



The Beacon

The newsletter of Chapter 54
Lake Elmo, Minn.

APRIL 2006

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THIS MONTH'S PROGRAM

MONDAY APRIL 10TH, 2006

- **SOCIAL HOUR AT 7 P.M.**
- **MEETING AT 7:30 P.M. CHAPTER HOUSE, ENTRANCE B, LAKE ELMO AIRPORT**
- **AT THE NEXT CHAPTER MEETING WE WILL BE PRESENTING INFORMATION FROM BUILDERS AND PILOTS OF AIRPLANES WITH ALTERNATIVE ENGINES. ROTAX 912 SERIES, JABIRU, VOLKSWAGEN AND SUBARU ENGINES WILL BE PRESENTED.**

MARCH 13 MEETING PROGRAM NOTES

BY: BETTIE SEITZER

The program for this meeting was a panel discussion on building airplanes. The panel was comprised of 4 members: Tom Gibbons, currently building a Pulsar (a composite plane), Chip Andrews who has built a Sky Ranger (Tube and Fabric), Tom Marson (wood and fabric) and Paul Hove who has built an RV (sheet metal). Dale Seitzer moderated the discussion, asking each builder to answer each question. The questions and answers are provided below.

1. **What types of tools were required for you to complete the project?**

Paul: riveting tools, there are some specialty tools that are required such as Clecos, there are others that are nice to have because they will make the work easier. It is useful to talk with other builders about the tools that they found useful, and it is often possible to buy used tools or borrow tools. The tool kits that Van's offers are very complete, a builder can upgrade, but that isn't necessary

Tom G: Composite plane building requires a lot of sandpaper and cutting tools, but composite planes do not require a lot of specialized tools. A heated shop is critical for proper curing.

Chip: Specialized tools are not necessary; typical shop tools are used but a builder will need 2X4 lumber, sawhorses, and a heat gun to shrink fabric.

Tom M.: Woodworking tools, most of which would be available at any Home Depot or Menard's. The fabric covering does require tools and paints specific to the type of fabric being used. The metal fittings require some welding. A palm sander and disk sander will get heavy use. There is a lot of gluing. A small

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PRESIDENT'S COLUMN
BY PAUL HOVE

On Saturday (March 26th) Lake Elmo Airport pilot Ray Lundgren had the misfortune of an engine failure shortly after takeoff and made an emergency wheels up landing off the end of runway 34 in the corn field. Ray's Beach Bonanza had just had major engine work and was on its first flight. Ray made a very smooth landing and was able to keep the wings level minimizing wing damage. The picture below shows us raising the plane and dropping the landing gear. The plane was set down on sheets of $\frac{3}{4}$ " plywood which supported the plane as we slowly



moved it across the field by moving the sheets forward one at a time and then rolling the plane forward. This process was slow and tedious. We started at 8:30am and had the plane back in the hanger at 7:30pm.

The Young Eagles program provides young people ages 8-17 in more than 90 countries around the world with free plane rides to introduce them to the world of aviation. An average of 250 Young Eagles is added to the World's Largest Logbook every day. The March issue of Sport Aviation, the national EAA magazine honored the Young Eagles pilots that have donated their time and aircraft to fly at least 10 Young Eagles during 2005. Our chapter was well represented with 5 of our members listed in print.

The qualifying members were:

Dave Becker (Chapter Coordinator)
Dennis Hoffman
Alan Kupferschmidt
Paul Liedl
Dale Rupp (1250+ rides given)

Several of our members have special issuance medical certifications. They have long complained about the cost and difficulty associated with obtaining and renewing a special issuance medical. There is hope in sight as the FAA is now working on a procedure to alleviate the backlog. Some of the steps are immediate such as, sending the backlog requests to the Regional Flight Surgeons for review and action. Other steps will require changing the FARs to relax the requirements of a 3rd class medical. The EAA has been actively involved with this process and has been a catalyst in getting the program moving along.

Here is a link to EAA's April Calendar http://www.eaa.org/desktop_wallpaper.html

See you at the April 13th chapter meeting!!

