



THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

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

President	Gary Aldrich	661-609-0942
Vice-President	Scott Weathers	661-317-9453
Secretary	Kent Troxel	661-947-2647
Treasurer	Doug Dodson	661-256-7276
Newsletter Editor	Russ Erb	661-256-3806

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

September 2008

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:



Designed To The Operational Need

Tuesday, 16 September 2008

1700 hrs (5:00 PM Civilian Time)

Not at TPS! → **AFFTC Museum
Edwards AFB, CA**

"It's so ugly, it flies just by scaring the ground away."
"It's so slow, it takes bird strikes in the trailing edges."
"It's a seven barrel cannon with an aircraft attached."

If you guessed we're talking about the A-10, you're right. For our next meeting, we will meet under the wing of YA-10B at the museum. Bring your own stories of the A-10 or any other 27,000 pound airplane you would like to talk about. We be joined by our own **Kommandant** - the only man ever depicted climbing into both cockpits at the same time. We will also talk about other aircraft as well. So, if you are building, get out there and work on it so you have something to talk about. If you project is already an airplane, be sure to fly to someplace interesting so you can inspire us builders to keep working. See you there!

Our 'steemed panel of self-proclaimed experts will include:

Erbman – A-10 design history researcher

Bushman – Actual A-10 Test Pilot

The **Kommandant** – 33.3% of the USAF Flight Test Engineers ever to log actual flight time in the A-10

Stormy – A-10 SPOviet with a long list of stupid operator stories

You – assuming you know anything about or have any experience with the A-10

- **Scott "Stormy" Weathers**
Vice Kommandant

Last Month's Meeting

EAA Chapter 1000

Clearchannel Stadium "The Hangar"

Lancaster CA

19 August 2008

Kent "Cobra" Troxel, Presiding

The August meeting was held at the City of Lancaster Skybox at the Lancaster Clear Channel Stadium featuring the **Lancaster Jethawks** vs the **Victorville High Desert Mavericks** (or Mudhens as they are known as locally). This was our third and final year to enjoy Skybox tickets courtesy of **Mrs. Kommandant Anne Aldrich**. **Mr.** and **Mrs. Kommandant** were vacationing in Hawaii and were unable to join in the merriment. **Vice Kommandant Stormy Weathers** was likewise absent, TDY on secret government business, location unknown.



Amanda struggles to keep her game face on while wondering what sort of looney bin she has stumbled into

Thirteen members were in attendance to watch the Mudhens dominate through 7 innings leading 5 to 3. The

THE LEADING EDGE

Jethawks came roaring back with a slugfest in the bottom of the 7th inning, taking the lead 6 to 5.



The assembled looneys, sans Knife and Cobra

In our meeting last year, we were fortunate to have the evening's guest of honor astronaut Buzz Aldrin visit the skybox. This year, the Jethawks mascot "Kaboom" dropped by and was instantly recognized by **Houdu**.



As previously attempted two years ago, the Jethawks again **attempted to kill us** with a foul ball directed over the backstop net into our skybox. The ball ricocheted off a chair and hit **Cobra** in the back of the head. **Knife**

Gennuso was able to retrieve the ball which was undamaged by either impact.



The impact point, between Allison and Karen and directly behind Cobra



Divot left by the horsehide projectile



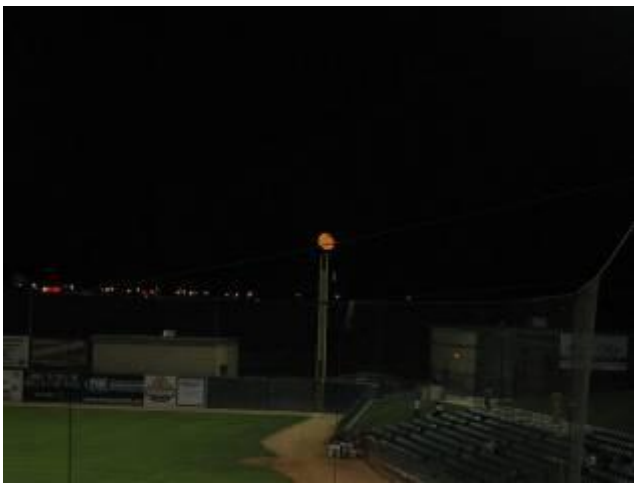
Knife snatched the horsehide projectile from the wall milliseconds before it dropped into the abyss



Uh, Cobra...you're going to have to clean those up before we can leave...



