

Volume 34

Issue 3

March, 2015



FT	3000	9000	12000	18000	30000	34000
BRL	1937	2215+12	2617+07	9900-09	20734	283444
DBQ	1922	2215+12	2617+07	9900-09	20734	283444
DSM	1919	2215+12	2617+07	9900-09	20734	283444
MCW	1709	2215+12	2617+07	9900-09	20734	283444
JOT	2229	2215+18	2106+13	2706+06	3205-09	9900-19
SPI	2028	1921+18	1911+12	9900+06	3611-10	3405-20
					191034	161745



EAA Chapter 790

Lake in the Hills, IL

790.eeachapter.org

Presidents Column

It was good seeing so many of you at the banquet last week. Our guest speaker, Karlene Pettitt told me she enjoyed being with us and wishes us the best of luck in our future events.

This month's guest speaker is going to bring us the insight of what it's like to travel to the North Pole. Dick Greenwood is known as a high achieving sales and marketing executive with an outstanding record of personal sales results and management leadership. Dick is also an accomplished explorer and mountaineer.

The significance of Dick's expeditions is such that some have been on TV – "National Geographic Explorer"; and some have been the subject of books. Others have been covered by national magazines such as Forbes, Reader's Digest, Expedition News and The International Wolf Digest. Dick has been quoted in articles in Newsweek and Outside magazine. His expeditions are often written as feature stories in the Chicago Tribune, Sun Times, Crain's and many other publications.

At our last board meeting the board discussed updating our meeting format. It was discussed and agreed on that the meeting will be to start at 7 PM with a short business meeting and announcement period limited to 15 minutes, followed by the guest speaker's presentation that, including Q & A, is programmed to end at 8:15 or earlier, followed by social time to end by 9 PM. It is hoped that this will

add a personal touch to the meetings. It will also allow members to get over to Nick's for some social time.

See you there!

Elton

How Aviation Degrees Lead to Unique Job Opportunities

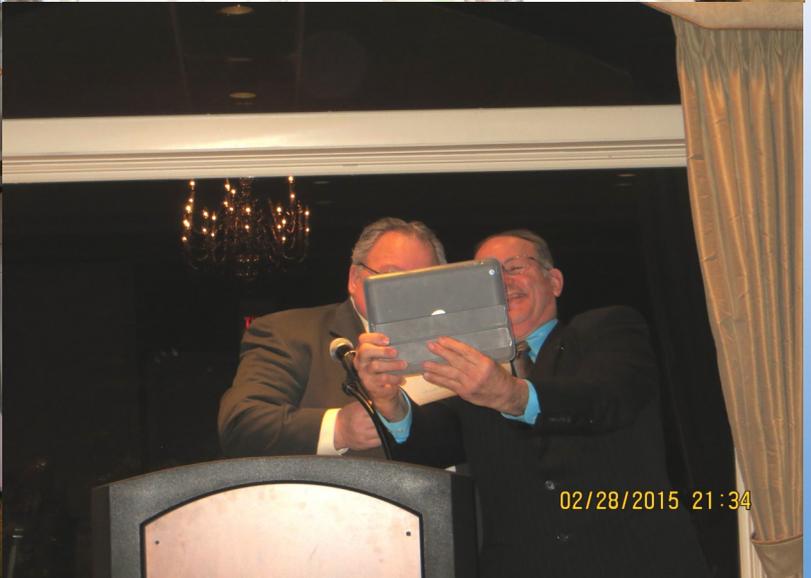
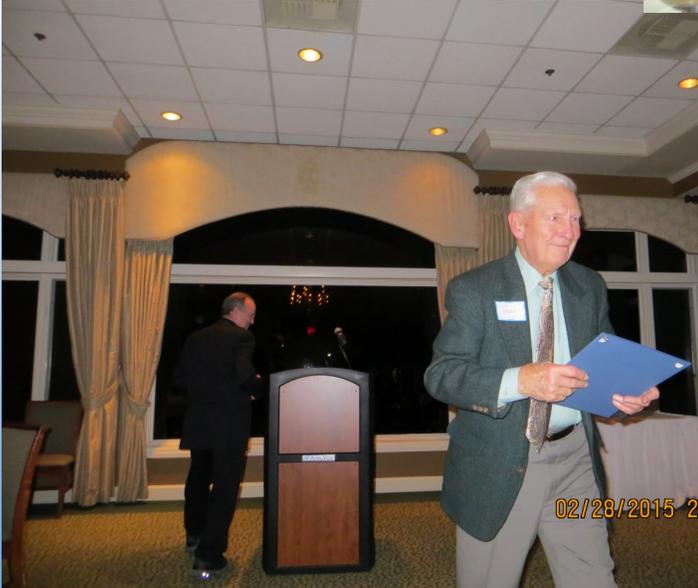
Lauren Clarke knew there was no other career option for her after she took her first flying lessons while in college. She was hooked. In her current job at Airtec, she gets to both fly and maintain the aircraft.

