

CHAPTER 55 EXPERIMENTAL AIRCRAFT ASSOCIATION

APRIL 2013

Meetings are the 2nd Saturday of each Month

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

Pres: Ken Vandenbelt 589-5051 Vice Pres: Joe Madziar 676-4341 Treas: Al Spalding 676-3370

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Climb and Maintain Flight Level 55

Welcome to April ! So far, spring has been reluctant to arrive.

Not much of anything to report in the way of news this month. Joe Madziar has arranged our program this month - a "road trip" to Lansing for a tour of the operations at the LAN tower. This will be very interesting. We will proceed north after our meeting and plan to take the tour shortly after our arrival. Car pool details will be discussed at the meeting.

Bill Bezdek sent me an email regarding a great presentation he attended about activities on the Great Lakes during WWII.

He is working on setting up a presentation in our area, possibly at MSU, for members of the Lansing Sail and Power Squadron and hopefully EAA55. I will keep you posted as news becomes available.

The next 2013 Events Planning meeting is scheduled for April 24th at 7:00pm. Ideas and folks willing to assist are always welcome!! We are still looking to fill the position of Volunteer Wrangler and also Team Captain for the Auto Parking & Transport team. Signup sheets for all events will hopefully be available at the meeting this Saturday.

Share the passion!
Ken Vandenbelt, President

Breakfast Teams

<u>April</u>	<u>May</u>
Louis Bacon	Bill Bezdek
Don Frank	Lewis (Bob) Clark
Deanna McAllister	Margie Clark
Don McAllister	Ralph Gregus
George Moore	Chuck Hacker
Gary Nesbitt	Gordon Hempstone
George Spencer	Bill Hensler



March Breakfast Team
Ray Fink, Greg Hover & Greg Shannon

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

EAA Chapter 55, Board of Directors Meeting March 6, 2012

→Directors Attending: Ken Vandenbelt, Joe Madziar, Al Spalding, Jack Voss, Steve Houghton, Vickie Vandenbelt, Jim Spry, Ed Search, Dave James, & Bill Purosky. Absent: Warren Miller. Guest: Phil Tartalone. →Meeting was called to order at 7:05 pm. →Secretary's Report: Madziar moved, Spry supported; motion passed to approve minutes as distributed in email. →Treasurer's report: Purosky moved, James supported; motion passed to accept. →Adult Eagles: Margie Clark has agreed to be coordinator with assistance from Dan Schiffer. →Membership: V. Vandenbelt reported 14 members have not renewed. →Flying activities: Steve Houghton and Jim Spry will meet and report next month on some possible flying activities. →Program activities: V. Vandenbelt reported that Rick Anderson, FAA, has had to cancel for March. →Madziar reported that our visit to the control tower in Lansing KLAN is scheduled for after our April meeting about 11:00am.

→Safety Advisor: Steve Houghton has researched this, and finds that some other organizations are utilizing a position to focus on safety. Houghton and Voss will meet to generate ideas and recommendations, and report next month.
 →“Thank You” cards to be signed for MACC & others.
 →Relay for Life: V. Vandenberg reported EAA55 will do some fund raising (50/50 drawing; breakfast sales; potluck??) for a chapter donation & Karen Mierendorf will be seeking support for her team. →2013 events planning meeting started framework for this year's Dawn Patrol (DP); Mason Aviation Day, (MAD) Young Eagles (YE) and advertisements for these functions. →V. Vandenberg moved, Purosky supported, motion passed to approve advertising budget of \$850 for the Dawn Patrol. Madziar moved, Purosky supported to extend free breakfasts to visiting pilots at the Dawn Patrol. →For MAD, we will extend free food to exhibitors and warbird pilots. Purosky moved, Madziar supported, motion passed to approve advertising budget of \$1,000 for MAD and authorize up to 100 "Free Breakfast" certs as advertising promotions. →Al Spalding to check on PortaPotties and Golf Cart rentals.
 →Discussed use of T-shirt transfers to apply flyers to shirts for advertising. →Discussed audit of the books; will ask Joe Pirch if he is willing. →Purosky moved. James supported, & motion passed to adjourn at 8:05pm.
 →Respectfully submitted, Jack Voss

