

# CHAPTER 55 EXPERIMENTAL AIRCRAFT ASSOCIATION

MARCH 2008



Meetings are the 2nd Saturday of each Month

EAA Chapter 55 Hangar - Mason Jewett Airport – 643 Aviation Drive, Mason, MI 48854  
Pres: Bill Bezdek 351-0448 Vice Pres: Bill Purosky 214-2729 Treas: Sharron Hacker 740-4647  
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## Climb and Maintain Flight Level 55

We have another day of celebration to mark on our calendars. **February 28 is now Ernie Lutz Day!** Ernie was honored at a joint ceremony between the Mason City Council and the Board of Education for his service to his country, and his service to his community. We are honored to have this distinguished gentleman as a member of our aviation community as well. We all know him as a faithful supporter of the Young Eagles program, flying kids at every rally. And we have heard him tell of his WWII experiences flying the high performance twin engine light bomber, the Martin Marauder. And some of us know of his business experience as an electrical contractor for many years in the Lansing area with the firm of his name.

Congratulations Ernie, well done!

But there are many more stories to be told by our distinguished membership. Let's hear your own experiences, in service to our country, in your early days of aviation, or in the construction of your project. Please contact either myself, or Al St. George, our Program Chairman to help prepare your story.

**Board of Directors Meeting  
March 5, 2008 7:30 pm  
Chapter Membership Meeting  
March 8, 2008  
Breakfast 8-9 Meeting 9:30 am**

You may have received the flyer announcing EAA SportAir workshops coming to Detroit on 5 and 6 April. We are planning a series of workshops within Chapter 55 but with one exception, on other subjects. You might have an interest in Introduction to Aircraft Building; Composite Construction; Sheet Metal Basics; Electrical Systems, Wiring, and Avionics; Test Flying your Project, or What's Involved in Kit Building. The cost of each Workshop varies between \$25 and \$289. Make your reservations at [www.sportair.com](http://www.sportair.com), or by calling 1-800-967-5746. As I have announced before *our* first workshop will be on welding, held sometime in May or June. It will be an all day Saturday, not on our meeting day, at Chuck Hacker's

shop. We'll bring in sandwiches and drinks. The cost will be nominal, just your commitment to help with our annual Mason Aviation Days in August.

Our program this month is an 18 minute FAA video about runway safety. I picked this up at the GLIAC last year and I thought this month would be a good time to show it. It relates particularly to general aviation and has some spectacular Alaska scenery. I also was given a video that is specific to airline operations. But it is 35 chapters in length and not of interest to everyone. If you would like to borrow it for your personal edification you have only to ask.

Bill Bezdek, President



January Breakfast Team: Bill Purosky and Del Johnson.

## Breakfast Teams

<u>March</u>	<u>April</u>
Bartley Dixon	Warren Davis
Ray Fink	Don Frank
Leo Holmes	Robert Harter
Ted Lakin	Jennifer Huldin
Gary Riddell	Deanna McAllister
Mary Schwaderer	Don McAllister
Jim Schwaderer	Gary Nesbitt
Mark Stanton	Dan Schiffer
	George Spencer

## **EAA Chapter 55**

### **Board of Directors Meeting, February 6, 2008**

No meeting due to weather.

## **EAA Chapter 55**

### **General Membership Meeting – February 9, 2008**

President Bill Bezdek called the meeting to order at 1300 Z, earlier than usual because of the more than usual quantity of business to be conducted.

Secretary's report: Two corrections for the minutes of January: Information re: Mike Hauser should read, Mike Hauser has accepted an appointment to the Air Force Academy. Also, re: information re: tax filing for Chapter 55, we do have to file each year from now on, but we will not have to pay taxes as we remain a non profit organization. The secretary's report was passed with these corrections.

Treasurer's Report given by Doug Koons in the absence of Sharon Hacker. Mr. Koons reported that the amount of funds for January is down by \$600.00, but the Christmas party and the payment due for insurance were the reasons for the drop. The certificate for our insurance has been received. As for membership fees, some still have not paid, but the percentage of paid membership fees is better than last year. The treasurer's report was passed as read.

Our guest in attendance today is Lynn Matteson who is featured as our special program this month. The program he presented was excellent and featured his cross-country round trip to California and back to Michigan. His talk and DVD slide presentation was most interesting laced with good humor. Very enjoyable.

Sharon Hacker sent the board a proxy enabling Doug Koons the authority to represent her in voting privileges and to act as treasurer while she is in absentia.

