EAA 485 MAR. 2024

HOME OF THE "PANHANDLE PELICANS"

PRESIDENT'S NOTES: Contact: Ralph Moser

We had a nice turnout for both meetings Feb. 10th. Special thanks to Drano for setting everything up at the National Naval Aviation Museum, and providing another wonderful tour.

As was mentioned at the meeting, Roscoe Airport will again host a pancake breakfast/fly-in March 23rd. It has been four years. Some of you newer members have not seen this in action. It is a great way for us to thank our hosts at Roscoe. They provide our chapter free rent and utilities for the clubhouse. Our chapter has volunteered to provide most of the cooking manpower. At the March meeting, we will know more details, and will be signing up volunteers. If it goes well, expect these to continue on the last Saturday morning of every month.

After the March meetings and lunch, Nick Hanssen will be looking for a few volunteers to help him clean up the exterior of "Rusty", our chapter simulator. Some soapy water and the right cleaning utensils should do the trick. Then John will try to get it up and running for the April 20th Young Eagles event. You can see Rusty in action under COOL LINKS on the chapter eaa485.org website.

See you at the March 9th meetings!

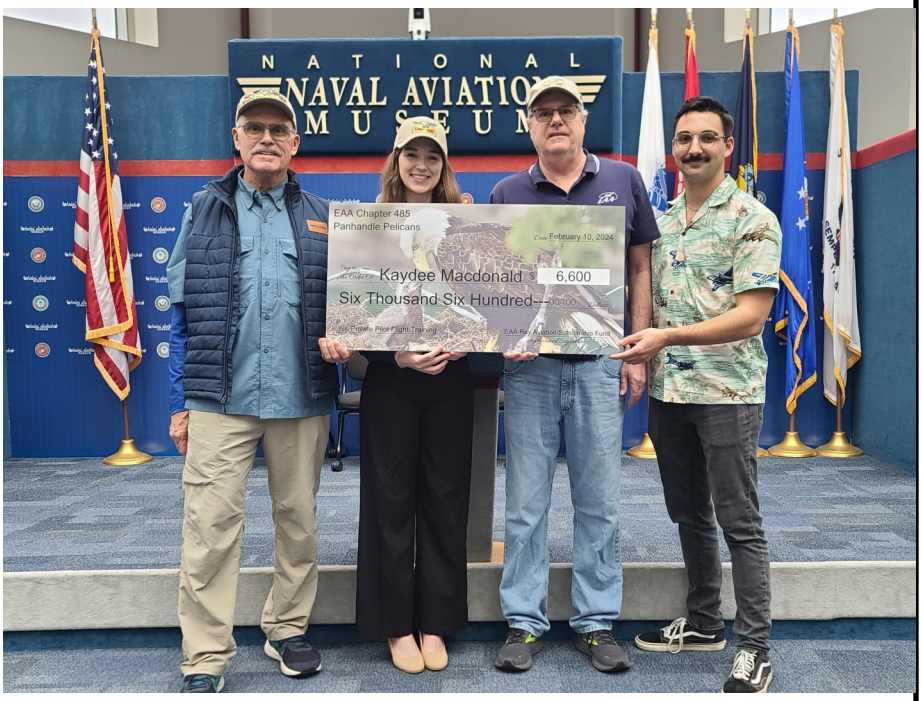
Ralph

CHAPTER DUES: Chapter dues are due for members who have not already paid their dues for 2024. Dues are $25 per year and can be paid during the meetings or mailed to Scott Swanson.

Ray Aviation Scholarship Report

At last month's chapter meeting Kaydee Macdonald, Ray #8, was announced as our 1st of 2 matching scholarship award winners. She is getting back into the swing of things. She took a break from flying until the scholarship was official. During this time, she worked on preparation for her written and should be ready to take it soon.

April 1st we are going to open the applications for the second matching scholarship for 2024. Let me know if you know of a young person that would be a good candidate.



The age range is 16-19 years old. They must have or be able to receive their class 3 medical. They must have or be able to get their student pilot certificate. More information will be posted on the web site soon.

