

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>

August 2015

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:



BASEBALL NIGHT!

Tuesday, 18 August 2015

1800 hrs (6:00 PM Civilian Time)

Jethawk Stadium (45116 Valley Central Way)
Lancaster, CA



This month's meeting will be held in **Skybox 301 at The Hangar**, better known as **Jethawk Stadium**, home of the **Lancaster Jethawks**, Class A Affiliate of the Houston Astro's.

Come and cheer for the home team as we battle the Inland Empire 66er's.

Parking is \$5 per car, or free if you park in the Cinema parking lot across the street and walk in.

Minister of Propaganda Kent Troxel will be under the F-18 outside the main gate at **1800** and will distribute the 25 tickets on a first-come, first-served basis, so line up if you arrive before he does. Kent will enter the stadium shortly after 1800, so be on time. If you're late, you can call him at **661-886-3740**, but you will have to wait until he is darn good and ready to come down at give you a ticket (which will irritate him).

Guests arriving after all tickets are distributed will be told to buy your own damn ticket and then someone (depending upon the bribe offered) may try to get you past Stadium Security into the Skybox, but no guarantee is made nor implied.

FYI, **beer prices** have risen this year and selection is limited, and beer temperature can be an issue. However, Kinetic Brewery has a stand on-site.

- **Kent "Cobra" Troxel**
Chapter 1000 Minister of Propaganda

Last Month's Meeting

EAA Chapter 1000 individually

Your Workshop

Your Location

21 July 2015

You, Presiding

Last month you were tasked to do something aviation oriented during our normal meeting time while the **Kommandant** and **Treasurer** were representing us at the big **AirVenture 2015** show. I would remind you in this space about what you did, but **you failed to submit a report** to tell me about what you did. How typical. Can't get anything out of you. People are starting to talk.

I'm not going to tell you about what the **Kommandant** and **Treasurer** did that day, because that's what you're going to hear about at the **September** meeting.



Do not attempt restart if engine stopped because of obvious mechanical failure.

Kommandant's Korner

The NLE suggested I base this month's K² on the topic of flying little airplanes like ours in the furnace-like heat of the Antelope Valley summer.



While this is a relevant topic, and one that would dovetail nicely into one he is no doubt drafting on his solution to the problem (throw mass quantities of dollars at it)(*watch for that next month – ed*), I will instead bring the reader up to speed on the *Fightin' Skywagon's* health issue and maybe a bit on in-flight emergencies.

Firstly, you have probably heard of my discovery of small metal particles (shavings, actually) I found while performing a routine oil change immediately prior to our scheduled flight to AirVenture 2015. These particles, which were small in number but very visible in the cleanable oil screen, were non-ferrous leading me to assume they were made of aluminum.

Consultation with **Mr. Mike Grimes**, former Continental forensic mechanic, made me question the wisdom of flying 25 hours or so over some of the more rugged mountainous areas of the country. With mere hours remaining before the planned departure, which prevented further trouble-shooting, I made the disappointing decision to switch our mode of transportation to Southwest Airlines. **JD3** and I booked round trip tickets to Chicago Midway Airport (MDW) and a pricey rental car to make the final 4-hour leg to Oshkosh. The trip went smoothly after that with the possible exception of forcing me to answer the frequent question "Did you fly here?" with a pained expression and a recap of the metal-in-the-oil story. As for our time at AirVenture, I'm sure there will be ample details and accompanying pictures at next month's gathering to satisfy the curiosity of the membership so let's jump back to hangar 703 and the on-going diagnosis.

After our return from the Midwest, I once again imposed on **Mike Grimes** and we pulled the top sparkplugs to take a look in the cylinders for obvious problems. Visual inspection showed mild scoring in the cylinder bores of 5 out of 6 jugs. Further, 3 of the piston tops were wet with oil, some with small puddles of the stuff. This indicated quite a bit of wear on the piston rings which are allowing significant amounts of oil to make it into the combustion chamber. It also provided an explanation for the oil-fouled plugs I have been cleaning every 10-15 hours or so for the past couple of years. Further, upon checking the records, the VC-180's oil consumption has gone from approximately 10 hr/qt to 5 hr/qt. While this rate of consumption, apparently burning, is not in itself serious, it does corroborate the conclusion that the rings are shot. We also did a cold compression check which, from the roar of air coming from the oil filler, again pointed to tired rings.

