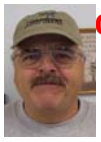
CHAPTER 55 EXPERIMENTAL AIRCRAFT ASSOCIATION

MARCH 2012

Wingtips

Meetings are the 2nd Saturday of each Month
EAA Chapter 55 Hangar - Mason Jewett Airport – 643 Aviation Drive, Mason, MI 48854
Pres: Ken Vandenbelt 589-5051 Vice Pres: Bill Purosky 214-2729 Treas: Al Spalding 676-3370
Secr: Vickie Vandenbelt 589-5051 Editor: Warren Miller 214-2656 (all Area Code 517) www.EAA55.org



Climb and Maintain Flight Level 55

Our events planning committee had their first meeting and are off to a great start. A few things we'd like mention . If you have any contacts for exhibits or attractions of an aviation nature OR if you or someone you know might loan us Gator or golf cart type equipment OR if you know of any sponsors we might contact for donations to EMU Foundation Newberry Aviation Scholarship Fund 501c3 - PLEASE let us know. Additionally, our YE-DP-MAD flyers will soon be ready. We hope you will help distribute them by posting one at your employer, church, barber, airports you visit or anywhere else where you see they allow posters !!

Board of Directors Meeting
December 7, 2011, 7:00 pm
Chapter Membership Meeting
December 10, 2011
Breakfast 8-9

As I mentioned last month, several members have been tossing out ideas to stimulate activity at EAA55 and TEW. This Saturday, we will attempt a short survey to see what activities you members would be most interested to participate in.

A big "thank you" to Doug Koons, Bill Purosky and Greg Hover (and me). We gathered at Doug's home on a recent Wednesday morning to cut out plywood reinforcements for all our meeting room chairs. (We have been experiencing a large number of broken bottoms!) Doug made a template; we cut them out, sanded & painted edges. Then, installed on all our chair seats. Hopefully the problem is solved !!

I am looking forward to this month's program on Mountain Flying presented by Alan Wright. Our safety program for next month had to cancel, but I am hoping that we will have an Aviation Law program to replace it for our April meeting.

Let's hope March is in like a lion and out like a lamb - with a lot of great spring days !!

Ken Vandenbelt, President

Breakfast Teams

March	April
Ron & Becky Broschart	Louis Bacon
Rick Dallas	Don Frank
Ray Fink	Deanna McAllister
Cliff Hale	Don McAllister
Dan Schiffer	George Moore
Jack Voss	Gary Nesbitt
	George Spencer

February Breakfast Cooks
Phil Tartalone; Tom Schroeder; Lynn Brown

The Chapter meeting room is in "WINTER MODE" - please be sure to keep the bathroom door AND the storage room door CLOSED.

EAA Chapter 55
Board of Directors Meeting, February 8 , 2012

✈Meeting was called to order at 7:03pm. ✈Directors present: Ken Vandenbelt, Vickie Vandenbelt, Doug Koons, Al Spalding, Dave James, Steve Houghton, Bill Purosky, Jim Spry, Ed Search & Joe Madziar. Absent: Warren Miller. ✈Secretarys Report dated January 11, 2012; Joe Madziar made a motion to approve; Ed Search supported; all approved. ✈Treasurers Report dated January 31, 2012; big expenses for insurance, Newberry Scholarship and Xmas party; Vickie Vandenbelt made a motion to approve; Bill Purosky supported; all approved. ✈YE: Doug Koons mentioned there may be another home school group. ✈Adult Eagle (AE): details still pending due to national reorganization. ✈YE: Steve Houghton to work on a biz card design. ✈Membership: will send EAA55 promo along with DP & MAD flyers to at least 100 prospective members; Al Spalding secured pilots list for prospects. ✈Program: had to cancel; no program for Saturday; discussed options. ✈Tables: Doug Koons made a motion to approve up to $200 for 8 tables if they look good; Dave James supported; all approved. ✈BOD still looking for a Secretary to appoint. ✈Joe Madziar will check with a friend to look at our furnace. ✈Bill Purosky made a motion to use $250 (50 credits) of our YE Credits to sponsor Anna Koerber to go to the EAA Academy; Doug Koons supported; all approved. ✈Vickie Vandenbelt made a motion to provide Honorary Memberships for the three new Newberry recipients; Brian Kolbuch; Justin Jaworski; and Joseph Moore. Bill Purosky supported; all approved. ✈Discussed possible activities for TEW; see what members think. ✈Fire Extinguishers; time to update; $47 last year; approved to go ahead if cost not up. ✈MAD attractions; ideas & contacts needed. Joe Madziar suggested we consider pizza & will check into. ✈Doug Koons presented $125 material cost estimate & made motion to repair 100 chairs; Joe Madziar second; all approved. ✈Joe Madziar made a motion to adjourn; Bill Purosky supported; meeting adjourned at 8:27pm.