EAA Chapter 55, General Membership Meeting March 9, 2012

→Called to order by President Vandenberg at 09:30am.
 →We saluted our country while observing the National Anthem. →President Vandenberg thanked the breakfast team and announced next month's team. →Attendance and guests by my count: 39 members and 3 guests.
 →Secretary's report as published in the newsletter was accepted. →Madziar read the treasurer's report as furnished by Spalding, and it was accepted as read. →Adult Eagles: Margie Clark reported on ideas and guidelines that she, with good assistance from Dan Schiffer, has for the Adult Eagle (AE) Program. This is not a program to simply provide rides. A pre-screening process will produce adults 18 years of age and older, who express a sincere desire to learn to fly. Mentors will work with them as they start training, and reach milestones along their way. She is seeking pilots to participate, names of eligible AE, and Certified Flight Instructors (CFI's) to whom they can be referred. →Steve Houghton, Jim Spry & Ed Crouse are our Flying Activity honchos. They will be suggesting various activities for us to engage in, and request suggestions for additional activities.
 →Madziar had a sign-up sheet for the trip to Lansing's control tower following our April meeting. →President Vandenberg presented an award for first flight of Kyle Bradford's side-by-side Pietenpole camper. →Bill Bezdek announced that the US Power Squadron (this is a boating operation) will have big activities in Pontiac on the weekend of April 5-7. →President Vandenberg adjourned the meeting at 9:50am. →Respectfully submitted, Jack Voss



TIDBITS

By Vickie Vandenberg

NEW MEMBERS: Chapter 55 welcomes new member William (Bill) Hensler and his son, Student Member Peter Hensler.

EVENTS PLANNING MEETING: Next events planning meeting is scheduled for Wednesday, April 24th, at 7:00pm. We are still looking for a Volunteer Wrangler and a Team Captain for the Auto Parking & Transport team.

Signup sheets for all events will hopefully be available at the meeting Saturday.

KEY CHAPTER EMAILS:

President: ken@eaa55.org
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 Membership: vickie@eaa55.org
 Webmaster: craig@eaa55.org
 Young Eagles: phil@eaa55.org
 Adult Eagles: margie@eaa55.org

A PILOT'S PRAYER

God, grant me the eyes of an eagle,
 the judgment of an owl,
 the quickness of a hummingbird,
 the reflexes of a cat,
 the radar of a cave bat,
 the heart of a bull,
 and the balls of a Vietnam helicopter pilot.

- Anonymous



YOUNG EAGLES

By Phil Tartalone

Very soon, the weather is going to get better. It will eventually warm up, and the wind will calm down a bit. It will be time to start thinking about a new Young Eagles season. Our rally dates for 2013 are June 8, July 13, and August 10. My phone is already ringing with folks inquiring about when they can come to the airport. I think that it is already shaping up to be a great summer.



NOTES FROM CAPE JUBY

**By Terry L. Lutz
Chapter 55 Flight Advisor**

While the major aircraft manufacturers in the world are fierce competitors when it comes to sales and market share, there is much to discuss when it comes to flight test safety. Unlike most aircraft operators, including the airlines and corporate flight departments, flight test organizations operate right on that thin line between

successfully completing a test point and a devastating accident. It takes vision and wisdom to realize that where safety is involved, there are no well-defined boundaries between flight test organizations.

Two years ago, at a meeting of the Society of Experimental Test Pilots, I was contacted by Van Chaney (Boeing test pilot) and Paul Bolds-Moorehead (Boeing senior flight test engineer) about the possibility of Airbus and Boeing jointly preparing a paper and presentation about some aspect of our flight test activities. It took the vision and guidance of the Heads of Flight Test at both companies to give the go-ahead.

The first task was to pick a subject. It had to be a something common to both companies, where the methods were both different and non-competitive. After some discussion back and forth, we decided to prepare a paper on how our companies conduct stall testing on large airplanes. When we got deeper into the discussion and shared more information, we discovered that while there were many similarities in how we approached stall testing, there were indeed some differences.

Since Van and Paul were a pilot-engineer team at Boeing, I teamed up with Stefan Vaux, an Airbus engineer who is an expert at stall testing and with whom I had flown several stall tests. We work very well together in the air, and I knew it would be great to work with Stefan on this project. Once the subject was established, we reviewed all the upcoming technical meetings, searching for the best venues to present the paper. The final event would be the upcoming Symposium and Banquet of the Society of Experimental Test Pilots, to be held in Anaheim, CA in September of this year.

We agreed to hold meetings each Wednesday, exactly at 1800 local time in Toulouse. Since Seattle is 9 hours earlier, it put the time in Seattle at 0900. We set the meetings up as teleconferences, with a webex capability that allowed us to look at our work on screen and in real time. We divided up the writing task so that by the time we were ready to create the presentation, there was a solid base to work from.

