

CHAPTER 55 EXPERIMENTAL AIRCRAFT ASSOCIATION

JULY 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

Secr: Jack Voss 708-7079 Editor: Warren Miller 214-2656 (all Area Code 517) www.EAA55.org



Climb and Maintain Flight Level 55

A huge "THANK YOU" to all of our members who contributed to the success of our Dawn Patrol. It was a great morning. Over 80 planes flew in and we served over 300 breakfasts. Kudos to these members took time out of their busy schedules to help: Dick & Barb Bacon; Bill & Marilyn Bezdek; John Caron; Bob, Margie & grandkids Clark; Dave Cook; Paula & Dale Corsi; Dave Courey; Ed Crouse; Grant Dowell; Rosie Duckworth; Zack Embersole; Gordon Hempstone; Greg & Karen Hover; John, Patty & Laura Karlen; Doug Koons; Joe Madziar; Don & Deanna McAlister; Karen Meirndorf; Bill Puroskey; Greg Rheeder; Pat Salow; Tom Schroeder; Drew Seguin; Al & Julie Spalding; Jim Spry; Bruce Thorburn; Ken & Vickie Vandenbelt; and Jack Voss. (If I missed your name, I apologize and ask that you let me know so I can get you on our list.)

**Board of Directors Meeting
July 10, 2013, 7:00 pm
Chapter Membership Meeting
July 13, 2013
Breakfast 8-9 Meeting 9:30 am**

A short plea to the rest of our members - Can

you come help at Mason Aviation Day? If more of our membership can contribute a few hours on the field, it would greatly relieve those of us who have committed to work the entire day.

There's no way four or five of us can handle the kind of plane traffic we see on a good day and provide flightline security on the entire field. We need 2-3 people stationed in each section down the field - monitoring for pilots coming in; for pilots preparing to leave; and assuring that the public is respectful of other people's property. Then, there's the staff we need to keep the people fed with our hearty breakfast and then lunch. Add to it auto parking and the soliciting of donations at the gates - this is our main fund raiser for the Newberry Aviation Scholarship Fund. **How about it? Can you sign up for a shift or two?**

Summer is flying by and we are only days away from AirVenture 2013. For those of you lucky enough to be attending - keep in mind we are always looking for new contacts for supplies for our Young Eagle and Pilot "goodie

bags". If you meet any vendors who might be interested in providing give-away items as an event sponsor, please get their contact info for us.

Speaking of AirVenture ... If you are camping, Greg Hover is our group camp coordinator; 517-676-5126 or 517-862-8966 or rv.man2010@hotmail.com. If you're looking for a place to stay, Bill Puroskey has rooms at a house they rent; 517-655-1432 or 517-214-2729 or bpuros@aol.com.

Big news from member Ralph Gregus !! Ralph had his First Flight in his Zenith CH750 on June 7, 2013. It is a great looking plane !! **Way to go, Ralph - Congratulations!**

Thinking ahead, EAA Chapter 55 will celebrate our 55th anniversary in 2014 and we want to celebrate that 55 is 55!! Jack Voss has agreed to chair our anniversary committee. If you have thoughts or ideas, please let Jack know.

Share the passion,
Ken Vandenbelt

Breakfast Teams

<u>July</u>	<u>August</u>
Gary Bauer	Pete Chestnut
Nancy Bauer	Barry Crites
Paula Corsi	John Eiler
Ed Crouse	Chuck Hacker
Zach Ebersole	Jim Palmer
Mary Gowans	Dave Paul
Greg Harris	Gregory Rheeder
Ward Harris	Roy Thelen
Ellen Webb	Bruce Thorburn

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



June Breakfast Team: Tom Sheehan, Dave Groh, Keith Byrd & Dave Cook



Chapter Officers VP Joe Madzair, President Ken Vandenberg & Treasurer Al Spalding conducting the June business meeting.