Send me their contact information and I will send out a local application.

—Craig Spoke

JOIN NAFI!!!

NATIONAL ASSOCIATION OF FLIGHT INSTRUCTORS
Excellence in Flight Instruction

Here is a link to download a pdf copy of the NAFI (**National Association of Flight Instructors**) Member Handbook: LINK

Ralph will briefly review at the meeting why every pilot may want to join this fine organization. You DO NOT have to be a flight instructor to join. The member discounts alone typically pay for your annual subscription.

DRANO'S PROGRESS: ZENITH 750

In my experience, building an airplane is a thousand smaller projects that eventually become an airplane. Each of these smaller projects have their own layout, fabrication, assembly and techniques associated with them and for me, sometimes the planning takes as much time as the actual doing does. This is further complicated by the fact that few, if any, of these projects can be seen to completion before reaching a point where it intersects with another project or you hit a point of all-stop because you have to find and order a part, a tool or more material. Some time ago I read an article in one of my aviation periodicals that said you should tackle one project at a time, see it to completion, then tackle the next project. It has never worked that way for me so I end up in the cascade conundrum of non linear, perpetual, parallel, plane project progress. Non linear 'P' to the 5th power is a philosophy I will leave for discussion in later progress reports.

I am currently focused on the firewall forward area. The basic cascade is:

1. What do you need and what do you want?
2. Where does it go?
3. How does it route from where you put it to where you need it to do something.

Some kit manufactures are better at the detail of this than others. I recently reviewed the assembly plans for an RV-12 and have to complement Vans for the detailed sequential planning and instructions they provide. The builder was taken through each step with enough detail to know exactly what and how to do what needed to be done. But that is a point designed aircraft around a single engine. Of course there are now different variations and options for that same engine available depending if your goal is Experimental Amateur Built Light Sport Aircraft or Special Light Sport Aircraft . In the case of my Zenith, it will support six or more different engines, and each has their own individual options for components and layout for an EAB.

By way of a personal example and as I have mentioned in an earlier update, I am installing a Rotax 912 ULS engine (hence my investigation of the RV-12 plans). There is a LOT of plumbing involved when you consider the What (fuel, oil and coolant), Where that plumbing has to go on the engine and the firewall, and How to route so much plumbing around the engine, engine mount, exhaust, and firewall with the distance and radius requirements. Additionally there are the primary and secondary wiring associated with my choices. The details start getting less and less specific.

Then it happened……I got hit with Non Linear 'P' to the 5th. I needed a new CHT sensor to match the one I already have or need to replace them both to the same sensor. I also need a new oil pressure sensor. Both sensors have unique requirements in thread size and pitch according to the old or new versions of the engine heads or model of oil pump, and both sensors have unique plumbing or wiring requirements depending on which I select. Furthermore, I need for these sensors to provide temperature and pressure information on the EFIS I selected which means they have to be compatible with the EMS, which means I need the technical data to check compatibility. I am in a sensor selection do-loop.

I have turned to working on instrument panel layout while I try to solve the cascade conundrum of sensor selection…..another non linear, parallel, plane project in order to make progress. I will keep you informed.

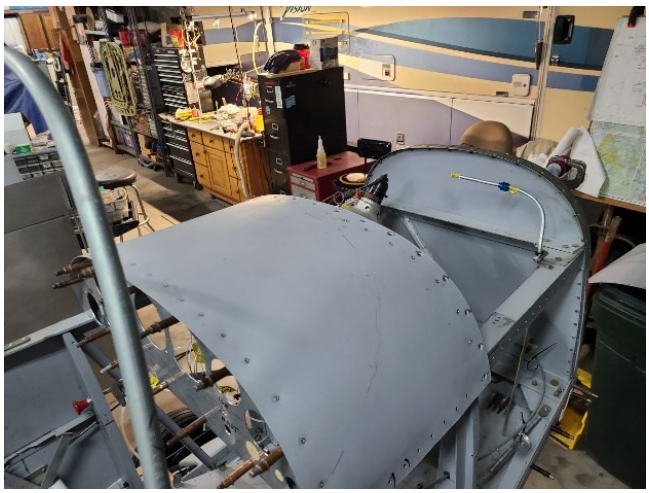
Thatcher Update

Wingtip Foam Ready for Glass

We've made progress the past few meetings with our fiberglass Guru, Mark Rogers leading the way. We now have wingtips that just need to be slicked up and drilled. They will me removable for maintenance/inspection. We have conduit in the wings to run wires through in case a future owner wanted to install lights.