President Bezdek reported on the Yankee Air force and their plans to hold a fund raising auction and dinner on Saturday, February 16, 2008. RSVP by February 12, 2008. The question of our sponsoring YAF Museum fund was presented. Al St. George suggested that we cooperate and support a sponsorship. Vicky Vandenbelt suggested that we table this until the end of our fiscal year when we would be better able to make a monetary contribution to the Yankee Air force Museum. It was so moved, seconded and passed. However, those who wish to attend the fund raising dinner on the 16<sup>th</sup> of February, could do so, the price of the dinner is \$70.00.

Oshkosh Leadership Academy: President Bezdek and David James reported that a great number ideas were presented, including those presented by our president and David James. These suggestions were well received by Head Quarters and it was noted that Chapter 55 is one of the most active and successful Chapters in the U.S. Our representatives came back with a 7-page report providing a wealth of ideas for projects

and activities. A 17 minute video, which we saw at our meeting, was presented and targeted mostly museum visitors at Oshkosh. Our two representatives suggested that videos be created for local PBS transmission of varying lengths, some 30 sec, others perhaps at 60 sec, still others hour long presentations that can be broadcast on our T.V. PBS stations. HQ seemed to like these suggestions.

EAA Head Quarters desires a calendar of events of Chapter 55 to be included in the national calendar of events. Mr. Greg Tucker volunteered to handle this task.

Young Eagles: Doug Koons reporting. Dates for YE days: June 14, July 12, and August 9. Also, 6<sup>th</sup> graders of Mason Public Schools to be invited to our YE day on May 17<sup>th</sup>. EAA Head Quarters has been informed of these dates. Mr. Koons is also instrumental in making contact with Mason Elementary School re: promoting aviation as part of the curriculum, or at least to provide a special day for our Chapter to provide a guest appearance to the 6<sup>th</sup> grade class to spark interest in aviation as a future employment objective and for recreation. Efforts such as this can help promote more positive understanding between the citizens of Mason and our Chapter. The survival of our airport is at stake and these efforts are critical to the future of Mason Jewett Airport.

Student membership for ages up to 17 years discussed. We obviously need to bring in younger blood into our organization. When the member reaches age 18, that member will have the opportunity to continue ongoing membership at the established membership fee as an adult.

Chairs: Bill Bezdek presented a sample vinyl chair, but it has been suggested that an upholstered chair would be much more comfortable. The vinyl covered chairs are called "half-hour chairs" for good reason as after about ½ hour, one's derriere suffers noticeable torment, whereas the upholstered chair is called "two-hour chairs," again, for good reason! Therefore, the upholstered chairs for our meeting room is the preferred choice. Incidentally, the upholstered chairs cost \$30.00 each which is considerably less than that presented as less comfortable!

Tom Botsford indicated that our Chapter can participate in two Chamber of Commerce parades (or even three if so desired) this summer. It was suggested that some of our airplanes can be perched on flatbed trailer(s) as part of our promotion for aviation at Mason Jewett and our Chapter. Also, the Chamber of Commerce ribbon cutting ceremony discussed in last month's meeting is to be held on the 28<sup>th</sup> of February at CP Credit Union at 9:00 a.m. to celebrate the opening of CP Credit Union. Lunch to be served afterwards. Another opportunity to do some PR.

Vicky Vandenbelt awarded a sack of Vickie's Potato Chips (she's just a chip off the old potato) for her faithful contributions to our chapter, presented by Bill Bezdek.

Bill Bezdek brought with him from the Leadership Academy an entire roster of EAA members within a 30 mile radius of Mason. There are 269 members, complete with addresses, but no telephone numbers. Maybe postcards sent to invite these members to our local Chapter? Vicky Vandenberg has offered to cross-check for telephone numbers list.

Some discussion followed re: concern for lack of maintenance of Mason Jewett Airport during those times when Connie Stewart is not at the airport for vacation or other needed absences. The telephone number for Mr. Mike Daigle, Assistant Deputy Director at Capital City Airport follows for those who need to contact him regarding important issues affecting our facility: (517) 886-3712.

Al St. George discussed the need for additional Flight Advisors and who could qualify for this voluntary position. It has been noted that the Flight Advisor program is responsible for improving the safety record of experimental aircraft, especially during first flight of a newly built airplane. The Flight Advisor program is essential in continuing to improve this favorable result.

It was moved and seconded to adjourn at 1430 Z. Meeting adjourned.

Lynne Matteson followed the general meeting with his excellent presentation.

