

EXPERIMENTAL AIRCRAFT ASSOCIATION - CHAPTER 55

JULY 2023

Meetings are the 2nd Saturday of each Month

EAA Chapter 55 Hangar; Mason Jewett Airport; 643 Aviation Drive, PO Box 443, Mason, MI 48854

→ **President:** Margie Clark 517-712-2203 → **Vice-President:** Doug Koons 517-676-5001

→ **Treas:** Drew Seguin 517-333-4531 → **Secr:** John Kuchar 517-203-9976 → **Editor:** Deanna McAlister 517-795-8171

→ **YE Coordinator:** Margie Clark → **Webmaster:** John Bobcik → **Youth Group:** Jeff Shaud → **Membership:** Vickie Vandenberg

→ **Flight Advisor:** Terry Lutz → **Adult Eagles:** TBD

Website: chapters.eaa.org/ea55



PRESIDENT'S MESSAGE

by Margie Clark

ea55.president@gmail.com

Happy July everyone! Hope you all had a safe and happy 4th of July.

The air has been a bit heavy of late, hope it hasn't hindered everyone's fly time too badly. I've witnessed a few planes up at the airport but doesn't seem to be as active as usual. Please be safe out there.

Again I want to say a great big **THANK YOU** to all the folks that helped last month with our Young Eagles Rally and with Dawn Patrol. Our counts were lower than usual but we still were able to shine as a Chapter in the community and promote aviation. Please mark your calendars for Saturday, August 19 as that is our next **BIG** fund raiser for the chapter. Yes, it is time for Mason Aviation Days! Once again I will ask that you look at the sign up sheets in the clubroom and start filling them in. As always, teamwork gets much more accomplished. We will be setting up for MAD on the Friday prior and will need helpers that day also.

Hope to see you at general meeting and breakfast on Saturday, July 8th.

CHAPTER 55

BOARD MEETING: 7:00pm: Wed. July 5th

MEMBERSHIP MEETING: 9:30am; Sat. July 8th
with Breakfast served from 8:00am to 9:00am



Thank you June Breakfast Team

SCHEDULED PROGRAMS:

July - August - Young Eagles

**CONTACT DAVE COUREY WITH YOUR
SUGGESTIONS**

UPCOMING BREAKFAST TEAMS:

JULY

Karen Hover
Bruce Boardman
Bruce Thorburn
Ivan Bradley
Jan Angell
Albert Esser II

AUGUST

Jim Palmer
Cal Hayslette
Richard Floyd
Clark Radcliffe
Shawn Nofziger
Chara Walters

**EAA Chapter 55 Membership Meeting Minutes
for Dec. 10, 2022:**

Not yet provided for publication.

**EAA Chapter 55 Board Meeting Minutes for
February 8, 2023:**

Not yet provided for publication.

**EAA Chapter 55 Membership Meeting Minutes
for February 11, 2023:**

Not yet provided for publication.

EAA Chapter 55 Board Meeting Minutes for April 5, 2023:

Not yet provided for publication but the Board was able to approve them.

EAA Chapter 55 Membership Meeting Minutes for April 8, 2023:

Not yet provided for publication.

EAA 55 Chapter 55 Board of Directors Meeting June 7, 2023

☐ The meeting was called to order by President Margie Clark at 7:04pm. ☐ Present were Margie Clark, Doug Koons, Drew Seguin, John Kuchar, Warren Miller, Ken Drewyor, Gary Nicola, David James, Bob Clark, Greg Hover, Gabe Blosser. Absent were Jeff Shaud and Michael Rosencrans. ☐ Secretary's Report for May 10th was submitted; motion to approve was made by Ken Drewyor and was seconded by David James; motion approved. ☐ Treasurer's Report for May 31, 2023, was submitted by Drew Seguin; a motion to accept was made by Doug Koons and was seconded by Gary Nicola; motion approved. A donation of \$100 was received from Michael Marhanka for any EAA need. Clark Borgesen also sent a \$125 donation to the Young Eagles fund. A motion was made to place the \$100 donation from Michael Marhanka in the Newberry Aviation Scholarship Fund by Dave James and was seconded by Bob Clark; motion approved. ☐ The Ray Scholarship report by Doug Koons is Daniel our 2022 winner was supposed to finish by the end of May and Doug has not been able to contact him in the last two weeks. He spent all his scholarship money and has been paying the rest out of his own pocket. Cal Haslett our current scholarship winner has 6 or 7 hours in but has been hampered by the weather. ☐ The Youth Group report from Jeff Shaud given by Margie Clark is they continue working on the wing and have cut it in two to prepare it to be made into a table. ☐ The report on our Dawn Patrol fly-in for Sunday from Margie Clark is we still need people to sign up to help. Our water test report came back with a clean report. The food permits for Dawn Patrol and MAD have been turned in and paid. The food will be \$10 for adults and \$5 for kiddos 3 to 12 years of age and 3 years or under free. Vickie is taking care of pilot registration. We will be serving scrambled eggs only this year to keep our food line moving. Set up will be this Friday for Dawn Patrol and Young Eagles. ☐ Amazon Smile will be checked into by Margie to help bring