Here in the right wingtip after three layers of heavy cloth. The dark circle area in the upper area is where the conduit is located inside. The next step is to slick up the finish with some epoxy and micro balloons same as the elevator tips.

The upper fuselage panel in front of the cockpit area has been riveted along the top area. The bottom row and a couple side rivets on the lower side are left out at this time to allow sliding the side panels under them. In the picture you can see that the instrument panel is clecoed in place. We deviated from the plans which used a solid upper bulkhead that was the surface of the instrument panel. We actually used the original bulkhead and cut out a large area leaving an outside flange for skin riveting and added an aluminum angle on the bottom for strength. The instrument panel is made from a piece of 1/16" (.063) aluminum. Using nutplates on the original frame the panel is easily installed/removed using #8 screws to fasten the panel to the bulkhead. This will aid in any maintenance down the road or greatly simplify construction and installation of a replacement panel if needed.



We now can work on final fitting of the windshield and installation. That leaves 5 side panels remaining to get riveted. The forward top panel installs over the fuel tank with screws and is removable. In the next few weeks, we should be "closed up".

We want to make sure that the front panels are on securely before the aircraft comes off the bench. Once on the floor the engine can be mounted and we can temporarily mount the wings. There is an updated aileron bellcrank out. We have a problem with interference of the aileron pushrod with the wing aft spar. The geometry of the new bellcrank should alleviate that allowing proper control throws.

The wings haven't been on for a long, long time and we've never had them connected to the control stick. The plan is once we're satisfied with the control throws, we'll limit the deflection as we did on elevator to specification. We used two pieces of hose attached with hose clamps to hit stops at the proper limits. Once off the bench we will have easier access to finalize the canopy and windshield attachment. John

FOR SALE

STARDUSTER TOO PROJECT

Gen. Characteristics
Seating: 2
Length: 20 ft 7 in
Wingspan: 24 ft
Height: 7 ft 3 in
Wing area: 165 sq ft
Empty weight: 1,000 lb
Gross weight: 1,704 lb
Fuel cap: 28 Fuse 15 Wing
Powerplant: Lycoming O-360 , 180 hp)
Max. speed: 180 mph
Cruise speed: 134 mph
Stall speed: 56 mph
Service ceiling: 23,000 ft
G limits: +/- 6
Roll rate: 120°/s
Rate of climb: 1,500 ft/min

Sometimes, on rare occasions, opportunity comes knocking at your door. When that happens some individuals are astute enough to open the door. Well, KNOCK, KNOCK!!

EAA Chapter 50 in Huron, OH is offering for sale a STARDUSTER TOO Project. If you're looking for an economical two seat, sport bi-plane capable of plus or minus 6 G's then perhaps it's your lucky day. This kit includes:

* Professionally welded fuselage, completed, primed
* Wings (4) meticulously crafted, ready to cover
* Center sections (ditto from above)
* Full set of guide wires
* Misc. parts, instruments too numerous to list

Contact: Ed Beer, 419/610-3560 or elb511@hotmail.com

HEAD TO HEAD

A PIREP ON G100UL

February 22, 2024 Part 1 By Peter A. Bedell

General Aviation Modifications Inc., perhaps better known as GAMI, following the success of its GAMIjector balanced fuel injectors, has been on a 13-year crusade to get the lead out of general aviation fuel.

Others have blazed this path, but none have made a drop-in 100LL avgas replacement that nearly all GA engines can operate on. The company was granted a supplemental type certificate by the FAA in September 2022. The STC can be purchased on GAMI's website for $1.50 to $1.75 per horsepower, depending on the installation.

