

THE LEADING EDGE

NEWSLETTER OF MUROC EAA CHAPTER 1000

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

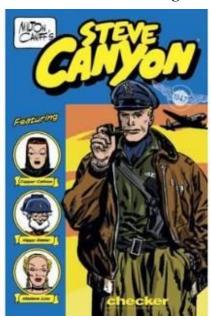
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http://www.eaa1000.av.org

January 2009

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:



An Evening with Steve Canyon

Introduced by Mike Machat Tuesday, 20 January 2009 1700 hrs (5:00 PM Civilian Time) USAF Test Pilot School Auditorium Edwards AFB, CA

Learned Colleagues,

For the first Chapter 1000 opportunity of the new year, we present "An Evening with Steve Canyon." More correctly, I am delighted to invite you to an evening with Mike Machat. Mike is prepared to offer us a sneak preview of the new Steve Canyon DVD set that is soon to be released. Mike tells me these are digitally re-mastered versions of the original TV episodes first aired in 1958. He mentioned some footage that includes an F-100 shot at Edwards AFB, but I don't want to give too much away. Suffice it to say that Mike always brings an excellent expert perspective that is sure to result in a fascinating evening.

Not exciting enough for you? You'll also want to see the **Project Police** premiere viewing of an eight minute short feature of Mike's NASA artwork entitled "Journey to *Dryden.*" You've got his art hanging in your house, so you'll want to see this! (You don't have his art in your house? Talk to Mike—he'll be happy to help you with that problem.)

But wait! There's More! He will also be offering a new book on *X-Plane Crashes*, written by aviation archeologists Peter Merlin (DFRC) and Tony Moore (AFFTC Museum). Special this night only: get yours at the special *PPO* discount price of \$25 (\$29.95 retail) with \$5 of that going into the chapter coffers. (*No, you can't use that to get a break on your dues—still \$20*)

Come join us for an evening with **Mike Machat**. We will meet at the Test Pilot School on Tuesday, 20 Jan 09, at 1700. Soft drinks and snacks in the lounge will precede the presentation in the auditorium.

- Scott "Stormy" Weathers Vice Kommandant



Your dues are due now!
\$20 to Houdu
See back of newsletter for address

If you prefer, you

can pay online by at the Join/Pay Dues link on the <u>EAA</u>
<u>Chapter 1000 web site</u>.

You may also qualify for the government sponsored EAA Chapter 1000 "Free Dues" program.¹

¹Simply write you name on a government printed "Free Dues" coupon and hand it to any chapter officer. "Free Dues" coupons are available at any bank, ATM, and many businesses. Ask for it by the secret code name "Twenty Dollar Bill."

Last Month's Meeting

EAA Chapter 1000

Kommandant's Kwarters Quartz Hill, CA 16 December 2008 Anne Aldrich, Presiding

The annual C1000 **Festivus** celebration was hosted by **Kommandant** and **Mrs. Kommandant Aldrich** at their **Kommandant's Kwarters** in Lancaster. Twenty four members were in attendance to participate in the **Festivustivities**, which included a traditional lasagna dinner, and a special treat of garlic bread flambé. Hanukkah jelly donuts made a reappearance after much not-so-subtle hinting by the **Erbman**.

Guests were greeted by **First Dog "Pixel"** sporting a doggy flight jacket complete with wings and TPS patches.

The **Kommandant** had thoughtfully displayed sample beers on the counter indicating what was in the cooler. These were subsequently referred to as **English Beer** (warm) and the cool beers as **American** (cold).

After dinner, everyone assembled 'round the **Festivus Pole** for the annual **Kommandant's Krap** gift exchange. As usual, there were some goodies and some stinkers which included an "**I'm not dead yet!**" *Spamalot* hat, an emergency light (sat around the house for a year without being opened) and a portable chess set. **Vice-Kommandant Weathers** speculated that one box was filled with "sailboat fuel".



