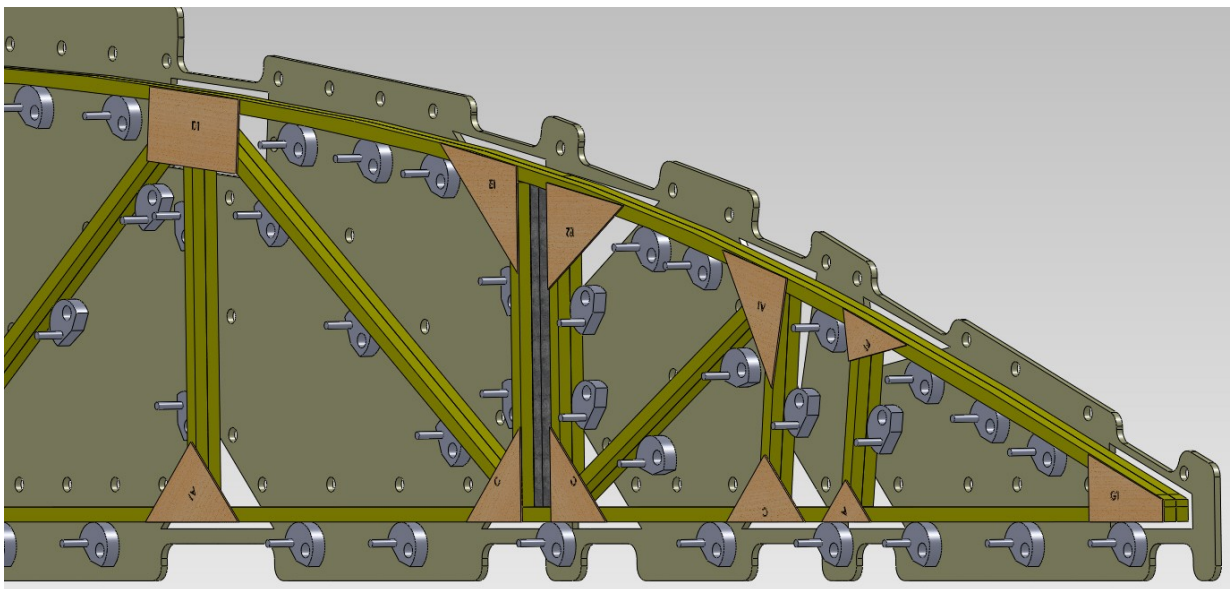
The wings and building them. Again Joe and crew had some excellent ideas. They went from a front faced spar to a I-Beam spar, and while this has some great plus factors for our first build I think we will stay with what we know that works. We have some great folks on board on this project but before we make to many changes, we need to devote study to some of them. Time is not on our side for this at the present.

I had brought along my drawings that many of you have seen for the wing ribs. And while they may work fine, it was soon apparent that Joe had a better mouse trap for this. And it was very easy for me to make drawing adapt to his way. He was convinced I would have to start over I think. But in reality it was just a matter of hours for a new shape to unfold.

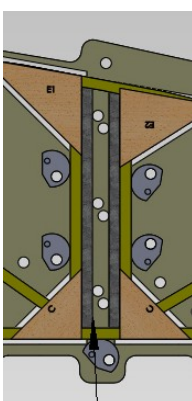
Ok, the purpose for this is simple. To make the jig with CAM claps for the 1/4 x 1/4 wood pieces and open areas behind the gussets allows us to insert the parts, and glue the gussets over these openings without fear of glue drips sticking the whole rib in place. Also this design lets us use plastic clamps that hold the gusset for 2 hours or over night with NO staples required. Thus no pulling afterwards. By having 3 jigs, the kids will still be able to assemble in order and to there own identity. (name each one) This also allows us to get very creative with the gussets and make special ones for the ailerons right at the get go and not have to create the standard way and then change later on. Worth the trip down for sure.

And lastly, the tires. What Joe and crew have come up with is great. But what we have with the Black Max set up will also work very nicely. The largest difference here being his has a center axle height of 10" and ours 5.5" If we determine we want our wing bottom to be at the same level of attack as his, our landing gear legs will have to be longer. We are studying this a bit. But the great thing is, this study will not slow down the wing or frame building process.

