

Editor: Frank Huber | Layout Editor: Frank Huber

The President's Flight Deck

It is hard to believe it is nearly the end of February already! Our Chapter has been busy with pancake breakfasts, Explorer events and of course Young Eagle events. I hope you are able to attend some of those events and more important, volunteer at them. We will meet in person for our February Chapter meeting. Social and dinner hour begins at 6:00 PM, followed by our business meeting at 7:00 PM, and either a guest speaker or social hour at 8:00 PM. Please bring a fellow aviation enthusiast with you!

Many thanks to Chapter members who have renewed their memberships! Keeping your membership up to date minimizes the work load on our membership committee, let's keep them happy! We still have about 30 members who have not renewed for 2023. On March 31st those members will be moved to inactive status. Memberships can be renewed on our website, or in person at a Chapter meeting.

The Board met recently and picked June 3rd as the day for our Burger Bash fly-in fundraising event. The D.A.D. event will not happen this year so we would like to make our event larger than last year. We have a couple of ideas in mind, but would like to hear from our members on ideas they may have. There will be plenty of volunteer opportunities for this event, so mark your calendars now.

Our culinary coordinators, Deb and Al Patchin, have indicated they would like to start transitioning their aprons to some new cooks. Please let me know if you are interested in heading up the Chapter meeting kitchen duties. This position can be shared by multiple individuals, and we always have some volunteers to assist with setup, cooking, cleanup, etc., so this role does not need to be a singular responsibility.

Dave Peterson is also looking for some volunteers to help him with his IT duties, and eventually assume full responsibility. Let me know if you are interested in helping with this responsibility.

I look forward to seeing you at the next Chapter meeting. Please invite a friend or neighbor to our next Chapter meeting or event, and introduce them to the wonderful world of aviation. *Kevin*



YOUR CHAPTER BOARD OFFICIERS

Kevin Sislo, President Ellen Quist, Secretary Charles Jasicki, Director Robert Henkes, Vice President Mark Heule, Treasurer Michael Grzincich, Director



Contact the Board at: board@eaa237.org



The chapter held another successful Young Eagle event on Saturday, February 18. The sun was shinning, the temperature was moderate and the ramp was clear of the ice and snow we saw in January. Twenty-nine young people went flying on their Young Eagle rides. There were seven young women and twenty-two young men who went flying. Andy Geppert, Joe Gmitter, Michael Grzincich, Mark Heule and Mike Miller flew a combined seventeen flights during the event. Once again we had great support on the ramp and with the registration.

Michael had a group of twenty Girl Scouts scheduled for Monday, February 20, but had to cancel that event because of IFR forecast weather. The chapter will be holding the March Young Eagle event on Saturday, March 11 from 9am until 2pm. As always we can always use more volunteer pilots and ground support people. Come on out and enjoy watching the young people be exposed to the fun of aviation.













2023 Ray Scholar Cody Philippi flew his first solo flight on Sunday, February 12 at the Princeton Airport. His instructor, Kai Lee says he has been working hard to prepare for the PPL written test and coming well prepared for his flights.

JJ Runde is still trying to get his PPL check ride completed. He has been shut out seven times due to weather and other things.

Sawyer Hahn was ready to solo on Saturday, February 18, but a Civil Air Patrol annual qualification had lapsed. He did the course with his instructor, but they were unable to get the required sign off from the person in charge of that qual. So he is hoping, weather permitting, to solo next weekend.





Chapter 237 Aviation Explorer Post Tours FedEx Operations at MSP









In February, the Aviation Explorer Post toured the FedEx Ship Center / Aircraft Operations facility at the MSP airport. The consensus for all attendees was "Wow. I had no idea all of that went on right there!" The tour began on a dark and cold evening in the main lobby general package drop-off area. Our tour guide was Dennis Doty, Senior Manager for Ramp Operations. The first stop on our tour was a large, second floor conference room lined with windows on two sides. Even though it was dark outside, the view was impressive. Almost all of the approach and arrival activity is spread out like a wide screen TV across the windows. It was obvious that we were "on the airport."

After the introduction, we moved through the entire warehouse and watched some unloading and sorting take place. Watching a cargo container being packed with boxes was like seeing Tetris happen in real life. Then the massive containers were pushed and pulled around the floor which consists of hundreds of shopping cart wheels placed upside down. We quickly learned to watch our steps carefully as we moved about.