Jackie Payne (Assistant Principal, Desert High School) was thrilled to have the chance for adult conversation, even if it was about airplanes, instead of parents whining about how their kids were screwed.

Anne Aldrich, who complained last year that no one was stealing any gifts, got a gift she actually liked (a bar bell, no, not the weight-lifting kind) and then Gail Dodson stole it. Anne ended up with a DVD of "Night of the Comet" subtitled "They Came. They Shopped. They Saved The World!" Jackie Payne looked at the cover and said "They look like my students". Erbman said "Looks like another one of those movies that should never have been made".



I was able to depart sans the Festivus Pole with which I came. The "leaving of the Festivus Pole" is actually a time-honored C1000 tradition. Frosty Wyatt (who built it), left it for me. I left it for the Kommandant who has indicated he will assume long-term hostmanship duties for the Festivus locale. I suggest the title of "Festivusmeister".

Officious without pretense.

Tim Brien.

The Kommandant performed the extremely tricky "tossing of the dog" combined with simultaneously tossing beer on Jimmy Doolittle, the dog and beer going up in formation. The true skill

making

laugh about it.

The final steal of the

prized

book from

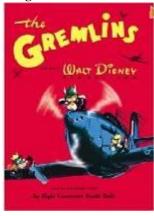
Doolittle

evening was accomplished by **Karen Bowen** taking

highly

the

"Gremlins"



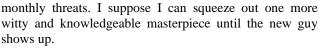
The **Festivustivities** were concluded without incident or injury, and without **Pixel** escaping followed by an inebriated pursuit down the block, thus closing out the hilite of our social season.

Hoping you had happy and safe holidays, and wishing a wonderful new year to all.

- Kent "Cobra" Troxel Minister of Propaganda

Kommandant's Korner

I thought this column would be submitted by the new **Kommandant** of Chapter 1000, but for some reason, **E**²**Z** only has my email address for his



How come **Phil Boyer** (who became president of AOPA about the same time President **Mike Pelletier** mentioned to Vice-President Aldrich that, "Oh, I won't be at the next meeting 'cause I'm PCS'ing to Korea...") was so easily and smoothly replaced by **Craig Fuller**? How come we just survived the longest national Presidential race in history, with a dozen politicos willing to say or promise anything to get the top job...and nobody wants to

run for **PPTAF/CC**? I guess I can now understand the awkward silence and nervously averted eyes that met my bold announcement at the **Festivus Pole** in 2007. About the only conclusion I can come to is that the Chapter membership is happy with the benign dictatorship that has existed lo these many years. Must be kind of like the former Soviet citizenry who liked to complain about the Kremlin...but weren't really interested in doing anything about it. The upside is that I don't seem to get many complaints...at least to my face. The Chapter 1k citizenry seems to have settled into a stable, comfortable relationship with their leaders. Is this a good thing? You tell me. (The only complaint I hear is **PPOs** tired of hearing the **Kommandant** whine that he can't get anybody else to take over the job—**EEZ**)

So, we've started another year. There's not much to report on my personal flying activities. Between the nasty weather we've had over the holidays and the holiday party schedule, the VC-180 has spent most of the time snuggled in hangar 703, sipping on 28v dc and patiently waiting for the temperature to stabilize in the 60's or 70's. I did spend one of the warmer days neatening up the power and weather connections to the new GPSMap 696 installation I reported on last month. It almost looks like it belongs there...perched on its R-A-MTM ball mount angled slightly toward the left seat. Despite the fact that the internal Li-ion battery claims to hold a charge longer than I can hold a cup of coffee in my bladder, it is reassuring to have the unit connected to ship's power. In fact, that connection is mandatory if the unit is to be considered a legal "Class I" Electronic Flight Bag (EFB). Having not flown extensively with the thing since my last report, I have had to satisfy my need to learn its operation through simulation in the hangar or on the work bench and providing the occasional demonstration for friends and clientele of our local avionics shop. Now that gas prices are more reasonable I hope to make good use of its prodigious capabilities in the coming year.

