THE WINDSOCK

JULY 2021

Editor: Frank Huber | Layout Editor: Deb Huber

The President's Flight Deck

Happy July to all chapter members! It is hard to believe but AirVenture is happening this year! We have many members planning to attend this year, which will make the event even more enjoyable. I look forward, each night at the campsite, to hear the exploits of the day from chapter members. This year Kirk Fjetland is spearheading a disco party on Tuesday and Friday nights. Be sure to invite friends to this event! Thursday evening is our annual spaghetti feed, so be sure to bring an empty stomach! Friends are welcome as well as we won't turn anyone away!

Our recent fly-in event was a success for a couple of reasons. We generated some income, which is always nice, but we proved we can host an event other than a pancake breakfast. We had attendees fly in from as far away as Rochester, and drive in from Georgia! OK, that couple was visiting family members in the area and came out for lunch. The event did identify a few bottlenecks that we can correct for future and larger events. So it was good to find them now rather than later! Thanks to all who helped plan and worked the event. A special thank you goes out to Bryan Orr and his staff at Lynx, which let us use the ramp space in front of their building.

Many of you may have heard about the recent FAA rule requiring a LODA, or Letter Of Deviation Authority in which compensation for flight training in limited category, experimental category, and primary category is received or provided. You may think this is just a formality to get approval to do so. However, the reach is quite broad in that there is no guarantee the LODA will be issued, as each situation is evaluated independently. This may mean you can't receive flight instruction in your homebuilt, which you planned to do since aircraft insurance companies often require a check out. It may also mean a flying club will need a letter for each participant that uses an experimental plane, such as our up comng flying club utilizing the CH701. I won't pretend to be an expert on the rule and you can view the rule here in the Federal Register. If you are attending AirVenture, I encourage you to visit the EAA, AOPA, and FAA booths and express your concern and displeasure with this rule and it's potential to reduce safety training in your aircraft. I also encourage you to contact your congress person to have the rule revoked.

I will be at AirVenture for the entire week, so please stop by our chapter camping area and say hello to me, and your fellow chapter members! And as always, introduce someone new to Aviation. *See you at AirVenture!! Kevin*

CHAPTER 237 BLAINE, MN EAA

YOUR CHAPTER BOARD OFFICIERS

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

Contact the Board at: board@eaa237.org

EAA CHAPTERS GOLD 2019

boldmethod

9 Things You Should Do If You Suspect A Radio Failure by Corey Komarec

What Makes An Instrument Approach Unstable? *by Swayne Martin*

GPS vs. DME Distance For IFR Flying *by Nicolas Shelton*

EAA IMC CLUB

EAA VMC CLUB

AIR FACTS
the journal for personal air travel—by pilots, for pilots

Go or No Go: summertime in Florida *by John Zimmerman*

boldmethod

How To Safely Stop During A Rejected Takeoff

10 Ways To Perfect Your Landings

Quick Links

boldmethod

8 Ways To Make Your Flight Lesson More Efficient If you are taking lessons or are planning to, these common sense ideas will help you make better use of your instruction time and quicken the pace of your progress.

AIR FACTS
the journal for personal air travel—by pilots, for pilots

If you are thinking about learning to fly, you might find this piece inspiring!
How flying saved my life *by Andrew Skattum*

An unexpected cross country challenge *by O.C. HOPE*

Two churnin' and two burnin' – who's the PIC? *by J.D. LODATO*

Really short and really soft fields—flying C-123s in Vietnam *by Ralph Grigg*

EXPERIMENTAL AVIATION

continued from June Windsock
by Jon Swenson

A unique design element in the original conventional gear Q is the very large canard situated in front of the center of gravity and low on the fuselage with the main gear at the tips of the canard. While the main wing is about the same size as the canard, it is mounted behind the CG and high on the fuselage. In the Tri Gear version on takeoff the main wing forces the nose down making it hard to rotate. To counteract this tendency the ailerons' are fitted with a "reflexor" trim system. On takeoff adjusting the reflexor up reduces the lift on the main wing allowing the canard to lift off first.

The Continental 0-200 engine is the preferred engine for this model. But due to my financial constraints and my sense of adventure I decided on installing a air-cooled Corvair engine. It is a little narrower, slightly longer and arguably, very similar in weight to the Continental engine that was originally in the airplane. This airframe/engine combination required me to design, fabricate, install and test an engine mount, Intake and exhaust manifolds, fuel system, control cables starter and dynamo mounts and on and on. You get the idea. I was by no means the first to recognize the Corvair as a potential aircraft engine. There is an entire industry of builders that specialize in converting auto engines to aviation uses with the Corvair possibly being the engine most used. After the Corvair engine was flown in a wide variety of airframes, some problems were discovered. In higher speed airframes (like the Quickie) some pilots had experienced crankshaft failures. It was determined that the side loads caused by the propeller were causing the cranks to crack. The first fix for this was to remove the crankshaft and send it to a specialty shop to have it hardened. After losing one crankshaft and a year's time, that company disappeared from the earth. I purchased a second hardened crankshaft and finally got my engine back together.