**EAA Chapter 55 Board of Directors Meeting
June 5, 2013**

→Called to order at 7:08pm. →Present: Ken Vandenberg, Al Spalding, Jack Voss, Vickie Vandenberg, Bill Purosky, Steve Houghton, Warren Miller, Dave James, & Ed Search. We have a quorum. Absent: Joe Madzair & Jim Spry. Guests: Phil Tartalone & Judy Search. →Secretary's Report 5/8/13; Voss moved, Search supported, and motion passed to accept. →Treasurer's Report as of 5/31/13: V. Vandenberg moved, Voss supported, and motion passed to accept. →Young Eagles (YE): Tartalone reported that insurance is in place. →Adult Eagles: V. Vandenberg reported on "Meet & Greet". →Membership: V. Vandenberg reported three new members. →Flying Activities: Houghton reported several options for us to do on Saturdays, with Sundays as a rain-date; Mackinaw Island, Auburn IN (Auburn-Cord-Dusenber Museum), Grand Haven MI, Hillsdale, Plainwell, Houghton Lake, Marshall, Howell, Chesaning, & Clare. He proposed several

dates in June, July, August. (Now, HERE'S some potential fun!) →Our Chapter 55 coffee mugs are in – see Joe Madzair. →Audit of the books: Joe Pirch volunteered to do an audit. →Dawn Patrol: Discussed field logistics, parking, exhibitors, clearing the hangar, volunteers, pedestrian entry. →2014 is the 55th anniversary for EAA Chapter 55. We will plan a celebration. →The previously private Tecumseh Products airport is now a public field; Tecumseh Mills 36MI. →Houghton moved, Voss supported, and motion passed to adjourn at 8:05pm. →Respectfully submitted, Jack Voss

**EAA Chapter 55 Membership Meeting
June 8, 2013**

→President K. Vandenberg called the meeting to order at 09:20am. I counted 34 souls on board at the meeting. →Following the National Anthem, President Vandenberg thanked the breakfast team - applause followed. →Vice President Madzair announced the breakfast team for July. →Introduction of guests and new members. →Secretary's Report dated 5/11/13 accepted as printed in the June Newsletter. →Treasurer's report dated 5/31/13 accepted. →Madzair commenced sale of our special Chapter 55 coffee mugs. (Thanks, Joe!). →Group Camping AirVenture; Greg Hover volunteered to coordinate. Bill Purosky announced rooms to rent in a house at Oshkosh. →Tecumseh Products Field is now a public airport; Tecumseh Mills Airport. →Next year, 2014, our EAA Chapter 55 will be 55 years old. Voss volunteered to chair a team to plan celebrations. Madzair hurried to join that team. Stand by for further announcements! →President Vandenberg gave hearty thanks to 8 volunteers who helped Friday to prep for YE and DP. →Announced field logistics for DP. →Bill Bezdek announced event at CARDS field. →50:50 drawing won by Bill Bezdek. →Meeting adjourned at 09:50am. →Respectfully submitted, Jack Voss



TIDBITS

By Vickie Vandenberg

2013 EAA CALENDERS FOR SALE: A few left; just \$4.00 each (awards that have not been picked up). They will go to the YE if not purchased.

EGGS FOR SALE: Yes, we STILL have dozens available !! Just \$1.25/ dozen (our cost).

EGG CARTONS: Vickie can recycle your empty egg cartons. Just drop them off at the chapter & they will be put to use by EAA55 or a local food pantry.

KLONDIKE BARS & SNACKS: We've opened the last box of Klondike's for sale at discount price - Get yours while supply lasts!

IN THE NEWS: Ryan Todd, one of our Newberry recipients this year, secured an internship with Cessna this summer. Cessna is providing him and six other students with brand new C-172s. Their job is to fly around the country promoting General Aviation. What an opportunity for Ryan !! You can follow his exploits on FaceBook

<https://www.facebook.com/RyanForDiscoverFlyingChallenge>

"RELAY FOR LIFE" FUNDRAISING: Bill Bezdek was the winner of the 50/50 at our June meeting. EAA55 raised \$169 total for Karen Meirndorf's Relay for Life team. Again, thanks to all who participated for the benefit of this worthy cause.

FROM DAVE COOK: check out www.fliht radar24.com

THINGS TO DO FOR EAA55: Someone once asked me what needs to be done at the chapter. There are a lot of little things and some big. Some are currently handled by folks who might someday wish to retire from them. Others are small and just need someone to take them on. I'll try to highlight a few items each month...