EAA CHAPTER 54 TREASURER'S REPORT

BY PAUL RANKIN

March 2006 Financial Summary

Cash on hand	\$	40.00
Checking Account	\$	"5,875.44"
Investments	\$	"6,364.86"
Total	\$	"12,280.30"

Income

Donations	\$	25.00
Membership Renewals	\$	250.00
New Members	\$	50.00
Calendar Sales	\$	10.00
Ground School Fees	\$	100.00
Total	\$	435.00

Expenses

Newsletter	\$	41.84
Membership Postage	\$	39.00
Utilities - Gas	\$	186.93
Utilities - Electricity	\$	26.30
Total	\$	294.07

Net Cash Flow \$ 140.93



Chapter 54 Directory

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Chapter member meet on the second Monday of every month at the Chapter House, Entrance B at Lake Elmo Airport (21D). The House is at the base of the airport beacon. The newsletter is printed on the first Monday of every month. Parts of the newsletter may be reprinted with appropriate credit.

21D RCO 118.625
21D Unicom: 122.8
TPA: 1932'
Runways: 4-22 (2497' x 75')
 14-32 (2850' x 75')

CHAIRMAN'S REPORTS: YOUNG EAGLES

BY: DAVE BECKER

This Saturday, 8 April, is our first regular scheduled Young Eagles Day. The weather is looking good and we have 5 confirmed young eagles scheduled. We may be getting many more kids who have not contacted us, however, we just don't know. In the future, we will request people to contact us via our web site to indicate the number of kids planning to take flights. Then we can better schedule pilots and ground support. So, this first Young Eagles Day will be a bit of an uncertainty as to how many kids to expect.

If you are interested in being available to either fly or help on the ground with registration, ground control, etc, please let me know. The following people have committed to helping this Saturday. I am not sure if this is enough or not.

Pilots: Dennis Hoffman, Al Kupferschmidt, Paul Liedl, Dan Bergstrom, Bill Schanks.

Ground Support: Dale Rupp, Paul Hove, Dave Fiebiger.

Leif Erickson, our publicity chairman, has done a very good job of getting articles and advertising about our Young Eagles program in the local newspapers and other media. Paul Liedl and Hugh Sontag have been working to update the Young Eagle section of our web site and giving it a higher profile. I would like to thank all of them for their great work.

The Young Eagle information area in the club house has all new and updated Pilot Folders and other Young Eagle information for your use.

I look forward to a SAFE and enjoyable Young Eagles Program this year.

MAC COMMISSION 20 MAR 2006

BY: VIVIAN STARR

March Committee meetings were held during the morning of March 20, rather than earlier in the month.

During the afternoon full Commission meeting, there were two topics of interest to Relievers. St. Paul is moving through their process regarding the dike for STP. The St. Paul city planning commission has recommended proceeding with the project. Opponents of the dike have appealed to the City Council. After a public hearing, the City council will make a recommendation to the Mayor as to whether or not to proceed with the dike.

MAC held a pre-proposal meeting in February

for the ANE northwest building area FBO. Although well attended, participants were unwilling to continue with the process since the negotiation process with the LLC (developer) lacked definition. Staff suggested to the Commissioners that the agreement with Anoka County should be modified to allow the LLC to directly solicit and negotiate with interested parties. The selected FBO operator would still be subject to approval by MAC and the County. The Commissioners approved this modification.

Outside of the meetings, MAC legal staff confirmed to me that Crossroads FBO development has run into difficulties. A private hangar owner and the Crossroads owner have both filed law suits against MAC.

EAA CHAPTER 54 MARCH 13 MEETING MINUTES

BY: *BETTIE SEITZER*

The meeting was called to order at 7:30. We welcomed one visitor, Tom H., who is a student attending our current ground school.

The Treasurer's report was reviewed and approved as published.

There are still a few Chapter 54 logo hats and 2XL shirts available for purchase. A new order will be considered, it was generally agreed that having all members wear logo shirts at the pancake breakfast is a good idea.

The annual OshKosh work party is being tentatively planned for May 6th and 7th, this is the first work weekend and has traditionally been the weekend that Chapter 54 goes.

A reminder to members when you send in your membership renewal form, please send in the whole sheet, not just the bottom portion. Also, make sure to include the member's name on the check so that the payment can be properly credited.

Banquet planning has begun, Bettie Seitzer will be the banquet chair, invitations will go out in April.