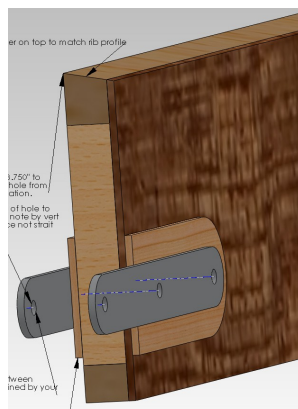
The wrap of this trip: So many things to see and ponder on their project. But as we all know, one change can lead to 10 others. I don't mind changes if I can draw the first one and see the results of this change. If I can't see them, we best not do. We know we have a plane that is flying well. We know that it will give great lessons in the build process, for all involved. That being said our steps forward will be cautious and calculated.



This shows it fairly well the metal fixture, presently with two ribs in it, and the cams which will be held with rubber bands for tension against the wood. Barely shown here in the darkest part is a piece of key stock, this is for the wood to go against and simple to weld/tack in place. Some say an over kill, but it has lots of design benefits built in.



Open holes are for .250 indexing pins only. Darkest part is the key stock. Not notches by gusset for plastic clamp access.



Front spar design and build up. Most parts that are bonded with epoxy. The grey in this part is the metal ears, all other parts are wood as shown.

**Updated photos in place— please follow directions below:
Latest new photos are of the young eagles and Pilot listings.**

Photos: Please note a neat new way to view past events in our photo section. This is a better way to showcase more photos each with a description. Here are the steps to follow to see them. And they are simple!

Hit this tag: <http://photobucket.com/> Then in upper right hand corner **username box eaa94** For **password type eaa94show** then hit **Login** On the left you will see any one of the events...with photos.

Pick the event and then pick **slideshow** and you should be able to see everything. This works really well.

Those of you with EAA 94 photos, I can send directions to load them... it is just two more steps than above and also works really well. Please do ask... and I will help you.

There are lots of events again for the balance of the year, please do send any and all photos to me that you would like on this photo site. WE can put into categories from airplanes sitting, flying and the like, right down to rivets and tire stems. With your help this can be a great grouping of photos.

Why pay dues?

Your club has been doing some great things, with more members than many, more flying planes than most and the list goes on. We held the largest young eagles event in Iowa last year. We exposed more aviation related material to the kids than any other young eagles event.

We have been apart of a declining population of flyers with a upbeat group of members and this can only take place with new members and ideas. By being a bit more involved with the group carries this on even further.

We have some great things coming down the line with the hanger project, possible high school class start up of a flying aircraft build project, revived interest in helping members get back to flying with lower cost planes.

Such a diverse group we have from Airline 1st officers, Corporate Jet pilots, ultralights to twin engine classics. WW2 type aircraft pilots to turbine pilots and everything in between, just a fantastic array of experience. Certainly worth being a part of.

EAA 94 DUES PAYMENT FORM

DUES \$15.00/YR JAN 1 TO JAN 1 each year.

Name: _____

—

Address: _____

Phone number- (snow list calling) _____

Email address (printed please) _____

Dues for () 2008 () 2009 () 2010

Submit to -

EAA 94

Bill English

-3385 Saratoga Court Mason City IA 50401



The above dues notice was mentioned that I have not been posting this every month and that is true. So from here on out it will be an integral part of your newsletter just like the photo page notice items.

Dues have been and always will be considered due in Jan each year. Starting next month, unpaid members will just receive meeting notice with no updated minutes or agenda.

To:

September—Third Sunday of the month Meeting
Roger Mulcahy
2:00 pm Meeting planned. Airstrip at location.
A Rocket build completed and in progress on location.

<http://eaa94.org/> Is the connection present for the EAA 94 Web site

<http://www.facebook.com/burgerburn> Burger Burn Facebook page
Hosted each month by Doug R. (see inside) 3rd Thursday.

The Legal Eagle build project will always accept donations to the project, this for labor or expertise or funds. Please contact any on the board as listed on the front page header

Not many project or class studies can tote life building experience, with on going improvements with little to no cost to school system or surrounding enterprises .