Special note: Congratulations are in order for the marriage of member Jim Spry and Carol Brown who were married on January 16<sup>th</sup>. Now Carol is just as Spry as Jim is! (Have you noticed the spring in Jim's step lately?) Best wishes Jim and Carol for continued happiness for many years to come.

## **TIDBITS 2007**

**By Vickie Vandenberg**

### TEW AIRPORT OPERATIONS:

The Mason Jewett Advisory Group has received numerous complaints and comments about airport maintenance pertaining particularly to the stated snow removal procedures and most recent field conditions after snow storms.

Mr. Robert Selig; CRAA Executive Director, has asked that we encourage tenants and users to immediately contact **Airport Operations Center at 517-886-3723** when there is a safety, or other such situation, at Mason Jewett Airport.

He advises TEW is generally open 24 hours a day and for the most part is an unattended field, which is generally the nature of small general aviation airports. Further, Connie Stewart, Airport Supervisor, is not always on site or available by telephone to respond to incidents or events. The Airport Operations Center is literally responsible for monitoring Mason Jewett, and Capital City Airport, operations daily and dispatching a response to resolve situations. Accordingly, Authority staff cannot correct a situation that it doesn't know about. This is also the department that Connie Stewart, and all other Airport Authority employees, are obligated to maintain emergency telephone contact with 24 hours daily.

**Note:** In the case of bodily injury, health, fire emergencies – **call 911**

### SNACK & POP SALES:

Just a reminder – if you get hungry or thirsty when you are on the field, stop by the EAA meeting room to purchase a drink or chips or cookies. I try to keep these stocked with favorites and costs reasonable (depending on market cost). Payment is on the “honor system” and monies fund future purchases.

### DVD COLLECTION FOR THE LIBRARY:

I'm also working on building a DVD selection for our library. Some are new and some are from “gently used collections”. Recent purchases include Flags of our Fathers; Fly Boys, One Six Left and The Great Circle Air Safari. Check them out if interested.

### SOCIAL GATHERINGS:

We haven't had anyone step up to host a social this winter. Now that it is March, maybe we can hope that the snow and the cold will soon be behind us. If anyone wishes to host a spring event, I would be happy to help “pass the word”.

## **Young Eagles**

**By Doug Koons**

No new news for Young Eagles this month. Please keep these dates in mind to help with Young Eagles this summer.

5/17, 5/31, 6/14, 7/12, and 8/9.

## **Notes from Cape Juby**

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

The A380 test program is essentially complete, and we are shifting our focus to first flight and delivery preparation of new production aircraft. So far, Airbus has delivered 2 A380s to Singapore Airlines, with a third to be delivered in March. We also continue to test both systems and performance of our three remaining test airplanes. For example, Msn 9 F-WWEA, equipped with GP7200 engines, needs some natural icing tests to complete the full test campaign.

In the last month, I was fortunate enough to have some very interesting flight test assignments on the A380. We needed to do several takeoffs at close to the maximum takeoff weight, to measure performance under some specific conditions. This included performance in abused takeoffs (rotating 10 knots below the normal V1), and the usual engine cuts at V1.

Our initial weight at takeoff was 576.0 metric tonnes. If you do the simple math on that number (multiply by 2.2), it turns out to be a rather astounding 1,267,200 lbs. I mentioned this to Chuck Berthe, the former chief test pilot at Calspan, who had once tested some flight control concepts for a 1,000,000 lb airplane. Chuck remembers thinking that such a heavy airplane would never be built. But there we were, ready for take off at 576.0t. The maximum takeoff weight is 561.0t, so we were about 2% heavier than the maximum certified weight. Although the takeoff speeds are fairly high (V1 was 141 kts,

and V2 was 165 kts), the airplane rotated easily and lifted off predictably.

We flew for an hour or so to the French Flight Test Center at Istres, where they have a 5 km long runway (about the same length as the runway at Edwards AFB). To do takeoffs, you have to be on the ground, which according to many people requires some sort of landing. But these landings would be far, far over the max landing weight of 391.0t. The engineers in the back made sure we knew that the sink rate at landing had to be less than 8.0 ft/sec to avoid overstressing the landing gear. This, in essence, is what the flight test business is all about. Know the airplane and know its limits, then use your knowledge and skill to fly the airplane as precisely as you can.

I was designated to make the first landing at Istres. This is good and bad. You get to make the first landing, but then there are no “warm-ups”. It has to be right the first time, and each time after that. But being right means more than just touching down smoothly. It means touching down in the first 1000’ of the runway so you have the full length to slow down and can minimize the use of the brakes. To minimize brake energy, we used maximum reverse down to about 70 knots, then idle reverse until the last possible time to begin using brakes.