The grand finale was an opportunity to explore an empty 767 just prior to loading. It was destined to be loaded about an hour after our visit. Again, the floor was lined with wheels so the containers could be slid into position. The floor also had several locking points (red in the picture) spread about. Dennis told us that each of those little tie-downs were about a thousand dollars. He also mentioned that had something to do with why next-day-air packages are so expensive to ship from a consumer perspective.

The Explorers were pretty unanimous that getting to sit in the flight deck was the best part of the whole tour. It was the most expansive flight deck I've ever seen, with three jump seats, a lavatory, and still room to walk around.

The origin story of FedEx is interesting. The founder wrote a paper about the concept while in college. The response to the concept in the paper was not overwhelming. But he believed in the concept pursued it. And now everyone knows the value of it! https://www.fedex.com/en-us/about/history.html

The Aviation Explorers have also been making some good progress on their model airplane build. We hope to see it fly this summer. On behalf of the Explorers, thank you EAA 237 for the support and providing a great place to meet! by Andy Geppert



Cab icing leads to forced landing for student pilot <u>https://generalaviationnews.com/2023/02/06/carb-icing-leads-to-forced-landing-for-student-pilot/</u>

The cure for get-there tis: FAA's 57 Seconds to Safer Flying https://generalaviationnews.com/2022/11/28/the-cure-for-get-there-itis/

AIR FACTS

The journal for personal air travel- by pilots, for pilots

An airplane that no longer wanted to fly By Matt Keane

https://airfactsjournal.com/2023/01/an-airplane-that-no-longer-wanted-to-fly/? trk_msg=6l8FC6GMGLC4N2TTJCPFKTMO3G&trk_contact=RMPCRR64F9CCIR5GOMICQNF7 OC&trk_sid=NPUVFO20U0NQ2NGSLG8I4QN6FS&trk_link=223QMI5ULD64DAMGRMIPI7DU70 &utm_source=listrak&utm_medium=Email&utm_term=An+Airplane+That+No+Longer+Wanted+t o+Fly&utm_campaign=F23015A&utm_content=North+to+Alaska%2c+An+Airplane+That+No+Lo nger+Wanted+to+Fly%2c+Go+or+No+Go

When an Uneventful Flight Turns Eventful By Mark Vanderpool

https://airfactsjournal.com/2023/02/when-an-uneventful-flight-turns-eventful/

boldmethod

When Should You Use Trim? https://www.boldmethod.com/learn-to-fly/systems/how-pilots-should-use-trim-in-flightphases-climb-straight-and-level-turns/

Quiz: Can you answer these 5 VFR cross country Questions?

https://www.boldmethod.com/blog/quizzes/2023/02/5-vfr-cross-country-questions-can-youanswer-them/

Common Takeoff Mistakes, And How To Avoid Them https://www.boldmethod.com/blog/lists/2022/02/dont-make-these-six-mistakes-on-your-nexttakeoff/

How To Safely Stop During A Rejected Takeoff

https://www.boldmethod.com/learn-to-fly/maneuvers/rejected-takeoff-how-to-safely-stop-on-therunway-and-taxi/

How Do Clouds Form?

https://www.boldmethod.com/learn-to-fly/weather/how-do-cloud-forms/

Why Landing With A Tailwind Increases Your Risk Of An Accident

https://www.boldmethod.com/learn-to-fly/maneuvers/why-landing-with-a-tailwind-can-increaseyour-risk-of-landing-accident-or-incident/



AIR FACTS

The journal for personal air travel- by pilots, for pilots

Go or no go: Appalachian IFR By John Zimmerman

https://airfactsjournal.com/2023/01/go-or-no-go-appalachian-ifr/? trk_msg=6l8FC6GMGLC4N2TTJCPFKTMO3G&trk_contact=RMPCRR64F9CCIR5GOMIC QNF7OC&trk_sid=NPUVFO20U0NQ2NGSLG8I4QN6FS&trk_link=S24QCLNVE1CKV7F7 0BNFF9DP1G&utm_source=listrak&utm_medium=Email&utm_term=Go+or+No+Go%3a+ Appalachian+IFR&utm_campaign=F23015A&utm_content=North+to+Alaska%2c+An+Airpl ane+That+No+Longer+Wanted+to+Fly%2c+Go+or+No+Go