→ Become an Officer (2 year term): elections in November 2013 for President, Vice-President, Secretary & Treasurer
→ Program Coordinator - this position vacant as of 12/31/13
→ Events Coordinator - this position vacant as of 8/31/13
→ Event Promotion - every member should be doing this; posting flyers at work, church, local party store, Facebook page, email family & friends, etc etc.

NEW MEMBERS: Chapter 55 welcomes new members Ward Harris, Barry Crites and John Bobcik.

NEWS FLASH:

Potluck with guest speaker Elliot Seguin. Elliot will be in town before going to AirVenture. He has agreed to come out to the chapter for a talk. Let's do a potluck on Saturday, July 27th - tentatively to gather at 5:30pm; eat at 6:00pm with Elliot's talk to follow shortly thereafter. He'll present material from his forum at Oshkosh and probably give some insight on his own airplane project and maybe some news from the Mojave.

If you're going to AirVenture and want to catch Elliot's live presentation: Thursday, 8/1/13; 2:30pm-3:45pm; Forum Pavilion 07 Main Stage Honda Aircraft.

Bio: Elliot is the son of our member Drew Seguin. He is a homebuilder, race pilot and is currently a project engineer and flight test engineer at Scaled Composites, Mojave, CA. He interned with Jon Sharp as a part of the Nemesis Racing Team and now flies his own homebuilt, Wasabi, at the Reno Air Races in Reno, NV.



YOUNG EAGLES

By Phil Tartalone

Chapter 55 held two Young Eagles events so far this summer. The first was a special event for the local Girl Scouts on May 18. Four of Chapter 55's pilots flew a total of 20 girls.

The second rally was on June 8. This rally was open to everyone, and although we had a slow start, the turnout was eventually outstanding. Bob Clark, Doug Koons, Ernie Lutz, Terry Lutz, and Pat Salow flew a total of 55 kids. A few special milestones happened today. Bob Clark flew his 100th Young Eagle! In addition, four of Chapter 55's pilots earned their "10 for 2013" pins at this rally.

By way of comparison, by this time last year we had flown 59 Young Eagles. This year we are already at 80! That is over half of our total from 2012, and we still have two rallies to go!

Our next rally is Saturday, July 13. I just checked the weather and it looks like it might be an OK day. Chapter 55's final Young Eagles rally for the summer is on August 10.



Young Eagles Kaelyn, Rachael and Chloe Weisbrod preparing to take their first airplane ride with Chapter 55 Pilot Ernie Lutz on June 8, 2013

Hello EAA Chapter 55, from Ryan Todd

This summer I am on an internship called the Discover Flying Challenge with Cessna Aircraft Company. I am one of six pilot interns that is traveling around the United States promoting general aviation and raising awareness for our five community partners: EAA Young Eagles, The American Red Cross, United Way, Veteran's Airlift Command, and Special Olympics.

I have been assigned the great lakes region and will be traveling around the area from Minnesota to Kentucky all summer (including Michigan)! They have given us each a 2013 Skyhawk, which we have the privilege of flying around. I also received a week of Cessna factory G1000 training.

The internship ends at AirVenture 2013 where the six pilot interns will be reunited. We will be working at the Cessna booth all week! You can follow me on Facebook "Ryan for Discover Flying Challenge" or Twitter @DFC13Ryan.

Thank you for all of the support. I am honored to be representing Chapter 55 and a Newberry Scholarship recipient!

Best Regards,
Ryan Todd



NOTES FROM CAPE JUBY

By Terry L. Lutz
Chapter 55 Flight Advisor

It's almost time for AirVenture. The question is: what kind of AirVenture will it be? While a lot of hype has been added to the EAA website, it remains to be seen if the substance will draw the kind of crowds that AirVenture is known for.

I think that the variety of airplanes attending this year, and some of the themes EAA has selected, such as "former champions" is very good. I also think that adding the night air show on Wednesday night is a great idea. It seems like I always have to leave before the Saturday evening air show – this year, I'll be able to watch it!

Among the many interesting aircraft that will be there, so will the Terrafugia Transition. I hope to see it fly. Terrafugia is literally translated as: escape from the land. I hope the Transition is able to do that where we all can see it.

As a test pilot, when you know you will fly an airplane for the first time that is distinctly different from what you have flown before, you begin by carefully looking it over, to imagine what each design feature will bring to the way it flies. The Terrafugia Transition is no different.

