

THE WINDSOCK

APRIL 2021

Editor: Frank Huber | Layout Editor: Deb Huber

The President's Flight Deck

Hello chapter members! Welcome to April and improving weather conditions. The improvement in weather invites us to attend GMAG on May 21st and May 22nd. The event will be held again this year at the Buffalo airport. Here is a link to the GMAG site: http://www.mnpilots.org/gmag/index.php. I see there are several members signed up to help at our booth, and it would be nice to see a few more. The booth management task is easy, just promote aviation generally and our chapter specifically. If you are working on a project, your experience is invaluable in answering attendees' questions related to EAA and our chapter. Even if you cannot help at the booth, it would be nice to see chapter members supporting Michael Grzincich and Mike Miller, the two Young Eagle pilots who have flown the most Young Eagles in Minnesota in 2020! They, along with our chapter, will be recognized Saturday afternoon at GMAG for their accomplishments!

Planning has begun for the EAA 237 fly-in event to be held at Anoka airport. Originally planned for June 26th, we are rescheduling it for June 19th, with June 20th as a rain date. We are rescheduling because the city of Duluth has decided to host their air show this year and their date coincides with our date. We realize our event will now be on Father's Day weekend, but what a great event to take Dad to! We hope our members are as enthused to volunteer on this day as well. Blaine Burger Bonanza is the name selected for the event, but we will be offering more than just burgers. Stay tuned as the menu is being selected right now. A promotional flyer is also in the works and will soon be available to members to help promote the event. I see quite a few chapter members signed up to help, but as always, the more the merrier. The sign-up genius was updated with the new date, and a check box added if you can help on the rain date of June 20th. You can access the sign up via this link, https://www.signupgenius.com/go/508094dacaa2ca5ff2-eaachapter.

Finally, don't forget EAA237 has the Berlin Express bomber jackets for sale on our website and you will find a link to purchase them on the front page.

Looking forward to seeing you at these events! Kevin

YOUR CHAPTER BOARD OFFICIERS

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

Contact the Board at: board@eaa237.org

Ellen Quist, the chapters new IMC/VMC Club coordinator, held her first Zoom meeting on Thursday, April 8th. The IMC meeting began at 6:30 pm with about five people in attendance. It began with a question for discussion and then continued with a scenario video for discussion. The discussions were lively, interesting and fun. The VFR meeting started at 7:30 pm with the same set up as the IMC meeting. Both meetings went well and I think everyone that participated found them informative and fun. The future meetings will be taking place on the second Thursday of each month until we are able to hold meetings at the chapter building post Covid-19. There will be an email to all chapter members weeks in advance of the meeting, as well as a follow up reminder email in the week of the meeting. For those of you who like to talk about flying airplanes, I think you will find either of the meetings fun and informative.

boldmethod

When Is a SPECI Issued For Rapidly Changing Weather?
Have you heard of this one?

Quiz: Do You Know These 6 Common Approach Chart Symbols?

How To Go Missed From A Circling Approach
by Swayne Martin

EAA IMC CLUB

EAA VMC CLUB

boldmethod

Incorrect Traffic Pattern Entry Leads To Mid-Air Conflict
by Swayne Martin

Should You Trim During Landing?

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

Go Or No Go: Home Before The Rain? *by John Zimmerman*

YOUNG EAGLES EAA

The Chapter 237 Young Eagles event on Saturday, April 10th was canceled due to low ceilings and poor visibility. The next Young Eagles event is scheduled for Saturday, May 8th from 9 am until 2 pm. We can always use more volunteers to make our events fun and successful. Michael will send out an email to all chapter members in the week before the event, so please sign up to fly or help with registration and ground support. It is always fun seeing the young people return from a memorable Young Eagles flight.

Post 237

Michael Miller

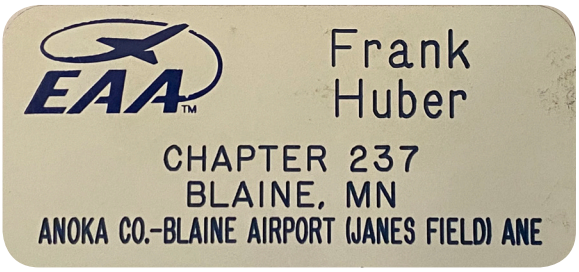
The Chapter 237 Aviation Explorer Post received a tour of the Lynx FBO operation on their second meeting date in March. We had an opportunity to talk at length with the LifeLink crews. The crews were fantastic, taking all kinds of questions and going out of their way to interact with us. We were able to see both their fixed wing aircraft and rotorcraft and even got to watch one of the helicopters landing up close. Lynx was very accommodating and Bryan, the manager, was happy to host us.

