



September 2023

EAA 485



Home of the "Panhandle Pelicans"

Squawk 485

Meeting Saturday, Sep 9th See Below At Our Clubhouse IMC/VMC Club Meets at 0830-0930

Details

President

Ralph Moser

Contact: [Ralph](#)

PRESIDENT'S NOTES

Mark Rogers has donated a used smart TV, to be mounted in the NW corner of the dining room. We plan to use it for several things: present some programs to Young Eagles while they await their turn to fly, run slide shows or videos of recent events while dining after a meeting, or as a repeater of whatever we are showing on main room TV.

We recently surpassed 100 members! I plan to present the 100th member with a door prize at the September meeting..

A couple additions to the presentation Brian and I gave at the main meeting in August: There is a 2022 interview with Brian Shiff and the Gold Seal Ground School worth watching. Click this link: "The Impossible Turn, Myths, Mistakes, and Misconceptions." Also, if flying a turn back at 30 degrees angle of bank versus 45 as I advocated, plan on needing 100-200' extra altitude, depending on your glide speed. One other interesting observation from a seaplane CFI: He said that given a lake long enough, they can and do safely simulate engine failures on takeoff at 100', 200', etc. to build the pilot instinct of "PITCH FOR BEST GLIDE".

Our guest speaker in September is Mike Vaccaro, a proponent of aural Angle-of-Attack (AOA) Systems. His low-cost design for experimental aircraft won the EAA Founder's Innovation Prize in 2018, and the follow-on 2021 EAA Founder's Innovation Prize Grand Championship. Should be a good one!

On August 26th, we held a board of directors meeting. Long-range planning, etc. Minutes are in this newsletter. We will take a membership vote

on some items discussed.

See you Sept 9th. FLY SAFE!

Ralph



Chapter 485 Young Eagles Coordinator

Contact [Eric Goldman](#)

Come out with us to give our communities' youth another great day of flying. Our Young Eagles program will be hosting an event on Oct 21st. This rally we have opened the event up to 60 pre-registered kids starting at 0900 and ending before noon. For this event to be successful we are looking for volunteers to help on the ground (escorting parents and kids, Aircraft Marshalling, and people to talk about our chapter/scholarships/aviation related items) and in the air.

If you are looking to fly for this event, please make sure your EAA membership, Youth Protection, and all items for your aircraft and self are up to date. If you need help with the Youth protection, please feel free to reach out to myself and I can help walk you through that process. If you can attend this event, please RSVP by sending a quick email to YoungEagles485@gmail.com.

I also want to say thank you to those volunteers that made the Aug 5th Chappy James Flight Academy rally a big success. We flew a total of 15 kids with 6 pilots. During registration I noted that 0 of these kids had previous experience in a light aircraft. EAA485 was able to introduce them to the world of flight in General Aviation Aircraft. Every kid that I spoke to was excited



Pensacola FL



and eager to continue their flying journey. I did notice a few bumps during this event and we're working at smoothing those out before the October rally.
Eric



RAY AVIATION SCHOLARSHIP UPDATE [Craig Spoke](#), Chapter 485 Coordinator

Ray Aviation Scholarship report

Not a lot to report for the Ray Scholarship this month.

Gabe Davenport, Ray #6, is continuing his training. He will be completing his cross country flights etc. and preparing for his check ride soon.

Samantha Watkins, Ray # 7, had to pivot a little this month. The aircraft that she has been training in has been down waiting for "wing parts" plus 100 hour inspection since 8/16. This is the only Piper Archer that the flight school has for training.

She has moved to a Cherokee with similar avionics and her instructor has reported that she is handling the transition easily. The Archer should be back in service by the end of this week so Samantha will be back in the plane she is most familiar with.
Craig

ANOTHER NATIONAL AWARD for EAA 485 !

Doug Francisco recently won the EAA National Web Editor Award for 2023!

Mark Rogers' recommendation read as follows: "Doug Francisco has performed an exemplary service to our Chapter as our Webmaster. His selfless devotion to Chapter 485 and the mission of the Experimental Aircraft Association should be a goal for others to emulate. Everything you would want to know about our chapter's past, present and future can be found on the website eaa485.org. I seriously doubt that you can find a more entertaining or informative web-

site in the EAA. Doug has been the webmaster for our chapter for over ten years and is eminently deserving of the EAA Web Editor award."