Overall, the airplane will have a lot of drag. With twin booms and 4 wheels (so it can be easily driven on the road), it has a lot of wetted area (skin friction drag), and a lot of intersections between the surfaces (interference drag). It has a relatively low aspect ratio, so there will be a good deal of drag due to lift (induced drag). On the thrust side, the engine is mounted to the rear, with a pusher propeller. While the propeller will be less efficient because of its location (blocked somewhat by the fuselage), the rear location is better for both stability and control.

Terrafugia will constantly face the battle between thrust and weight. They have already appealed to the FAA for an increase in the weight allowed for light sport aircraft, and rightly so. In order to be both street legal and a viable airplane, some increase in weight for the light sport category is appropriate. But there is no room for a weight increase, and removing weight is very challenging. The Terrafugia transition is literally trapped at the maximum of many things. Weight, drag, and horsepower are the major things that are very unlikely to change.

It is hard to say whether Terrafugia as a company will progress. The Transition has room to grow only into the Standard Category, and that brings many more certification challenges. They recently announced a new aircraft design called the TF-X (a long time ago, there was an airplane called the TF-X, which eventually became the F-111. While the F-111 was successful as a low-level penetrating bomber, it never fulfilled its role as a carrier-based airplane). The Terrafugia TF-X will utilize electric motor technology with lifting propellers that allow it to move from vertical to forward flight. It was soundly criticized in the aviation press because it was long on promise and short on performance. While Terrafugia as a company claims to employ the best and the brightest minds in the aerospace industry, they have a long and arduous road ahead of them.

Today, I had the opportunity to fly a prototype airplane on its 10th flight. As many of you are aware, the Airbus A350 flew for the first time on June 14th. It is a wide-body competitor to the Boeing 777. Since first flight, we have opened the envelope considerably, beginning with the Fly-By-Wire (FBW) control system. For the first flight, the crew operated the airplane in Direct Law, where the electronic flight controls essentially duplicate an airplane with conventional mechanical controls. Then they slowly tested the FBW system up to the standard of Normal Law, which employs the hard protections that keep the airplane in the normal flight envelope.

Today's flight began with an engine cut to idle at V1 on takeoff, which was the first time this had been evaluated. The airplane quickly responded to rudder input with little deviation from centerline prior to liftoff. Once level at 10,000 feet, we did an assessment of both the drag and the buffet characteristics of the spoilers, when used as speed brakes (spoilers are in used three ways: to provide roll control, to slow the airplane in flight, and to spoil lift at touchdown to put more weight on the wheels and brakes). There are 7 spoiler panels on each wing, and with the instrumentation in the airplane, we can measure buffet characteristics while varying the deflection.

Then we climbed to 38,000 feet to test the descent rate in a simulated emergency descent to 10,000 feet. We compared the time of the descent to the predicted results and we were about 10 seconds faster than predicted. Once back down to 10,000 feet, we began a series of tests where we individually turn off the flight control computers to assess controllability with degraded flight controls. At each test point, we moved the airplane in pitch, roll, and yaw to have a look at controllability and control accuracy. We did single computers off, then two off at a time, then three off, and then specific groups off, while the remaining groups were left on. While we could see small changes in response, the airplane flew consistently well throughout the tests.

The final tests were to assess controllability with hydraulic systems turned off. The A350 has two hydraulic systems operating at 5,000 psi, and there are two hydraulic pumps per engine. Modern designs, from the A380 forward, utilize

electro-hydraulic actuators, so when ALL the hydraulic pumps are turned off, electrical power is used for flight control. We tested aircraft response with hydraulics off, eventually reaching the point where all 4 pumps were turned off. Flying with electro-hydraulic flight control actuators only is really a look into the future. Someday, all flight control will be electric, even on small airplanes. Introducing FBW opens many possibilities, including protection against stall and loss of control.

Then we did the first single-engine landing, with one engine in idle and the hydraulics for that engine shut down. I was surprised at the small amount of rudder trim necessary to properly trim the airplane for final approach. On landing, I used only one reverser, and once again the airplane was very well behaved in the yaw axis, allowing good tracking of the runway centerline during rollout. Not wanting to waste good test time, before heading to the gate, we did some turns on the ground with full nose wheel deflection, to measure the stress on the main landing gear in a very tight turn. Starting with 3 knots groundspeed, I smoothly moved the tiller to full deflection, then used thrust on the engine opposite the turn to increase speed slowly up to 7 knots. The airplane can really be controlled that precisely!

