EAA 485 JAN. 2024

HOME OF THE "PANHANDLE PELICANS"

PRESIDENT'S NOTES

Contact: Ralph Moser

Happy 2024! We at Chapter 485 go into this year in great position. I see lots of activities, continuous growth, and endless possibilities.

First, thanks go out to Mark Rogers, Craig Spoke and any others who helped set up/take down our Holiday Social Dec. 9th. Turnout was light, but there are some well-fed Lillian firefighters who enjoyed the leftovers…

We'll start 2024 by thanking the many volunteers from 2023 with chapter awards at the January meeting.

There is a revitalization of the Roscoe Field FBO ongoing. Mark and I attended a meeting in November about it. We will fill you in on this as the year goes on. Our chapter will play a part. Pancake breakfasts may return, with us providing the bulk of the manpower. They will soon have a flight school back on the field, a branch of Pensacola Air. An outdoor pavilion near the FBO is planned, as well as 24/7 restroom facilities outside the FBO. We will have a presence on their revised website, and our chapter location will be posted on a new airport sign. An enthusiastic lady named Savannah Brown is the impetus behind all this. One of the many positives for us is visible around the clubhouse—lots of nice furniture they donated to us. We hope to get a personal update from Savannah at an upcoming meeting.

One chapter priority this year will be to give John McKiernan all the resources possible to help advance the chapter build project, the Thatcher CX-4...

New Newsletter Editor:

I am so happy to have this opportunity to run the newsletter for chapter 485. I joined this chapter while in college for Pre-Law. Shortly after graduating this past May, I got my PPL. Now I'm studying for my IFR rating and flying whenever I get the chance.

When I volunteered to take over the newsletter, President Moser expressed that he was glad I was being an ambitious member of this chapter— but at the time, I had no idea what I was undertaking and how much effort a newsletter takes. I have a new appreciation for all of the newsletters John McKiernan put out over the past ten years. I *also* didn't realize when I signed up for this that John won the EAA award for his 2022 newsletter!

Many times while sitting at the hold short line in a Cherokee 151 I've heard the phrase "Caution wake turbulence". John is undoubtedly leaving a big wake, but I am looking forward to hearing all your stories and putting together interesting articles for EAA chapter 485 this year!

President's Notes Continued:

Our Spring Young Eagle Rally, date TBD, will start to incorporate AeroEducate information to all the parents. This upgrade is easy, requires no work on our part, and helps answer the question we often hear: "What can my child do between this Young Eagle flight and when they start flight lessons to stay involved in aviation?" Read all about this great new EAA program at EAA.org.

We need more chapter Young Eagle pilots! I urge our newest pilots/scholarship winners to get yourself current and qualified for this. Yes, it costs some money and time. But it is super rewarding. There is no reason we can't add 5 or 6 new pilots to the mix!

At the January meeting, you will hear about an innovative way Craig Spoke figured out to get us two Ray Scholars for 2024. These will be our 8th and 9th Ray Scholars: WE RULE!

As you saw in a recent email from John, we lost Gene Scott, a long-time member of the chapter. Among other contributions over the years, Gene flew 270 Young Eagles, the most of any Chapter 485 pilot! That's 10% of the total Young Eagles flown by this chapter. May he rest in peace. See photo nearby of him flying YE in 2011 in his Beech Debonair.

Due to my Dec. 1st heart bypass surgery, Mark Rogers will be steering the ship for a while. I could not put it in better hands. My recovery has been progressing well. I miss you all dearly. My progress in recovery will determine when I can once again "lead from the front."

Cheers, Ralph

Ray Aviation Scholarship report for January

Gabe Davenport, Ray #6, has decided that flying is not for him and will not be continuing his flight training. I have informed the EAA Ray Scholarship Coordinator and confirmed that this setback will not negatively impact our future Ray Scholarships. We wish Gabe well and good luck going forward.

Samantha Watkins, Ray # 7, passed her check ride on Sunday, October 22 and is now a private pilot. Her Lightspeed Zulu 3 headset, which is part of the scholarship, arrived on November 8. Too late for her private training but will definitely be useful if she continues on with instrument training. We will formally congratulate her on all her successes during the January meeting.

Well, the fun is starting again. As many of you know the chapter decided to apply for a matching 75/25 scholarship, which is a guaranteed award. If one is good then two should be better, right??? After a short discussion with the chapter board, it was decided to take advantage of this opportunity so November 15, I submitted our application for **two** matching scholarships for 2024. We are looking at some creative ways to utilize these scholarships so stay tuned for more information in the coming months.