Registration for Aviation Explorer Base at Oshkosh is opening up at the end of this month. The dates of the event are July 26th through August 1st. We'll be arriving prior to opening on the 24th or 25th. We will register as a unit, so think about whether you would like to attend the event and we'll register as early as we can once we have a decision from everyone. The May meetings will be held on Friday, May 7th and Friday, May 21st beginning at 7 pm at the chapter building. If you know any young person with an interest in aviation, please tell them about our chapter Aviation Explorer Post.



Are you itching to get out and see your fellow aviation enthusiasts? Here's your chance with "Hangar Talk". On the first Saturday of May, June, August and September, I'll be at the chapter building from 8-10 am with Donut Hut donuts (while they last) and coffee.

Come and just grab a donut and talk with fellow members about all thing's aviation and then some. I will keep these up until we are able to start our Pancake Breakfasts back up. *Hope to see you all on May 1. The more the better.*
Bob Henkes | Chapter 237 Membership Chairman



Chapter Name Tags

I have been organizing the name tags on the refrigerator at the hangar. I have found there are a lot that are not there, and that's okay if you have one with you. But, if you don't have a name tag and would like one, please email me with a request to get a name tag and how you want your name on it at Membership@EAA237.org.
Bob Henkes | Chapter Membership Chairman

Pursue Mastery of Flight

FLYING LESSONS for April 1, 2021

by Thomas P. Turner, Mastery Flight Training, Inc. | Flight Instructor Hall of Fame inductee

When and Why

I saw a short discussion this week on a Facebook page aimed at student pilots. The topic was fuel tank selection, specifically the ubiquitous advisory to select the fullest fuel tank for takeoff. The gist of the discussion was a warning from one instructor that, despite this advisory, pilots should not switch tanks just before takeoff. The warning is designed to prevent fuel starvation shortly after liftoff if the pilot does not get the fuel selector precisely aligned to the intended fuel tank. The instructor was precisely right.

I did a test a year or so ago at the request of an Air Safety Investigator (ASI) who is a FLYING LESSONS reader and was at the time actively investigating the crash of a Beech Bonanza shortly after takeoff. His request perfectly aligned with an experiment I've planned to do for a long time but never managed to get around to doing. The ASI and I both wanted to know approximately how long it would take from an improper fuel tank selection—not getting the selector handle in the tank detent—to engine failure from fuel starvation at a takeoff power setting.

The experiment was simple: sitting out of the way in the runup area at ground-idle power, I would intentionally move the fuel selector handle to a point between the LEFT and RIGHT tank position. I would then delay about 10 seconds, simulating time spent taxiing onto the runway, and then advance power to full (hard on the brakes, still in the runup area). The intended data to be collected: How long until engine failure? We did the test three times, on a premise I often state: that once is an anomaly, twice is a coincidence, but three times is a trend. Consistently the engine quit from fuel starvation about 20 seconds after going to full throttle. Where would you be 20 seconds after the beginning of your takeoff roll? What would happen if the engine quit at that point?

It's not only important to follow checklist guidance from the Pilot's Operating Handbook or Airplane Flight Manual. It's important to understand why you should (or should not) do things. The "fullest tank" recommendation isn't literal, that if one tank has 15 gallons and the other has 17 that you absolutely must be on the tank with 17 gallons. What the checklist is really saying is, "select a tank that assures you will have plenty of fuel for the operation, along with a healthy reserve." The goal is to avoid the possibility of fuel starvation all the way through takeoff and climb to altitude.

I looked at a few sample POHs/AFMs and confirmed what I see in the airplanes I most commonly fly (Beech Bonanzas) is reflected in at least some other airplane types as well. Most of the aircraft called for the fullest tank to be selected on the Before Engine Start Checklist. The Cirrus POH called for fuel on the fullest tank before the engine runup.

The point is, none of the checklists suggests switching fuel tanks just before taking the runway for departure, despite the oft-recommended "fullest tank for takeoff." It's true that, in general, we should follow this advice. But when you make the selection must be based on safety, not supposition.

FAA has new practice knowledge test questions on PSI site

The FAA has posted new batches of sample knowledge test questions for pilots, instructors, mechanics, and other aviation professionals in the training and testing section of its website. The sample knowledge test questions, posted March 11, are intended for use in practice for the exams and may not be identical to actual questions applicants encounter. However, the sample questions are representative of the real thing and can be considered "suitable study material," the FAA said.

Correct answers are not provided, but each question comes with an associated topic code. For private pilot applicants, for example, the code links the subject matter to a task element in the Private Pilot—Airplane Airman Certification Standards. An airman knowledge test supplement containing charts and

other graphics needed to answer some of the sample test questions during your practice test-taking sessions is also available.