Follow this link:

<http://www.flyingmag.com/careers/career-spotlight-series-lauren-clarke-pilot-and-aircraft-mechanic?cmpid=enews030915&spPodID=030&spMailingID=22254097&spUserID=NTY3MzA4OTI1MzYS1&spJobID=520954352&spReportId=NTIwOTU0MzUySQ>

2015 Banquet





EXPERIMENTERS CORNER

Submitted by Ole Sindberg

About my experimentation with Vortex Generators.

First Flight of my Prescott Pusher was on 7. 8. 1998 – Yeah, it has been flying for 16½ years. The published specifications promised a stall speed of 70 MPH clean and 65 MPH with flaps – both at a weight of 2250 lbs.

Prescott Aeronautical had originally planned a max gross weight of only 2250 lbs., but that proved totally insufficient and was soon raised to 2400 lbs. Even that is insufficient for a 4 place airplane and with some adjustments and upgrades I fly mine at as much as 2820 lbs.

That has an impact on stall speeds, but I soon discovered that my stall speeds were significantly higher. At the original max weight of 2250 lbs. my CAS is now 75 MPH clean and 69 MPH with full flaps. At a more typical landing weight of 2500 lbs. the corresponding speeds are 80 MPH and 73 MPH. This means I have to fly my approach at 95 MPH CAS at a gross weight of 2500 lbs. Higher yet for higher weights.

I underline “now” because I decided in 2003 to experiment with vortex generator on the wings in an attempt to lower my stall speeds.

I obtained a kit really meant for a Bonanza from Micro Aerodynamics, and proceeded to experiment with installing these vortex generators on my wings and tail surfaces.

The first thing I did was tuft the wings and photograph the tufts at just above the stall. For the most part I did this while solo and it’s quite a handful to fly the plane and handle the camera at the same time. Having another person do the photography helped enormously.

Most of the tufts behaved as expected, but the ones on the inboard 20” near the fuselage were totally wild. Some were standing straight up –

other actually flowed forward. At the very aft tip of the winglets, the tufts were leaning aft and up at about a 45° angle. That I could not do anything about, and the wing-root area was my initial concentration



Some experimentation with slightly different locations followed, but I soon discovered that the stall characteristics were different. Prior to this, as I approached the stall, I would typically lose control laterally; one wing or the other would drop and I would initiate normal recovery. But now – it was always the left wing that dropped. As hard as I tried to keep the wings level, the left wing would drop. That was not the case before – so why now? So I added a whole row of tufts and VG’s on the rest of wing in a diagonal line. This so I could document where the VG’s did the most good. As it turned out the VG’s were needed about 11” in front of the ailerons, but they did nothing on the remainder of the wing. So that’s where they were installed.

(Continued on next page)

(Vortex Generators Cont.)

Here I installed 4 VG's spaced about 3½ - 4" apart and set on a line just behind the crest of the airfoil – or about 21" from the leading edge. The tufting was repeated and lo-and- behold, the tufts were now flowing with the relative wind. Especially on the right wing.

Some experimentation with slightly different lo-



cations followed, but I soon discovered that the stall characteristics were different. Prior to this, as I approached the stall, I would typically lose control laterally; one wing or the other would drop and I would initiate normal recovery. But now – it was always the left wing that dropped. As hard as I tried to keep the wings level, the left wing would drop. That was not the case before – so why now? So I added a whole row of tufts and VG's on the rest of wing in a diagonal line. This so I could document where the VG's did the most good. As it turned out the VG's were needed about 11" in front of the ailerons, but they did nothing on the remainder of the wing. So that's where they were installed.

But that did not solve my left wing dropping situation. I did not begin to understand this until I decided to stand in front of the airplane – hoping to see something different about the two wings. Something was different – on the left wing, where the door is – I have a wing-walk installed. Just a rough no slip surface sold by Aircraft

Spruce and glued to the wing-root area from the leading edge to about the crest of the airfoil. Sounds familiar?

I theorized that the rough surface disturbed the attached flow over that part of the wing and that the VG's were not high enough to be effective. So I called Micro Aerodynamics and asked whether they had VG's higher than the ones I had. They did and in due course, new 50% bigger and higher VG's were installed and that was the end of my left wing dropping.

Test flying revealed that the VG installation re-



duced my stall speed by 2 MPH when clean and 4 MPH when flaps are extended. That latter number is quite a significant reduction, and while I would love to have even lower stall speeds, I am at a loss on how to obtain that.

Cruise speeds have not been affected in a measurable way. I suppose there is some reduction, but I can't document any. The VG's on the tail surfaces turned out to be ineffective and most have come off the airplane on their own. The ones on the wings have stayed put.

Keep the blue side up.