another source of funds. ☐ Our banners and signs are being done at a sign shop in Mason called Sign Smith. Doug was impressed with their efficiency and willingness to help. ☐ The Young Eagles report from Margie was our first event will be after the membership meeting this Saturday. ☐ Doug advised cost of materials to finish and insulate the hangar; \$7-\$8,000 to do the job. Our roof also will need to be re-coated in the next 3 years or so at a cost \$3,500-\$5,000 for materials. ☐ There was no further business and the meeting was adjourned at 7:55pm. ☐ Respectfully Submitted, John Kuchar, Secretary

EAA 55 Chapter 55 Membership Meeting June 10, 2023

☐ The meeting was called to order at 9:32am by President Margie Clark with 28 members present and one guest, Ken Drewyor's granddaughter Katie, a graduate from the LCC Aviation Technology program. ☐ Following the National Anthem President Margie Clark thanked the breakfast team of Bill Bezdek, Rick Laub, and Les Paquette. The breakfast crew for July is Karen Hover, Bruce Boardman, Bruce Thorburn, Ivan Bradley, Jan Angell, and Albert Esser II. If you cannot make your scheduled time, please contact Joe Madziar so that he can fill your spot. ☐ Secretary's report for May 13, 2023, was submitted; a motion to approve was made by Bill Purosky and was seconded by David James, motion approved. ☐ Treasurer's Report of May 31, 2023 by Drew Seguin was submitted, David James made a motion to accept, Dave Trojan seconded; motion approved. ☐ The Youth Group report from Jeff Shaud was Pat Salow flew two Youth Group members for their Young Eagles flights. One was a first flight. The group continued to work on the wing panels and they are learning to use more tools. ☐ Ray Scholarship update from Doug Koons was Daniel didn't do well on his ground school exam and is feeling a bit down. Cal helped with the set up for today and has 6-8 hours of lessons and is continuing to work on more lessons. ☐ Young Eagles report from Margie is we need helpers for our first Young Eagles flights of this year. Flights begin immediately after membership meeting ends. ☐ Dawn Patrol Pancake Breakfast Fly-In will be Sunday June 11th. Health department inspection will be tomorrow morning at 6:30am. The water test came back okay. Everything is in order. We need help so come and lend a hand. The event will go on rain or shine. ☐ David James donated a book "Lightening Down" by Tom Clavin

that tells a story that is the same as Russ Hildings untold story of his service during WWII. Dave Trojan has donated eggs, pancake mix, and sausage he purchased from the Jackson pancake breakfast last weekend for our breakfast supplies. Bill Bezdek suggested a book on the ecology of the Great Lakes titled "The Death and Life of the Great Lakes" written by Dan Egan. There was no further business and the meeting was adjourned at 9:51am. Respectfully Submitted, John Kuchar, Secretary

THE EAA MISSION: To grow participation in aviation, by inspiring people to fly, build, volunteer and outreach to promote aviation.



YOUTH GROUP

By Jeff Shaud

(jlshaud@wowway.com)

July Meeting Schedule

Our July 2023 Young Aviators youth group meeting will take place on **Sunday July 9, 2023** and **Sunday July 23, 2023** from 2:00 PM until 5:00 PM.

Location will be announced in forthcoming email notifications to youth, parents, and the chapter board of directors.

Welcome New Young Aviator Members

Let's give a warm welcome to new Young Aviators youth group members Patrick, Justin, Amogh, and Miles. These new members have already participated in several Young Eagles flight events and have enthusiastically been working on the Piper Tri-Pacer wing project. Welcome aboard new youth members!

Youth Group Tour Planned

A tour of the Capital Regional Airport Authority (CRAA) Lansing airport operations is being planned for the youth group on Sunday July 23, 2023 from 2:00 PM to 5:00 PM. This will be a great opportunity for youth to see and experience other careers within the aviation industry. Stay tuned for more details to follow.