According to the FAA, many aviation-industry members had requested that the sample knowledge test questions be available in the training and testing section of the FAA website for study—after which applicants can take a practice test (including a test score) on the website of the FAA's knowledge test vendor, PSI, and then take the official knowledge test. The private pilot knowledge test includes 60 questions and requires a minimum passing score of 70 percent.

Task-Based Phase I to Revolutionize Flight Testing

April 1, 2021 – After years of hard work and advocacy by EAA, the FAA has published draft guidance to implement an optional task-based Phase I program for Experimental Amateur-Built (E-AB) aircraft. Under the program, once an aircraft completes a flight test plan that meets FAA standards, Phase I is complete. The standard 25- or 40-hour flight test period for Phase I will remain an option for all E-AB, and Experimental Light-Sport (E-LSA) continues to carry a 5-hour test period.

The program is part of an upcoming update to Advisory Circular (AC) 90-89B. Flight test programs do not need specific approval by the FAA, but the Circular lays out certain required flight test points and requires the use of test cards for data collection in flight. Users of the EAA Flight Test Manual should find it a straightforward way to complete the requirements of the task-based Phase I program, but anyone may draft a flight test plan that meets the FAA's outline, including kit manufacturers and other experts.

Task-based Phase I ensures that every hour spent in flight testing is meaningful and is contributing to both validating the airworthiness of the aircraft and gathering the data necessary to build a detailed operating manual. This will benefit the builder in ensuring full exploration of the aircraft's operating envelope, and it will benefit subsequent owners in having access to quality data on the aircraft. In exchange for this work, the aircraft will be released from Phase I when it is ready, not based on an arbitrary time requirement.

"This is the result of more than eight years of work by EAA and the FAA and we couldn't be happier that it is now nearing completion," said Tom Charpentier, EAA Government Relations Director. "This will be a true paradigm shift in E-AB flight testing."

This program comes on the heels of EAA's publication of its Flight Test Manual in 2018, which has sold thousands of copies to date. EAA is continuously working to improve it and create new materials and programming based upon the manual.

Task-based Phase I is yet another example of the EAA working collaboratively with the FAA to achieve a win-win solution that benefits the community and enhances safety. The groundwork for this change was laid by the EAA/FAA working group that created the Additional Pilot Program (AC 90-116), which allows another pilot into the cockpit to enhance safety during flight testing.

The Advisory Circular is in draft form and comments will be accepted through April 29. Please note that the relevant language on Task-Based Phase I is housed in Chapter 1, Section 1 of the draft. The rest of the document contains advisory information on flight testing and is not part of the task-based program requirements.

Link to Advisory Circular (AC) 90-89B https://www.faa.gov/aircraft/draft_docs/media/afx/AC_90-89B_CHG_1_Coord_Copy.pdf

JAY JONES RANS S-21 OUTBOUND PROJECT

Chapter member, Jay Jones, is building a Rans S-21 Outbound. Wanting to build an airplane since his high school days, he considered all the many options available, deciding on the two seat high-wing Rans S-21. Jay liked the looks of the S-21, the excellent visibility, speed range (40-155 mph) and the use of traditional aircraft engines. All aluminum construction with pulled rivets offered a quicker build time and a durable aircraft. He decided to go with the tricycle landing gear and may consider adding floats for future use.

The S-21 is Rans latest design, so Jay waited for the design to mature before flying to Hays, Kansas in July of 2019 to take a test flight. It turned out to be an expensive flight as he put down a deposit for a S-21 kit. In January of 2020, Jay and his son, Nathan drove to the Rans factory for a rudder build workshop, where they learned many tips and techniques for the aircraft build. While waiting for his kit to be delivered, he also attended the Aircraft Electrical Systems and Avionics Sport Air Workshop at Oshkosh. The comprehensive tutorial covered electrical wiring, antennas, components, grounding, connectors, troubleshooting, and more.

Jay received the tail, fuselage and wings kits on July 14, 2020, almost 12 months to the day after ordering. The cockpit cage comes pre-welded, so he was able to sit and make airplane noises the night the kit arrived! This was a surreal night as he had been dreaming about this for 40 years. The kit was packaged amazingly well and arrived with no missing or damaged parts. It was pretty intimidating to see bags and bags of rivets, but more exciting than scary.

So far Jay has completed the empennage and left wing, working very part time. Rans claims a 500-700 hour build time due to matched hole construction and the use of pulled rivets, but being a first time builder and priming as he builds, it takes longer than the book. The only difficult part so far has been rolling the leading edges of the control surfaces, which require two strong people to accomplish this task. So far everything has gone together quickly with no real glitches. Any questions about assembly are answered within minutes by an informal Facebook group of S-21 builders, which has been a great resource. Jay started construction on the right wing this month. He is priming the inside of the whole aircraft and plans to paint the outside as well.