Here is a post-script to the story I wrote earlier this year for Sport Aviation magazine. If you recall, it was about building the safety net into your planning during the Phase I flight-testing of your homebuilt. I used the example of our own George Moore, who experienced loss of power when an over speed sensor on the automotive engine conversion brought engine power pack to a “limp home mode”. This resulted in a successful forced landing at the local trap shooting range. I was contacted by a builder from Heidelberg, Germany who had an RV-6 with the same engine. He experienced an engine failure, and he wanted to know more of the details of what George had experienced. Even though the man in Germany used the same engine, the failures were different. A 5-amp circuit breaker was installed instead of a 20-amp circuit breaker, to protect the electronic engine control circuit. The undersized breaker popped when the airplane was about 200 feet into the air. So while the two failures were different, they both were single point failures causing loss of power.

With summer in full swing, enjoy the beautiful flying weather. And always remember to help your fellow pilot when you can. Wouldn't you be happy to point out “Hey that's the wrong circuit breaker!”?



FROM THE FLIGHT SURGEON
By Gregory Pinnell, MD
Senior AME/ Senior Flight Surgeon USAFR

AirVenture at Oshkosh is coming soon! Many of us will be taking our aircraft over Lake Michigan flying at high altitudes for safety.

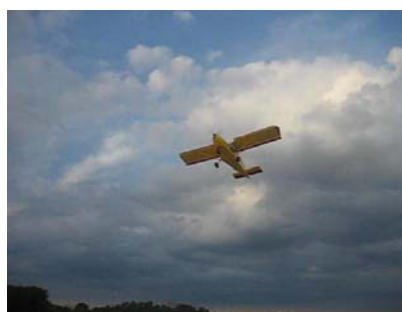
We all know the FAA rules for oxygen usage. Flight crew must use oxygen above 12,500 feet when the time at altitude

is 30 minutes or longer. At 14,000 feet or above all aboard must use supplemental oxygen. The reality is that hypoxic symptoms can start as low as 5,000 feet at night and 9,000 feet during the day! If your trip takes you to high altitude, consider renting or purchasing a portable oxygen system to increase your safety and make the trip more enjoyable!

We have a new High Altitude Lab at Western Michigan College of Aviation which can simulate hypoxia symptoms to 30,000 feet. It is a great way to increase your altitude awareness and learn your personal hypoxia signs and symptoms. Contact us for more details.

Gregory Pinnell, MD
Senior AME/ Senior Flight Surgeon USAFR
www.airdocs.net

First Flight for Ralph Gregus in his newly constructed Zenith CH750 on June 7, 2013
Congratulations on a Beautiful Aircraft
Good Luck and Happy Flying!!!!



CHAPTER 55 CLASSIFIEDS

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

AIRVENTURE: Group camping; Greg Hover
517-676-5126/ 517-862-8966/ rv.man2010@hotmail.com
Rooms for rent; Bill Purosky 517-655-1432/ 517-214-2729/
bpuros@aol.com

WANTED:

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

FOR SALE:

Vans RV-12 project; wings, empennage, fuselage kits; 95-98% complete; pics posted at terminal. Albert Mickalich 517-246-9872; Holly MI

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

Honey; Gordon Hempstone 517-515-1454

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

Stearman Rides & new surplus hardware source;
Yesteryear Aviation 517-676-4416

Contact Warren or Vickie to place your ad here!

JUNE 9, 2013 DAWN PATROL BREAKFAST PHOTOS BY WILLIAM BEZDEK

A beautifully restored Howard aircraft,
inside and out.



PILOT HUMOR





POCKET CALENDAR

July 13 = YE Rally 1000-1400

July 14 = Chesaning DP

July 29-Aug 4 AirVenture

Aug 10 = YE Rally 1000-1400

Aug 10-11 = YAF Thunder Over Michigan

Aug 11 = South Haven DP

Aug 17 = Mason Aviation Day 0730-1430

Aug 24 = Sparta Build-Off & Fly-in

Sep 14 = Jackson DP

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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