Progress Made on Tri-Pacer Wing

Over the past several months, the youth made quite a bit of progress on the Piper Tri-Pacer wing. They removed all of the aluminum skin from the wing ribs to expose the structure. While doing this, the youth gained valuable experience in the use of hand and power tools. All of the youth have had an opportunity to learn the proper use of drill motors, grinders, reciprocating saws, punches, chisels, hammers, tin snips, and measuring tape.

We have decided to fabricate an executive table/desk from a section of the Tri-Pacer wing. Chapter member Bruce Boardman donated a 54" diameter by 5/8" thick piece tempered glass for the tabletop. Chapter member Gabe Blosser generously donated an abundance of original Tri-Pacer wing spar material for us to use to make the table legs. Our plan is to have this executive desk/table completed



MEMBERSHIP

by Vickie Vandebelt

(EAA55.mems@gmail.com)

NEW MEMBERS: Chapter 55 welcomes back David VanderMolen. David has a Zenith 750 based at Mason Jewett. We also welcome our new Student Member, Amogh Kodur.



YOUNG EAGLES COORDINATOR

by Margie Clark

(margieclark172@gmail.com)

Our first Young Eagle Rally is scheduled for June 10th which happens to be the "International Young Eagles Day"! As always, we will need folks to help.

So far - the weather is looking good for our next Saturday, July 8th, which is our 2nd Young Eagle Rally for this year.

Please consider coming out and volunteering as a helper or flying youth that day. If things go as usual, we should have over 100 youth coming out to take their airplane ride. That being said, it takes a lot of folks to make this event work successfully. Thanks to those who have already signed up to participate. As always, many hands make light work for all.

HAPPY ANNIVERSARY, CHAPTER 55

Chapter 55 was formed in 1959 and 2023 marks our 64th Anniversary

and on display by the Mason Aviation Day event in August.

Thanks to those EAA Chapter 55 member who have come to our youth group meeting and assisted with the work on this project. The youth gain valuable knowledge from the lessons you pass on.



Civil Air Patrol Squadron Visits Young Aviators

Commander Rick Williams and a few cadets from the Scott M. Burgess Composite Squadron of the Civil Air Patrol visited the Young Aviators during our May 21, 2023 meeting at the chapter Builder's Hangar. We exchanged ideas and activities during this meeting and had a great time. We look forward to working together on future projects and events. The Scott M. Burgess squadrons shares our EAA

meeting room occasionally to gather for their meetings.



Generous Donations Greatly Appreciated

I, along with the youth members, would like to express our sincere appreciation to those of you who have graciously donated to the youth group fund to help us cover the rent of the EAA 55 Builder's Hangar. We would not be able to take on the Tri-Pacer wing project without your generous donations. To see the enthusiasm on their faces make all this worthwhile. The kids are learning valuable life skills.

Youth Group in Need of Tool Donation

The youth group is in need of one or two lightweight (1/4" drill chuck size) air drills. We are also in need of #30, #40, 7/64" & 1/8" jobber length drill bits. If you have any these items and are willing to donate them to the youth group, please see either Jeff Shaud or Bruce Boardman.



LCC - MASON JEWETT CAMPUS

By Mark Bathurst

[\(bathursm@star.lcc.edu\)](mailto:bathursm@star.lcc.edu)

For our students graduating early in August, the employment opportunities continue to increase. Unlike in 2020, when few employers were interviewing our students, this year is a mirror of the pre-pandemic period when multiple job offers are the norm even before graduation. The industry remains concerned that the supply of qualified aircraft technicians is not growing fast enough to meet demand. While this is a concern for major airlines, manufacturers and service and repair companies around the world, it creates a remarkable opportunity

for people interested in entering and working in this exciting and rewarding field.