GENERAL AVIATION NEWS

I can't believe I just did that By Bill Bond https://generalaviationnews.com/2022/12/26/i-cant-believe-i-just-did-that/

boldmethod

6 Things Every Pilot Should Know About IFR Fuel Planning https://www.boldmethod.com/blog/lists/2023/02/6-things-every-pilot-should-know-aboutfuel-planning/

What's The Maximum Safe Decent Rate On An Instrument Approach? https://www.boldmethod.com/learn-to-fly/maneuvers/what-is-the-maximum-safe-descenton-an-instrument-approach-np/

Can You Fly A Visual Go-Around On An Instrument Approach Clearance? https://www.boldmethod.com/learn-to-fly/regulations/instrument-approach-clearancedoesnt-allow-a-visual-go-around-how-to-do-it/

The Hardest IFR Quiz You'll Take This Week https://www.boldmethod.com/blog/quizzes/2022/01/the-hardest-ifr-quiz-you-will-take-this-week-six-questions/

QUICK LINKS

GENERAL AVIATION NEWS

A Perfectly Pleasing Emeraude By Sparky Barnes

https://generalaviationnews.com/2021/02/11/a-perfectly-pleasing-piel-emeraude/

Editors Note: Kevin Sislo and Mark Heule accepted the Emeraude project that was offered to the chapter last year and purchased the engine parts from the builder. The project needs the wings, controls and fuselage to be covered, which will likely be the next chapter project after the Zenith 701 project is complete and licensed.

Video: A behind the scenes look at the Thunderbirds training for air show season https://generalaviationnews.com/2023/01/28/video-a-behind-the-scenes-look-at-the-thunderbirds-

Five things you don't know about crop dusters By William Dubois <u>https://generalaviationnews.com/2023/01/19/five-things-you-dont-know-about-crop-dusters/</u>

AIR FACTS

The journal for personal air travel- by pilots, for pilots

Freak School: learning to fly at OAK in the 1970s By Drew Kemp <u>https://airfactsjournal.com/2023/01/freak-school/</u>

FAA Air Safety Introduction to Safety Risk Management https://www.faa.gov/sites/faa.gov/files/2022-01/Intro%20to%20SRM.pdf



WHAT OUR MEMBERS ARE BUILDING, RESTORING AND FLYING

Timothy Aanerud's Zenith 750







Timothy has made great progress since his last update in the April 2020 Windsock on his Zenith 750 project. After getting the fuselage on it's gear, he worked on installing the horizontal stabilizer, elevator and rudder. There's a fair amount of trimming required to get the required range of motion. He trimmed until he had the required 28 degrees of up and down on the elevator and 23 degrees left and right on the rudder. Tim's airplane is primarily plans-only, but he has bought some factory kit parts. Zenith did a re-design on the bubble doors using $\frac{1}{2}$ " square aluminum tubing. He didn't want to try forming the bubble doors so he bought and assembled the doors using the kit parts. All of the $\frac{1}{2}$ " squares tubes come pre-bent. On a 90F degree hot day in July , Timothy drilled the plexiglass bubble doors. He only had one very small crack after drilling the holes using a plexiglass drill bit.

In July 2020 he placed an order for a ULPower UL-350is engine and the factory firewall forward kit. The UL-350 is a direct drive 130 hp fuel injected four cylinder horizontally opposed engine made in Belgium. It has an Engine Control Module that can interface with the various brands of avionics. It's uses a single knob control, just a throttle with no mixture control. It will run on 93 Octane Auto Gas with up to 15% ethanol or 100LL. Tim was hoping the engine would arrive by mid-September when Zenith Aircraft hosts its annual home coming event in Mexico, Missouri. The engine had not arrived yet so he came home from the Zenith event with only the firewall forward kit. There were enough parts in the FWF kit to keep him busy until winter set in. Tim has been building his airplane in $\frac{1}{2}$ of his unheated garage. Because of the cold winters here in Minnesota, he wanted an engine pre-heater system for the engine. When the engine finally arrived in Missouri, Tim had it shipped directly to Tanis Aircraft Products in Glencoe, MN. Tanis didn't have a pre-heat system for ULPower engines so when he offered them his engine to develop a product, they accepted his offer.