-Craig Spoke

Federation Aéronautique Internationale Conference

Held in Dayton, Ohio

Through the 25th - 26th of October, Lou Toth attended the Federation Aéronautique Internationale Awards Dinner & General Conference in Dayton, Ohio. There he met with other award winners and representatives from around the world including New Zealand, China, India, Canada, The Netherlands, Luxembourg, and Finland. Since its inception, the FAI Conference has been hosted by different countries around the world. It has been decades since it has been in the United States and may be decades more before it returns, making this particular conference a once in a lifetime experience.

During the Awards Dinner, Lou sat with the Gulfstream 280 Around the World record holder team and listened to the challenges they overcame. Were the longest, fastest award winners seated with the shortest, slowest award winners at the dinner?! After getting a chance to hear about Ben and Lou's aviation accomplishments, (from October's issue) the team was impressed that they only burned 3 gallons of avgas on each of their record route legs. Lou later ran into them again at the National Museum of the US Air Force which is also in Dayton.

At the General Conference, Lou sat with some members of the NAA Contest and Records Board, and had many questions answered.

Thanks to Mr. Maynard and the rest of the board, (the Albuquerque International Balloon Fiesta Dinner was great.) Next on the agenda were two concurrent events: the Albuquerque International Ballon Fiesta Dinner and a panel discussion featuring Mr. Budreau from AMA, Mr. Centuori from the Neal Armstrong Museum, and Ms. Magill from NASA. During the discussion, Lou sat with NAA President Sporwart and past President Principato.

SIDE NOTE: On his flight out of Pensacola, Lou ran into Ben Poffenberger, who was enroute to the 15th FAI World Advanced Aerobatic Championships in Las Vegas!

Pictures provided by Lou Toth (top to bottom):

1) FAI President David Monks, Lou Toth, NAA President Amy Sporwart, **2)** Aerobatic championships **3)** Awards Dinner & General Conference 2023

DRANO'S PROGRESS: ZENITH 170

One of the interesting aspects of the Zenith homebuilt aircraft is the large number of engine options supported by the factory. There are at least six options, each with their own unique advantages and disadvantages, strengths, and shortcomings. My point is NOT to debate those differences— individual preferences for any of the choices can be supported. I personally decided early on to install a Rotax 912 ULS engine in my 750 so that launched a month-long quest for the right deal.

Unless you are buying a new engine in a shipping crate, the difference between a good deal and a good engine can be significant. I finally found what I considered a good deal. It was a Rotax 912 S (certified version of the 912 ULS) off a motor glider that had been totaled when the hangar was destroyed in a storm. The sail plane was totaled but the engine was undamaged. It had less than 400 hours on it, an engine log book with professional maintenance recorded, and the price was well below Barnstormers market averages. I jumped on it and soon had it in my shop where I looked at it for hours trying to decide if my good deal was a good engine.

For builders with Rotax experience, this engine may be very straight forward, but I have been a "Lycomasaurus" kind of guy and this was clearly a different animal. The cylinders are air cooled but the cylinder heads are liquid cooled, and it is a dry sump engine with the oil tank on the firewall of the aircraft. The fuel pump and oil pump are on the very front of the engine which makes for more complicated plumbing, the coolant pump is on the back. There are two radiators, one for the oil per the norm and one for the coolant. It has no external alternator but an internal stator that drives the two ignition modules and develops a paltry 18-20 amps at cruise rpm. This was clearly going to be different.

Use play button as link or click here to watch above video

Drano's Progress Continued:

The engine had been run exclusively on 100LL which, while not necessarily bad, is not optimum. There was a lot of carbon and lead fouling in the intakes and heads. The engine reportedly works better long term on 93-94 octane no lead. Fuel with ethanol is supposed to work as well but introduces other considerations concerning age of the fuel and hose life.

I decided that if I was going to strap my back side to an airplane with this engine on the front end, I first needed to know more about its heart. Was this puppy going to hold together when thrust needed to dramatically exceed drag? High cruise RPM is listed as 5500 rpm, take off limit is 5800!

Luckily, there is a regional Rotax dealer and maintenance center only 1.5 hours' drive away and they agreed to look at it for me. Ronnie and Morris Smith of Southern Mississippi Light Sport Aircraft (SMLSA) in Lucedale, MS are the pros from Dover—well…..actually Lucedale. They agreed to take a thorough look at the engine, replace couple old components, remove the heads and clean them, and put my engine on their test stand.