Jay is planning to spend some money at SteinAir, going with a Garmin G3X touch and a G5 backup, initially for day/night VFR, but expandable to IFR. He plans to have SteinAir create a wiring diagram for his setup and use the skills from the Sport Air workshop to do the wiring himself. He plans to power his aircraft with a Titan IO-340 and would like to use the Whirlwind 3-bladed electric constant speed prop. Jay has been impressed with Rans and his kit. He believes he has at least two more years of work and is enjoying the educational and recreational aspects of homebuilding an aircraft.



Jay and Nathan holding rudder built at Rans factory training.



Rolling the aileron leading edge



Jay with completed left wing.



Jay sitting in the fuselage structure on kit delivery day.

The Zenith 701 Project

The work crew continues to make good progress on the chapter Zenith 701 project. New wing root fairings have been fabricated and rivunut fasteners are being installed to hold them in place. Two leading edge rudder fairings were fabricated and installed and the elevator stops were adjusted for the proper travel. Inline fuel filters were installed downstream of the fuel pumps and the cabin fire extinguisher was installed on the right flaperon pushrod cover. The work on the instrument panel has been completed as well as all the wiring on the three electrical and engine system shelves. Mounting brackets for the magnetometer and the emergency beacon are being fabricated for the installation of those two items. Once the weather warms up, we are planning to paint the interior of the cockpit. Then the system shelves will be installed and all the wiring from the various systems will be hooked up. Once that work is completed, the instrument panel will be installed. It will then be time to fire up the engine and get it running properly with the SDS electronic ignition and fuel injection system. We have picked up a few more volunteer workers and, as always, encourage anyone interested in helping out to join us Mondays and Wednesdays from 9 am until 1 pm at Mark's hangar at 2155 Kansas on the southwest side of the field. *by Frank Huber*





GREAT READS for the Aviation Enthusiast



Forever Flying | Fifty Years of High Flying Adventures, From Barnstorming in Prop Planes to Dog Fighting Germans to Testing Supersonic Jets *by R.A. Bob Hoover*

Bob Hoover is arguably the greatest pilot in aviation history. This book is filled with many great stories of his stellar aviation career.

Return of the Enola Gay *by Paul W. Tibbets*

Col. Tibbets was solely responsible for the organization, training and command of the worlds first nuclear strike force. On the morning of August 6, 1945, Col Tibbets flew the Enola Gay B-29 into the future by dropping the worlds first atomic bomb in combat on Hiroshima. This is his story.

CHAPTER FLIGHT SIMULATOR

In an earlier article we mentioned that our flight simulator includes a touch-screen monitor running the Air Manager software as shown below. This allows the trainee pilot to manipulate some of the instruments and controls by touch and movement of the finger on the panel. One of the controls that can be manipulated is the elevator trim wheel located in the lower right corner of the image above. The gesture is to touch the wheel image and then slide the finger upwards for down trim and downwards for up trim. While this method does work in the sim, it is less than an ideal representation. When doing pattern work it is natural to be reaching for and adjusted the trim wheel for each power change or when changing the flap position, especially in the C-172. To make it more realistic it is much better if you are able to reach over and actually touch and feel a physical trim wheel to move it. It becomes second nature and the pilot learns to do this without even looking at it.

To address this one of our chapter members donated an original Saitek Cessna trim wheel to our flight simulator project (see picture). We greatly appreciate the donation. Unfortunately, the unit did not work when connected to the sim as there seems to be a problem in the electronics. However, there is some online documentation available which shows how to modify the electronics inside this unit to include an Arduino Nano processor. The processor communicates with the X-Plane 11 software via a USB connection. The Arduino idea has already been tested with the software. Now it's a matter of tapping into the optical sensor within the unit, which we hope is still functional. If you are interested in the details, here is the link to the article about this modification.
http://www.simav8.com/simtrim.html





AVIATION ADVENTURES

Out and About in Our Neighborhood *by Bob Henkes*

Credit for this article is given to MHS, Holman table and Johannes Allert.

Last month I posted a photo of some women working on a fuselage and asked if anyone knew the history of the photo, the plane being worked on and where it was at. No one got the challenge right.

Shortly after the WWII started, Northwest Airlines Modification Center was created under contract with the USAAF to modify 20 B-25 bombers for the RAF. With that success behind them, they were given another contract. The military needed planes and fast. Although they were being made around the country in their basic models, many needed outfitting before seeing service. Northwest Airlines was hired by the USAAF to run modifications to the B-24 fleet and to do it from Holman Field in St Paul. This new work necessitated big expansion. To accomplish all of this, they built two additional large hangars that held up to 13 B-24s. They were known as the "River Hangars" and they remain there today. Prior to them being built, much work was completed outside in the cold.

