



THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

Voted to Top Ten Newsletters, 1997, 1998 McKillop Award Competition

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<http://www.eaa1000.av.org>

October 2019

Chapter 1000 meets monthly on the third Tuesday of the month in the USAF Test Pilot School Scobee Auditorium, Edwards AFB, CA at 1700 or 5:00 PM, whichever you prefer. Any changes of meeting venue will be announced in the newsletter. Offer void where prohibited. Your mileage may vary. Open to military and civilian alike.

This Month's Meeting:



Scaled Composites

Jake Rabideau

Tuesday, 15 October 2019

1700 hrs (5:00 PM Civilian Time)

USAF Test Pilot School Auditorium

Edwards AFB, CA

We all know that there is a company here in the Antelope Valley called Scaled Composites. You probably know it is located at Mojave Airport (KMHV) and was founded by Burt Rutan. The overachievers in the crowd (you know who I mean!) even know that while "Scaled" does work on their own proposals, they also do a lot of work on contract for other aerospace companies, exploiting their unique abilities to rapidly prototype different aircraft.

But you think that this mere pittance of knowledge is enough? Hardly! So what is an EAAer to do? Come to this month's meeting! Duh!

This month our guest will be **Jake Rabideau**. **Jake** is building a **Long EZ** (apparently that is still a thing!) so you know he is one of us. For his day job, **Jake** works at the Scaled Composites. He plans to tell us about some of the projects that Scaled is currently working on, including the Stratolaunch. Come find out if it will make more flights than the Spruce Goose. So far it is a tie.

Beyond just a program review, **Jake** will take us "behind the kimono" and talk to us about the construction techniques that they favor. Find out how they can build a flying airplane so fast when it takes any of us multiple years. Hint: It's not just that they throw more builders at it.

When **Jake** finally exhausts his supply of cool things to talk about, we will escort him to the **BK Dead Cow Emporium** where you quiz him or make up your own stories! See you there.

TAKE NOTE: The back entrance door at TPS has been modified to automatically lock at 1630 and there is nothing we can do about it. Plan to come to the sliding door on the side of the building or text or call **Erbman** at 661-754-0524. If you don't have base access and haven't been on the access list before, contact **Erbman** right away to be added.

- **Erbman**

Subbing for the Vice Kommandant

Last Month's Meeting

EAA Chapter 1000

USAF Test Pilot School

MOL Room

Edwards AFB, CA

17 September 2019

Gary Aldrich, Presiding

The September meeting was lightly attended by stalwart members. Notable by his absence was **Kent "Cobra" Troxel**, who once again chose not to attend because of his ongoing pursuit of **filthy lucre**, mostly by taking young minds full of mush and replacing the mush with incredibly important knowledge about how to be successful in business. As a result of his decision, **Cobra** missed out on the **Tuki Kukis** which were happily consumed by those present. Also partaking of the **Kukis** was **Capt Aronoff**, TPS student and owner of a 1955 Cessna 180. He was introduced to our favorite Cessna 180 owner, the **Kommandant**. This led immediately to a conversation of esoteric Cessna 180 details that could only be understood by someone intimately familiar with Skywagon history. He was asking for recommendations on avionics shops for doing last minute ADS-B installs. This puts him in direct competition with **Randy "Kanard" Kelly's** Cessna 182 "**Lois**", still waiting for its ADS-B installation. It appears that **Lois** may be finally emerging from her year-and-a-quarter state of hard and soft brokenness. The hard broke required a cylinder transplant. While that has been working fine, the longer

issue was intermittent electrical charging, having been noticed before the cylinder shuffled off this mortal coil. After thinking it was the voltage regulator and performing a transplant, the problem was eventually traced down to an alternator drive belt that was too big and thus was not sufficiently tensioned. Replacement with a slightly smaller belt seems to have finally fixed the problem.

Our program was presented by the **Kommandant** with color commentary from his First Officer **JDIII** on their recent trip to **AirVenture 2019**. The first day of the trip there was nominal, but was beset with many weather challenges on the second day. This was mostly related to a large weather system that grossly over-watered the grounds of Wittman field, causing arrivals to be severely limited. As such, the **Fightin' Skywagon** spent the week happily parked at nearby **Fond du Lac**. The remainder of the story may be reasonably accurately covered in the following pictures.