Ole

LIFE IN THE RIGHT SEAT



Low Blood Sugar Can Land Ya in Jail

By Wendi Nelson

Flying to Dallas with my husband (a.k.a. My Pilot) was our first long trip together. We set out to make the trip in one leg, but bladder restrictions (mine) would have none of that.

Approaching Columbia Missouri he interrupted my Cirrus Radio Comedy hour with, "Would you like to eat and use the rest room?"

Sounded good to me, I was getting HANGRY (hungry leading to angry from low blood sugar) up there and starting to feel the effects of my 16 ounces of coffee and 2 cans of diet Coke.

"Sure!" I eagerly responded. So he started the descent. I could see the airport and it was small but had a bathroom so I didn't care about its size. All I cared was that it had a bathroom and a vending machine. We landed, parked our Cessna and headed for the FBO. I wasn't really paying all that much attention since my bladder was now aware of the fact that a bathroom was near and therefore went into what I call I quit mode". "I quit mode" is what happens when your bladder senses a bathroom near and decides to take on a life of its own refusing to hold it anymore. This causes "penguin walk" and fail-

ure to notice ones surroundings as one to scurry to the restroom, strange phenomenon but very real for me.

In my mad dash to the restroom, Rob said, "I'm going over to the café and going to grab us a coupe sandwiches, meet me when you are done!" I noted what door he walk out of and completed my penguin mission to the john.

With my potty mission completed my sights quickly changed to my HANGRY low blood sugar and those turkey sandwiches. Still drying my hands, I shot out the door which I had seen Rob leave out of as he headed to the "café". The airport appeared to be empty so I started across the pavement to the building which had the big CAFÉ sign on the side. It was about a good block away. Boy, I thought to myself, how inconvenient, but I knew that my husband was there with those sandwiches I was HANGRY for. I stomped a little agitated as I set out for the CAFÉ.

About half way there I hear a voice say, "PLEASE STOP! MA'M, PLEASE STOP WALKING!". Sounded like someone on a speaker and since I was the only Ma'am on this asphalt, I concluded they MUST be talking to me.

(Continued on next page)

Low Blood Sugar Can Land Ya in Jail

(Continued from previous page)

SO I looked around only to see a side door flying open and two guys in suits with government issues sun glasses come running towards me in lightning speed.

They approached me, one on each side and started asking me who I was, where I was from, if I had ID, where I thought was going and all I kept trying to say was, "I am going to get a turkey sandwich!". They weren't really very friendly, but gently took me by the arm and escorted me back into that door.

"Have I done something wrong?" I asked. "Uhhhhh yes Ma'am you could say that!" one of them curtly responded. "Where are you taking me?" I demanded. "To your turkey sandwich!" one of them stated. They wiggled me through a very sterile building and finally opened a door to....."Ohhhh my Gosh the CAFÉ!"

There with horror on his face stood my pilot husband holding two turkey sandwiches to go. "What did you do?" he asked. I was a little offended that

this was the first question out of his mouth. Not "WHY ARE YOU MAN HANDLING MY WIFE?" but "WHAT DID YOU DO?"

"Sir," one of the agents said, "your wife here was found walking down the runway!"

"I was?" I blurted. "I only walked out of the last door I saw Rob walk out of as he went for the sandwiches!"

"Yes, mam we are FAA agents and for your safety we needed to get you escorted to the "CAFÉ", you were on the tarmac and that is against the law."

"Sir, do you have her from here?" they asked Rob as they sternly "walked" me over to him. Rob embarrassedly answered, "Yeah I HAVE her from here!"

The walk back to the plane was long. Rob referred to me as his "Lucy" as I ate my turkey sandwich as we took to the skies to complete our trip to Dallas. He said he could see the headlines "Woman arrested at Columbia Airport as she breeches FAA Security for the sake of a sandwich!"

Wendi

Wanted - CFI seeks partnership in a nice Cessna 172 for personal-only use based at or near 3CK. Ted Rouba 847-683-9349.

Members info

- Pancake Committee Meeting Members Needed- Contact Elton Eisele, see dates In Calendar of Events.
- Wanted airplanes, parts, technical advisors for Youth in Aviation Program. Contact Rob Nelson
- Congratulations to Dale Mendendorp obtaining his Zenith CH650 Airworthiness Certification.

Blue Skies Flying Services Presents Private Pilot Written Test Ground School

This is a 12 week ground school in preparation for the FAA VFR written examination. You will need the Gleim Private Pilot FAA Knowledge Test Guide, an E^AB Computer, and navigation plotter. This course includes 6 months free on-line practice tests.

Fee \$250 plus books and supplies

When: course Begins Tuesday, March 31st, 2015 at 7:00 PM at the Blue Skies Pilot Shop Training room and then every Tuesday from 7:00 PM until about 9:15 PM.

