

2016 Chapter 45 Officers

Ken McClelland (President) 724 437-0246
eaachapter45@gmail.com

John Warren (Vice President)
724 258-3490 airsnoopy @ comcast.net

Steve Glaeser (Treasurer) 412 616-9211

John Handis (Secretary) 412 512-1042

Gary Kreutzer (Membership Coordinator) 724-454-6786

Board of Directors

Rudy Vogelsberger 412 343-2990
Paul Jencka 724 744-3272

Rob Rossi 412 343-6795
Ernie Romito 724 335-4821

Charlie Meyers 412 655-2265
Travis Hall (leave of absence) 724 733-7343

Richard Seman 412 901-1627
Don Coester 412 531-4496

Eric Humes 412 653-7060
John Mateka 724 929-6757

Steve Glaeser (Young Eagles Coordinator)
412 616-9211 stevenglaeser @ gmail.com

Michelle Glaeser 412 616-9211
Bill Flaherty 724 864-3396
John Handis 412 512-1042

Jack Dernorsek (Newsletter Editor) 412 824-2297
hangarb7 @ yahoo.com

TENTATIVE CALENDAR OF EVENTS – 2016

Planning and setting of dates are typically done by your board of directors at the beginning of the year and sometimes change. Unless noted, meetings are held at the chapter hangar at Rostraver Airport. Hangar is C1

February 12th Board of Directors meeting; open to all members

February 19th General Meeting
See inside for details

March 11th Board of Directors Mtg

March 18th General Meeting

For the time being, Monday night workshop / build nights are every Monday evening at the chapter hangar, 7:00pm This may change to alternate Mondays if the weather ever gets to be regularly bad.

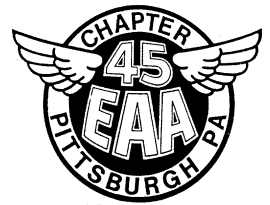
In the Winter, depending on weather conditions there is always the possibility of a cancelled meeting, so stay tuned or check out the meeting web site for updates

<http://imapilot55.wix.com/ch45>

See News inside !!!

Cockpit Clutter

EAA Chapter 45 web site <http://45.eaachapter.org>



Chapter 45 Newsletter

Experimental Aircraft Association

FEB - MARCH 2016

IMPORTANT DUES CHANGE - to all Ch45 Members

At the January Board of Directors Meeting (which any member can attend), the chapter officers have decided to change the time of year when dues are due to be paid.

That means that rather than owing your dues to Chapter 45 on January 1st, starting in August of this year, the dues year will be August 1st to July 31st

HOWEVER, IF you pay your dues SOON for 2016, you will NOT owe dues until August 1st, 2017 !! Essentially 18 months for the cost of 12 months

If you have already paid your 2016 dues (thank you), you will not owe dues until August 2017. So get those dues paid quickly.

By the way, it will be no use waiting until August as you may be removed from the membership list *and still* have to pay the normal amount when August comes around. And if you join again in August, you may owe back dues, so don't delay !!

General Meeting on Friday, February 19th

Topic for the February 19th General Meeting... by Jack D

A series of picture albums showed up in the chapter hangar, which includes a collection of homebuilt aircraft from EAA conventions in 1960 - 1962. I started trying to research some of these odd birds and will be showing these for discussion at this meeting. It seems that back then, homebuilders didn't follow plans as much as today, and kits were unheard of at that time.

Come and see these aircraft and some of the discoveries I've made in my search. Pictured at right, the Moon Maid... but what was it before it was an airplane?



Gary Kreutzer is Chapter 45's new membership coordinator. Please make his job easier by filling out your dues renewal on the next page and either bringing it to a meeting (preferred) or sending in to the chapter by mail. If you bring it to the hangar, drop it off into the dues box.

Year 2016 Membership Renewal Drive

Dues for all members ... **\$ 25.00** cash or check ... make checks payable to EAA Chapter 45.