Pandemic era early retirements, financially advantageous buyouts and wide-spread layoffs all contributed to the current shortfall of qualified aviation maintenance technicians, and the industry is scrambling to find enough new aircraft mechanics to meet their needs. Demand for air travel is now ahead of the pre-pandemic levels, and reports of significant aircraft orders in the commercial and corporate markets will only aggravate the problem. Boeing is forecasting that 610,000 new technicians will be needed around the world by 2042, including 134,000 new mechanic positions in North America alone. In addition to the economic turnaround, the increase in demand for qualified technicians can also be traced to technological changes in aircraft manufacturing. Newer aircraft require different skills to maintain them compared to older ones, but both types are still in widespread use. Increasingly, new aircraft orders are to accommodate growth rather than fleet upgrades and aircraft replacements. This means tomorrow's fleets are going to be composed of a mixture of cutting-edge aircraft and much older aircraft. Therefore, there is a need for aviation maintenance technicians who can repair older aircraft but who are also familiar with things like composite materials, digital systems, and additive manufacturing (3D printing). The industry needs new technicians with the latest training, and it needs them now. That's where programs like LCC's come in. Our enrollment for the incoming class this fall is already at capacity and we have had to create a wait list for both the day and evening sessions.

Increased demand for skilled mechanics (and pilots) yields a competitive employment environment. We have seen more employers coming to talk to our students than in the history of the program. The net affect for our students is that the numerous jobs available have starting salaries at or exceeding \$60,000 per year. Students have the choice of airlines, large and small repair facilities and manufacturing operations that weren't looking for new employees three years ago. Students can choose to work in any part of the United States, and employers are offering enhanced relocation allowances, sign-on bonuses and benefit improvements unlike in any period before. It's good to see the industry growing and creating

employment opportunities for our students when they graduate.



EDITORS PROLIX
By Deanna McAlister
(zirconmoons@gmail.com)

See you at the hangar!!

EAA Chapter 55 is a 501(c)3 non-profit. Donation gifts to Chapter 55 are tax deductible to the extent provided by law. If desired, donation gifts can be designated specifically for the Youth Group, for Young Eagles, or for the Newberry Aviation Scholarship. An acknowledgment receipt of your donation gift for tax purposes can be provided on request.

Tax ID#90-0423493



FREE RADIUM INSTRUMENT TESTING AND TRAINING
By Dave Trojan

Many instruments made up until 1960s had the luminous paint, needed to read them at night, based on Radium. Radium is one of the most radioactive chemical elements and is 1000 times more radioactive than Uranium. It has a half-life of 1602 years and decays into radon gas. This means 70 years old instruments are still active and will be for the next thousands years. Are you worried or just want to be extra safe around gauges that may contain radium? I can check any and all your gauges, instruments and anything else that you may suspect of containing radium free of charge. I have been trained by the U.S. Air Force to identify and test for radium. I can also provide training to you on how to identify radium gauges. Testing is FREE of charge using my portable Geiger counter testing device. I can also safely dispose of any Radium gauges that you may have. For more information on this subject: <https://theaviationist.com/special-reports/radioactive-materials-in-flight-instruments/>

If interested in testing and or training on this issue, please contact Dave Trojan at dtrojan60@gmail.com or cell 808-386-0609



EXPENSIVE HAMBURGERS

By Bill Purosky/Doug Koons

Due to a lot of low ceilings and smoke from Canadian forest fires as well as graduations and athletic events at the playoff level, our flying was somewhat restricted.

On 6 June, Doug and I travelled to Adrian, Lenawee County (ADG) for lunch. The flight was smooth and the reported visibility was 7 miles in smoke and haze. We think that at 2500 feet on the altimeter it was more like 5 miles. It was worse if you climbed higher. Reportedly this was smoke from the forest fires in Quebec, Canada. Adrian has a 5001 foot runway 05/23 with a full length taxiway. It also has a grass strip 11/29 that is 1810 feet long. We landed on 05 with the winds at 040 at 3 knots. Not very challenging! The terminal building is relatively modern and very well kept. Lots of lounging areas as well as a briefing room. Their courtesy car is a modern and clean Ford Explorer. The only requirement is to top it off after using it. It took a half gallon and cost \$1.90. We drove to town (less than 5 miles) and found a Country Skillet for lunch. They had a special of chicken/bacon wrap that included a cup of chicken noodle soup and a fruit cup for \$8.99. We both jumped on that. With coffee and tip, I got away with \$25.00 for the lunch. It was my turn to buy! Bummer! We posted a flier for our fly-in and headed out. It was Doug's turn to fly back. It was bumpy at 2500 feet but smooth at 2700 feet. The flight is about half an hour each way. A nice easy lunch run.



RELAY FOR LIFE

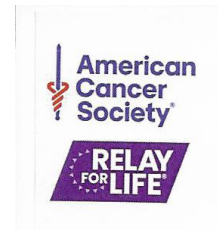
By Karen Meirndorf
Team Heartwood Glad Rags

The American Cancer Society is attacking cancer in many ways. Our Relay is doing everything in our power to create a world without cancer, and making it possible for our community cancer Survivors to celebrate more birthdays.