Location:

Blue Skies Flying Services and Pilot Shop

8411 Pyott Rd., Lake in the Hills, IL 60156

800/850-4397

Instructor: Jerry Coarson, CFI 815/943-8785

Directions to Venue:

Rakow Rd. to Pyott Road then South on Pyott Road to airport entrance

(Blue Skies Flying Services Inc. is an approved FAA Testing and Lasergrade Testing site)

Submitted by John Kinyon

Calendar of Events

March 20-21 Leadership weekend EAA
March 24Meeting Dick Greenwood (North Pole adventures)
April 11Pancake Breakfast Committee Mtg (Panera Bread Algon. 9:00 AM)
April 18 ---Rochelle Airport Lunch
April 25--Air Zoo Kalamazoo--- with other EAA Chapters from northern Illinois
April 28 ---Chapter Meeting Second Chili Cook-off
May 2 ...Pancake Breakfast Committee Mtg (Panera Bread Algon. 9:00 AM)
May 9----Young Eagles
May 15-17---Trip to Ford Museum
May 26---Meeting- Avionics Talk
June 6----Young Eagles
June 9 ...Pancake Breakfast Committee Mtg (Panera Bread Algon. 9:00 AM)
June 13---Yokes and Spokes
June 23---Meeting-- Invited Roger Keys to speak on the TDR-1 military pilotless drone manufactured in DeKalb at the Wurlitzer factory in the 1940's for the U. S. Navy.
June 20 ...Pancake Breakfast Committee Mtg (Panera Bread Algon. 9:00 AM)
June 28---Chapter Pancake Breakfast at Lake in the Hills Airport
July 20-26---Oshkosh AirVenture
July 28--- Meeting---AirVenture rundown
August 22----Young Eagles
August 23... Ken and Son's 20th Annual Day at the Hanger
August 25--- Meeting Guy Lieser -former ATC and now area speaker/instructor
Aug 30--- Sunday---Poker Run with other EAA Chapters from northern Illinois
Sept 12----Young Eagles
Sept 22---Meeting-- Paul and the FAA
Oct 9-10---- Air Force Museum, Dayton Ohio
Oct 27---Meeting-- AME--Dr. Greg Ostrom (to be confirmed)
Nov 24---Meeting-- Aircraft structures, Mike Perkins
Dec 22---Chapter Christmas Party
Jan 26---- A better Fuel System (2016)

**Send any of your aviation adventures, pictures, articles or humor
you would like to appear in the Newsletter to:**

“tomsolar@sbcglobal.net”

Tod Whitmore's T-51 Project



On Saturday March 7th, EAA 790 Chapter members converged on Tod Whitmore's purpose-rented workshop, fittingly, on Eagle Drive. Yes, that can be interpreted as golf related, but I choose to go with the bird type of eagle.

Anyway, when I looked at the address, and knowing that it is in a Bensenville industrial park, I figured we were going to visit a corner of Tod's business set aside for airplane building. Not quite. He is renting a commercial shop that is 100% dedicated to the project. How cool is that? He did have some other goodies secreted away under covers and some vintage film projection equipment in the office that I didn't ask about, but that's another story.

The shop is about 1500 square feet and is clean room clean. Well almost. But hey, if my donut rolled off my plate and onto that floor, I would.....uh, you know. The shop is very well organized with the plane sitting in the center and surrounded by well set up tables and cradles that support various parts and assemblies awaiting fitment.

The plane's fuselage, wings and tail are mostly complete and sitting on the retractable conventional (tail dragger) landing gear. Interestingly, the main tires are high performance scooter tires, good for at least 100 MPH. That should suffice, since the stall speed is 42-52 MPH. That, coupled with a cruise speed of 150-180 MPH and a VNE of 215 MPH, gives the plane quite a speed range. A takeoff run of 250' to 450' into a climb rate of 1,200 to 2,500 FPM to a service ceiling of 16,000'-18,000' should provide Tod and his wife

Linda with the sportiest of performance, since he will install the Honda V-6 engine rated at 245HP.



Winding things up at noon, we discharged into the sunny weather and went our separate ways until next time. We had 13 in attendance, many of whom are also builders. For me, these workshops and similar events really are the main attraction to chapter 790 and EAA. Not only do we get to see and learn about cool aviation stuff, but it is an opportunity to spend time with some interesting and intelligent people. Oh, and donuts and coffee are served....



Thanks to all in attendance; hosts Tod and Linda Whitmore, tech counselor to this project Capt. Ole Sindberg, Dale Medendorp, Paul Ranieri, Ron Liebmann, Tom Solar, Lon Danek, John Grosse, Carl Gieger, Gordon Lawrence, Charlie Boyle and Ed Berthold. Mike Perkins is also a tech counselor for this project but was not in attendance since he lives 3.5 hours away!

Write up by Joe Rossi

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