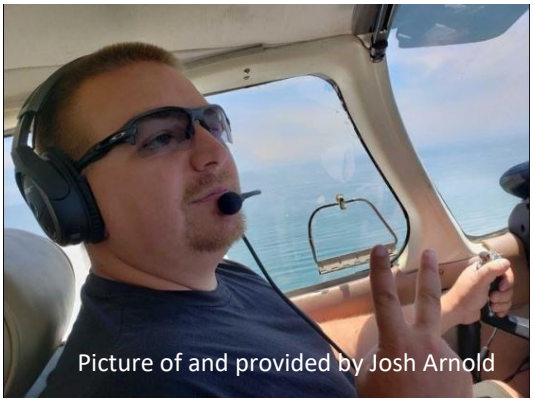
I got to witness a test run which is in the video clip below and I have to admit it was exciting. The engine passed with flying colors. This maintenance check added considerably to the total cost of my engine, but my mind and my back side are now far more relaxed about the prospects of getting airborne together with Mr. Rotax up front.

The engine is now back in my shop getting prepped for installation. I am still trying to figure out all the fuel, oil, and coolant plumbing, but with thousands of these engines in use, I'm convinced it is within the art of the possible.

I'll keep you posted,

Drano

A NEW AVIATION EXPERIENCE ?



Picture of and provided by Josh Arnold

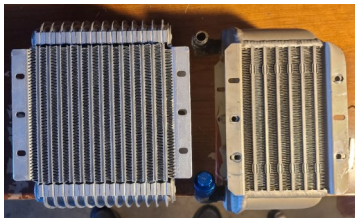
Just this past month, while visiting my family back home in the Keys for the Holidays, I had the pleasure of meeting Josh and Allison Arnold. Josh had noticed my Women in Aviation t-shirt and struck up a conversation as I passed by. He is currently training to get his commercial license, and pretty much only has the checkride left to take. But after talking about our aviation goals and swapping our most interesting aviation related stories— Josh shared his experience at a flight school that surely trumps any trivial CFI squabbles or flight school complaints I'd ever heard. Josh told me he had spent hours training for his pilot's license, only to find out he was spending his money at a fake flight school. Here is a link to the news article originally put out about Josh's lawsuit.

As a fairly new private pilot, I figure there is a lot more for me to learn about the aviation community—good and bad (mostly good). I certainly would never have expected this to be any kind of real issue for aspiring student pilots. I'd be interested to know from those who have been in general aviation longer: is this a common problem—or a one-off nightmare?

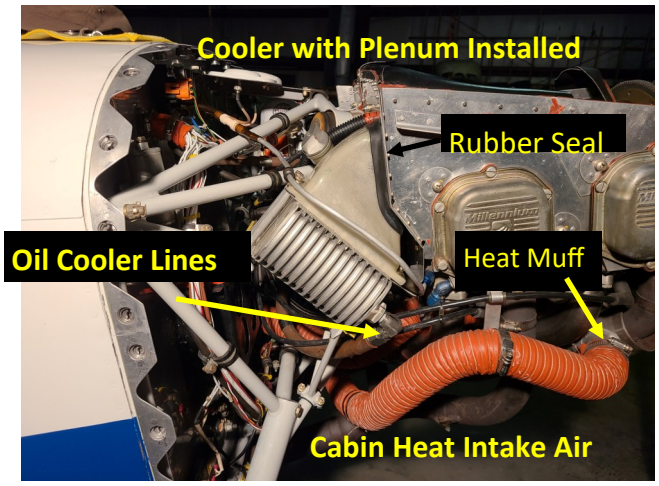
—Courtney Wielander

RV-7 Oil Cooler Upgrade: Part 2

I was hoping to wrap this up by now but with the holidays and another road trip I didn't have quite enough time to finish. The system is ready for an engine ground test and then a test flight. I'm still lacking a valve to adjust the amount of air allotted for cabin heat. For now the system will remain as originally installed.



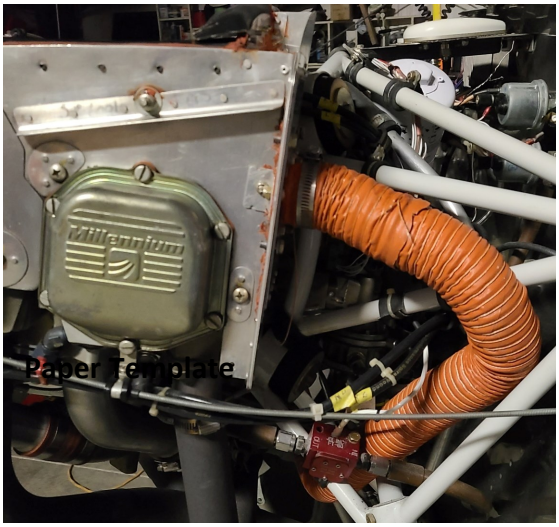
To refresh from last month I'm replacing an inadequate oil cooler with a massive one.