Tim says the internet and builder's forums fill your head with all sorts of ideas. Shiny is always nice, so Timothy sent his nose gear out for polishing and had it nickel plated. He bought a new slightly larger nose wheel fork from Zenith that can handle a larger 8.00 x 600 aircraft tire. He used the AP Aircraft Metal Polish system to shine up the nose wheel fork. Tanis returned his engine in the spring of 2021. He quickly got the engine hung on the engine mount. His attention then turned to a carbon fiber cowling that he had seen in builder's forum and to a propeller. The cowling that he bought sadly didn't fit correctly. It was too short so he had to extended it because the designer thought the engine mount was quite a bit shorter. The UL-350is weighs 176 pounds according to the factory. The main 4130 tubes engine mount tubes are 25 inches long so there's lots of room between the firewall and the engine.

hile pondering what to do about the cowling, Tim installed 3/8 5052 aluminum fuel lines and started making decisions about avionics. His plan is to use Garmin 3X touch because he likes the way they work. He has an instrument rating and I wants the flight director display to be straight in front of his eyes. Unfortunately placing either the 7" or 10" display means the upper corners don't fit inside of the instrument plan, so he designed his own instrument panel so the avionics will fit. That required placing the fuselage forward top skin between the instrument panel and the firewall.

Tim's propeller arrived in October 2021. It's an Airmaster electrically in flight adjustable two blade propeller with feathering capability. The propeller blades are made by Sensenich. Airmaster modifies the normally ground adjustable propeller blades to work with their servo-controlled hub. This decision means my aircraft can not be Light Sport Aircraft since adjustable props are not allowed on LSA's. In the fall of 2021, he decided the best way to resolve the cowling problem was to add material to the cowling as opposed to adding more metal forward of the firewall. Three layers of carbon fiber cloth and epoxy made a 11-inch extension. More than half of that was cut off, but he didn't want to do this twice. Jeff Mullen used Skybolt 1/4 turn fasteners on his Pegazair so after seeing this installation, he chose to use this system for his cowling fasteners too. After getting the cowling attached, Tim ran into the next cowling road block. The oil cooler he is using didn't fit in the space provide. He talked to the cowling designer at Sun 'n Fun 2022, who said he had several oil cooler extensions that could be grafted on to the cowling to make his cooler work. Tim's upholstery arrived after 11 months of waiting in March 2022. They were made by Lemke Autosattlerei & Möbelpolsterei of Karlstadt Germany. Several builders on the Zenith builder's website have used their seats and he liked what I saw. Lemke was able to do a custom stitching pattern for the center of the seat and for the pockets of the side panels. He chose to use FAR 25.853 certified leather which is the FAA Air Transport standard for flammability.







Other miscellaneous task Tim has been working on is mounting hardware for landing/taxi lights that will mount into the wing, and brackets to install the ELT and auto pilot servos. The oil cooler door has taken a few tries to get to work correctly. Tim's custom cowling is using the hinges of a Van's RV-12 oil cooler door with a Cessna style latch. The wait list for Stein Air is rather long too. Tim has finally reached the top of the initial design process. After a few iterations with a designer, his panel design is finalized. He is waiting for the next phase to begin which triggers writing a check. By the time the instrument panel is wired up and working, Tim will have firsthand knowledge of what is said on Stein Air T-Shirts. We're not happy until you are broke. Tim's project is shaping up to be a very well built and capable aircraft. By Frank Huber











Thoughts on Flying a Successful Emergency Landing

Former Naval Aviator, air crash investigator and high-performance aircraft flight instructor Jeff Edwards wrote the following about engine failures and off-airport landings in the January Mastery of Flight Lesson:

The FAA <u>Airplane Flying Handbook's</u> treatment of engine out landings has some serious shortfalls and should be rewritten. Additionally, the FAA discourages pilots practicing these skills from descending below 500 feet AGL. This in turn has an unintended consequence. **Below 500 feet AGL is where the true test of the pilot's skill in this endeavor resides**. Sticking the landing spot (as we see in the Olympic gymnastics) is critical. Too fast, too high, too low, too slow brings bad results-- loss of control or collision with objects.

The best instruction that I have seen was the [U.S.] Navy T-34B NATOPS manual discussion of this subject [in Section 5]. I have used this as a teaching tool. The NATOPS manual stresses the idea of total energy (TE) management: kinetic energy (KE) and potential energy (PE) by illustrating the "key" points in the maneuver (high key and low key). The pattern is NOT a rectangular pattern as shown in the FAA's *AFH* but rather a racetrack turn adjusting for wind. The Navy pattern (and I am sure the Air Force teaches it as well) is the same pattern the space shuttle used albeit with higher key points.