Houdu prepares to boost the Moon to a higher orbit



Moon resting on the Foul Pole



Failing that, try jet propulsion



Knife channeling E.T.



Cobra again successfully pulls off the incredibly tricky photographer's point



“See, when I flip this switch, the far side of the stadium goes dark”



During the seventh inning stretch, Houdu gets confused which way the “C” goes

As usual, mass quantities of beer, peanuts, hot dogs and pizza were consumed. **Victory!** was declared as the Jethawks wrapped up with a final score of 8 to 5 and dealing the Mudhens their tenth straight loss.

- Kent “Cobra” Troxel
Minister of Propoganda

The Last Meeting Before Last Month's Meeting

EAA Chapter 1000
Bill Irvine’s Yet-To-Be-Named Hangar
Rosamond CA
15 July 2008
Gary Aldrich, Presiding

The July meeting was held in **Bill Irvine’s** hangar at **Rosamond Skypark** with six members in attendance. Bill brought along two co-workers as guests: **Dan Koch**, a summer intern at NASA Dryden from the **University of Colorado** brought cookies (always a good thing when guests bring offerings), and **Liz Kissling**, lead technical

editor at NASA Dryden who along with husband **Steve**, a Manufacturing Engineer on the F-35 at Lockheed Palmdale just acquired a **1950 Chipmunk** they are restoring.

The featured event of the evening was the teardown of one the Continental O-470’s from Bill’s Cessna 310 project. Time limitations forced us to settle for the removal of one cylinder. As the photo’s indicate, Bill completed the teardown post meeting.

Having a captive audience, Bill began by regaling us with his positive/negative ion theory of flight, but relented after a barrage of cookie crumbs, spent Pepsi cans and anything else handy, then proceeding to the teardown process.

As a note, Bill highly recommends the use of LPS LST as a penetrant before trying to break loose exhaust manifold and cylinder bolts. **Houdu** insisted that I document this arcane but useful tidbit.



“I wonder if I could get a spare piston for the Fightin’ Skywagon out of here”



“Hold my beer and watch this!”





Lubricating the engine disassembler



“So the forward speed of the airplane strips the positive charges from the surface of the wing, causing the negatively charged earth to repel the aircraft”



Project Police Picture Pointer in training



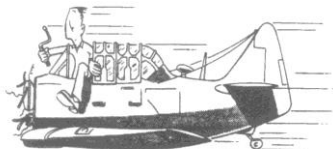
Always have a hammer ready for the stubborn, fragile parts



“So which cylinder should we remove?”



Bill removes the pushrod tube while the Kommandant tries to push him over



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



Deftly handling the non-linear cylinder base wrench



“This is the piston”



“Lemme try that”



Either Bill is using a heat gun to heat the piston to free the piston pin, or...well, we can't say that in a family newsletter



Houdu pulls the jug



Pushing out the piston pin



“Score! Bill will never miss this”

Kommandant Aldrich, after taking advantage of several photo ops, had to leave early, thus forcing me to make the declaration of **Victory!** After action dinner arrangements were left to individual discretion.

- **Kent “Cobra” Troxel**
Minister of Propoganda

Kommandant’s Korner

Just got back last week from a "hardship" TDY to **Honolulu**. While the destination was sweet, the getting there was anything but. Our United flight was due to depart from LAX at 0915 on a Saturday morning. That dictated a pretty early launch in "**Gretel**", the Bimmer with the lower mileage tally.