This cooler would also work for my RV-10 so I could easily use it if it's too large for the RV-7.

After lots of plenum trimming, I finally got a good fit on the baffle. The plenum sealing rubber is the same seal as the wing root seals on the RV-7. On my third flight years ago just after takeoff I heard something beating on the passenger side of the cockpit. I landed to find most of the wing seal had come out and was slapping against the right side fuselage. I purchased a new one and saved the old seal that was still intact. I used a small piece on the cooler saving the new seal included with the kit as a spare.

With the cooler installed it was time to work on the rest of the warm air delivery system



that was removed during the cooler installation. The cabin heat air intake system needed additional length SCAT tubing to extend to the pilot

side aft baffle. I used a piece of used SCAT tube that I and made a 2" aluminum tube coupler attaching the two hoses together with hose clamps.

The termination connection required a new plate to be made where the hose could be mounted. Here's the heat intake connection on

Thatcher

We figured out how to rig the rudder cables to the rudder and tailwheel. It wasn't easy to get everything setup. We changed our rudder cables a while back from 1/8" to 3/32". The 1/8" were way too big and the maximum load the cables to see would be less than 200 lbs so the thinner cables were used.

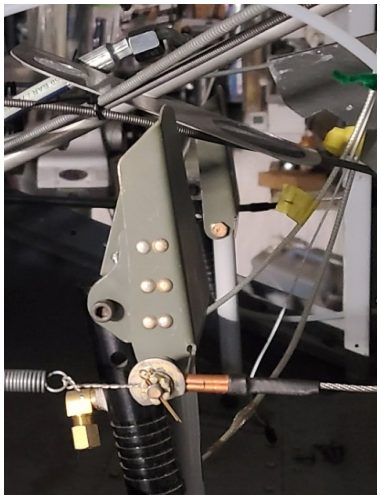
Multiple bushings were needed. I found some Oilite bushings that were too long and cutting them square is awkward to keep true edges so I found a way to do this using a pipe cutter. It worked well and with a little cleanup with a deburring tool produced 4 nice bushings and one wasted old AN4 bolt.

These bushings are used on the tailwheel end of the steering system to get better alignment on moving the tailwheel, The fittings are closed end AN fittings which provide for a structural system.

The forward attachment eyes with the tailwheel spring attached are for fitment only. They came from the Lowes "Aviation Isle" and are common Zinc that wouldn't handle the load or environment without bending over time,

Our cables are attached to the rudder horn with double steel tangs that allow for length changes

if necessary. There are also spacers and bushings to allow smooth travel with no binding



When the rudder is aligned with the fuselage we have a very equal distance on our rudder pedals,

Next on the list is some cleanup around the cockpit area and getting the CX-4 off the bench and putting the wings on to work on fairings.

—John

Pilots Need to be Generalists, Not Specialists

November 20, 2023 by John Zimmerman (part 1)

American education has been obsessed with STEM (Science, Technology, Engineering, and Math) for at least a decade, and the aviation industry has eagerly jumped on the bandwagon. The FAA is leading the charge to fit our square peg into this round hole, declaring aviation to be the ultimate STEM career path. I'm in favor of anything that attracts a new generation of pilots, but this framing is a radical oversimplification—and it sets up some pilots for failure.

Flying an airplane, especially a general aviation airplane with one pilot, is not simply an engineering job. As airline pilot and Cub owner Joe Costanza said on a recent podcast, "flying is the artful application of a scientific process." Yes, you need to understand weather, engines, and aerodynamics. But a good pilot also needs to learn softer skills like decision making, teamwork, and self-awareness. A truly great pilot should have some understanding of history, an appreciation for beauty, and even a creative streak. Engineer, meteorologist, psychologist, coach, artist—it's all in a day's work for a pilot.

Is flying a taildragger a STEM activity?

Aviation is certainly not unique in requiring a broad range of skills and experiences. As David Epstein recounts in his book *Range*, many of the best musicians, athletes, and inventors succeeded precisely because they did not specialize in one narrow discipline. Roger Federer and Rafael Nadal, two of the greatest tennis players of all time, played a wide variety of sports as kids; both credit that variety with helping them succeed. We certainly don't do that much anymore. Youth sports have come to resemble *The Hunger Games*, a fight to the death where kids are told to pick a sport and specialize early or risk being irrelevant by age 10. Second graders end up working with private coaches and kids who should be going to slumber parties instead travel 500 miles for yet another "showcase" tournament. This sounds completely insane—and it is. Injuries among young athletes are skyrocketing almost as fast as burnout and anxiety, all while parents' bank account balances plummet.