Common errors: The FAA's rectangular pattern leads many pilots to extend the downwind as they normally would in a regular traffic pattern and then they end up too low turning base leg. If they turn prematurely they overshoot the landing zone. **Most have no idea what altitude they need to be at to begin the maneuver** and that is half of the PE+KE=TE equation. Another common error that GA pilots make in practicing this maneuver is they cannot properly visualize the nearly 6-degree glide slope required because they are used to seeing a 3-degree slope.

Editors notes: Practicing this maneuver in your aircraft is a great idea to help ensure you can successfully handle an engine failure situation. As a starting point to establish the best Low Key altitude for your aircraft, you can practice some power off approaches using a planned touch down point a couple centerline marks down the runway. This will give you room to safely fly a power off approach to touchdown so you can see what adjustments you need to make. We all typically use some power during our normal approach and landings, flying a normal 3 degree glide slope. Like Jeff Edwards points out in the above article, a power off approach is going to be more of a 6 degree glide slope. I can attest from my recent practice, it is significantly steeper, which means you have to fly a much tighter approach to make it work.

Also from the diagram, you can see the Navy flies a continuous turning approach off a tighter180 point, adjusting the angle of bank to roll out on final. I recommend doing this at an uncontrolled field to facilitate practicing a tighter approach without busy traffic causing an extended downwind. Speed control is important throughout this maneuver. With an engine failure you should be at best glide speed for your aircraft.

Because this approach is much steeper than normal, your rate of decent is going to be significantly higher than normal. With most aircraft, the first notch or two of flaps allow for a lower stall speed with increasing drag. The full flap setting will normally just give more drag. Because you have no power to add if you get low, you have time full flaps when you are sure you have the field made. Because of the steeper approach, higher decent rate and no power, the round out to the flare will be different. After you have this approach figured out, try beginning at a higher altitude near the field and fly to the correct Low Key on speed to a successful engine out landing. Frank Huber



CHAPTER 237 COMING EVENTS

*Chapter Meeting on Monday, February 27 beginning at 6pm with dinner, meeting to follow at 7pm *Aviation Explorer Post meetings Friday March 3 and 17 beginning at 7pm at chapter building *Chapter Aviation Social Breakfast Saturday, March 4 from 7:30am until 11am *Young Eagles Event at Atlantic Aviation on Saturday, March 11 from 9am until 2pm *VMC/IMC Meeting on Tuesday, March 21 VMC begins at 6:30 pm and IMC at 7:30 pm *Chapter Meeting on Monday , March 27 beginning at 6pm with dinner, meeting to follow at 7pm



Short Take Off & Landing Competition Series

Isle Private MY72 will host a National STOL Series event Friday, Saturday and Sunday July 7-9 2023.

Activities will include STOL practice on Friday and STOL competition Saturday.

A free concert Friday night featuring Rhett Walker

Aerobatic practice featuring US National Aerobatic team members Craig Gifford and Britt Lincoln.

The annual Pancake Breakfast fly in/drive in will also take place Sunday morning.

Weekend under wing camping is available, stay tuned for the final schedule and weekend parking/ camping costs.https://www.rhettwalker.com/

For more information on tickets visit: https://nationalstol.com/2023seasonschedule/

On The Lighter Side





Brain: I can see you're trying to sleep. Can I offer a selection of your worst memories from the last 10 years

#KJshow



"Hey, it's good to see you again. That medicine must have worked!"





"I've crunched the numbers in your retirement account. It's time to figure out who will be wearing the mask and who will be driving the getaway car."

Followed this Chinese Balloon for 150 miles.....turned out to be bird shit on my windscreen.



The distance it takes for me to forget a number between 1 and 10



MY KIDS LAUGH BECAUSE THEY THINK I'M CRAZY.

I LAUGH BECAUSE THEY DON'T KNOW IT'S HEREDITARY.

Why were we told to lower our AC usage on hot days to prevent overwhelming the electric grid while simultaneously being told to trade in our gas cars for electric vehicles ?

Is this a great description of America: Andy has left town and Barney is in charge?

In future Windsock editions, I plan to showcase aircraft that our members are building, restoring and flying. Please email me with the aircraft you are building, have completed building, are restoring or have purchased and are flying. I will follow up with you to provide a questionaire and will come out to take pictures to include with your article.

If you have a story or photo you would like to see in our newsletter, contact Frank Huber | eaap51@comcast.net | 763-245-0170

To view past issues of The Windsock, visit www.eaa237.org and select newsletters.