The traffic gods were kind and after placing Gretel in her stall at Wally Park, we shuttled over to the terminal...fully two-point-five hours prior to departure time. Stepping off the shuttle we were greeted by a scene from one of those disaster movies where a sea of humanity is struggling to escape from somewhere. The lines were out the door and down the sidewalk. There were United employees standing about, dazed and harried. I stationed Anne in a likely looking line and scouted the others for signs of progress and applicability. After some furtive questioning of an employee and some educated guessing, I discovered we were eligible to join a somewhat shorter queue since we had checked in on-line. **Note to self...ALWAYS check in on-line**. I felt bad for the large number of non-English-speakers who were wandering about trying to find the proper line. Despite our excellent planning and timely airport arrival, we were barely able to snag a snack in the gate area concession before being the last on board the 757. So, how bad was it? Well, the experience caused **Mrs. Kommandant** to ask "Are you sure our plane wouldn't get us to Hawaii?"

Given the recent travel and work schedule, ("**Auseptober**" effect?) the **Fightin' Skywagon** hasn't seen

much action. A short out-and-back to San Diego (MYF) to deliver a friend and co-worker to his waiting family and a WJF-L00-L94-L00-WJF round-robin to do some proficiency soaring with **Erbman** is about all there is to report. The flight hours should increase, though, in support of first daughter's impending nuptials. I'm also planning to spend a weekend at the AOPA Expo in San Jose (SJC) in November. If there's any good news in this inactivity it's that I'm not draining the bank account as quickly on \$5+/gal avgas.

Here's a gentle reminder...I was pretty serious when I announced the end of my reign as your Kommandant at last December's **Festivus** party. I think the Chapter needs/deserves a **CHANGE** in leadership (apologies to **John S. McCain** and **B. Hussein Obama** for co-opting their slogan). I think there's someone out there reading this that has both good ideas and the combination of time and energy to implement them...with the support of the current chapter leaders. I do not intend "fade away" like MacArthur, but I'd like to "shake things up" a little and help move the Chapter in whatever direction the new **Kommandant** would propose. I think it was 1996 or 1997 when **Mike Pelletier** convinced me to sign up as **Vice-Kommandant**, then promptly departed to Korea leaving me in charge. Since then I've basically "ruled by benign neglect" and we've settled into a kind of comfortable lethargy. I know there's more we can do to stimulate and serve our membership's needs, and support/promote sport aviation...I'd just like try someone else's ideas for a while. What say you? Wouldn't YOU like to be the target of **E. Editor Zurg's** monthly nagging? Wouldn't YOU like to receive the deference, honor, and respect of your fellow **PPTAF** Troopers? Wouldn't YOU like to be acclaimed a noted aviation celebrity?

Applications for **Kommandant** cheerfully accepted...
Fly Safe and Check 6,

- **Gary Aldrich**
Kommanding

P.S. I'm still hosting the Festivus event...too much fun.

The Smoking Gun...er...Engine

Then at last...now it can be told.

I heard this morning (5 Sep) from my engine dude. The problem with the engine was chrome rings in chrome cylinders. For reasons I don't fully understand, that's a bad combination. It was supposed to be chrome cylinders and steel rings. He said that's what he ordered, and this wouldn't be the first time that he had chrome rings show up in a box marked cast iron. I don't know how difficult it is to tell the difference by inspection.

Apparently chrome rings will not wear to match chrome cylinders, but will damage the cylinders instead. He told me that the cylinders have been sent out to be re-chromed, and that the report was the damage was minimal and they are re-surfacing nicely. You can bet he'll be sure that the right rings go in this time!

Before I didn't even know what type of cylinders I had--now I do.

THE LEADING EDGE

The non-sealing combination of chrome and chrome explains the large amount of oil getting into the cylinders and thus out the exhaust pipe.

But what about the overheating? Here are some quotes that I pulled from various articles on the Sacramento Sky Ranch (<http://www.sacskyranch.com>) knowledge base:

"Oil in the combustion chamber may lower the fuel octane enough to create detonation."