They customized bombers at their work center for specific things like photo reconnaissance, where the bombing equipment was replaced with cameras or as fuel tankers with extra fuel storage. The most significant accomplishment was when they started to equip planes with H2X radar systems.

As all of this was growing, labor was in short supply and thus started the process of hiring women to do the work. This required labor regulations to change and the building of women's bathrooms, smaller size coveralls and lower work tables. Many more hurdles had to be leaped, but it was war and they got it done.

Things moved fast. With all this chaos blossomed an employee incentive program to offer suggestions for safety, efficiency and cost savings. One blind worker offered ways to better sort parts to a movable platform with ladders, allowing mechanics better access to the motors. By the time they closed they had modified over 3,286 planes and employed over 5000 workers at their peak. Because of secrecy, the actual work done wasn't revealed until late 1945.

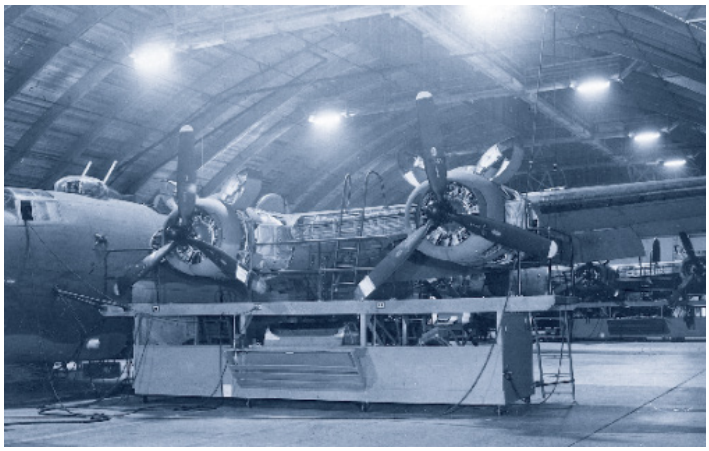
For a twelve page article on the "mod" center, written by Johannes Allert, go to this website http://collections.mnhs.org/mnhistorymagazine/articles/63/v63i08p324-333.pdf

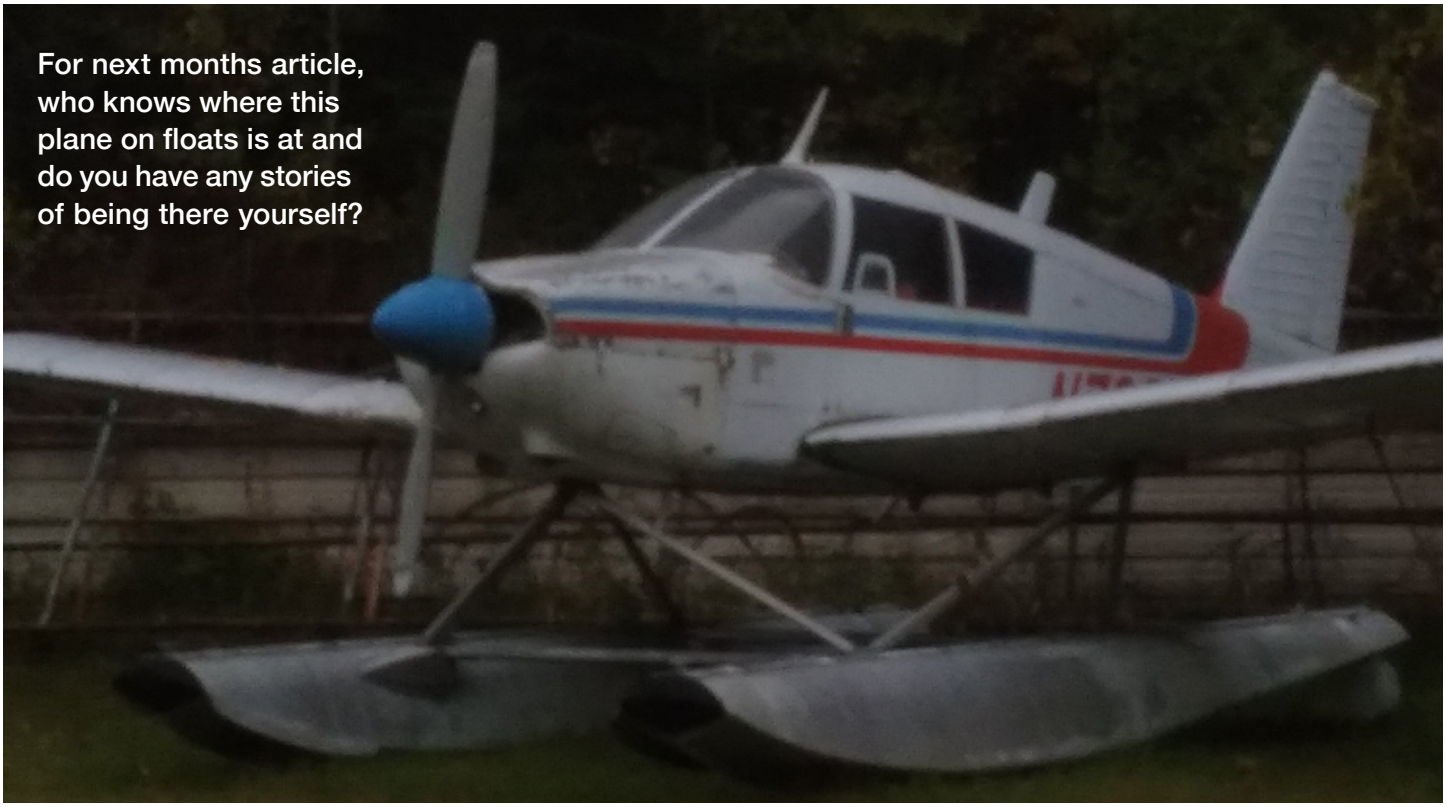
As to Holman Field itself, St. Paul Downtown Airport is the only reliever airport in the MAC system with a runway longer than 5,000'. The Holman Field Administration Building is a Kasota limestone building designed by Clarence Wigington and built in 1939 by WPA employees. The airport was named for Charles W. Holman, who won the U.S. air speed trials in 1930. The airfield was built on the former site of Lamprey Lake, which was filled with dredged material from the adjacent Mississippi River, which regularly floods the airport. Across the river in Indian Mounds Park is one of the last remaining airway beacons in the country. A restaurant in the building is open to the general public, and allows viewing of the airfield