A big Thank You to everyone who donated or participated in our Chapter 55 "Fact Sign" 50/50 drawings this spring. The money raised exceeded my

wildest expectations that will most definitely help us in reaching this year's goal of \$100,000.

Thank you all very very much.



Contributions, corrections and additions to "WingTips" are welcome and can be made by contacting Deanna McAlister (zirconmoons@gmail.com)
Deadline: 1st of each month.
Joe Madziar "Breakfast Teams" (madziars@msn.com) and Dave Courey "Monthly Programs" (dcmi@reagan.com)

CHAPTER 55 CLASSIFIEDS

FOR SALE:

Do you have anything you want to buy, sell, or trade?? Contact Deanna McAlister zirconmoons@gmail.com

WANTED: Your old Gauges, Instruments, cockpit parts. Looking for non-airworthy gauges, the older the better, for use in static display instrument panels. I collect and restore old aircraft instrument panels for collectors and museums. I'm a member of the international Aircraft Cockpit & Instrument Panel Collectors Group. I also work with many Aviation Museums to restore their aircraft such as the Selfridge AFB Museum, Wurtsmith Air Museum, and the Yankee Air Museum. I recently restored FG-1D Corsair panel for the Selfridge AFB Museum using old gauges and parts. Old instruments can be used to fill holes in panels and can be used for parts to restore other instruments. While not all damage can be fixed, broken parts from two or more identical indicators can often be salvaged to create a single, functional whole.

I'm especially looking for Clocks, Altimeters, Gyros, Fuel gauges, and Airspeed indicators. I'm also looking for toggle switches, warning lights, and old control boxes. I don't mind getting my hands' dirty

digging through hangars looking for stuff. One pilot's junk is another's treasure! If you have old gauges, instruments, and cockpit parts please contact Dave Trojan at dtrojan60@gmail.com or cell 808-386-0609



HANGARS FOR RENT AT TEW:

Lloyd Brown; 517-589-8619
Tom Tuttle; 734-216-7532
Gabe Blosser; 517-896-0020
EAA55; Common Storage or Building hangar space;
Margie Clark; 517-853-1418 (waiting list)

SENDING EMAIL BLASTS:

The best way to do a broadcast email to our Chapter 55 membership is to "reply all" to your latest newsletter email. Update the "Subject" enter your message and delete the old subject matter content. This will insure you get the most up-to-date membership roster.

EAA55 = PILOTS, PLANES & BUILDERS:

Here is a list of those who are working on homebuilts and/or restorations, as well as pilots and their planes ... Additions, deletions & corrections appreciated:

Mark Bathurst; Cessna 172
Gabe Blosser; Bushmaster SuperCub Amphib
John & Connie Bobcik; Kitfox 7SS
Ivan Bradley; Zenith CH650B
John Caron; Cessna 172
Stan Chubb; Beechcraft Bonanza
Lewis (Bob) Clark; Cessna 172
Randy Coller; Cessna 182 & Hot Air Balloon
Dave Cook; RV-6A (w/Greg Hover); Taylorcraft Ultralight
Ken Drewyor; Kitfox (sold); Mooney M20C

Richard Floyd; Cessna 310
Adam Fogg; Piper Warrior II
Donald Frank; BE35P
Mike Franzago; Stearman; Starduster project
Ralph Gregus; Zenith CH750
Dave Groh; Stearman; Citabria; Beechcraft Bonanza; and Travelaire; PT-17; AT-6 restorations
Greg Harris; Zenith 750 project
Ward Harris; Cessna 177B
Steve Houghton; RV-7A
Greg Hover; RV-6A (w/Dave Cook)
Mark & Jennifer Jacob; C-120; Beech 18, C-34 project
Dawn Koepplinger; Cessna 172; Aeronca Sedan
Doug Koons; Glastar (w/Bill Purosky)
Rick Laub; Sling 4 project
Terry Lutz; Luscombe & RV-8
Edward Manturuk; Lancair ES
Doug MacKenzie; Zenith 701
Tim Martinson; RV-6A & RV-14A; RV-9A project
Don & Deanna McAlister; Cessna 172
Chuck Moore; RV-12
Gary Nicola; Beechcraft Bonanza & Grumman Traveler restoration
Jim Palmer; Glasair III
Bill Purosky; Glastar (w/Doug Koons)
Pat Salow; Zenith 701
Drew Seguin; Carbon Cub EX2 & Carbon Cub EX3
Jeff Shaud; RV-7 project
Tom Sheehan; C-170 & Aerosport & Funk B85C; Lincoln-Page 1928
Rockwood Shepard; RV-9A
Jim Spry; RV-8
Jeff Stetson; Aeromot Ximango
Bruce Thorburn; Cessna
Ken Vandenbelt; C-172; C-170; Stearman project
David & John VanderMolen; Zenith 750
John Yurkon; J3C-65; PA28-181; C-172P