Ah hah! The first reliable source I've found that states how oil in the cylinder can affect the burning of the charge. I do know that low octane leads to detonation. Detonation can certainly raise the temperatures inside the combustion chamber. From another source:

"The oil contaminates the fuel and lowers the octane rating causing knock and the excess oil will foul the plugs."

Also from Sacramento Sky Ranch:

"Top of piston shouldn't look wet! Too much oil in the combustion chamber"

I don't know about my pistons, but I pulled several spark plugs that looked rather wet.

But if I had detonation, wouldn't I hear it? No, according to this:

"During detonation the almost instantaneous ignition of the fuel/air mixture causes such a rapid pressure wave that shock waves pound against the insides of the combustion chamber and piston. These shock waves produce the knocking sound in your automobile engine but are not heard in our more noisy aircraft engines."

But it's not just detonation running hotter that may lead to overheating. Besides oil getting in the cylinders, the bad ring seal lets the hot gasses out (blow-by).

"Normal heat flow is from the piston dome to the piston rings and to the atmosphere through the cylinder barrel fins. If combustion gas is passing by the piston rings then the piston cannot dissipate the large amount of heat absorbed by the piston dome. The piston heats up causing the oil in the ring grooves to carburize causing the piston rings to stick."

So the heat normally rejected from the piston dome can't make it through the rings to the cylinder wall, so it heats up the combustion chamber more and eventually shows up as a higher CHT.

Thus, while not an exhaustive (pun intended) proof, this does support the idea that bad rings will lead not only to excessive oil in the exhaust but also to excessive CHTs.

Project Police Engine Guru Bill Irvine commented "chrome rings absolutely will not seal against a chrome cylinder. Chrome is very hard, so there would be no relative wear on either the ring or cylinder wall surface. Think two diamonds rubbing together."

I have also had confirmed that besides making the cylinders hard, chrome treatment is also used to build up the surface of worn cylinders back to their original dimensions.

Another Bearhawker told me "That ring/cylinder combo also wrecked Brother Dean's CH250 Engine, couple years back...."

- Russ Erb

Piavis Converges On RV-7 Paint Scheme



So how does **PPO Piavis** create these wonderful pictures? They're done in the latest version of **Microsoft® Flight Simulator**. He found that somebody had created a Flight Sim model of the RV-7, and he "merely" applied his paint scheme to the model.



Jim describes his choice of paint scheme as “My Dad spent 14 years restoring a Yale # 3434 that was assigned as a trainer in Canada after the French capitulated in WW2. Basically I grew up with the airplane in the back yard, from the time I was about 12 until I finished college. He flew it for a while but it was subsequently sold and ended up in an accident, which is now for sale from the guy who crashed it. BTW, it did earn a **Best Trainer** award at Sun-N-Fun in 1991. I always thought it might make an interesting paint scheme for an RV, but wasn’t convinced. Once I did the re-paint in FSX, I thought this is a workable paint scheme. I’m still working some details such as the roundel sizes on the wings and the specific paint specifications, but the basics are there.”

Jim also recommends <http://www.spitcrazy.com/Simmons-2.htm>. This is where the Yale came from.

Now to just get someone to create a **Bearhawk** model for FSX....

Project Police Aircraft Spotters Quiz



As you may recall, two months ago **Evil Editor Zurg** presented photos of an airplane that looked like it had been conceived at a **Project Police Design Group** session when the participants had made a few too many trips to **Houdu’s Kegerator**. The result looked like an unholy alliance of a Cessna 180, Coot Amphibian, Beech Staggerwing, Republic Seabee, Ercoupe, and the **Kommandant’s** old Corvair. Just to remind you what had you stumped, **EEZ** presents the pictures again.