Beginning in November 2012, our writing began to take shape in January 2013, and the presentation began to unfold very nicely in the early days of March. This included graphics and videos never before seen outside of the doors of our individual companies. We were able to describe the preparation work required to begin a stall test campaign, both in terms of studies and analysis, and in terms of preparing the airplane itself. Finally, after many weeks of preparation, we had the chance to give the presentation at a meeting of the Royal Aeronautical Society in London, England.

Located near the eastern edge of Hyde Park in London, the headquarters of the Royal Aeronautical Society contain the images of British Aviation as it advanced through time from the early 1900s to the present. We spoke to an audience of about 150 people. As far as we know, it is the first time in

history that Airbus and Boeing have shared technical information on the way our individual designs are tested and certified. We were at just the right technical level to challenge the audience with new material, and bring out several good questions at the end.

Are there differences in our test methods? The answer is yes, and the differences are in the areas of aerodynamics, cockpit displays, and test methodology itself. Boeing pilots use a small display mounted ahead of the control column that can be tailored to show parameters unique to the test, such as trim position and highly accurate airspeed. They also have a special panel to indicate load levels on the horizontal tail. And finally, for stall testing, Boeing uses a chase airplane (T-33) with a photographer in the rear seat to record stall tests. After the initial stalls in a new aircraft, they will normally carry 15-20 engineers in the back of the airplane during stall testing.

Airbus does not use a chase aircraft, but we do use cameras inside the airplane to record the movement of what we call "flow cones". Basically, instead of tufts of yarn, we use 2.5 inch slender plastic cones at the end of a piece of nylon cord. These are taped to the wing just like tufts of yarn. Airbus test pilots have standard angle of attack, angle of sideslip, and g meters in view on the flight deck. The Flight Test Engineer has specialized instrumentation, where the calculation of lift coefficient is shown as a function of angle of attack. During an approach to stall, the FTE watches lift coefficient, and calls "Break" when it reaches a peak. On very large aircraft, the stall break is barely felt on the flight deck, so stall testing is done as a team. At Airbus, we usually fly stalls with a minimum crew of 4 people.

In the presentation, we cover two interesting but little known characteristics that must be flight-tested. They are horizontal tail stall, and the effects of Mach number on stall characteristics. When the airplanes have full flaps extended with max forward cg, there is risk of the horizontal tail stalling. To test for this, a series of push-overs are performed at the stall to check for horizontal tail stall. We like about 2 degrees of stall margin, to account for the worst case, which is the accumulation of ice on the leading edge of the horizontal tail.

At high altitude and high Mach number, the situation is completely different. The faster you fly, the closer you are to the stall. The reason is that as shock waves form on the wing, there is flow separation behind the shock. Increasing Mach number, or pulling back to increase angle of attack makes the shock stronger, exposing more of the wing to flow separation. At high altitude, the stall is indicated more by an increase in sink rate than a classic break. It is really hard to understand that if you decelerate to the stall at high altitude, your margin to the stall actually increases. The opposite is true if you accelerate to a higher Mach number – your margin to the stall actually decreases.

Both companies learned a lot from this study of stall testing, and we hope that the international test pilot community is interested in the presentation, which contains considerable technical detail. After AirVenture this year, I will be in

Michigan and would be happy to give this presentation to Chapter 55 and any people who might be interested.

I think the weather in Michigan is about the same as it is here in Toulouse – winter just will not let go. We have had rain, rain, and more rain, and we think in a few days it might start raining. Several people started construction on large boats. The temperature isn't much better, hovering around 50 degrees most days. One major thing to remember at this time of year is how easy it is for carburetor ice to form due to high levels of humidity in the air. Check for it during run-up and be alert in flight. It has caused many an engine failure, and leaves no evidence behind. When Spring does decide to show up, many pilots will feel like leaping tall buildings in a single bound. But to actually get into the air, they might need an extra hand from their friends. It's always appreciated.



FROM THE FLIGHT SURGEON By Gregory Pinnell, MD

Senior AME/ Senior Flight Surgeon USAFR
www.AIRDOCS.net

Just getting back into the plane after a long winter? You will undoubtedly do a more thorough preflight on the old bird but don't forget the little carbon monoxide (CO) detector stuck on your panel. These detectors which turn color when exposed to CO only last on average from 28 days to 18 months depending on the brand. They are inexpensive and provide protection from the colorless, odorless gas which can (and has) incapacitated and killed aircraft crew and passengers. The usual cause of CO poisoning in single engine aircraft are exhaust leaks and leaks into the cabin heater shroud which surrounds the exhaust.