EAA's Chapter Field Representative Tim Dahnke stated; "Doug, it is my sincere pleasure to announce that you have been chosen as a 2023 Chapter Web Editor Award winner. Your hours of hard work contribute to the success of your chapter and foster the growth of sport aviation. Your contributions are recognized and appreciated by your fellow chapter members. You are truly deserving of this award. The chapter website is one of the most important tools of communication a chapter has to keep members and prospective members informed and engaged, for both the day-to-day, future events, and happenings of the chapter. Please accept my sincere congratulations for this great achievement.
Ralph

"Here is a photo of our chapter recognizing Doug with his award plaque.





EAA Chapter 485 Meeting August 12th, 2023:

General Membership Meeting 1000-1100:

Opened the meeting with the Pledge of Allegiance

Guest introduced themselves including Anthony from Chicago who is in Navy Flight training, Jeff who has his commercial and multi-engine ratings, Sharon from Arkansas. Christian Kidder returned.

Officers Reports:

President: Ralph talked about mishaps that occurred during Air Venture at Oshkosh. He showed an update on the Perlan 2 glider project and an article about the cost of aircraft ownership.

Secretary/Treasurer: Scott talked about membership and gave a status of our account.

Ray Scholarships Update – Craig Spoke said Gabe and Samantha continue to progress in their post solo training.

Emily Bond earned her private pilot certificate and her father Steven earned his instrument rating within days of each other. Emily was presented a hoodie for earning her certificate.

Young Eagles – Eric Goldman reported 15 kids were flown during the Chappie James Flight Academy event. The fall event will de-conflicted with the Crestview chapter's event.

Member Build Projects Update – Drain gave an update on his Zenith 750 project.

New Business – The final report for the Navion accident that occurred near the airport was released. Neither the pilot nor aircraft maintenance was found causal in the report.

Engine Failure on Takeoff Presentation – Brian DeCamp and Ralph Moser gave a safety presentation about attempting a turn back to the airport after engine failure on takeoff.

Adjourn

A cheeseburger lunch followed the meeting.

VMC/IMC Club at 0830-0930.

Phillip talked about his trip to New Orleans

Lakefront Airport.

Dewitt talked about his alternator failure on a cross country flight to San Antonio.

The IMC question concerned when you can descend when cleared for a localizer approach while you are being vector to final.

The VMC question was about the standard climb gradient.

Dewitt noted AC 90-66C, Non-Towered Airport Flight Operations, was just released. The VOR MON program and the stipple on a RNAV approach were presented.

Submitted by Scott Swanson Sec/Treas

EAA Chapter 485

August 26, 2023 Board of Directors Meeting
Attendees:

Ralph Moser,, Scott Swanson, John McKiernan, Duane Theissen, Criag Spoke, Eric Goldman

.Absent: Mark Rogers

- The date for the fall Young Eagle Rally was set for October 21, 2023.
- The board discussed ways to offer Young Eagle rides to Chappie James Flight Academy graduates who were not offered flights due to cancellations.
- The board discussed ideas to improve the process and flow during Young Eagle Rallies and ways to spend the money earned from flying Young Eagles..
- The board decided to propose using chapter funds to pay 25% of a 2024 Ray Scholarship so we would be guaranteed to get a scholarship for the year. This proposal will be presented to the members for approval.
- Scott Swanson presented a financial and membership status report.
- Ralph Moser noted the need to nominate new officers in October and election in November.
- The board members talked about identifying club house improvements.
- The board discussed having a social event by the end of the year.
- The possibility of a T-shirt fund raisers was discussed but no decision was made.

Submitted by Scott Swanson Sec/Treas



September 2023

EAA 485
news

GIRLS IN AVIATION DAY

BEYOND THE PAST, BEYOND EXPECTATIONS, COME CELEBRATE ALL THAT IS BEYOND.

SAVE THE DATE

SATURDAY, OCTOBER 28, 2023

GIRLS AND WOMEN AGES 8 TO 88

EXHIBITOR CHECK-IN: 8:30 – 9:15 AM

EVENT STARTS: 10 AM

NATIONAL NAVAL AVIATION MUSEUM

Registration for participants ages 18 and under opens on August 1.