For anyone that was at our B-25, B-17 tour stop over the 4th of July in 2019, you know the one destination stop for Holman Field is Holman's Table. Whether you fly or drive, it is a dining experience. They were very generous to our chapter during the tour stop, so here is a little about them.

Holman's Table is a dining experience that celebrates the spirit of travel. Diners can expect fresh, modern, sophisticated dishes complimented by a beautifully classic bar and wine list. The gorgeous space captures the high society and fashion essence of the jet set travel age. The Dining Room offers an unforgettable dinner or you can grab drinks & bar snacks in Cora's Lounge (which was added in the historical terminal's lobby to accommodate additional seating due to COVID-19 capacity restrictions). For the true aviation lover, you can dine alfresco on the tarmac patio and watch the plane activity. You can also host your private event in the Earhart Room with full-service chef-catering and craft bar. Holman's Table partners with Minnesota Helicopters, to provide helicopter rides on the weekends. Guests can have dinner and drinks, and then take a skyline tour of the Twin Cities.







EAA237 COMING EVENTS

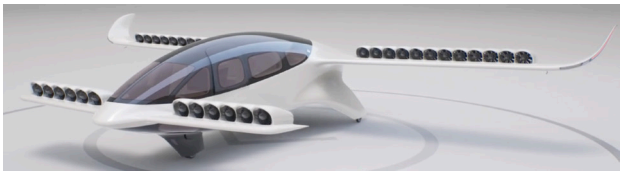
- Chapter 237 Aviation Explorer Post meetings are usually held on the first and third Fridays of the month at the chapter building, beginning at 7 pm. The gate codes after 6 pm are: Gates A & B 9378 and East gate 3278.
- May Chapter Young Eagles Event will be held on Saturday, May 8, from 9 am until 2 pm at the Lynx FBO at KANE.
- IMC/VMC Club May meeting will be held on Thursday, May 13 via Zoom. The IMC Club meeting will begin at 6:30 pm and the VMC Club meeting will begin at 7:30 pm.
- 2021 Great Minnesota Aviation Gathering on Friday, May 21, 9 am to 5 pm, Saturday, May 22, 8:30 am to 4 pm at the Buffalo Municipal Airport (KCFE).
- May Chapter meeting will be held on Monday, May 23. Details to follow in an email.

ELECTRIC PROPULSION

Researched by Ronald Borree EAA Chapter 237

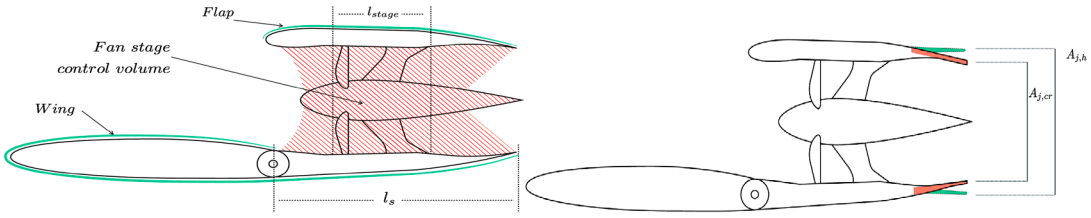
Lilium's Ducted Vectored thrust high lift wing on the Lilium 7 seat air taxi.