Our intrepid aviators after parking the Fightin' Skywagon



Getting to the show the first day took a long time to get going. Here JDIII sits in Blackhawk Commons (the University of Wisconsin Oshkosh dining hall) and contemplates the deeper meaning of a life of aviating and the length of the line waiting to get on the bus



Our intrepid aviators spent much time on the bus making close to zero progress. Here they are just off the approach end of Runway 9, which apparently was closed for a while, shown here with emergency vehicles on the runway. The rumor was that there had been a landing accident that was washed up and kept out of the media.



Our heroes at the Brown Arch. This was a time machine—if you walked under the arch to the other side you went back in time to 1970



The World's Busiest Control Tower and the World's Busiest Sanitation Contractor



Flyby of a whole mess of T-34s



Piper PA-11 Cub Special. This is the same type of aircraft in the same paint scheme as the one the Kommandant took his primary flight training in



JDIII's former glory—an A-1 Skyraider similar to the kind that JDIII flew in Vietnam. That's a rather large airplane for one pilot to be flying



David Hartman led a presentation on the Skyraider by two former Skyraider pilots. JDIII sat in the audience and did his best not to heckle



Close up of the wing fold on the Skyraider, showing one of the machine guns. JDIII claims he never did the carrier thing, since he was flying for the Air Force



Draco, a PZL Wilga minus its radial engine with a PT-6 turboprop in its place, was exhibited outside the Garmin tent. Two days before the Kommandant made his presentation, this aircraft was destroyed in a takeoff accident at Reno



Fairey Firefly, one of the...lesser known fighters from the RAF in WWII. It was a carrier borne fighter and anti-submarine aircraft introduced in 1943. This aircraft was originally with the Royal Australian Navy



The much ballyhooed restoration of the XF-82



The machine gun installation was in the center wing section, with the ammo supply in the opening shown in the upper wing skin



You can't go to AirVenture with JDIII and not go visit the seaplane base. Here a Lake Amphibian struggles to get airborne



A Samaritan Aviation Cessna 206 on floats



A rather bizarre advertisement for Wipaire Floats



A Howard DGA-15P on floats



Another one of those e-VTOL drone air taxis that will be blotting out the sun by next year, if you listen to Silicon Valley



Even e-VTOL drones need air data YAPS booms, at least for testing



A T-6 thrown in just to remind Dave Vanhoy we were thinking of him. We're sure Helida would love a two-day long cross country to get to Oshkosh...



A Royal Navy painted Beech 17 Staggerwing



Cole Raiwet's Bearhawk in the Bearhawk Aircraft booth. Those big tires sure appeal to some people more interested in landing in out-of-the-way places than in cruise speed



Cole Raiwet engineered an interesting cowl flap arrangement in the side of the cowl instead of the bottom



Opie and Gail were camping in Camp Scholler with PPO Nathan Davis and the rest of the Indiana group. This is the sub-scale RV that they bought for just this sort of event



What do you do if your landing gear is so high pressure that it sinks into the grass? Bring your own piece of PSP (Pierced Steel Planking), WWII's solution for all sorts of civil engineering problems



A Grumman F8F Bearcat. Note: In spite of what so many people say, this is NOT what Erbman flies



Gun bay on an F6F Hellcat. Note the access that allows servicing the guns while the wings are folded on the carrier



North American B-25 Mitchell



Vought F4U-1D Corsair



Lack of instrument maintainability continues to drive us to do things that just don't seem right. More and more vintage aircraft are getting glass panel instrumentation because there really isn't any alternative anymore. A DeHavilland DHC-2 Beaver with a glass cockpit



A North American...er...Ford P-51(?) Mustang. All painted up for the Young Eagles raffle



Bob Carlton flies the SubSonex Jet in the air show



Another view of the SubSonex Jet



The Yak 110 air show version of the 3-legged race



Young Eagles Co-Chairmen Sean D. Tucker and Jimmy Graham fly the Challenger Biplane and Extra 300 in a formation aerobatic act



Helicopters aren't supposed to do that...