*EXHIBITORS *SPECIAL GUEST SPEAKERS

*AIRCRAFT DISPLAYS

*SIMULATORS *STEM ACTIVITIES



PRESENTED BY



Celebrating 50 Years of Women in Naval Aviation and
30 Years of Women in Combat Aviation

For more information contact, Dianna Hayden: dhayden@navalaviationmuseum.org, or
Women in Aviation International WAI Gulf Coast Chapter at: Waigulfcoastchapter@gmail.com

Pensacola FL



Aviation Briefs

Two Eject From MiG-23 At Michigan Airshow
Two people aboard a MiG-23 fighter were slightly injured when they ejected from the Cold War fighter at an airshow in Michigan Sunday. The swing-wing jet was part of the finale of the Thunder Over Michigan at Willow Run Airport [...] [Read this article](#)

NTSB REPORTS ON FATAL ACCIDENTS DURING EAA AIRVENTURE

A preliminary report from the NTSB shows exactly where a homebuilt helicopter collided with a gyroplane as both attempted to land on the turf runway used by ultralights and helicopters at EAA AirVenture Oshkosh in Wisconsin on July 29. Another report includes the ADS-B track of the North American AT-6D Texan that descended “rapidly” into Lake Winnebago hours before. [Full Story](#)



The Biggest Aerospace Story Ever (Yawn)

While our gaze was momentarily distracted by the aviation party out in Wisconsin a couple of weeks ago, we missed the biggest aerospace story in history. In fact, it was the biggest anything in history, short of the emergence of[...] [Read this article](#)



Five changes the new MOSAIC rule could bring to aviation

John Zimmerman

Coming from an aviation family, John grew up in the back of small airplanes and learned to fly as a teenager. Ever since, he has been hooked on anything with wings and regularly flies a Citabria, a Pilatus PC-12, and a Cirrus SR22. He is an ATP and also holds ratings for multiengine, seaplanes, gliders, and helicopters. In addition to being Editor-in-Chief of Air Facts, John is the President of Sporty’s Pilot Shop, responsible for new product development and marketing.

August 16, 2023

The word mosaic can be a noun, meaning a beautiful arrangement of glass, or an adjective, as in the tablets that Charlton Heston brought down from the mountain. Whether you view the FAA’s recently released Modernization of Special Airworthiness Certification (MOSAIC) proposal as a work of art or a restrictive set of commandments, this 300-page document will definitely change general aviation. In fact, it’s quite likely to be the most important regulatory change for pilots in at least 20 years.

The initial goal for MOSAIC was to update the 2004 Light Sport Aircraft (LSA) rule, which created an entirely new industry, but one that struggled to find mainstream appeal. LSAs turned out to be a little too fragile for flight training and a little too limited for family transportation. Likewise, the Sport Pilot certificate found only modest success, used mostly for older pilots stepping down at the end of their career, not younger ones entering the industry. The FAA says estimates there are 7000 active Sport Pilots, compared with 164,000 Private Pilots (although the Sport Pilot number does not count Private Pilots using Sport privileges).

MOSAIC directly addresses these limitations by dramatically expanding the definition of LSA to include almost any airplane with a clean stalling speed of 54 knots or less. That adds well over 50,000 legacy airplanes, including the venerable Cessna 172, and make the Sport Pilot certificate much more useful.

But this new proposal is also a reaction to the



huge boom in experimental airplanes, which seems to both excite and frighten the FAA. This segment of aviation has seen rapid innovation in construction techniques and avionics, all while keeping the cost of airplanes surprisingly low—and as a result, selling like hotcakes. A clue to the FAA’s thinking is right in the executive summary for MOSAIC: “The FAA intends for these expansions to increase safety by encouraging aircraft owners, who may be deciding between an experimental aircraft or a light-sport category aircraft, to choose aircraft higher on the safety continuum and, therefore, meet higher aircraft certification requirements.”

Only time will tell whether MOSAIC airplanes take market share from homebuilts. For now, the proposal offers enough details to imagine a GA industry that looks quite different in the 2025-2030 timeframe. Here are five trends I’ll be expecting.