EAA Chapter 55
Gen'l Membership Meeting, February 11, 2012

✈Meeting was called to order at 9:31am with approximately 32 members and 8 guests present. ✈Following the National Anthem, President Vandenbelt thanked the breakfast team & announced the team for March. ✈Guests were introduced including our four Newberry Aviation Scholarship recipients. ✈Secretary's report dated 1/14/12; motion to approve; second; all approved. ✈Treasurers report dated 1/31/12; motion to approve; second; all approved. ✈YE: Phil Tartalone met with Doug & ready for summer. ✈Card circulated for the family of Rocky Stone. ✈First Events Planning meeting scheduled for 2/29 at 7pm. ✈Solicited input on activities to support our airport. ✈Bill Bezdek/Phil Tartalone announced the EMU/LCC Eagle Flight Center offer for ground school at half price. ✈Phil Tartalone announced the GLIAC was a great event; tentatively scheduled for 1/23 & 1/24/13. ✈No program as the gentleman scheduled had to cancel. ✈Motion was made & meeting adjourned at 9:58am.

TIDBITS ~

By Vickie Vandenbelt

NEW MEMBERS: Chapter 55 welcomes new member Gregory Rheeder; along with Honorary Members Kyle Curtiss, Joseph Moore, Brian Kolbuch and Justin Jaworski (our 2011/2012 Newberry Aviation Scholarship recipients).

EVENTS PLANNING MEETING: tentatively scheduled for Wednesday, April 25th @ 7:00pm

Newberry Scholarship recipients for 2011/2012
Justin Jaworski, Joseph Moore, Kyle Curtiss
& Brian Kolbuch

YOUNG EAGLES

By Phil Tartalone

I am busy being indoctrinated as the new coordinator for our Young Eagles program. I sat down with Doug a couple of weeks ago and he showed me all of the materials and procedures. Of course, I sat there glassy-eyed and nodded my head positively while he went through his book of notes from all of his years of experience. I suspect that I will figure all of his out sometime before June. Fortunately, there is not much activity this time of year.

That being said, I am about to schedule my first school group. I'll let you know how it goes.