Unleaded avgas has been an elusive formula because the tetraethyl lead in 100LL and its predecessors were key to boosting octane required to run higher-powered engines that utilize high compression ratios. Combine that hurdle with a lack of interest among oil companies, FBOs not wanting to purchase and maintain new tankage, economics, politics, red tape, and more politics, and well, you can see why this has been back-burnered for decades. Today, avgas is the only leaded fuel used in the world and it has a big, red target on its back from environmental-activist groups and governments around the world.

Unleaded aviation fuels have been around a long time, but they're only approved for use in lower-power engines utilizing low compression ratios. The economic problem is that those engines burn only about 30 percent of the avgas sold. The other 70 percent is burned by high-powered engines found in complex singles and twins that can't use the lower-octane unleaded fuels.

GAMI broke the octane code with G100UL after about 15 months of formulaic research. The following 12-year approval process? Well, let's just say it's been a long and frustrating slog for this plucky, little company in Ada, Oklahoma. Fuel is now flowing in Ada and thanks to the donation of AOPA members Greg Herrick and Dan Shewmaker, a unique demonstration program has been initiated to continue gathering data on G100UL in real-world conditions. Herrick donated the use of his 1966 Beechcraft Baron C55, which burns G100UL in the left engine and traditional 100LL in the right. Shewmaker is offsetting the operating costs. Both Continental IO-520-C engines were freshly overhauled by Pinnacle Engines of Silverhill, Alabama, providing a clean slate from which to start this comprehensive, independent analysis.

HEAD TO HEAD cont.

Savvy Analysis will be provided with regular data dumps from the onboard Garmin engine analyzer. That data will be disseminated and pored over by Savvy Aviation founder and AOPA Pilot columnist Mike Busch and his team. Savvy has amassed millions of hours of historical engine data to compare with the Baron's data. Oil will be analyzed at each change and cylinders will be borescoped every 50 hours. All this extra maintenance and observation is intended to spot any trends in wear in both engines. The hope is no news is good news.

Since my family has owned a Baron D55 since 1971 when I was in diapers, AOPA called me off the bench to get my opinion on this experiment. I was happy to oblige since I hadn't been to Ada since 1999 when the company opened the country's first independent aircraft engine test facility, named after former Teledyne-Continental engineer Carl Goulet, who helped GAMI certify GAMIjector fuel nozzles after his retirement.

By the time I arrived in November 2023, the C55 test mule had 25 hours on the engines and had just undergone its first oil change. I immediately gravitated to the left main fuel cell, popped the cap, and gave it the smell test. G100UL definitely has a solvent smell to it. I never did well in chemistry, but GAMI president and co-founder Tim Roehl assured me that the smell was from xylenes, which are commonly found in paint thinner. Since this was unleaded fuel, I dipped a finger in it and rubbed against my thumb. Like 100LL, it evaporates quickly and leaves no residue except for dry-looking skin. Despite its lack of hazardous lead, it was recommended that I protect my hands with gloves like I now do with 100LL.

The color is officially green but that depends on ambient lighting. Flowing out of the nozzle it looks pale green, but in my fuel tester after sumping, it appeared more like a sample I hand over to my aviation medical examiner every six months. One of the biggest hurdles for GAMI was to ensure that G100UL will mix with traditional 100LL in the tanks of your airplane or in the tanks of the suppliers. GAMI co-founder and head of engineering, George Braly, likes the term fungible and it's an accurate descriptor. It's also absolutely critical for G100UL to succeed. Exhaustive testing for certification proved that G100UL and 100LL can coexist just fine. No worries for pilots mixing fuels. No new tankage for FBOs. Perhaps no more special trucks and rail cars used only for leaded fuel transport. You get the idea.

What about storage? 100LL is one of the most durable fuels on the planet. It can sit on a shelf for a decade and still meet its fuel specification. Twelve years ago, Braly set aside a few barrels of G100UL in one of his hangars and so far, occasional testing of the fuel inside is meeting the fuel's specifications.

Psst.. Guess What?