1. The Sport Pilot will be the default certificate for flight training. In spite of the FAA’s attempts to introduce lower level certificates (before the Sport Pilot there was the Recreational Pilot option, which never took off), the Private Pilot certificate and the Third Class Medical is still the standard path for a new student pilot. While the Private certificate is loaded with privileges, it also requires longer training and the dreaded FAA medical. BasicMed has been a popular option lately that reduces the medical burden, but even that requires the pilot to have passed an initial FAA medical exam so it is rarely used by brand new pilots.

Under MOSAIC, that could finally change. Thousands of legacy airplanes, including the 152 and 172, would now qualify to be flown by a Sport Pilot, with the accompanying driver’s license medical. That means no trip to an Aviation Medical Examiner of any kind, a refreshing change for nervous newbies and a boost for flight schools, who can now offer Sport Pilot training without buying a new airplane. For career-track pilots, the medical exam may still be routine, but the majority of pilots learn to fly for fun. That should make the Sport Pilot certificate a much more popular option for new pilots. This will almost certainly spell the end of the Recreational

certificate, and it might even put a dent in Basic Med's popularity.

2. Older 4-seaters will get fixed up. The value of airplanes like the Cessna 182 (up to the D model, by my math) will probably go up, since even these high performance machines can be flown under MOSAIC. While a Sport Pilot can still carry just a single passenger, the option to fly a faster airplane and use the back seats for luggage will appeal to many. That should make restoring them and adding new avionics a smarter investment, creating some really nice airplanes in the process. Expect avionics shops to be even busier. The raw numbers are compelling. The FAA claims that just over 5000 LSAs have been delivered since 2004, and with over 200 models on the market the average LSA manufacturer probably makes less than 20 airplanes per year. In comparison, Cessna has delivered over 60,000 airplanes that will now qualify for MOSAIC. In an instant, the no-medical-required fleet just grew by 10 times.

3. Existing LSAs will get a performance boost. So far, a lot of speculation has revolved around existing GA airplanes that are now included under the MOSAIC rule. That’s big news, but don’t forget the existing crop of LSAs—they aren’t going away, and the new rules apply to them as well. In fact, many will probably see a weight or speed increase, making them much more capable airplanes without the need for expensive modifications.

The existing 1320 lb. limit was completely arbitrary (based on the European 600 kg class), and many LSAs can easily carry more. Likewise, the 120 knot maximum cruise speed forced some manufacturers to artificially limit performance, with some even going so far as to publish maximum continuous power settings that were barely over 50% of rated engine output. Don’t be surprised if you see a new Cub with a 1600 lb. max gross weight or a sleek Kitfox with a 135 knot cruise speed. The only thing that might be different is the POH.

4. New high performance airplanes will arrive. What about the real goal of MOSAIC, which is to spur innovation in light aviation. Here



things are more speculative, but it's entirely possible we will see a new class of airplanes introduced in the second half of this decade. On the high end, these could compete head-on with the top-of-the-line experimental airplanes, with 180-knot cruise speeds, IFR avionics, and four seats. These would be attractive for Sport Pilots who want more performance, but they would also work well for Private Pilots looking for modern designs. Since MOSAIC airplanes will be approved by industry standards (ASTM), they should be less expensive than traditional Part 23 airplanes like the Cessna 182 or Cirrus SR22. Some companies are already working on these mLSA designs (to use Dan Johnson's phrase), in anticipation of this rule. These could come from new players, like the VL-3 from JMB Aircraft, or from established manufacturers—Tecnam, Van's, and Flight Design have all teased future models that seem to be made for MOSAIC. The airplane business won't magically become profitable with these new rules, but it certainly opens up a lot more possibilities.