What do you do when the Thunderbirds are passing through your area and ask to do some flybys in your airshow? You say "Yes!" of course!



Many DC-3/C-47s fresh back from "Daks over Normandy" reprised their formation flybys for the AirVenture crowd



The Air Force did a lot of flying this year in the air shows. This included the always popular Heritage Flights, where a "modern" aircraft flies with "legacy" aircraft. Given the A-10's age, which category does it fit in?

Following the presentation, in keeping with tradition, some of the assembled members reconvened at the **BK Dead Cow Emporium**, where the **Kommandant** and **JDIII** broke with tradition and ordered the fake burgers. After consumption, there was a debriefing and evaluation. What else would you expect from two life-long professional testers?

Most of this is true.

- Russ "Erbman" Erb

Emergency Backup Minister of Propaganda
Chapter 1000 of the Experimental Aircraft Association of these United States of America and Occupied Territories
"We have more zeroes in our chapter than any other!"

Kommandant's Korner

It was a beautiful morning this last Thursday at Mountain Valley Airport (L94). I was the duty tow pilot, flying a tired but serviceable Piper PA-25/235 Pawnee. The winds were light and variable and the temperatures were mild. I advanced the throttle with an SGS 2-33A on the end of the rope carrying a student and CFGI on a planned pattern training flight. Acceleration was normal and the Pawnee lifted from the runway in the usual spot. As is my custom, I glanced at the airspeed indicator (ASI) to set the proper pitch attitude for the nominal tow speed of 60-65 MPH. The ASI stared back at me with the needle resolutely stuck on "0" MPH! Hmmmm. A short series of options to address this lack of information ran through my mind (it's a short run so it didn't take long). With the light winds and warm temps we had used up about half of the available runway before liftoff and we were taking off toward the large berm surrounding the flood control basin off the end of runway 9L. That pretty much put the abort option out of my mind. That left the "continue" option...which is often the best idea in a situation such as this. The NTSB Aviation Accident Database is littered with stories of folks who reacted too quickly or badly to a simple anomaly and made things worse. So, with a quick glance at the RPM and oil gauges to ensure the engine was doing its job I returned my focus to the front and assumed a pitch attitude that I was pretty sure would get me close to the desired speed. The good news here is that 1500+ glider tows and 750 or so hours of Pawnee time made it pretty easy to set a familiar pitch reference. Additionally, other clues were evident...wind noise...control forces...trim position...all "normal".



So, the sharp-eyed reader will probably say, "Why didn't you check your airspeed before takeoff?" Well, that's a good question. In the **Fightin' Skywagon** I often mutter to myself on the takeoff roll, "Airspeed alive". However, it's been my experience with the simple and aging Pitot-static systems of the Pawnee that the ASI experiences some "lag" on takeoff. When functioning, the needle bounces around the lower end of the scale (which starts at 40 MPH) just about the time the tail is flying and the airplane is getting light on the gear. Very shortly, flying speed is attained and I am concentrating on maintaining the runway heading, accommodating any crosswind and giving the glider pilot a stable reference for the tow.

Back to the tow... As I turned out of the traffic pattern and maneuvered for the anticipated glider release I started to mull over the cause of the ASI anomaly. Since the altimeter and Vertical Speed Indicator (VSI) were indicating normal climb performance I surmised that the problem lay in the Pitot half of the Pitot-static system. That

ruled out a fairly common problem at L94 when a small wasp chooses the unguarded static ports of the tow planes for the ideal place to raise a family. The result is a "fixed" static pressure supplied to the P-S instruments...all of them. In this case, only the Pitot pressure was lacking. From my preflight that morning I noted that this airplane was equipped with what I'll call the "bug blocker". This clever little contraption consists of a small round plate that is hinged to flop over the end of the Pitot tube when the airplane is not moving. This effectively discourages little critters from taking up residence. Above the hinge is a small vertical round piece that, upon impingement of the airflow during takeoff is designed to rotate the blocking plate out of the way and, "voila!" Pitot pressure makes its way to the ASI. It's always been my practice to "flick" this little gizmo during preflight to ensure it will perform its function. It seemed to work when I manually moved it, but it apparently wasn't responding to air pressure today.