PLEASE MAIL THIS RENEWAL OR DROP IT INTO THE MEMBERSHIP DUES BOX AT THE HANGAR.

PLEASE DO NOT HAND IT IN TO ANY OTHER MEMBER OR BOARD MEMBER.

New members only, joining after January should pay a pro-rated amount equal to \$ 2.00 per month of the remaining year. Current members or those who haven't paid in a while still owe \$25.00 no matter when you join.

Fill out, clip & mail this slip with dues payment to:

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EAA Membership Dept.
2 Airport Road
Belle Vernon, PA 15012

Name _____ Date _____

Everyone needs to fill out their address so that we may correct errors. The post office makes us PAY double postage for correcting addresses,

Street address _____

Town, State, Zip _____

Home phone _____ Wk phone _____

*Pilot Y ____ N ____ Spouse name _____

e-mail address _____

(PRINT CLEARLY - chickenscratch will not go through)

*National EAA # _____ * Please note: you do not need to be a pilot to be a member in good standing with our chapter, however **you MUST be a member of the EAA in Oshkosh, Wisconsin.** It is your responsibility to ensure this AND WE WILL ENFORCE THIS REQUIREMENT. Go to www.eaa.org to join.

SAD NEWS : Past long time member, Ollie Washburn passed away. He and his wife Loreene have been retired and living in Florida although they had driven up to visit this past summer. At one time they owned a hangar at Rostraver and were very active members.

In other news, the workshop team has added a new sentry light outside the hangar over the door, making access to the hangar at night much easier and safer. It is an LED flood light so it will be bright and not take much energy to operate. The workshop team has also repaired a couple of the overhead lights in the meeting room that were florescent previously and flickered uncontrollably. They have been replaced by LED spotlights.

And more news, the chapter has added some tools to the hangar, available to members at workshop gatherings. An air compressor has also been acquired, although no air tools are currently available in the hangar.

However if any member would like to donate any air tools or any **good** used hand tools, that would be appreciated. No junk please. We are trying to build a nice workshop environment to encourage more building and creativity. Donations of tools need to be approved by the Chapter Officers prior to acceptance. Thanks!

LOST AND NEEDS TO BE FOUND

One of our members had stored his two door molds (for acrylic heat fabrication) in the Chapter hangar some time ago. They are missing and we were wondering if they were mistakenly removed during one of our hangar cleanups. if someone innocently saved them, understand that our member desperately needs them back for further work on his project. Please contact John Warren or simply return them to the EAA hangar. No questions asked.

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Here at right is a picture of a recent Monday evening workshop project where a device for separating crankcase vapor and oil was cut on a metal lathe. Pictured are Rob Rossi (L) and Jake McClelland. Rob is quite versed on using a metal lathe.



The January meeting featured an excellent talk by Steve Glaeser. The topic was his experiments with creating carbon fiber covers for the leading edges on his Starduster ailerons. The front edge of these ailerons are designed for the application of very thin aircraft plywood, formed in a rounded shape over the nose of the ribs. Steve thought this was an excellent place to test his idea of using a carbon fiber/resin layup

His results are Impressive and successful. He gave a slide presentation of the entire process and brought in the concrete forms and female fiberglass forms that he used during the final vacuum bagging process to achieve a very light, and very thin layup. You missed a good one if you didn't see this. Thanks, Steve!



Steve at left showing his aileron with the finished carbon fiber skin on the leading edge. His slide presentation of the process is in the background, showing the use of pink foam to create the initial shape between the ribs. Below and next page, a fascinated audience asked questions of the process.

At right Andy Stern gives a few moments of explanation to some handouts he brought on bearings and counterfeit bearings and hardware.





EAA Chapter 45 Board Of Directors Meeting Minutes

1/08/2016

Minutes by: Jack Dernorsek

Meeting was called to order at 7:34 by President Ken McClelland. Signed-in attendance was as follows:

John Warren, John Mateka, Rob Rossi, Paul Jencka, Ken & Jake McClelland, Jack Dernorsek, Steve and Michelle Glaeser, Gary Kreutzer, Richard Seman and Bill Flaherty,

[Note: One must sign the sign-in sheet in order to be listed amongst the attendance.]