5. Growth beyond piston airplanes. One of the most embarrassing omissions in the original LSA rule was electric motors, which were never even considered and so were not allowed. This set back the cause of electric aviation by probably a decade, but that has been fixed with the new rule: electric motors are allowed, as are FADEC and fly-by-wire controls. Such flexibility might finally allow for real engine innovation, which has lagged avionics badly over the last two decades. In the process, hopefully light airplanes become easier to start, quieter, and more reliable. It's not just systems that have more room to innovate; there's even the option for multiengine airplanes and helicopters. A Sport Pilot flying a helicopter one day and a 200-knot airplane the next?! That might sound broad—what is the standard?—but it's actually great news. The FAA seems to have learned its lesson with the LSA rule, which tried to be specific about definitions and ended up cutting off access to new technology. With MOSAIC, the approach is focused on using the ASTM process to maintain safety standards but adapt much more quickly as the industry changes. For example, the proposal has

its eye on multicopters with the requirement that all powered aircraft (regardless of type) “must provide the pilot an ability to maintain directional control and controlled descent in the event of a powerplant failure.” How that's done is up to the manufacturer and the industry standards.

Did we win?

Pilots are like field goal kickers on a football team: nobody knows we exist unless we mess up. So it's hardly been a front page story that the LSA rule has been a qualified success. Sure, sales have not exactly boomed and many LSAs airplanes are still expensive compared to vintage models, but at the same time the lack of an FAA medical has hardly caused airplanes to fall from the sky (rest assured, if grandpa has a heart attack and crashes into a school playground, you'll hear about it).

That “no news is good news” result has led directly to MOSAIC, with the grudging but welcome admission by the FAA that light aircraft can be both safer and less regulated. In their own words: “Since the 2004 rule, light-sport category aircraft have shown a lower accident rate than experimental amateur-built airplanes. The FAA considers that the successful safety record of light-sport category aircraft validates certification requirements established in the 2004 final rule and provides support for expanding the scope of certification for light-sport category aircraft and operations.” In Washington, that qualifies as a huge win.

MOSAIC won't be perfect, but it's a major step forward for a segment of aviation that needs a boost. We should all celebrate for just a moment, then get to work building a more innovative and affordable general aviation industry.

Rock Trivia

At the McCartney family house, Paul McCartney and John Lennon had finished writing “She Loves You” using his father's piano in a small parlor room. They auditioned for him. When Paul asked him if he liked it his father said “Yes”, but can't you change it to “She Loves You, Yes, Yes, Yes!” Paul and John looked at each other, turned to his father and politely said, “NO !”



How's Your Oil Temp?

It's been a hot summer and it takes a toll on our aircraft engines. I recently experienced high oil temps on a short flight in my RV-7 upwards of 250 degrees.

In summer I would see 210-215 on climb at my normal climb speeds. On this day nothing I tried helped. It takes a long time to remove excess heat from the oil. My CHTs were all below 380F. It was time to investigate.

I have a Superior IO-360 cold sump forward injected engine. You can normally tell these by the lack of the snorkel on the lower cowling. The induction air is taken off the left forward intake ramp. When I was building I wondered if this was a good idea, robbing cylinders and the oil cooler air for engine combustion?

My engine also has internal "oil squirter" that spray the bottom of the pistons, lowering CHTs but adding heat to the oil. The "cold air induction" moves the induction tubes from the "normal" oil soaked sump, slightly improving engine performance (colder fuel/air charge) but also eliminates some cooling. Today the recommendation is to upsize the oil cooler by the next size if you have the "piston squirter".

I've been flying this aircraft since 2008 and have never had oil temp problems. Lycoming recommends oil temps in the 170-220 degree range. Until this flight I never had an exceedance. The oil pressure was also lower around 63 psi due to the oil higher temperature..

Something changed and it can only be a few things. The engine is producing excessive heat mechanically, the ignition timing has changed, oil cooler is stopped up, the Vernatherm is malfunctioning or the temp sender is bad.

I ruled out the engine by removing plugs and hand rotating the prop finding no binding. The oil temp has always indicated correctly and the lower pressure validates the higher oil temp. At 95 degrees temp in the hangar the oil temp was within a degree or two of the CHTs and EGTs indications on the EMS at powerup. I still checked it later. That leaves the oil cooler, ignition and the Vernatherm suspect.

The Vernatherm see Lycoming [SI-1255A](#)

Thermostatic Oil Cooler Bypass Valve

As the warm oil passes around the valve it begins to expand in length beginning at 165F and around 185F it makes contact with a seat. Up until this point, a variable amount of oil is bypassing the oil cooler. Once the ball end seats most of the oil is going through the cooler. The valve reacts to the oil temperature trying to maintain 170 - 185 degrees range.