Unfortunately pilots were still having failures even with the hardened crankshafts. In the Corvair engine builders' community a solution for this problem was developed. This involved installing a large "fifth" front end bearing to counter the propeller loads. The bearing, housing and install kit cost a thousand dollars and several months of waiting but eventually I completed this modification. After I had installed the Fifth bearing in the engine the manufacturer of that part determined that it could fail in temperatures below 50 degrees F. That's a problem living in Minnesota. To strictly follow this rule my flying season would be curtailed.

After investing many years in developing all the necessary modifications to the airframe to use the Corvair engine, I now would say I traded time for dollars by making this choice. If I had stayed with the 0-200, I could have been ready to fly much sooner. Would I have had a better airplane? Maybe or maybe

not. I think that, having invested so much development time in the project, I became much more knowledgeable and discovered many issues that weren't obvious to my less experienced eye.

Some of these were minor; a couple would have been dangerous. Other issues that I discovered came with the plane when I bought it: the instrument panel was poorly fabricated and without instruments so I designed, fabricated and wired a new one. The front gear leg had failed in the first flight of the previous owner so I replaced it with a newer, seemingly more robust gear leg, yoke and mount. The right aileron and the vertical rudder where incorrectly installed. The elevator torque tubes exhibited inferior fabrication and welding so I remade them. After correcting these problems I felt that, though not perfect, the airplane was ready to fly. I could work out the final details in the testing process.

After fifteen years of this project (intermingled with all the normal life responsibilities that vie for your time) I achieved an initial airworthiness certificate from the FAA and a test flight area. In preparation of my first flight I began ground testing. This revealed a number of issues that had to be corrected. The first I addressed was in the fuel system. I had bought a MS3PP Marvel Schleber carburetor that had an automatic mixture control that caused the engine to run excessively lean. I tried adjusting this but was never satisfied. Eventually I replaced it with a MS3PA model with a manual mixture control. The next problem I addressed was the engine over heating. This too is a common problem when combining an untried engine combination with a different airframe. I had designed and built the cowl myself and had installed air plenums on the engine. Not having the engineering experience required to work this out on paper or computer beforehand, I used trial and error to resolve it as well as I could at this stage of testing. Jon's story will be continued in the August Windsock.

GREAT READS for the Aviation Enthusiast

The Memphis Belle *by Mennno Duerkson* | The real story of the most famous war plane of WWII.

Target Polesti, A View from the Bombsight *by Leroy W Newby*

Double Strike | The Epic Air Raids on Regensburg and Sweinfurt *by Edward Jablonski*
On August 17, 1943, Mission 84 of the Eight Air Force became one of the costliest and bloodiest air battles of WWII.

EAA237 COMING EVENTS

- Aitkin Airport (KAIT) wild rice pancake breakfast Sunday, August 8th, 8 a.m. to noon.
- Milaca Annual Fly-in pancake breakfast Sunday, August 8th, 8 a.m. to noon.
- August Young Eagles Event will be held on Saturday, August 14th at the Lynx FBO from 9 a.m. until 2 p.m.
- Mankato (KMKT) EAA Fly-in Breakfast Sunday, August 15th, 7:30 a.m. to 12:30 p.m.
- Moose Lake (KMZH) Fly-in Pancake breakfast Saturday, August 21st, 7:30 a.m. to 11 a.m.
- Boyceville (3T3) Fly-in breakfast Sunday, August 22nd, 7 a.m. to 11 a.m..
- August Chapter meeting to be held at the chapter building on Monday August 23rd, food at 6pm meeting at 7pm.

Michael Grzincich
Young Eagles Coordinator

The Chapter held another successful Young Eagles event on Saturday, July 10 on a very beautiful weather day. Six pilots, Andrew Geppert, Joseph Gmitter, Michael Grzincich, Frank Huber, Mike Miller and Zachary Zweifler flew thirty-two Young Eagles. They were assisted by a ground crew that included, Bob Henkes, Ken Erickson, Kieran Dostal, Scott Nelson, Mark Huele, George Wollenborg and Aviation Explorer post members Joe Van Norman and Elijah Durkin. Our next event is scheduled for August 14 at the Lynx FBO beginning at 9am until 2pm. Here is a link you can send to friends and family members, who may have a child ages 8 to 17 interested in getting a free Young Eagles flight: https://youngeaglesday.org/?2288. As usual, we can always use more aircraft and ground crew volunteers.