As usual, the only correct answers came in almost immediately. **Murry Rozansky**, glider guider, KITPLANES author, and all-around good guy, came right back with “**Waco Aristocraft**. The last Waco. I might have a good article on it from '47, I know I've seen it. A lot of good ideas but probably too complex for the time.” He went on to say “This link is worth looking at.”

http://www.angelfire.com/ks2/janowski/other_aircraft/Waco_W/ This is the text and photos from Sport Aviation articles from March and April 1964 written by Terry O’Neill who had bought the sole prototype from Waco. If you want to see the articles in their original layout, go to <http://www.eaa.org> in the “Member’s Only” section and look in the Sport Aviation archive.

According to the FAA N-number registry the registration for the Aristocraft was cancelled in 1976. The number is currently reserved by someone in Ohio. There is no indication if this person now owns the Aristocraft.

Nathan “Dirt” Davis was the only other **PPO** to hazard a guess, saying “Waco pusher? If it is, only one was made...”. No mention was made if Nathan ever owned one.

EE Zurg has operatives everywhere as well as those who bring him tribute in hopes of escaping his evil wrath. One of those submitted the following photo:



If you recognize this aircraft, feed **Evil Editor Zurg’s** ego by submitting a correct response to erbman@pobox.com . If you don’t know for sure, make something up! The funnier the better! You can also mail to the editor’s address seen on the last page of this newsletter. Include any other information you know. Links to web sites with more info are a plus. Next month we’ll tell you who (if anyone) was correct.

Web Site Update

As of 9 September 2008, the hit counter showed **123006**, for a hit rate of 14 hits/day for the last month.

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

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

Oct 7: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

Oct 14: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

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

Nov 4: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

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

Dec 2: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

Dec 9: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (661) 609-0942

Dec 16: EAA Chapter 1000 Festivus Etc Celebration, time and location to be announced (661) 609-0942

Jan 6: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

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

Feb 17: 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:

President/Flight Advisor Gary Aldrich: gary.aldrich@pobox.com

Vice President Scott Weathers: flynwax@pobox.com

Secretary Kent Troxel: kenttroxel@sbcglobal.net

Treasurer Doug Dodson: houdu@pobox.com

Technical Counselors: Gary Sobek Gary@rvdar.com

Bill Irvine wgirvine@yahoo.com

EAA Chapter 1000 Technical Assistants

<i>Composite Construction</i>		
Doug Dodson	douglas.dodson@pobox.com	661-256-7276
George Gennuso	pulsar1@sbcglobal.net	661-265-0333
Brian Martinez	brianmmartinez@aol.com	661-943-5379
Bob Waldmiller	waldmiltr@qnet.com	661-256-0932
<i>Wood Construction</i>		
Bob Waldmiller	waldmiltr@qnet.com	661-256-0932
<i>Aluminum Sheet Metal Construction</i>		
Bill Irvine	wgirvine@yahoo.com	661-948-9310
Miles Bowen	cessna170bdriver@yahoo.com	661-822-0806
Russ Erb	erbman@pobox.com	661-256-3806
<i>Welding/Welded Steel Tube Construction</i>		
Russ Erb	erbman@pobox.com	661-256-3806
<i>Engine Installation</i>		
Bob Waldmiller	waldmiltr@qnet.com	661-256-0932
Doug Dodson	douglas.dodson@pobox.com	661-256-7276
<i>Electrical Systems</i>		
Miles Bowen	cessna170bdriver@yahoo.com	661-822-0806
<i>Instrumentation and avionics requirements for VFR/IFR</i>		
Gary Aldrich	gary.aldrich@pobox.com	661-609-0942

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

3435 Desert Cloud Ave

Rosamond CA 93560-7692

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

ADDRESS SERVICE REQUESTED

THIS MONTH'S HIGHLIGHTS:

REGULAR MEETING 16 SEP AT AFFTC MUSEUM

BALL MAGNET TROXEL NARROWLY ESCAPES DEATH

PACO STEALS PISTON, THREATENS ABDICATION

SMOKING GUN ENGINE CAUSE FOUND



The Leader In Recreational Aviation