I pulled the Vernatherm, oil temp sender and the oil cooler. I used some oil in a coffee mug and brought it up to about 230 degrees F in a microwave. Immersed in the oil the temp sender checked good. .

The Vernatherm is about 4 ounces of metal and takes time to react to the hot oil. It lowered the oil temp 35 degrees just heat soaking. I had to reheat the oil in the microwave. Finally, on the next try it opened. I still wondered about it.

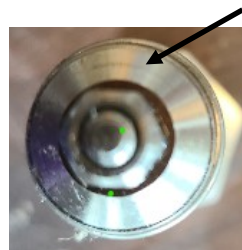


Bypass Position



Fully Extended

The manual calls for max extension of .248" @ 210F and .1894" to seat contact about 185F. The robust spring is on there to take up slack as the valve contacts the seat and act as an oil pressure relief valve. If you look closely at the top of the valve there is a very faint circle where the



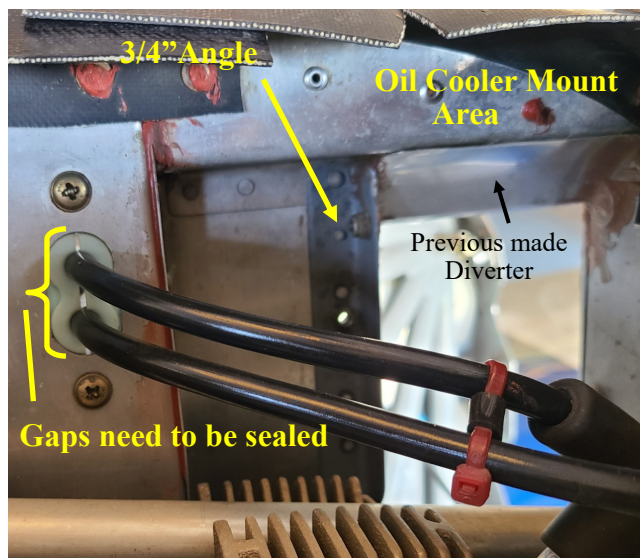
valve is engaging the seat. It should be consistent all the way around. Evidently this has been bypassing oil throughout its life, The valves are expensive, \$499, but I found a NOS on eBay for \$241 delivered.



The oil cooler was emptied of oil. The oil only had 7 hours since the last change and was clean. The cooler was externally cleaned using



mineral spirits and water flushing. It came out looking brand new. I lightly blew some low pressure air between the inlet and outlook and lis-



tened. I couldn't detect any blockage. The Pmag ignitions were checked and retimed.

I never liked the inside of the baffles where the cooler mounts. Originally, I added a 3/4" angle to fortify the baffle area at the inboard attachment of the cooler that was prone to cracks. This created a small dam to smooth airflow which needed correction.

I used a manilla folder for a rough template and then cut and mutilated a piece of Alclad .032 aluminum to cover the area. It attaches using the

spark plug wire passthrough screws and two new flush screws through the angle into nutplates on the air diverter. It was a tight place to work.

The part needed some gentle "massaging" but very little metal removal for a good fit. The most challenging area was marking the inside nutplate locations. Above the cooler open area I originally installed a small curved piece to slick up the airflow. This was fastened with a #8 screw



and nut. I match drilled the upper hole for the new diverter new part to this.

It helps to use a flashlight behind baffles to look for leaks and seal with High Temp RTV. Even a tiny hole can pass a lot of air at high pressure

Safety wiring the Vernatherm and oil sender

inside a narrow area was difficult. I did this before installing the cooler. I have a pair of these twist drivers which allow you to get into tight places to safety wire. You simply slip the safety wire through the holes and twist.

The [Yardstore](#) sells a 6" and 18" set for \$14.

This is a 3" hex and there is also a 6" from [ATS Aircraft Tool Supply](#) for \$8.75 and a 6" for \$9.75 For the money you can't go wrong. Shipping with both companies is free with a \$100 purchase.