Early signs of carbon monoxide poisoning can include headache, dizziness, weakness, nausea, vomiting, and confusion. Continued exposure can result in unconsciousness or death.

Don't have one? Put one on your list of purchases and reduce your chance of inflight incapacitation. There are more expensive CO detectors if you wish some of which can be hard mounted into the panel. Fly Safe!

CHAPTER 55 CLASSIFIEDS

EAA55: Builders Hangar space; Ken 517-589-5051

WANTED:

Serviceable ELT, model AK 450, 121.5 megahertz, with accessories. Kyle Bradford 517-663-3083

FOR SALE:

Chevrolet Corvair 100-HP flight motor conversion; nearly complete, unassembled. \$5,000/negotiable.
Greg Harris 517-775-4563 or gkharris1974@gmail.com

Zenith Zodiac XL/650 Corvair motor mount;
Greg Harris 517-775-4563 or gkharris1974@gmail.com

DTV analog or digital antenna; \$20.00
George Moore 517-536-1034

New surplus hardware source; Yesteryear Aviation 517-676-4416

Contact Warren or Vickie to place your ad here!



Kyle Bradford with his
EAA First Flight
Certificate

RELAY FOR LIFE – KAREN MERINDORF



On June 14th and 15th I will be taking a contribution from my own pocket PLUS giving 24 hours of my time in the fight against Cancer by walking in the American Cancer Society's 2013 Mason Area 24 hour Relay For Life.

One of the most meaningful ways that a contribution can be given is to purchase for \$10 each a luminaria either in honor of someone that has survived cancer or in memory of someone that has been lost to cancer. These bags with a candle inside are placed around our walking track held at dusk on Friday night at the Ingham County Court House in Mason.

Seeing this many decorated bags with the names printed on them really brings the message home of what this event is all about. Great strides are being made in research, education, patient services, and advocacy because of generous contributions from people like you.

If you do not wish to purchase a luminaria but would like to make a donation, please give what you can to help our team.

Checks should be made out to: American Cancer Society and mailed to me before June 1, 2013 at:

**P.O. Box 708
Mason, MI 48854**

Thank you for your support.

WANTED WANTED WANTED

One Photo / One Sentence / Ten Members
Every Month !!!

Flight Physicals

By Jack Voss

Pilot for the Ruptured Duck

Every (few) years, we have to think about and get a flight physical. As a young fellow, a physical exam was just something that interrupted my daily work schedule. I got to stand around in a cold hallway, without many clothes on, and wait for someone to do the next step. Altogether, the steps took, say, 20-30 minutes. Why, then, did the physical exam take two to three hours?

Recently, Dr. Greg Pinnell did a presentation at our breakfast. It was extremely timely for me, because I needed a flight physical yet that month (November, 2012). Vickie brings in interesting folks that tell us a lot of interesting information. Greg's timing and presentation was fortunate for me. I made an appointment and went for a physical.

WOW! What a difference! A local AME had been "OK" for me, but cannot hold a candle to what I experienced at AirDocs. (Let me state right here, that Greg did not ask me to write this, does not know that I am writing it, and I am NOT receiving any kind of remuneration – period.)

I, like most folks, appreciate being treated with respect and friendliness. BINGO! Got it. I appreciate being treated with courtesy and handled expeditiously. BINGO! Got it. An old maxim defines "Efficiency" as doing things right, and "Effectiveness" as doing the right things. My experience with Greg found him to be both efficient and effective.

Summary: I will gladly fly/drive to Harry Browne Airfield (KHYX) in Saginaw every time I need a flight physical rather than drive to Lansing. And, Vickie – thanks for the good programs we are treated to at our EAA breakfasts.

A SEA STORY By William Bezdek



I ran across an old photo which might be of some historical interest or amusement to someone and have sent it along with this background. The photo was taken in the spring of 1945 when our Navy's Carrier Task Force was cruising northeast of Okinawa and southeast of Japan during WWII. This was about the

time of our attack on Iwo Jima, as I recall. (The gentleman pictured is now 94 years old and resides in Minneapolis, MN.) At that time I was the leader of a division of fighter

planes on Combat Air Patrol. Our job was to circle the task force in case any enemy aircraft decided to attack the fleet and go after them before they got to the ships. At that time of the war, most of those that came out to attack the carriers were suicide bombers known as "kamikazes".