Notice: Traffic patterns in the metro area have changed resulting in significantly more traffic over Lake Elmo. Anyone who is aware of jet traffic at unsafe levels over Lake Elmo should report the time, approximate altitude, and route of flight.

Chairmen Reports:

Education: Art is currently planning hangar tours for Farnsworth elementary school children. This is the aerospace magnet school. The plan is to have several hangars involved so that the kids can be broken up into small groups and travel among several different hangars.

Young Eagles: Beginning in April, Young Eagle flights will be offered every second Saturday of the month. The flights will be offered in the morning, and a sign will be posted notifying people of the opportunity. Pilots willing to offer rides can come to the clubhouse, ground help is also needed to help with the paperwork and safety around the planes. There are also quite a few boy scouts wanting to have rides so an extra day may be scheduled to accommodate those groups.

OshKosh Air Academy: One candidate has been identified. Any students interested in the Academy should apply, including payment of the application fee. A club sponsor can bring their name forward so that the board can allocate funding for the students who have been accepted. This should be completed as soon as possible so that we can let the families know what funding is available from the club.

Newsletter: Tom Gibbon will be taking this over with transition help from Ian. The newsletter is especially important for those members who are not able to attend meetings.

Publicity: Pancake breakfast planning has begun! Notifications in the local paper have brought visitors to our meetings.

The meeting was adjourned.

pneumatic nail gun would be very useful.

2. How complete was the kit?

Paul: RV kits are very complete. The plane is actually broken into multiple kits so that a builder buys and completes one section at a time. The first kit (tail and empennage) require the most work; some of the parts have to be fabricated by the builder. Each kit is complete as a unit, but other parts do need to be bought separately (for example the engine, firewall forward, etc.) Van's aircraft advertises 2,000 hours to build, but more builders report taking much longer to complete their planes.

Tom G: Composite kits are like a large plastic model. (Pulsar kits are no longer available, but there are other composite planes on the market.) Composite kits typically require cutting, gluing, and assembling. The finishing is the toughest, filling pinholes being a demanding task. The typical builder takes 3 – 5 years to finish the plane, Tom has close to 2800 hours already.

Chip: It takes about 150 – 400 to complete assembly of a Sky Ranger. The kit comes in 5 boxes, the builder must assemble the tubes and parts, the plane is easy to build. The engine is not part of the kit, but a separate "Firewall Forward" kit is available from the company. The cowling comes cut for the engine that the builder has specified when they order the plane. Cowlings are customized to the engine. The kit was very complete.

Tom M: Tom built a wood and fabric plane because he enjoys working with wood; he had built an RV6 but did not enjoy that as much as working with wood. The Fisher Kit was quite complete, but did not include the engine or instruments. Aircraft Spruce is the best to use, but it is important to understand that wood can vary a lot. The builder must learn about wood in order to evaluate each piece to know whether it fits the criteria for use in an airplane. Most kits use something cheaper than aircraft spruce.

The construction should take about 1200 – 1500 hours. The cost of a wood kit tends to be lower than other types of kits. Quick build kits are available, and can speed up the time to complete a plane. Another unexpected advantage of getting a quick build is the opportunity to see how the factory completed certain parts and the techniques that they used.

3. What were the easiest and most difficult parts of your project?

Paul: The tail was easiest; it is small enough to handle, the tools reach easily, the riveting is repetitive. The canopy was the hardest due to the cutting, fitting and trimming that are required. The raw canopy stock is \$1200 so you don't want to make a mistake and have to buy a new one. The builder has to choose how it will open (lift up or slide back) and cut the canopy appropriately. Fiberglassing the shroud was also difficult.

Tom G: Assembly was easy, the builder can do a lot of sanding and adjusting. The finishing process is the most difficult – filling the pinholes that result from the curing process requires a lot of filling and sanding. New products are being developed as manufacturers try to overcome this problem.

Chip: Assembly of the cage and tail was very easy – they bolt together. The Dacron sleeve covering was also very easy. The hardest part was getting the right bend and fit for the door.

Tom M: The builder learns steps as they go so each technique is hard at first and then easy. The hardest part was the rib stitching especially if the builder works without a partner.