Old Business

1. New LED outside sentry floodlight mounted by the Workshop group on hangar above door.
2. Interior meeting room ceiling flood lights that were flickering were rebuilt with standard base sockets and LED bulbs installed, also by Workshop group and led by Rob Rossi.
3. New Membership Chairman is now on duty, Mr. Gary Kreutzer. He has revamped the database and we will be back to carefully and accurately logging member dues.

Treasurers Report by Steve Glaeser

Recent or upcoming expenses includes \$640 for EAA Insurance, \$100 chapter renewal dues to EAA, \$528 hangar ground rent to Westmoreland County Airport Authority. *(If you would like further information on the Treasurers Report, come to the next Board Meeting)*

Motion to accept report by Gary Kreutzer and 2nd by Paul Jencka. All voted unanimous.

New Business

Membership report by Gary Kreutzer. About 70 people on past membership list; many showing unpaid dues and a few who are just complimentary, non-members who just receive the newsletter.

1. Suggestions and discussion:
 1. Richard Seman made several proposals. Contacting past defunct members; send out an invite letter?
 2. Dues reduction?
 3. Proposal: currently, dues payment in late December/early January coincides with other commitments. How about August to August as the dues year, which aligns with the picnic which is highly attended. To encourage dues payment, pay for 12 months, get 18 months membership; i.e. if a member pays their dues early this year, then next due period is August 2017.
 4. How to account for delinquent dues owed? In the past, members were required to bring

their past dues up to date just to rejoin.

5. Refined proposal: Everyone who pays the regular \$25 dues for 2016 in the early grace period, gets a full 18 months of membership. If members have been in arrears before 2016, their past dues are forgiven if you pay on time for 2016. Offer of dues rescinded can be closed at any time later in the year by future board vote. Motion stands.

Richard Seman made motion, Rob Rossi 2nd. All voted unanimous.

6. Newsletter Editor Jack D to publish early in next newsletter - February. Jack D brought up the question of how to be sure that membership and new members are in good standing (paid up dues) with the National EAA? Ken asked if Jack would call the chapter office in Oshkosh and ask this question. Report at next meeting.

- Bill Flaherty took the floor.
 - Announcement first- Past long time member, Ollie Washburn passed away. He and his wife Loreene have been retired and living in Florida although they had driven up to visit this past summer.
 - There was a tabled discussion from last year where we considered that we should try to have a greater showing of our chapter at the Latrobe Westmoreland County Airshow. So, this being early in the year, are we going to participate at this gathering and have some displays and some homebuilts there for show? This was agreed in discussion; Bill was asked to generate some original contact and commitment from the WCAA. He will attend any of their meetings to establish our interest and to be sure they still want us to participate (in previous years they originally did then because of TSA and other security concerns, they didn't but then late last year they once again asked us to be a part of it but it was too late to prepare)
 - Richard Seman offered to do any needed signage for the display area once we know what we will be doing for the show.
 - Another proposal from Bill Flaherty: He showed a giant, colorful photo taken from the air of our airport and said that the FBO office and the restaurant would be interested in displaying these. He felt that it would help generate interest from patrons in the activities at the airport and he made a motion that we supply the three pictures (one for our hangar meeting area) at a cost of \$114.00 The pictures would have a note that they were donated by Chapter 45. Motion by Bill Flaherty, 2nd by Gary Kreutzer. Unanimous vote to accept.
- △ President Ken McClelland suggested that since the hangar is in pretty good shape and relatively uncluttered, that we try to foster more Workshop activities and involvement by purchasing some decent tools, a tool chest, and an air compressor for the shop.
 - Discussion of potential tools; Air compressor, Rolling tool chest; hand tool assortment; eventually a sheet metal brake and possibly a tubing bender.
 - Motion to start small and purchase a few of these items, taking advantage of recent good sale prices at Harbor Freight Aircraft Supply.
 - Discussion followed about caring and keeping track of said tools, especially the hand tools. Steve Glaeser suggested that it might be time for a Hangar Coordinator position. This to be discussed in the future.
 - Ken also suggested an announcement in the newsletter and meetings, asking for tool donations... no junk, but good honest tools. Offers would need Chapter Officer approval to prevent accepting or receiving surprise drop offs of crappy, unusable stuff. Airtools would be particularly useful.
 - Steve Glaeser then restated the Motion, of purchasing a starter set of tools and a rolling chest, and perhaps an air compressor; for a budget of \$500. Rob Rossi -2nd the motion and the motion carried with a unanimous vote