We had climbed out of our sacks, as we called our beds, at about 4:00 a.m., got dressed quickly, had a short breakfast, dressed in our flight gear, grabbed our parachutes, climbed up to the flight deck and headed for our planes. It was almost pitch black with only a few glowing lights visible. The planes had already been started by our "plane captains", the mechanics who took excellent care of them. In a few minutes I was in the air and making a climbing circle around the task force, and all planes in my division had joined me for a climb to about 10,000 feet.

As we climbed out of the darkness it gradually became lighter, and soon we could see the brilliant red sun just peeking over the easterly horizon; it was a gorgeous sight with the rays streaking across the entire sky. It looked like it would be very peaceful and perhaps uneventful day. After circling for about an hour and a half, however, I received a call on the radio from the Fleet Radar Director that an enemy plane had been sighted northwest of us. He gave me instructions to "vector 340 degrees about 20 miles scramble," which meant "go after him like hell", which, of course, we did. By the time we intercepted the "bogey", as enemy planes were called, the kamikaze was getting uncomfortably close to the fleet.

At that moment there was only one plane in sight so I threw a kiss to my wing man to take over and "peeled off" to make a high side run. I could see many shells from my six 50-caliber machine guns perforate the enemy plane's wing, which held the gas tanks. To my surprise the plane did not burst into flame as had most of the other planes I had shot down. A split second decision had to be made because we were getting so close to the fleet that there was not enough time to climb up and make another pass. So I decided to go over the top of the Jap's plane instead of going under him as we normally would do. As I passed over him, I dropped my right wing slightly, just enough to clip off the top of his tail assembly. When I got ahead of him, I looked back and saw the plane roll over into a spin and burst into flame.

It is always easy to "Monday morning quarterback" such incidents and some have said that it was a dangerous trick to assure the enemy went down. I agree there was an element of danger involved, but in my opinion it was minor. By that time I had hundreds of hours of formation flying experience, had quite a few doing formation aerobatics, and had even instructed cadets for about two years, so flying close to other planes was no problem.

What I did overlook at the time was the speed advantage I had over the enemy plane. It explained why the plane seemed to take so long to burst into flames. I knew that our planes were built "like a battleship" and were much stronger than the Jap planes, especially our wings versus their tail assemblies. Also, there was only about a three second time interval to make the decision and I concluded it was worth

the chance, especially when one was aware that the Jap suicide plane could sink a carrier if it managed to get through. In fact, I saw this happen when one of our largest carriers, the *Franklin*, got hit in the stern and it was something I hope I never see again, for the flames, not the smoke, but the *flames* reached up over 300 feet above the ship. Hundreds of lives were lost. It was a real tragedy. I was quite confident I could perform the maneuver safely, for even though my wing had a triangular hole in it about ten inches deep on the leading edge and carried a thirty-five pound piece of the Jap's tail stuck in it, I was able to get back to my carrier and land uneventfully. My skipper awarded me my second Distinguished Flying Cross medal, which I thought was a bit overdone, but I didn't turn it down.

POCKET CALENDAR

Apr 9-14 Sun-N-Fun

Apr 24 = EAA55 Events Planning

Jun 8 = YE Rally 1000-1400

Jun 9 = Dawn Patrol 0700-1100

Jun 15 & 16 = Thunder Over Michigan
(USAF Thunderbirds pending)

Jun 22 = JXN Dawn Patrol

July 13 = YE Rally 1000-1400

July 29-Aug 4 AirVenture

Aug 10 = YE Rally 1000-1400

Aug 17 = Mason Aviation Day 0730-1430

Sep 14 = JXN Dawn Patrol

Dec 14 = Christmas Party; Trippers; 1800

WINGTIPS is published monthly by *EAA Chapter 55 of Mason, Michigan*, for the use, education and enjoyment of Chapter members and supporters. Accurate information transfer is our goal; however readers should verify dates and times prior to attending an event.

DEADLINE FOR SUBMISSIONS is the last Saturday of the month. The Editor reserves the right to edit all submitted material. Photos, sketches or artwork sent by email must be in JPEG or BMP format. Text must be in a Word format or copyable from the email. Submissions may be sent by regular mail and must be accompanied by prepaid postage if you want them returned. Submissions should be sent to: Warren Miller, Newsletter Editor.

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