Mason Jewett Field FBO:

Great Lakes Air Repair

517-525-3673

Maintenance - Painting - Upholstery - Engines

POCKET CALENDAR:

Jul 24-Jul 30 = AirVenture
Aug 12 & 13 = Thunder Over Michigan
Aug 19 = Mason Aviation Day

FLYERS FROM OTHER AIRPORTS POSTED IN TEW TERMINAL

w/special thanks to Mark Bathurst. Be sure to check these flyers out if you are looking for a weekend place to fly !!

WEB EVENT CALENDARS:

www.eaa.org/eeaa/events

www.funplacestofly.com/aviation-events.asp

www.michigan.gov/aero/

2023 CRAA BOARD MEETING

4th Monday of the Month

4:30p.m.

Marion "Babe" Ruth Community Room
Terminal Building, Capital Region Int. Airport



Notes From Cape Juby

By Terry Lutz

At Oshkosh in 2018, I hosted 3 people from France who had shipped a CriCri (probably the world's smallest twin) for a demonstration where they flew the CriCri from the top of a moving Ford Explorer. Lucie Chapirot-Sarda is the woman who drove the Explorer. She is a Flight Test Engineer at Airbus and an accomplished pilot. This year she flew a Robin DR400 along the airmail route taken by Antoine de St Exupery as he flew from Toulouse, France to Dakar, Senegal. And yes, one of the stops along the way was Cape Juby. It has since been renamed Tarafaya. The old Spanish fort still exists, and there is a sandy runway there to land on. This is Lucie at Oshkosh:



Here is Lucie's photo with a local family after she landed on the sands of Cape Juby:

Such are the connections I have across the world. Connections with people who have the same passion for flight. During a recent trip to Linkoping, Sweden for the Society of Experimental Test Pilots European Symposium, I was reminded of a trip to that same location 41 years ago. I was an instructor pilot at the Air Force Test Pilot School at Edwards AFB, and a small

group of instructors took a field trip to visit flight test facilities in Europe. The visit included the Empire Test Pilot School at Boscombe Down, England, the Swedish Flight Test Center in Linkoping, Sweden, EPNER, the French Test Pilot School near Marseille, and the Israeli Flight Test Center near Tel Aviv.



We had the opportunity to fly some interesting airplanes during the trip. At Boscombe Down, I flew the Hawker Siddeley Hawk, which was fairly new at the time. It later became the US Navy's T-45A Goshawk trainer, and the British Red Arrows jet formation team fly the Hawk today. I remember that it had excellent handling qualities and would recover quickly from a spin in about a quarter of a turn. I was flying with the ETPS Squadron Commander Robin Hargreave, and we were due to land at 4pm because it was a Friday and they wanted to wrap up flight operations for the week. The Hawk uses braking for directional control on the ground as there is no nose gear steering. There was a crosswind for my landing, and I used the typical wing low, opposite rudder technique at touchdown. Then to wit, the Tower controller calmly said, "Empire 1, I do believe you have blown a tire...." It seemed that my opposite rudder had included a bit of brake! Everyone's day got a bit longer, and my wallet a bit lighter that evening at the bar.

Our next stop was the most interesting. We landed in Stockholm and took the train to Linkoping. Our hotel was a short walk from the train station (incidentally, for our trip this year, we took the train from Stockholm and stayed at the same hotel). We were met there by the Swedish test pilots. They gave us a quick briefing on the airplanes we would be flying, and provided photo albums with photos of the cockpits to study before turning in.

The airplane I flew was the SK37 Viggen, a two-seat version of the Swedish designed fighter. The name Viggen literally means "Thunderbolt", as unleashed by the Norse god Thor. The Viggen was the first airplane I had ever flown where the instruments were all metric, and of course the markings were all in Swedish. I had to quickly adapt to all the numbers. For example, the traffic pattern was flown at 500 meters, or about 1500'. The key to flying precisely was to stick to the numbers they recommended, and not try to do the math.