I wish I could say we found the "smoking gun" vis-à-vis the metal in the filter screen, but that didn't happen. So,

based on the aforementioned issues I decided to order a top overhaul kit. This will renew pretty much everything from the cylinder bases on the case outwards to the rocker box covers with new factory spec parts. While not cheap, it is approximately one-third the cost of a complete overhaul. It is still possible we will find a serious issue with the crankcase components, but for now I am "rolling the dice" in hopes of getting a thousand hours or so more out of the engine.

Stay tuned for updates on this adventure in light airplane maintenance.

Now for this morning's aviation adventure. Some of you are aware that I have been providing flight instruction to a gentleman from Bakersfield in his 1959 Cessna C-310C. This morning's lesson was to execute the cross-country plan that we discussed during our last ground session. The flight plan was to depart from WJF, do a full-stop taxi-back landing at Meadows Field (KBFL), then stop at Porterville (KPTV) for breakfast before the RTB to WJF.

The mission was to be punctuated by one or more "simulated" single-engine malfunctions. The weather was warm but beautiful. The air was smooth on the climb out on course. As we were approaching our planned cruise apex at 8500 feet MSL my student pushed to level flight and brought the propeller controls back from 2400 rpm to the cruise position of 2200 rpm. We were just about to crest the Tehachapi Mountain peak when the right engine began to surge. The fuel pressure indicator was fluctuating significantly and was causing quite a bit of yaw input. So, employing the test pilot credo of "undo whatever you did to cause the problem" I moved the prop control back to 2400 and the surging subsided. I decided to make one more attempt at reducing the prop rpm before aborting the mission, but movement of the control on the right engine produced the same uncomfortable surging. It's important to note that the fact that I had another engine that was operating normally allowed me the luxury of that second "test". When the problem recurred, I directed the pilot to initiate a turn back to Fox as I was uncomfortable continuing with what might be a serious engine anomaly.

Initiating a descent at 15 inches (Hg) of manifold pressure and 2400 rpm was essentially a non-event as the engines purred along normally. As we approached gliding distance of WJF I found that I could replicate the surging even at reduced manifold pressure when the rpm was reduced below 2400. Again, since we had a way to avoid the surges and we had a fully functioning number one engine, I elected not to declare an emergency. I formulated a plan to make a normal pattern entry and landing and, if the surge was encountered I would idle or shut down the offending engine and land. Fortunately, my student made an excellent approach requiring minimal power changes and the surging did not recur. He made one of his nicest landings and after moving the airplane into his hangar we retired to the airport restaurant to discuss the events, and perhaps take away a learning point or two. We discussed several "enhancements" to the scenario that might have changed our response. One would be the inability to quiet

the surging fuel pressure, requiring an in-flight engine shutdown, emergency declaration, and single-engine landing. Another takeaway was the value of two qualified crew members working together to manage the anomaly while safely returning to land. This allowed good crew resource management (CRM) techniques such as splitting up the tasks of flying, communication, checklist actions, and traffic clearing. Finally, exploiting the luxury of that second engine and the assurance that we would almost certainly be able to make a safe landing at the desired airport allowed a lowering of the stress level. Even if we could have managed a similar malfunction in a single-engine aircraft, the workload during the RTB would have been higher as we stayed prepared for a potential off-field landing. All in all a good, though unplanned, demonstration of successfully handling a potentially serious airborne anomaly...and a lesson that will probably remain vivid in the student's experience.

Fly safe, and check 6!