Can a 7,000 pound loaded weight 7 passenger aircraft efficiently lift vertically and proceed to horizontal flight with a 6 foot diameter fan area powered by available 250 KwH or soon to be available 320KwH battery packs?

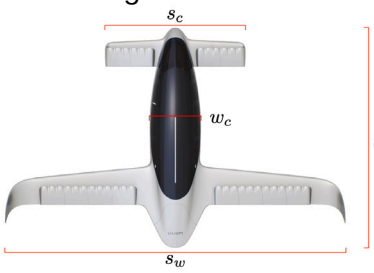


Yes, by being creative with the 6 foot diameter area.
The answer to the above question seems to be solved in the design of Lillium's air taxi wing/motor design. Take the area of a 6 foot diameter fan and create 36 one foot diameter small ducted electric motor "turbo fans" that in total equal the overall area of a 6 foot fan. The 36 "electric turbo fans" are innovatively incorporated into a "high lift" wing with creative lift surfaces. Each motor section has a variable exit flow design for efficiencies with a tilt design for the vertical and horizontal propulsion and maneuvering.
The Lift to drag coefficient of the 7 seat plane is about 18 compared to 9 for a Cessna 172 for twice the glide factor. For comparison the best glider planes may approach about 60 for a lift to glide ratio. This is a slippery plane in the air!!

Below is a cross section of each ducted fan showing the fan at the rear of the high lift wing section. The trailing rear edges behind the fans open and close as shown for efficiencies in take-off and cruise as well as maneuvering.
Sound is controlled by the air flow through the fans, acoustic lining material in the duct area, maximum fan tip speed of Mach .45 and exit air attenuation.



Compare the high lift "Ducted Vectored Thrust Wing" of the Lilium plane on the left with the high lift design of the NASA X57 electric plane on the right. The high lift Lilium wing has the propulsion electric motors built into the wing design for maximum lift with air being "accelerated into and over the total airfoil design". The NASA X57 wing has multiple small motors "pushing" air over the high lift wing





Below is the air flow in cruise and tilted downward for take-off



Technology summary:

Motors: Electric with details not yet released; approximate 1 foot diameter
Battery detail: Lithium Ion design and chemistry not yet released
Wings: High lift design with embedded ducted fan design
Construction: Carbon fiber composite
Size: 45.6' wingspan….26.2' length…. 5.57' cabin passenger width
Weight overall: 7000 pounds fully loaded.
Motor lift capacity: 194 pounds lift per motor for each of 36 motors
Battery weight: 2101 lbs of battery estimated on board
Battery power density: 320 Wh/kg battery assumption for initial production
Sound level at take-off: <60db at about 100 yards (high or low pitch not specified)
Maneuvering: All by directed trust of the 36 motor assemblies
Speed: 175 MPH
Cruise altitude: 10,000 feet
Range (by available battery pack power density): 162 mile total range at 320 Wh/kg….. 112 miles at 250Wh/kg… 219 miles at 400 Wh/kg

internet link references are below for Lilium and Lilium video explanations of the technology. For the technically inclined the Lilium white paper detail on the technology is located under the investors tab:

https://lilium.com/news

https://lilium.com Click on the investors tab at top of the web site and then click "7 seater paper" for the detail on the propulsion engineering technology.

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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.

QUICK LINKS

SPORTY'S iPAD PILOT NEWS

New FAA guidance defines role of iPad apps in preflight weather briefings April 7, 20212

FAA Advisory Circular 91-92; Pilot's Guide to a Preflight Briefing provides a practical advice on how to complete a self-weather briefing using the latest technology. They also weigh in on the misunderstood topic of a "legal briefing" and the role of Flight Service. This Sporty's News brief provides all the details of this Advisory Circular.