The Viggen was the first production fighter in the world with a canard. On the Viggen the canard is mounted slightly above the wing and helps the wing maintain lift at high angle of attack. The canard has a flap that is used only for landing to allow for lower landing speeds. Keep in mind that the large canard also has a significant contribution to lift. The engine is also rather unique. It was powered by a Swedish-built Volvo Flygmotor RM8, which was a modified P&W JT-8D engine built under license in Sweden. Modifications included an afterburner and a thrust reverser, the latter being necessary for landing on remote highways.



We did an IFR departure, then headed toward the shoreline of the Baltic Sea for some air work maneuvers. We had an overcast above, and both clouds and an angry sea below. I was in an airplane smaller and lighter than an F-4 Phantom, but with about the same thrust to weight ratio. It took the F-4 about 8,000' to do a Split S. We were about 3000m above the water, about to do a Split S, and I'm doing the math. With F-4 numbers, I would level off about 500m (about 1500') above the waves. The test pilot I flew with, Per Olaf Almstedt, assured me it would be OK. I rolled inverted and pulled toward 5g for the Split S. The effect of the canard immediately became apparent, and we completed the maneuver easily at 1000m (about 3000'). From there we did some low-level flying and simulated air-to-ground weapons deliveries. I found the Viggen to be excellent in terms of handling qualities and performance in up and away flight.

A very advanced feature of the Viggen was a system that would hold angle of attack on final approach to landing. It was engaged by a button on the stick marked "SPAK". Once engaged, you could select either 12 degrees angle of attack or 15.5 degrees angle of attack. I was very impressed with this feature as it allowed me to precisely target the touchdown zone with less focus on airspeed and angle of attack. The objective of my final landing (besides trying not to blow a tire) was to use the thrust reverser to stop in minimum distance. While thrust reverse helps to stop, it creates a moment that tends to raise the nose. There is a switch on the nose strut so when the strut is compressed it allows the reverser to operate. The pilot must keep full forward stick after touchdown to use the reverser and stop in minimum distance.

After flying, the Swedes had another surprise for us. They took us to the athletic facility on base and in the locker room there were two big boxes, one with athletic clothes and the other with soccer shoes. They had sized us up the day we arrived and knowing that we hadn't brought athletic clothes, put together clothes and shoes that would work. We got dressed and they challenged us to a game of soccer, which few of us had ever played. Guess who won. Then they said "OK, how about some American touch football?" We thought we could win that one, but we were already tired from the soccer match, and they beat us again!

From there we went to their Officer's Club for dinner. It was a fairly small room with one long table, and we enjoyed a nice dinner. It was interspersed with "Schnapps Songs", right from a song sheet they gave us, and played on the piano by their Squadron Commander, a guy named "SES". (It should be noted here that aviators in Europe generally have a three-letter "siglum" assigned to them, which accounts for SES. Later in life, when I arrived at Airbus, I was given the siglum TLZ).

As the schnapps flowed and the songs became more lively, we noticed that not only had the staff cleared the dishes, but they were also beginning to clear everything from the room. First all the furniture along the walls, then all the pictures, then they started on the chairs, then the tables. What remained was a wooden chair at each end. Then amidst the euphoria of many schnapps songs and associated toasts, the Swedes challenged us to a game of indoor field hockey. The sticks were wooden with plastic blades, and it was played in bare feet on a hardwood floor. A goalie seated on each of the chairs. This was almost painful after a day of flying, and all-out soccer followed by all-out American football. What I remember is that we played to a zero-zero tie in regulation, and the game went to overtime. I don't remember who scored the winning goal, but we won!

We retired to a lounge with a fireplace and there was one more surprise. Apparently, there is ceremony for any new pilot who flies the Viggen. They had this sword like device with a large aluminum shape of the Viggen at the end. SES asked me to kneel and be knighted in the order of the Viggen. After that lively evening, I wasn't sure if he would use the sharp edge of the Viggen or the flat side. I was dubbed the 538th pilot ever to fly the Viggen, and given a pin to remember my flight.

With those thoughts in mind, it was great to be back in Sweden to learn more about their aviation accomplishments over the years. The Technical Tour included briefings about what they are doing in their version of the Skunk Works, which they call "Rainforest". They are able to generate new and disruptive technologies there, which really are essential to the security of Sweden. If you follow world events, you know that Finland was recently accepted into NATO. Sweden is now between NATO members Norway and Finland. All three countries either share a border with Russia or are located across the Baltic Sea from Russia. Sweden has

applied for entry, but they are being blocked because of a dispute with Turkey, another NATO member.