- Gary Aldrich
Kommanding

Fox Air Fair 26 September 2015



We are planning to have our Annual Airfair and Open House, WITH a Pancake Breakfast, on Saturday, September 26. As before, **Bob Stambovsky** is the Airfair Chairman. We are looking to fill the ramp with airplanes (GA, homebuilts, experimentals, jets, all are welcome). We are going back to our original concept of a fly-in, Pancake Breakfast, and inviting the community to bring their families to see aircraft and talk to pilots in a low-key environment. **Stambo** has already sent out information to his mailing list, and hopefully between that list and the Association list, we will reach all the area pilots. Organization leads (EAA, 99's, Aero Club, etc.) please pass this on to your members. There are also announcements going out as we speak to online "places to fly" sites including AOPA. If you are interested in bringing an airplane for static display, please contact **Stambo** at stambo@earthlink.net. More information will be coming out in the coming months, but we hope you will reserve Sept 26 for the Airfair.

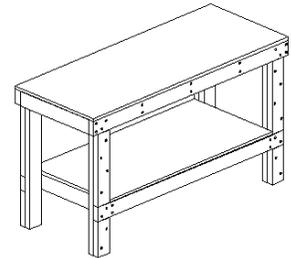
- Donna Knighton
President, Fox Airport Association
pilotdonna@earthlink.net

EAA Chapter 1000 Work Table Feedback

The EAA Chapter 1000 web site was started in 1996 for the specific purpose of providing a way to easily distribute the work table plans as designed by **Bob Waldmiller** and **Norm Howell**.

(<http://www.eaa1000.av.org/technic/worktabl/worktabl.htm>)

These plans have been amazingly popular, even to the point of being reproduced in Kitplanes® and being declared by **Charlie Becker** as the official **EAA Work Tables** with coverage in *Sport Aviation*.



We have recently received a couple of testimonials.

"Gary,

I found the post linked [here](#) written by **Bob Waldmiller** on your site and just wanted to send a note to your group to thank you for leaving the post accessible to people over the internet. I was looking for an easy-to-build yet sturdy and long lasting work bench for my shop in the garage and it was very easy to follow the instructions on the tutorial as well as the cut list, how much wood to buy, etc.

Anyway, just wanted to say Thanks!



Berge Simonian"

"Just a quick thank you to Bob Waldmiller for the EAA Chapter 1000 work table plans. I was looking for plans to build a simple but sturdy work table for my garage and came across your plans. Thanks much! Just finished building one today and it fit my needs perfectly.

Again, thanks.

Dan Oster"

Then there are all of the spam e-mails that the **Kommandant** and I get asking for quotes and delivery schedules on "work tables".

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

Aug 11: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Aug 18: EAA Chapter 1000 Baseball Meeting. The Hangar, Lancaster CA. (661) 609-0942

Sep 8: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond 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

Sep 26: KWJF Fox Field Airfair, Pancake Breakfast, and Open House. pilotdonna@earthlink.net

Oct 13: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Oct 20: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

Nov 10: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Nov 17: EAA Chapter 1000 Monthly Meeting, 6:30 p.m., Location TBD, Rosamond CA. (661) 609-0942

Dec 8: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Dec 15: EAA Chapter 1000 Festivus Etc Celebration, 6:00 p.m., Kommandant's Kwarters, 42370 61st Street West, Quartz Hill CA. (661) 609-0942

Jan 12: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Jan 19: 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, Doug Dodson, 4431 Knox Ave, Rosamond CA 93560-6428. Membership in National EAA (\$40, 1-800-843-3612) is required.

Contact our officers by e-mail:

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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!

**THE LEADING EDGE
MUROC EAA CHAPTER 1000 NEWSLETTER**

**C/O Russ Erb
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<http://www.eaa1000.av.org>**

ADDRESS SERVICE REQUESTED

**THIS MONTH'S HIGHLIGHTS:
BASEBALL NIGHT! 18 AUG 15 AT HANGAR
ELECTIVE SURGERY FOR FIGHTIN' SKYWAGON
FOX AIR FAIR COMING 26 SEP 15
WORK TABLE FEEDBACK**