CHAPTER FLIGHT SIMULATOR

Dave Peterson gave me an introduction to the operation and features of our chapter flight simulator this week. Dave, Michael Grzincich and Dick Pugh have created an outstanding system that we can use for practicing and learning new flying skills, such as instrument flying.

The seat, yoke and rudder pedals are all adjustable to fit every pilot. There is a touch screen display directly in front of the yoke that you can use for moving switches, making selections on the radios and doing all the things you normally would do in a real aircraft. The wide angle, three screen HD visual displays give you a real life flying experience. They also have provided a throttle/mixture control device along with a Cessna trim wheel to the right of the display, so you have the real feel of throttle and mixture control and manual trim. Additionally, the yoke has a thumb control trim switch you can use, if the the aircraft you have selected is similarly equipped.

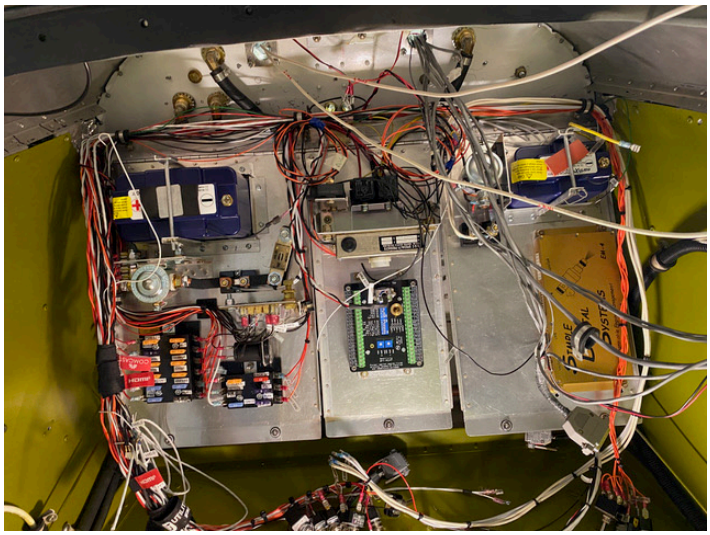
To help with doing pattern work, they added a Visual View control panel to the right of the throttle quadrant. This allows you to look back behind the aircraft to make your turns to the base leg. Additionally you can have the screen looking at the whole aircraft from the side, behind or above, so you can review the last maneuver you just flew. There is also a knobster control knob, that allows you tune radios on Garmin equipment with two concentric controls.

The simulator software is very powerful, with multiple aircraft to pick from, great visuals and the ability to build in weather conditions for instrument training and proficiency. You can also record your flight for later review. Dave is working on tweaking the feel of the controls, making an operating checklist and training guide for users and finalizing the start up/password protocols. I am certainly looking forward to a full checkout, so I can use the simulator for instrument proficiency and just fun flying. We owe our simulator team a great deal of thanks for a job very well done. *by Frank Huber*

ZENITH 701 PROJECT UPDATE

We made significant progress on the Zenith 701 project this month. The cockpit painting was completed in an Olive Green color, that will go well with the Army Drab Green exterior. We installed the three system shelves and did an initial install of the instrument panel in order to get the length of the throttle cables and to check for clearance of those cables. Now the process of hooking up all the electrical connections, the electronic engine controls and the engine monitoring connections has begun.

Once those are completed, the instrument panel will be hooked up and installed. This will lead to the first engine run followed by the fine tuning of the engine. The windshield needs a little repair and will then be installed. We have made great progress and a late summer first flight is looking very possible. If you are interested in seeing the project, feel free to stop by any Monday or Wednesday between 9 a.m. and 2 p.m. at Mark's hangar at 2155 Kansas on the south-west side of the field.



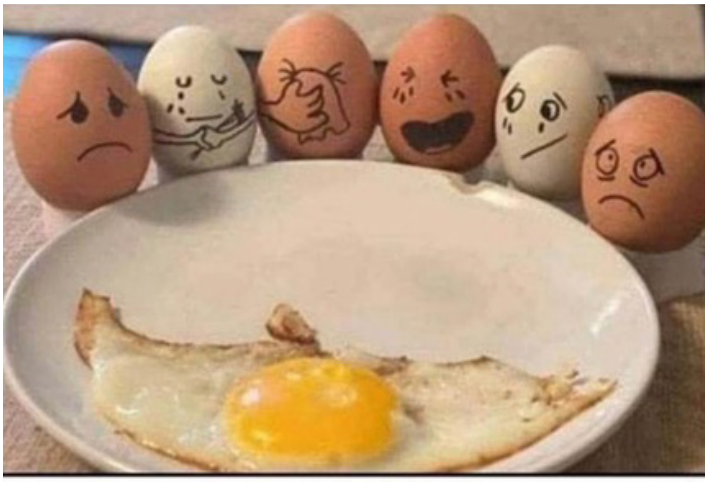
amazon Smile Donations

Do you purchase items on Amazon? If so, please consider using Amazon Smile for your purchases as our chapter is a supported non-profit organization. You pay exactly the same price for your purchase, and our chapter receives a .5% donation from Amazon. To use this service, simply choose https://smile.amazon.com while searching for your next purchase. When asked for the charitable group, enter *Chapter 237 Experimental Aircraft Association* and it should appear. You can use this service with your existing Amazon account. Here is a link for additional information on how to use this service on all devices: https://smile.amazon.com