4. How much space was needed to build the plane?

Paul: The plane could be built in a single car garage up to hanging the wings (they have a 25' span); but the wings don't need to be put on until very close to the end of the construction process. Paul started his plane in the basement of

his house.

Tom G: He is currently building his plane in his basement, it went in very easily since the pieces were quite light. He has tried rolling it out and that went well, he has also started the engine. Building could be done in a garage if it was heated since temperature control is critical to the curing process.

Chip: The plane could be built in a garage. Chip built his wings in his living room! Final assembly was done in a hanger.

Tom M: A one-car garage is sufficient, Tom knew one builder who actually built one in a trailer house. The glue (T88) is not temperature sensitive – it can be worked as low as 45 degrees. When working with T88, you don't want a perfectly smooth joint, it works best with a somewhat rough joint.

5. Were there any difficulties in getting the Air Worthiness Certificate?

All agreed that the paperwork is very significant, it requires a lot of time to complete and must be filled out accurately as the inspector will spend more time reviewing that than in looking at the plane.

Tom G: EAA technical counselors can be a great help, it is a significant benefit of membership in EAA for builders.

Tom M: Two inspectors came from Chicago, they asked to have the spinner removed so that they could see the safety wire for the prop. They also required that the data plate be riveted on rather than screwed on.

6. Are you satisfied; would you do it again?

Paul: RV kits are now all pre-punched which will make it that much easier for future builders. He was very satisfied but cautions that an RV requires a lot of time and effort. Some parts have to be fabricated, so a builder should check periodically with the company to see if the prints have been updated.

Tom G: Yes, he is very happy but cautions that it is a commitment. Epoxies must be mixed correctly. There is a group of builders getting together in Florida, meeting the other builders has added a lot to the experience.

Chip: He would definitely do it again; building was quick and easy and he loves flying the plane.

Tom M: Would absolutely do it again, his plane is a 2-passenger (side by side) and he flies it about once a week.



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LOCAL EVENTS
COMPILED BY EAA CHAPTER 54

The event dates and locations listed here come from a variety of sources. There may be changes or cancellations. Please call ahead to verify that the event is taking place as scheduled.

April 8, Fort Dodge, IA, Annual Chili Fly-in, fort Dodge Regional, 11a-2pm. Rain date April 9, Eldon , 515-955-3635.

April 9, Dubuque, IA, University of Dubuque Flight Team Fly-In Breakfast, 8am-Noon, Dubuque Regional (KDBQ), \$6 Adults \$3 Children, Mike Glynn, 563-589-3277.

April 19-21, Willmar, MN 2006 Minnesota Airport Symposium "Transition in Aviation" 218-828-5049

April 23, Saint Cloud, MN, Saint Cloud Regional Airport, 11th Annual Airport Day, 10am-3pm. Pilots Free Booths & Displays, Todd Christopherson, 507-438-0782, chto0401@stcloudstate.edu

April 30, Graffton, ND, EAA Chapter 380 4th Annual Flapjack Breakfast Fly-in, Graffton Municipal Airport (KGAF) 7:30am-1:00pm. Scott 701-696-2224 rscottpearson@yahoo.com , eaa380.zapstone.com

May 5-7, Brainerd, MN, Minnesota SPA Safety Seminar, Brainerd Airport (BRD), Mike Aune, 612-720-4371.

May 13, Bloomington, MN, Minnesota Aviation Hall of Fame, Thunderbird Hotel, social at 5:30pm, inductions at 8pm. Reservations by March 30.

May 14, Fertile, MN, Mother's Day Pancake Breakfast, Fertile Airport (D14), Sharon Edlund, 218-945-3136.

May 20, Hangar Dance, Golden Wings Museum, Anoka County Airport, 8pm to midnight featuring Dave Andrews Big Band. <http://www.discoveraviationdays.org>

May 20 and 21, Blaine Aviation Weekend at Anoka County Airport, EAA Chapter 237 pancake breakfast and chili dog lunch, American Wings Air Museum, Golden Wings Museum, hangar dance Saturday evening, food and refreshments. <http://www.eaachapter237.org>

June 1-3, La Crosse, Wis. Deke Slayton Airfest. 608-779-9994. www.airfest.com

June 4, Reedsburg, Wis. Fly-in Breakfast 7am –Noon 608-534-6888. donhull@mwt.net