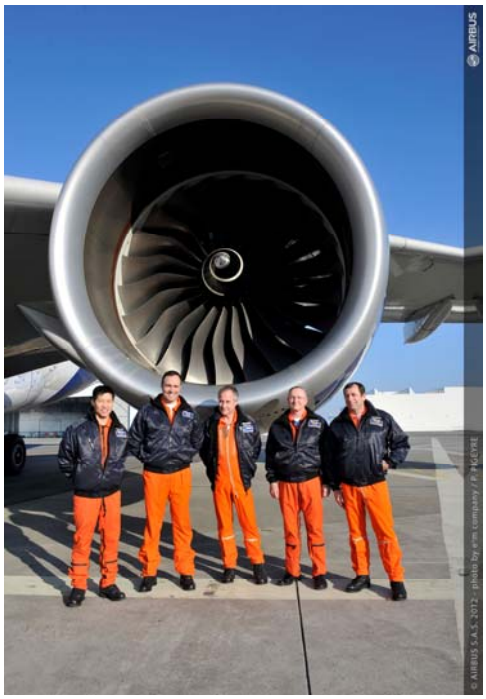
NOTES FROM CAPE JUBY

By Terry L. Lutz
Chapter 55 Flight Advisor

After several weeks of preparation, on February 18th we flew the Rolls Royce Trent XWB engine for the first time. It was mounted on the number 2 pylon of the first A380 ever built, F-WWOW. It was a WOW kind of flight! The engine is destined for the newest Airbus, the A350 XWB, which stands for Extra Wide Body. For the next several

months, we will test this engine to the extremes of its capability. For this month's Notes, I will put you on our test team, and describe how the testing has gone so far.

The Trent XWB engine is in the 84,000 lb thrust class. The existing Trent 900 engines on the A380 produce 72,000 lbs of thrust, so there is a 16% increase in thrust which must be accounted for in-flight, depending on the power setting. To prepare for flight, we did several ground runs to verify that the engine, engine mounted systems, and flight test instrumentation operated properly.



We spent a lot of time in the simulator developing a technique for thrust application that was effective with any individual engine failure, and to determine a crosswind limit. Then we did some accelerate-stop testing up to 100 kts to verify the thrust setting technique. In general, we were satisfied that the simulator model matched the engine-airframe combination quite well.

Then we waited for good weather. While we were definitely flying an all-weather airplane, one of the first things that needs to be measured is the stress on the fan blades. Measuring this stress requires the application of special instrumentation pads on the blades. The process actually involves bonding the instrumentation to the blade, then baking the instrumentation/blade combination. It is sensitive to any kind of rain, water droplets in clouds, or ice crystals at high altitude. While we could have taken the risk to climb through a hole in the clouds, damaging the instrumentation would have meant an engine change and a significant delay in the program. Once the blade stresses are determined, the instrumentation can be removed and we can evaluate the all-weather characteristics of the engine.

February 18th was bright and clear, with light winds and smooth test conditions at all altitudes. We would depart in formation with a photo-chase airplane, using a technique we call an airborne pick-up. The photo-chase airplane takes off first, flies a tight downwind, calls "30 seconds", then "Release brakes – Now", in order to be in perfect photo position at the time the A380 lifted off.

At the 30 second call, I moved all 4 thrust levers to 25% thrust. At the release brakes call, I released brakes and moved thrust levers 1 and 4 to a thrust setting slightly below full thrust. The First Officer then said "ready-ready-50 knots", and the Test Flight Engineer smoothly placed the thrust levers for the test engine and engine 3 to an equivalent setting and said "Thrust-Set". Between the time when all 4 engines were set at the proper thrust and V1, I knew that any deviation from runway centerline would indicate an engine failure and a reason to reject the takeoff.

The takeoff went perfectly, and we climbed to the south for some in-flight photos over the Pyrenees Mountains. The photo airplane was a French-built business jet called a Corvette. That's right, we were flying formation with a Corvette!

The objective for the first flight was to not so much to test the engine as it was to test the engine-airframe combination. We wanted to know that we could go to all the corners of the A380 flight envelope with the new engine/pylon installed on the wing. So we went to Vmo at low altitude, Mmo at high altitude, max angle of attack, and max angle of sideslip, without problem. The more interesting test points were maintaining a constant mach number during a slight descent until reaching a specific mach and indicated airspeed combination. At that point, we introduced flutter excitations to make sure that the new combination was flutter free.