Runway 33 at Istres is not served with an ILS, but it does have a VASI. My initial maneuvering off the downwind and onto final approach was done keeping the vertical speed at around 800 fpm rate of descent until I could begin to see the VASIs. From there, it was a matter of monitoring aim point, sink rate, and airspeed. The first touchdown was at 4.4 ft/sec, with a weight of 564.0t.

For the first landing, we used the full length of the runway, and discovered that brake temperatures were not as high as expected. We saw temperatures in the 425-450C range, which could easily be brought below 300C during the slow taxi back with the brake fans on (brake fans are mounted on each main wheel, and are a customer option). For subsequent landings, we used three-fourths of the runway rather than the full length.

Each takeoff in the test phase carried a different requirement, but we had to retract the gear and climb initially to 500’ altitude before making any other changes from a normal profile. After 500’, we extended the gear again to continue cooling the brakes. For landings the brakes need to be below 100C. During the first pattern, we did one 360 turn on the downwind to get the brakes cool enough. After that, we just extended the upwind leg one extra mile. Subsequent landings recorded sink rates less than 3.0 ft/sec, with the lowest being 2.2 ft/sec.

After making 8 overweight landings, we headed back to Toulouse, but remained with the Istres military controllers to do some additional engine failure tests at altitude. These were dynamic engine failures in the landing configuration. We would stabilize at V2+10, then apply full thrust on all 4 engines and climb at V2+10. After 5 seconds hands off, the number 4 engine was brought to idle. We had to keep our hands off the controls for a full 20 seconds.

The first one was accomplished in Normal Law, but the second was done in Direct Law (all the flight control magic turned off). Dynamic engine failures in Direct Law are quite interesting. Limits for the maneuver are 40 degrees bank or 10 degrees sideslip. After the engine is failed, sideslip stays rather small during the 20 sec hands off period. But when you put aileron in to recover to wings level, you have to watch sideslip very carefully, because adverse yaw will cause an increase in sideslip which really can’t be felt in the cockpit. You have to be watching on the flight test instrumentation. Our final landing in Toulouse was at 512.0t, still well over the maximum landing weight, after 4 hours and 55 minutes flight time.

A week later, I was scheduled for a “drooped nose” test in the A380. OK, we didn’t change anything on the nose, but we were trying to find out why the lift coefficients produced by the A380 are slightly higher in flight test than were predicted in the design phase. This involved instrumenting the inboard leading edge flap on the left side, including installation of tufts to collect photographic data on flow patterns over the wing, during stalls. That’s right, during stalls on the world’s largest commercial airplane!

For this test, the flaps were kept in the Conf 2 position for the takeoff and the landing. We were cleared to use a block altitude between 8,000’ and 15,000’. Once stable at 13,000’, the engineers in the back once again turned the magic off in the flight control system, and we were flying just the basic airplane in Direct Law. The first thing we did was manually trim for hands off at 160 knots in Conf 2.

From that point, engine thrust was reduced to idle, and the technique was to slowly increase angle of attack until the engineers called “g break”. The angle of attack at the beginning was 8-9 degrees, and I could easily increase it through 12 degrees, which is the normal angle of attack limit. From there, I concentrated on steadily increasing angle of attack, while making sure that absolutely no aileron inputs were made on the stick. Significant buffet begins between 12 and 15 degrees, but not to the point that you are being shaken around in the seat.

The amount of stick required to keep the angle of attack increasing is rather small. Even though the trim airspeed was 160 knots, stick forces remained fairly light during the approach to the stall, which occurs at about 120 knots (approximately 20 degrees angle of attack, with a weight of 380.0t or 836,000 lbs). Buffet at the stall is quite heavy, because the ripples in the turbulent flow as it separates from the wings are literally huge. But I have done stalls in other very large airplanes where flexing of the fuselage and wing contributed significantly to the intensity of buffeting as felt in the cockpit. The A380 is a very stiff airframe and the buffet was easily tolerated while remaining in full control and being able to read all the instrumentation.

Then you have to be very careful with the techniques used for recovery. If you lower the nose too abruptly, the horizontal tail will pass directly through the stalled wake of the wing. This will generate unacceptably high loads on the tail. Pitch control at the stall is excellent in the A380, and even though stick



movements and stick forces are light, you have very precise control of pitch at all times. So you want to recover smoothly but a bit slowly, so that the wing is mostly unstalled when the tail passes through its wake. This is a rather quick process in a light airplane, but for a very large airplane, it takes a bit more time. The last thing you have to be really careful about is increasing power too rapidly. Without the flight control magic, the fact that the engines are below the wing will cause the nose to pitch up, which could cause the angle of attack to increase again. Finally, to give you some idea of altitude loss, beginning at 13,000', we lost about 2500' during our idle power approaches to the stall.