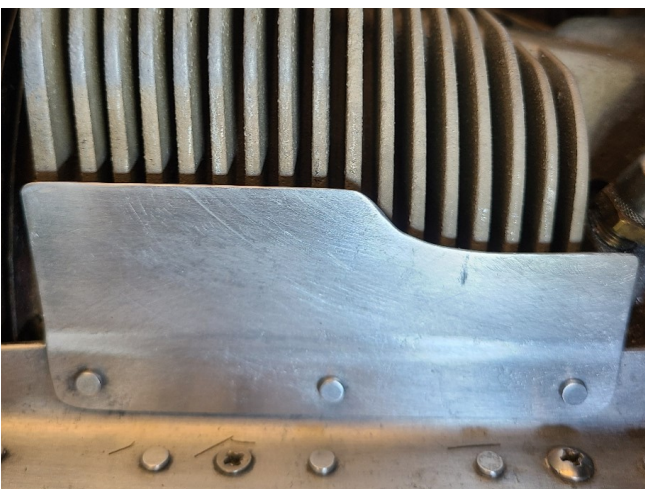
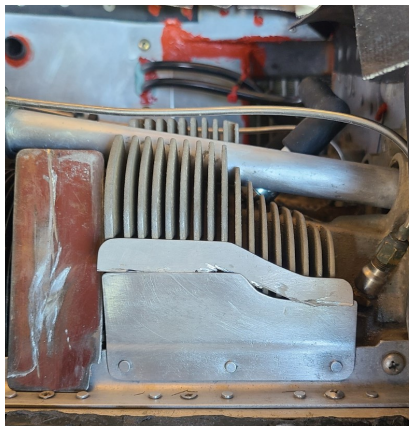
I'm almost done! On our Lycosaurus 360 and 540 engines we have an issue on getting cooling air to the bottom of the number 3/5 cylinders. On these aft cylinders we bolt a baffle to the backside where there isn't any fins. We need to create a gap for air by placing a washer or two in between the baffle and cylinder head. This allows additional airflow to the underside of the cylinder. That normally alleviates the problem.

What is overlooked by many is the baffle attached to the #2 cylinder up front on the pilots side. It's the same cylinder as 3/5 just located on the opposite side, now turned around. You guessed it no fins here on the front either. This area needs a spacer to create a gap also.

We also may have an "air diverter" plate on both the #1 and #2 cylinders up front that bypass some of the air around the front cylinders to the rear cylinders and oil cooler.

These may need trimming if necessary to allow more cooling air for these cylinders up front.

My #2 cylinder was always the warmest, not terrible just hotter. I decided now was the best time to give it a little more cooling. With a Dremel cutoff wheel and a piece of steel to protect the cylinder I sliced about 1/2"



off the plate.

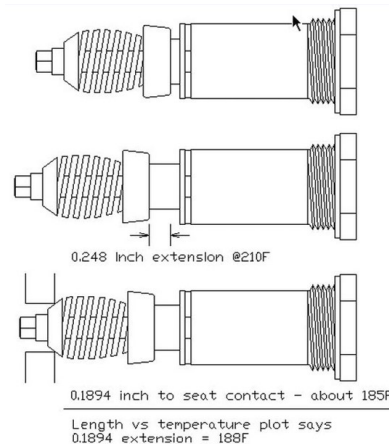
You need to be careful not to remove too much material. This would be a lot of work to replace. I figured a skinny finger width would work.

So is the plane fixed? Well yes and no! I waited till the afternoon temperature peaked at 94 about 1530. At takeoff my oil temp was already 150. Remember from earlier, that the oil is bypassing the cooler until around 160 degrees. I climbed out and settled into my 120 kts speed allowing good cooling. I climbed to 6,500' at full throttle and 2,500 rpm. The oil temp remained below 220 degrees. On level off it slowly came down to 190 degrees only dropping 1 or 2 degrees per minute. The bottom line is I don't trust the Vernatherm

The OAT was 89 degrees at altitude. The heat soaking affect lasts for quite a while. My highest CHT was 375 on #3 so trimming the metal air dam helped #2. I have ordered a new Vernatherm. I'll install the new one and confirm my results. John

Addendum to Vernatherm

Imagine a steel thimble filled with a hydrocarbon wax, then capped with a rubber diaphragm.