After almost 5 hours of flying time, we again joined with the Corvette, who would fly formation with us and photograph the landing. Some of the photos from the flight can be seen at the following web site. Look carefully, and you can see the shadow of the Corvette just behind the wing of the A380! Here is the web address:

http://www.airbus.com/presscentre/pressreleases/press-release-detail/detail/a350s-trent-xwb-engine-makes-successful-first-flight-on-airbus-a380-test-aircraft/

You can also find a video of the flight at the following web link:

http://videos.airbus.com/video/0e0d15fe23fs.html

We have since flown with the engine another 11 hours, and accomplished a lot of pure engine testing. From a piloting standpoint, it is rather fascinating. For example, we fly the airplane at a specific mach number and altitude, and vary the Trent XWB from Max Climb thrust down to idle in 10 specific steps. At each step, the pilot must keep the mach number within +/- .003 for 5 full minutes.

At higher power settings on the Trent XWB, engines 1 and 4 of the A380 are set to idle, and we maintain the mach

number in that very narrow band by moving only the number 3 thrust lever.

While this helps to keep sideslip close to zero, as the thrust of the test engine is reduced in steps toward mid-range, maintaining the mach requires that thrust on number 1 and 4 be brought up in steps, so that the thrust from number 3 is in mid-range and can still be varied to maintain the mach.

As a final comment, the objective of these tests is more than just to test the engine. One of the goals of this program is to test all the normal engine systems that will be used on the A350. So in addition to the engine itself, we are testing the generators, hydraulic pumps, fuel feed system, and bleed air system that will be used on the A350. This serves to reduce the development time of the A350 itself, because many of its systems will already be tested and mature by the time the new airplane flies.

I once heard Captain Al Haynes speak about his experiences with United Flight 232, a DC-10 that lost all hydraulics and was miraculously brought to earth on the airport in Cedar Rapids, Iowa. Captain Haynes remarked that every community should be prepared for a natural disaster. Cedar Rapids was prepared, and many people were not only saved, but clothed, housed, and fed. Considering that so far in March, many people have already perished in tornadoes across the Midwest, perhaps we should all give thought to what we can do if disaster strikes mid-Michigan. It has happened before, and can easily happen again. And if the weather is good, fly carefully and safely. Spring weather is changeable and full of energy as warm air pushes out cold air. Be ready, and be ready to lend a hand to those around you that really need it.

FROM THE FLIGHT SURGEON

By Gregory Pinnell, MD

Hearing protection in the cockpit is an important part of good aviation health. Loss of hearing with repeated exposure to loud noises is a well known phenomenon. Our ability to discriminate speech tends to decline naturally as we age but properly protected our basic hearing declines very little in later years unless other diseases are present. Protect yourself by using the best noise reducing headset your budget will allow and don't forget hearing protection when using powered lawn tools such as lawnmovers and chainsaws. Fly Safe!

Gregory Pinnell, MD
Senior AME/Flight Surgeon USAFR
www.OK2FLY.com

CHAPTER 55 CLASSIFIEDS

EAA55 Builders & Storage Hangers 517-589-5051

FOR SALE:
MH in Zephyrhills, FL At Rainbow Village RV Resort; 1993 12x37; $14,500; Dick Bacon 517-230-7808 or rhbbb27@comcast.net

Snowblower; MTD; 3HP; 21"; single stage; $99; Greg Hover 517-676-5126

Assorted woodworking tools; Steve Houghton 517-333-2196 or steve.houghton@att.net

Legal Eagle ultra-light; estate of Jim Cushing; $10,000 OBO; James Devereaux 989-534-1333

2009 Kitfox; Model 4-1200; Rotax engine; many extras; Jack Toman 517-882-8331

KIS TR-1, Subaru Legacy engine; GPS nav/com; many extras; George Moore 517-536-1034

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

Yesteryear Aviation; new surplus hardware; 517-676-4416

Contact Warren or Vickie to place your ad here!

POCKET CALENDAR:
Mar 27-Apr 1 = Sun-N-Fun
June 9 = EAA55 Young Eagles
June 10 = EAA55 Dawn Patrol
July 14 = EAA55 Young Eagles
July 23-29 = AirVenture
Aug 4-5 =Thunder Over Michigan
Aug 11 = EAA55 Young Eagles
Aug 18 = Mason Aviation Day
Dec 9 = Chapter Xmas Party