Financial and Property Donations

As an educational entity, Chapter 237 reminds you that we are a 501 (c)(3) corporation and gladly accept donations to promote aviation education to our members. For additional information please contact EAA 237 treasurer Mark Heule at treasurer@EAA237.org.

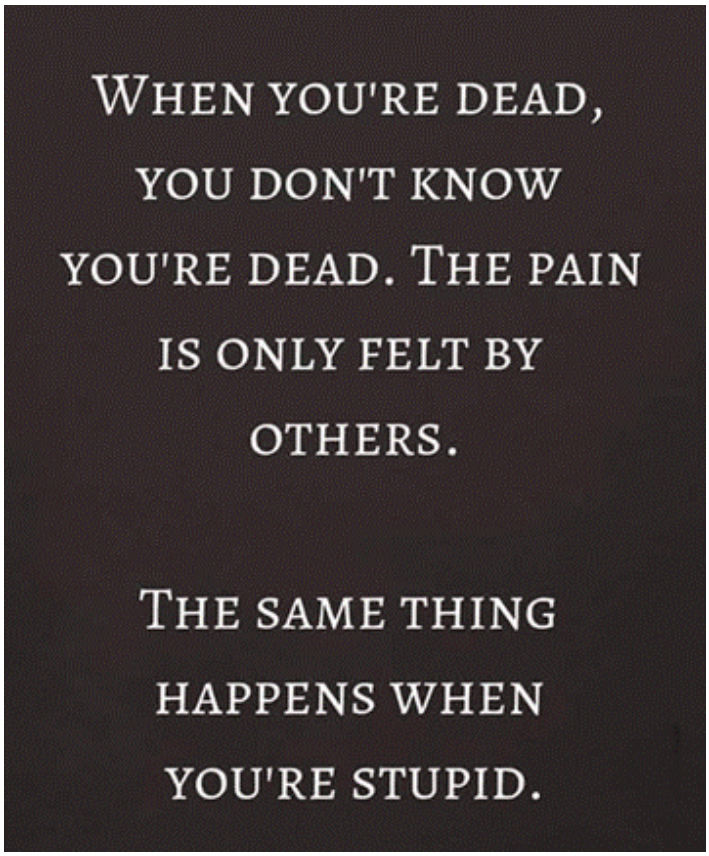
On The Lighter Side



He died last fry day. Thank God he wasn't beaten. Don't worry, he went over easy. He's now on the sunny side. He's definitely in a better plate.

Everything will kill you

so choose something fun



https://flightexpo.org/sweepstakes

"Rising Above for Education"

Our Sweepstakes drawings continue this Friday night (April 16, 2021), live on Facebook at 5:45pm central time. This week we will be drawing for a Polaris "Tenacity 4.0" Helmet. You will be able to choose the size and color. *"It will take 4—12 weeks to receive, possibly more due to availability"* .

Overviews and Specs of the Helmet:

Shock-resistant helmet made from ECE/DOT certified thermoplastic
Ventilated helmet keeps you cool
Helmet with removable lining for easy cleaning
Polaris helmet with padded double D-ring chin strap for comfort
Lightweight helmet weighs less than 3lbs for all-day comfort

Polaris has put together a video on this helmet: Watch it here: Tenacity 4.0 Helmet | Polaris GENERAL

Retail price for the helmet is: $139.99 plus tax. You can purchase a ticket today for $50 and support two great non-profits (Flight Expo, Inc and G.A.L.S. Technology) with their educational building that they are pushing for as the end goal!

Update on the progress of our sweepstake's we need your help to reach our goal of selling 1500 tickets. Currently, we have sold over 225 tickets. If you are not aware….

The Final Drawing for the 2021 Sweepstakes Fundraiser has been officially extended to August 6, 2021. Presently, we have not reached our ticket sale goals and do not yet have enough to break even. This is due in part to the shutdowns and economic hardships faced by would-be participating businesses and individuals. And so, as per the official rules, we have decided to extend the deadline for entering the sweepstakes until August 6, 2021. It is important, therefore, that you help spread the message about this fundraiser in support of our nonprofit educational programs. Thank you!

New Deadline: August 6, 2021

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.

Articles and photos for consideration in our AUGUST issue are due on or before AUGUST 10.