So from wherever you're reading this, you now have some appreciation for what it's like to fly the world's largest passenger airplane at very heavy weight, and to do a simple approach the stall and recover again. If I were there in person, we would call this a good "hangar flying" session. Maybe you'll remember the details the next time you're sitting around when the weather is bad and put it into perspective for the takeoffs, landings, and stalls you will no doubt be doing when the white stuff melts away.

From what I am hear, there are a lot of changes going on at the Mason Airport. It's time, perhaps, to stand up and be heard, because the situation seems to be headed in the wrong direction. Some of things we can't change, but for this month, perhaps the person who needs our help is Connie, our airport manager. It appears that at this point in time, both she and our airport really need our support.

### Proud Father – Drew Seguin

I thought you might like to see some photos of Elliot taken from his first mission in Proteus for Scaled Composites. They were taking up something for the military but he's not talking about it. His first flight was to 46,000 feet and lasted about 8 hours.

Chapter 55 members who remember Elliot coming to meetings when he was just 6 years old should be proud.



### CHAPTER 55 - CLASSIFIEDS:

**FOR SALE:** 2 Lots in Sugar Springs Residential Community approx. 10 miles north of Gladwin MI. This 4000 acre development has the following amenities: two lakes ( Lancer, 780 acres & Lancelot, 230 acres), paved roads, sanitary sewer system, underground electric, weekly garbage pickup, 18 hole championship golf course w/ pro-shop, indoor swimming pool, restaurant and pub, beach areas with toilets and showers, 2 tennis courts and a 3500 ft. grass airstrip ( 0mi1 ). These 2 lots (approx .40 acres each) offered are improved, drive/culvert, 5" well, electrical service set, sewer line already in. Only \$15,900.00 for both. Contact Doug Simons 517-626-6790

**FOR SALE:** Mason Aviation Day T-shirts; lots size L & XL \$10.00 each.

**FOR SALE:** Chapter 55 wear = (2) EAA55 hats; \$15.00 each.

**CHEAP:** Sporty's Electronic E6B Flight Computer. Like new. Retail value \$90.00; will sell for ANY OFFER. Proceeds go to EAA55. See Vickie Vandenbelt

FREE: Collection of EAA Sport Aviation magazines; all issues 1959 thru 2000. All organized in boxes by years & includes some indexes by Bergeron. One condition – entire collection must go. Contact Bart Smith 517-676-2146

FOR SALE – Wicks one inch seat cushions, blue, with front map pocket. Set of 2, like new. \$120.00. Contact Patrick Salow 517-565-3178

WANTED TO BUY – Cessna 210; retractable gear. Contact Doug Green 601-265-0009 or [coffee-break@hotmail.com](mailto:coffee-break@hotmail.com)  
WILLING TO LOAN – Jigs & Fixtures for a Zenith 701. Contact Chuck Hacker 517-740-9222

### **POCKET CALENDAR**

Sun-N-Fun; 4/8/08 to 4/13/08

Young Eagles; 6/14/08

Dawn Patrol; Sunday, 6/15/08; 7:00am-Noon (T)

Young Eagles; 7/12/08

AirVenture; 7/28/08 to 8/3/08

Thunder Over Michigan; 8/9/08 & 8/10/08

Young Eagles, 8/9/08

Mason Aviation Day; Sunday 8/17/08; 7am-4pm (T)

Mid-Eastern Regional Fly In; 8/23/08 & 8/24/08

Christmas Party; Saturday, 12/13/08

For additional listings see Events Calendar at  
[www.eaa.org](http://www.eaa.org) and [www.mdot.state.mi.us](http://www.mdot.state.mi.us) and [www.flyins.com](http://www.flyins.com)

FOR SALE – Avon Products & Natural Beauty Soaps. For a copy of the latest brochure, contact Deanna (McCreery) McAlister 517-596-2506 or visit  
[www.naturalbeautysoaps.net/deanna](http://www.naturalbeautysoaps.net/deanna)

WE COULD HAVE INSERTED YOUR AD HERE! If you have a FOR SALE or TRADE or WANTED or NEED TO BORROW or FREE TO GOOD HOME, etc. – we have space in our newsletter. Contact Warren or Vickie for the next edition!