When you warm the closed thimble, the wax expands and the diaphragm pushes outward against a little rubber plug. The plug pushes against a rod that moves the assembly. That's the basic operating principle. Given enough heat cycles and calendar

time, the rubber components get hard. Eventually the verntherm loses its ability to extend.

Lycoming recommends replacement at overhaul

- Valve travel to be a minimum of 0.160" between 150F and 185F.
- Valve should close against seat between 183F and 187F.
- Pressure relief spring force is 15 to 20 lbs when



the seat is pushed away from the nut a distance of 0.050". The result is a cracking pressure of 60-90 psi.

- Seat to sealing surface dimension (for us the bore depth in the oil filter adapter) is 3.280". The seal is assumed to be an aluminum crush washer of 0.0625" thickness.

Reworking the seat may increase the 3.280 dimension and raise regulated oil temperature. A thinner crush washer will reduce regulated temperature but also reduce pressure relief clearance.

John

Thatcher

Currently we are ready to drill the front windshield to the bow and will deviate from the plans. They call for a metal fairing around the base and we will use fiberglass layups. We believe that it will look better, give more strength and better waterproofing. We will use a 3M window adhesive glue along with a few metal tabs to secure it around the front. Since we have our resident "glass" expert, Mark Rogers on hand.

We've both built RV tip-up canopies using the



same process so the decision was easier. I've got plenty of epoxy and glass in the shop,

We also have a seat belt that will get fastened to the attach points inside the turtle-deck via some

cables. We've also started "slicking" the turtle-deck making ready for finalizing the tilt canopy installation. We're probably done with the epoxy/micro balloons and can use some quality body filler on small imperfections. The elevator counterbalance ribs are also ready for "glass" tips.

John



Thatcher Center Section Long Time Ago!





2023 Officers and Committee Chairmen

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Tech Counselor

Flight Advisor

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

EAA and Local Chapter Sites

[EAA 485](#)
[EAA HDQTRS](#)

[EAA 1265](#)
[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



Visit our website at eaa485.org



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

Ralph discussed our new dues system moving to a calendar year system. For our current members to finish out 2023 the dues are \$15. Paying \$40 dollars will have you paid up through the end of 2024. For new members the annual dues of \$25 will be pro-rated at \$2 per month.

Scott Swanson can answer any questions you may have. You can also just mail a check made out to EAA chapter 485 Here is his contact info:

Scott Swanson
711 Marlinspike Dr
Pensacola, FL 32507
(309) 267-9710

Something tells me that a roadrunner and a coyote were somehow involved.



“What would we do without Drano?”

Chapter Meetings:

September 9th, 2023 at 1000
VMC/IMC Club at 0830-0930.

General Membership Meeting 1000-1100:

- Pledge
Guests
Ray Scholarships Update – Craig Spoke
Young Eagles – Eric Goldman
Officers Reports: President, Vice-President, Secretary/Treasurer
Member Build Projects Update
New Business
Guest Speaker – Mike Vaccaro, 2018 EAA Founder's Innovation Prize Winner and 2021 Founder's Innovation Prize Grand Champion
Adjourn

Cheeseburger Lunch (\$5 donation requested)

Next Chapter Meeting Sat, Oct 14th.

Guest Speaker TBA

Upcoming Events:

CHAPTER EVENTS IN CAPS

- Oct. 4 0800 CDT - UW- Oshkosh Dorm
Reservations Open for Air Venture 2024
Oct 21 485 FALL YOUNG EAGLE RALLY
Oct. 28, Girls in Aviation Day (National Aviation Museum Atrium) 10:00AM-3:00PM

Fly-Ins

- Tripple Tree Fly-In SC (SC00) Sep 18-24
Trent Lott Airport (PQL) Oct 3rd 1200-1600
Thomasville GA (TVI), GA Fly-In Oct 13-15
Lucedale, MS (22MS) Oct 27-28

South Mississippi Light Aircraft Fly-in If people want to camp Burgers and Dogs will be provided for Friday night. Saturday there will be food from one of the local churches. This is a private Grass Strip (3000 X 75) about 19 miles Northwest of KMOB it is in great condition, CTAF 122.9. It is owned by Ronnie and Morris Smith of SMLA.