About the time I figured out the suspect cause of the ASI failure the glider released and whether due to the slight jolt or the slight airspeed increase the ASI suddenly indicated normally. This made the landing a "no-brainer" as I would not have to guess at my airspeed. Before the next tow I had the glider CFGI do another "flick check" on the device but the scenario repeated itself again...and again until I had an opportunity to find some spray lubricant to treat the issue.

This is not the first time one of these innocuous little devices has conspired to make a takeoff interesting. I think the my first time was shortly after I had taken off from the 12,000 foot runway at Whiteman AFB in my trusty Aero Club Cessna 150. That day I elected to reduce power, set up a normal glide and land on the remaining 11,500 feet. If you fly long enough you will probably experience a problem with one of these things...or something similar...say, neglecting to remove a Pitot cover. Anyway, take-aways for this overly verbose story? 1. Keep flying the airplane using whatever references look normal; 2. Assess the possible causes of the problem; 3. Use all available senses to augment the instrumentation; 4. Prepare a plan to safely recover the airplane...you know the rest.

Fly Safe and Check 6!

- Gary Aldrich
Kommanding

Web Site Update

 Just a reminder that the EAA Chapter 1000 Web Site is hosted courtesy of Quantum Networking Solutions, Inc. You can find out more about Qnet at <http://www.qnet.com> or at 661-538-2028.

Chapter 1000 Calendar

EAA Chapter 1000 Board of Directors Meetings are now held on an unscheduled, as needed basis. If you need to know when, you're already on the e-mail notification list. (661) 609-0942

Oct 15: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Nov TBD: EAA Chapter 1000 Monthly Meeting, 6:30 p.m., Flying Dog Ranch, 4400 Knox Ave, Rosamond CA. (661) 609-0942

Dec 17: EAA Chapter 1000 Festivus Etc Celebration, 6:00 p.m., Kommandant's Kwarters, 42370 61st Street West, Quartz Hill CA. (661) 609-0942

Jan 21: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Feb 18: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Mar 17: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Apr TBD: EAA Chapter 1000 Monthly Meeting, 6:30 p.m., Flying Dog Ranch, 4400 Knox Ave, Rosamond CA. (661) 609-0942

May 16: EAA Chapter 1000 Annual Aviation Event, currently accepting ideas for activities. (661) 609-0942

Jun 16: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Jul 21: CNX EAA Chapter 1000 Monthly Meeting, Cancelled in lieu of AirVenture. (661) 609-0942

Jul 20 - 26: EAA AirVenture 2020. Oshkosh WI.

Aug TBD: EAA Chapter 1000 Baseball Meeting, 6:00 p.m., The Hangar, Lancaster CA. (661) 609-0942

Sep 15: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

To join Chapter 1000, send your name, address, EAA number, and \$20 dues to: EAA Chapter 1000, George Gennuso, 3119 Lennox Ct, Palmdale CA 93551. Membership in National EAA (\$40, 1-800-843-3612) is required.

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Inputs for the newsletter or any comments can be sent to Russ Erb, 661-256-3806, by e-mail to erbman@pobox.com

From the Project Police legal section: As you probably suspected, contents of The Leading Edge are the viewpoints of the authors. No claim is made and no liability is assumed, expressed or implied as to the technical accuracy or safety of the material presented. The viewpoints expressed are not necessarily those of Chapter 1000 or the Experimental Aircraft Association. Project Police reports are printed as they are received, with no attempt made to determine if they contain the minimum daily allowance of truth. So there!

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MUROC EAA CHAPTER 1000 NEWSLETTER

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ADDRESS SERVICE REQUESTED

THIS MONTH'S HIGHLIGHTS:

REGULAR MEETING 15 OCT @ TPS

COME FIND OUT ABOUT SCALED

OSHKOSH REPORT

KOMMANDANT SANS AIRSPEED