We were given a briefing about the JAS 39E Gripen fighter (translated as griffin, a mythical lion with wings). The Gripen is the follow-on fighter to the Viggen. It has canard surfaces and has a full fly-by-wire control system to utilize the canards for flight control. The original Gripen first flew in late 1988. It is designed to be a lightweight, supersonic airplane with relaxed static stability similar to the concept used on the F-16. The Gripen is currently being flown by the air forces of Sweden, Czechia, South Africa, and Thailand. A new version, the Gripen E, is in flight test now for both Sweden and their new customer Brazil. It has 40% greater internal fuel capacity and an increased thrust F414 engine giving it the capability to cruise supersonic without the use of afterburner. We visited the production line, which is quite small compared to other production facilities in Europe and saw the first Brazilian Gripen E in production.

After the briefings, we traveled a short distance by bus to the flight line and witnessed an airshow just for our group of about 75 people. The airplanes used were parked nearby and when we exited the buses, we could see the first airplane starting up nearby. What we would see is their version of a historical flight. First in the air was the Saab 29 Tunnan or Flying Barrell. The Saab 29 was developed in the late 1940s and was the first operational jet fighter designed in Western Europe with swept wings (although the case could be made for the Me-262). After a flying a 10-minute airshow, the Flying Barrell landed and the Saab 22 Lansen took off.

The Lansen, or Lance, design came from secret Messerschmitt drawings retrieved from Switzerland by the Saab project manager. They had come from Messerschmitt engineers who fled Germany at the end of WWII. The German engineer Hermann Behrbohm was among them and was part of the design team for the Saab 29, 32, and the 35 Draken. The Lansen was the first airplane designed specifically for a ground attack

role. It initially used a Swedish designed engine, but they switched to the RR Avon engine early in the design phase. Both aircraft are shown below:



The Lansen was followed by the Saab 35 Draken. As you can imagine, with an impromptu airshow in progress, traffic had stopped on the highway near the airfield, fire fighters from the airport fire department were all outside, and not much work was getting done by the employees at Saab. The Draken, or Dragon, was developed to replace the Flying Barrell and the Lansen. It was the first double delta design, and the first fighter developed in Western Europe to achieve Mach 2, which it achieved incredibly in 1960, just 13 years after Chuck Yeager broke the sound barrier in the rocket-powered X-1S. Since a double-delta configuration had never been flown before, Saab built a sub-scale prototype called the Saab 210, nicknamed the "Little Dragon". Incredibly, the Saab 210 made its first flight in January 1952! They used this as a concept demonstrator before going ahead with development. The only Saab 210 is now in the Swedish Air Force Museum, which you will see below. It was obvious from the flying displays that there was an increasing level of performance and maneuverability with each airplane we were seeing.



During this private airshow, I was standing next to my long-time friend and Airbus test pilot Etienne Miche de Malleray. During my time at Airbus, we were office mates and as you might guess, solved most of the world's problems on a daily basis. He is an incredible test pilot and I keep two videos of his flight testing just for

inspiration. The next airplane to fly was the Saab 37 Viggen. Since I had flown the airplane, I knew most of the details about the airplane. But I just kept them to myself as we both admired the flight demonstration. No sense in playing one up with my good friend. The Viggen demonstration was nearly the same as the Draken except that the Draken used more afterburner and the Viggen demonstrated a short landing using thrust reverse.



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Just when we thought the airshow was over, from behind the development hangars came the Gripen E. That performance was amazing, even more so because we knew it would be practice for the Paris Air Show (Salon

du Bourget to the French) in just a few weeks. In the space of 45 minutes we had watched the entire history of Swedish fighter development since WWII.

Traffic started moving again, and everyone on the airfield went back to work. We got back on the buses, and I sat down next to Etienne. Finally, I spoke up and said, "Some years ago I visited Sweden with instructors from Edwards and flew the Viggen". To which he replied, "When I was a student at ETPS, I came to Sweden and flew the Viggen"! Out on the airfield we were just two good friends, being polite and respectful to one another, keeping our best thoughts to ourselves. It was if time had reversed itself and we were back in our office in Toulouse.



The Symposium ended with a black tie dinner in the Swedish Air Force Museum. We had the museum to ourselves and were treated to some Swedish singing of mainly pop rock songs, including a few from Abba. Here are pictures from outside and the Viggen on display inside.



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