We're Bringing Pancakes Back!!!

Can't you just hear the sizzle of the griddle and smell the delicious aroma of bacon and sausage in the air. All while being in the company of great people and watching the variety of planes fly in. We're bringing these monthly pancake breakfasts back, but we can't do it without **you**. Fly-in and bring a few friends. We're eager to see you all again.

1. Join Us at the Roscoe Field 82J FBO
1. March 23rd 2024 from 9AM - 12PM
2. This is a free event, but donations are greatly appreciated

What's better than one event? Two!

Join us for a Movie Night!

We know you're gearing up for Sun 'n Fun so why not make an evening pit stop? We'll be showing **Top Gun** on an outdoor projector. A food truck and popcorn will be available, and don't forget our awesome t-shirts. The movie begins at sunset on Saturday, April 6th.

During the movie night, don't miss the chance to participate in the raffle! We're excited to announce that we will be raffling off a beautiful painting of a Stearman, created by a talented local artist. It's a fantastic way to remember the evening, so bring your luck and you might just go home with this stunning piece of art!

March 2024

EAA and Local Chapter Sites

EAA 485 EAA 1265

EAA HDQTRS EAA 108

Interesting Links

Blue Angel 360 Way cool

Making the First Airbus 220 Time Lapse

Jetman Unleashed in Dubai

Boeing 737 Time Lapse Build

F-18 Low Level

High Speed Carrier Maneuvering

Miscellaneous

1800wxbrief.com

FAA Notams

Barnstormers

Skyvector.com Flight Planning, Charts

AirNav.com Airport info, Fuel Prices

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Secretary:	Jacob Abston (251)424-5004
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Young Eagles Coordinator:	Eric Goldman (317) 910-2513
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Newsletter Editor:	Courtney Wielander (305) 917-5557
Tech Counselor	John McKiernan
Flight Advisor	(850) 291-4134
Thatcher CX4 Build	

Normally meetings will be held at Roscoe Field Airport **(82J) (Uni 122.8) on the Second Saturday of each month at 10:00 AM unless otherwise posted. If flying in, check NAS Pensacola (KNPA) NOTAMS for possible TFRs and the Roscoe Field Airport website under the Arrivals tab for important arrival and departure information.**

Driving: From Hwy 98 go past the main airport entrance and take the next left. Go thru the gate and make a left on the gravel road. Make a right past the T hangars you'll see our building down on the left side. Anyone interested in sharing general aviation, aircraft building, maintaining and restoring is welcome.
For more info contact:

Ralph Moser (847) 736-4603

Home Of The
PANHANDLE PELICANS
EAA 485 Pensacola, FL

Get Your Chapter Ballcap

We have ballcaps with chapter logo for sale for $20. Get yours before the price hike. The next batch will be more expensive so don't wait!

CHAPTER DUES: Chapter dues are due for members who have not already paid their dues for 2024. Dues are $25 per year and can be paid during the meetings or mailed to Scott Swanson.

Upcoming Events

(CHAPTER EVENTS IN CAPS):

-SPRING 2024 YOUNG EAGLE RALLY – April 20th

-New Orleans 2024 Air Show (Blue Angels), NAS New Orleans – March 23-24

-Sun 'n Fun Aerospace Expo, Lakeland (LAL) FL – April 9-14

OSHKOSH ALERT!

UW-Oshkosh Dorm Room Reservations

Open Now for Air Venture 2024
Jul 22-28

Chapter Meetings:

Saturday, March 9th, 2024

08:30-09:30, VMC/IMC Club Meeting.

10:00-11:00, General Membership Meeting.

- **Pledge**
- **Guests**
- **Officers Reports: President, Vice-President, Secretary, Treasurer/ Membership**
- **Young Eagles – Eric Goldman**
- **Ray Scholarship – Craig Spoke.**
- **Member Build Projects Update**
- **Guest Speaker: TBD**
- **Adjourn**

Cheeseburger Lunch

Rusty's Renovation is finally happening!

Stick around after the meeting to help get Rusty ready for the April 20th Young Eagle flights!