Conclusion

Richard Seman motioned to adjourn. Gary Kreutzer seconded the motion. Motion carried unanimously. Meeting adjourned at 8:40 PM.

Searching for something to fill this last page of the newsletter, I found this article I wrote in 2005.

Engine Horsepower by Jack Dernorsek hangarb7@yahoo.com

Over the years, there has been much discussion and claims concerning the horsepower of engines in aircraft. When the early experimenters chose a Harley or Henderson motorcycle engine to power their backyard creation, they were looking for the lightest, least expensive, and most available motor at hand. Many were dismayed at the lack of power available and most of these pioneers used large wing area to make up for the minimal horsepower.

When the horizontally opposed two cylinder, then four cylinder engines came along to replace in-line or radial engines in the early 1930's, the purported engine outputs were still questionable. Many an early Lycoming 65 hp engine was replaced with a Continental 65 to gain much performance. The Continental A65 went on to power thousands of light planes through the '40s.

There are many, many stories of engines available to homebuilders that made a claim of a particular amount of horsepower, while the real world field experience showed the claims to be false. The horsepower figures for automobiles were inflated at one time and most manufacturers utilized their own method for determining output. When used in an airplane, there needs to be a full understanding of the power available to make the plane safe to fly. Case in point are the Volkswagen engines that have been converted to aero use since the late '50s.

In the 1950's, the VW engines rose from a lowly 25.4 to 30 horsepower. The early '60s saw a rise to 36, then 40 horsepower. In late 1966 for the 1967 model year, the cars were touting 53 horsepower from a 1500 cc engine. Yes, the cars would climb a hill much better, mostly due to the larger displacement, but would die on the freeway as their power peak was too high for sustained heat output of the cylinder heads, which did not change until 1969 when the dual port head was introduced.

1969, dual port heads, a rise to a 1600 cc displacement, and a top end horsepower claim of 60! But what happened in 1970? Virtually no changes to the engine, but the Society of Automotive Engineers (SAE) mandated a firm set of rules for rating engine horsepower. Result? The same VW engine was now 42 horsepower!

So what is reality for airplane use of a VW or any engine? Basically the same laws of physics apply except now we are asking the power to be applied through the slippage of a propeller slapping the air. Most aeronautical engineers use a standard formula for determining the power available for airplane use. Let's face it, if we can turn a 'set' size of propeller at a particular RPM, the thrust is going to be a calculable amount. The only real variable here is the efficiency of the propeller and of course, some designs excel over others. Here is the equation for figuring horsepower from prop size and RPM:

$$HP = \frac{P/D \times Rev^3 \times Dia^5}{2,600,000}$$

P = prop pitch

D = prop diameter, in inches

Rev = RPMs (typically at take off, at sea level)

Dia = prop diameter in feet

For the VW installation in my Teenie Two, 38" pitch, 52" diameter, 3350 RPMs = 52 hp, which is exactly what Scott Casler at Hummel Engines (the engine builder) told me it would be. For my Taylorcraft, 45" pitch, 74" diameter, 2150 RPMs = 63 hp..... pretty close to the rating of 65.