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

I WAS THERE | Orders From Heaven *by Lee Dalton*

boldmethod

Runway Stripes And Markings, Explained. *by Swayne Martin*

How Low Can You Go? Your Guide To Minimum VFR Altitudes

Federal Aviation Administration

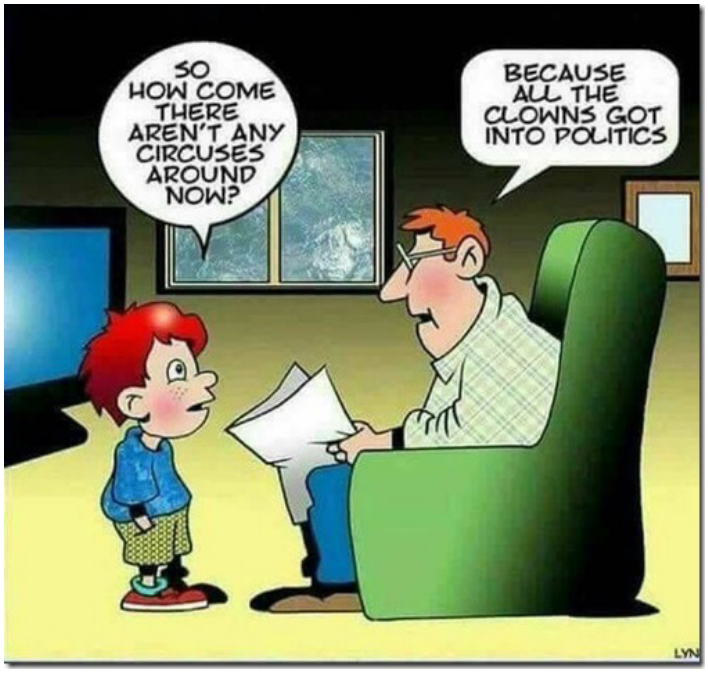
When to activate the ELT after the engine goes silent

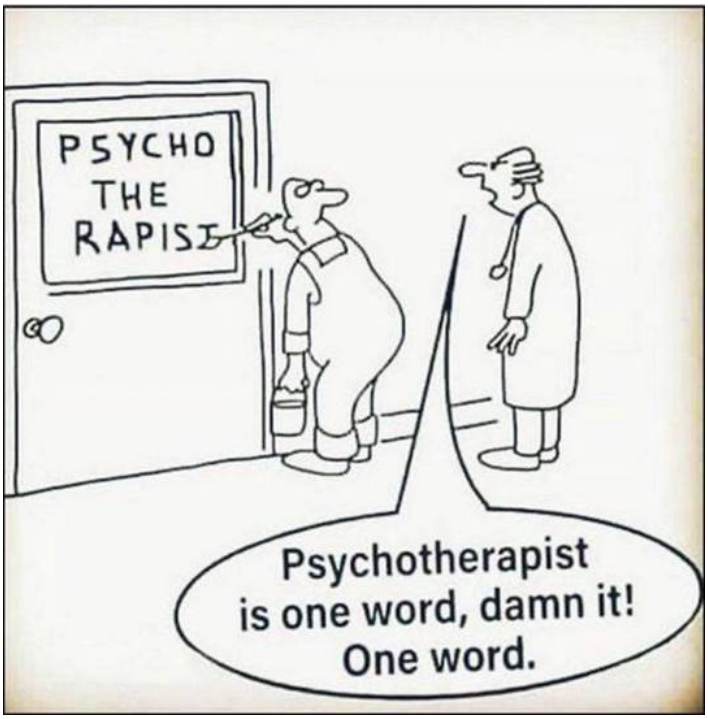
Mountain Flying: From the basics to sharpening your skills This completely free eBook is packed with guidance to help keep you safe while enjoying your mountain flying. Learn tips about what to look out for in the climate and weather patterns in a mountainous environment so you can stay knowledgeable and safe in this dangerous terrain.

Sharp Landings: From the basics to sharpening your skills With this FREE eBook, learn what goes into a really solid approach and landing, especially under crosswind conditions. In much the same way that glider and soaring training enhance a power pilot's prowess in the mountains, tailwheel flying hones a pilot's ability in a crosswind because of the tailwheel aircraft's less forgiving nature.

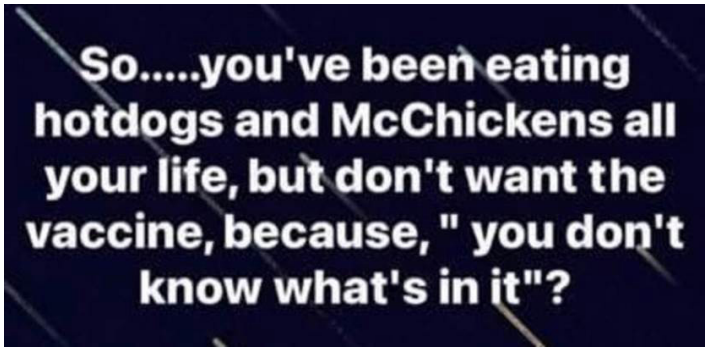
On The Lighter Side











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Feel free to contact us to become an exhibitor or sponsor of this premier event!

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 MAY issue are due on or before MAY 10.

Flyhalf Aero

Ellen Quist

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CFI / CFII

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Blaine, MN 55449

763-242-3564
gary.laurich16@gmail.com
www.eaa237.org

Chapter Meetings:
4th Monday of the month
Dinner Social: 6:00 pm
Meeting Starts: 7:00 pm

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