I worry that we might make the same mistake with "STEM kids" in general and pilots in particular. When the airlines are advertising six-figure signing bonuses, it's understandable that prospective pilots might chase the simplest path to the right seat of an RJ, one that focuses on learning the essentials of airlines flying in the least amount of time.

Pilot's Need to be Generalist's, Not Specialists Cont.

This usually means focusing on the *what* without considering the *why*, and there's definitely no time to explore subtle nuances or different perspectives. This fast track will almost certainly result in a job, but it may not result in a well-rounded pilot who is ready for the dynamic environment they will be working in. And if, instead of an RJ, the pilot should end up flying a King Air or (heaven forbid) a Cherokee, they may find themselves totally unprepared.

Epstein recounts a study of remote villagers that should serve as a warning to one dimensional pilots: "They were perfectly capable of learning *from* experience, but failed at learning *without* experience. And that is what a rapidly changing, wicked world demands—conceptual reasoning skills that can connect new ideas and work across contexts."

Understanding both glass cockpits and round dials can improve your instrument flying skills.

The word "wicked" is used by psychologists to describe a type of environment that is erratic and lacking in clear feedback mechanisms that link actions to results (in contrast to a "kind" environment). Pilots definitely get feedback, but often that feedback is delayed or confusing. Was your route through convective weather successful because of your great technique or because you got lucky? Did you make the right decision canceling today's flight? Sometimes it's hard to know, because flying is not chess. Sure, pilots and chess players both have very explicit rules, but the board pilots play on is ever-changing: capricious weather, complex mechanical systems, and unpredictable humans can ruin the best plans.

In a wicked environment, it's not enough to simply follow a checklist and hope it works out. As Gary Klein describes in *Sources of Power*, his classic book on decision making under pressure, true experts think, sometimes creatively, about the big picture before they take action. They are also skilled at pattern matching: "their experience let them see a situation, even a non-routine one, as an example of a prototype, so they knew the typical course of action right away." There's no way to recognize a pattern if you haven't first accumulated prototypes, and that means putting yourself in new situations. As a pilot, riding around the pattern 1000 times in a Cessna 172 does not qualify; it's nothing but the same prototype over and over again.

To be clear, this article is not intended as some rant about "kids today" or a demand that every pilot should be required to solo a glider and a taildragger before they touch a Cessna 172. That might be fun, but it's completely impractical. Likewise, many of the classic time-building jobs of the 1970s and 1980s are long gone: flying checks at night in a worn out Cessna 210 or delivering auto parts in a Baron are simply not options anymore.

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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Tech Counselor (251) 228-0356

Flight Advisor:

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VMC Club / IMC Club Donna and DeWitt Barker (850) 572-0288

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!

Rusty Chapter 485:

Winter Project

Rusty has been neglected for quite a while. Our mission is to have Rusty ready for our 2024 flying season and Young Eagle flights. It's time we have a crew to get Rusty cleaned up and in good working order for next year. It would be great if we can have the simulator ready for next years Young Eagle season for those younger siblings that don't qualify for YE flights due to age. Let me know and we'll get a group together for making Rusty Ready.
John

Chapter Meetings:

Saturday, January 13th ,2024

VMC/IMC Club at 0830-0930.

General Membership Meeting 1000-1100:

- **Pledge**
- **Guests**
- **Officers Reports: President, Vice-President, Secretary, Treasurer/M'Ship**
- **Young Eagles Recap – Eric Goldman**
- **Ray Scholarship – Craig Spoke**
- **Member Build Projects Update**
- **2019-2023 Chapter Scholarship Winners Where are they today ?**
- **Adjourn**

Cheeseburger Lunch

Next Chapter Meeting date – Saturday, Feb. 10th. **VMC/IMC will be 0830-0930 at club-house as per normal. 1000-1030 short general membership meeting will be at the National Naval Aviation Museum small auditorium beside Cubi Cafe. Then guided museum tour, followed by lunch in Cubi Bar Café (reserved room) around noon.

Upcoming Events

(CHAPTER EVENTS IN CAPS):

Spring 2024 Young Eagle Rally- date TBD

OSHKOSH ALERT!

UW-Oshkosh Dorm Room Reservations

Open Now for Air Venture 2024
Jul 22-28