This month's meeting should be a real treat as long-time *PPTAF* aviation historian **Mike Machat** reprises the popular Chapter 1000 movie night. Alas, familial responsibilities will prevent me from joining you, but I can guarantee all in attendance will enjoy the evening. Mike has never disappointed...and has been BK "super-sized" after every presentation. If you are looking for a pleasant, low-key evening with your aviation buds, this is definitely IT. So come on out. It's also never too early to bring suggestions for future programs, fly-outs, and other aviation activities to **Vice-Kommandant Stormy**. He's got the toughest job in the Chapter trying to figure out what it takes to entertain you guys...and then trying to arrange it without breaking any laws or moral standards.

Until next time, Fly Safe and Check 6 (I might just be trying to sneak up on you and pin a "Chapter President" pin on the back of our flight jacket.)

- **Gary Aldrich** Kommanding

Memories Of A Sailplane Pilot

(The following article was originally written for SOARING Magazine, but with some minor modifications, is hereby being submitted to THE LEADING EDGE in the fervent hope that EAA Chapter 1000 readers will enjoy the sentiments. Happy Holidays to all!)

"So would you like to fly it?" I'd ask, and the answer was always the same. "Son, the last time I flew an airplane was a B-17 over Europe" (or a B-29 in the Pacific, or a P-38 in the Aleutians. Pick any one of them.) The end result was always the same too. "OK, it's your airplane, and keep her around 40." Things were always a bit wobbly at first, but you could slowly feel the old magic returning. "It's just stick-and-rudder," I'd say, and then it would happen. Airspeed was suddenly nailed and the ride became smooth as glass. But the best part was when I would lean forward from the rear cockpit and see that great big grin on the old guy's face. Yes, another proud member of America's greatest generation was aviating once again, only this time in a sleek modern sailplane.

The year was 1975 and the place was Lake Elsinore, California. I was a young commercial pilot giving sailplane rides at Skylark Gliderport and I guess you could say I was in the recruiting business because the ultimate compliment from any of my passengers was seeing them get out of the airplane, walk over to the flight office and sign up for lessons. Soaring is like that. It grabs you and never lets go. It certainly was that way for me when I stepped out of a Schweizer 2-22 (and no, that's not a typo) after my own first glider ride. As a neophyte power pilot back then I thought I knew what flying was all about, but that single 20-minute sleigh ride literally changed my life, and my personal passion became wanting to share the magical experience of motorless flight with as many people as possible.



Schweizer 2-22 (Jeff Byard collection)

I've been blessed to have flown sailplanes while ridge soaring over the majestic cliffs of Torrey Pines, climbing elevator-like in the magnificent Pike's Peak wave, circling upward in towering thermals over the Mojave Desert, winging over scenic snow-covered hills in Connecticut, and even flying aerobatics over the verdant spring countryside of Scotland. I've also been privileged to have flown every generation of glider from the WWII-era LK-10 to open-cockpit homebuilts and modern fiberglass superships, but the thing that stands out most in my mind

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from all those many years of soaring is the people. Unquestionably some of the best folks I've ever known came from the soaring community and many have remained friends for life.

My favorite moments in soaring were uttering the words "I didn't know you could do that in a sailplane!" Oddly enough, the first time that happened wasn't even at an airport, but while sitting in a movie theater. Who among us doesn't remember with awe that stunning aerial sequence in the 1968 Steve McQueen movie, "The Thomas Crown Affair" where he loops his yellow Schweizer 1-23H to the dulcet sounds of Noel Harrison singing "The Windmills of Your Mind" and then with spoilers deployed, swoops in for a landing at that picturesque grass strip in New England, wings oil canning all the way through the landing rollout? (you can still see it at http://www.youtube.com/watch?v=dAGGTVft5Lk)

Other times I'd utter that phrase while witnessing the ultimate capabilities of soaring machines skillfully demonstrated by airmen of the highest caliber. Flying glider aerobatics and acclimating to the unusual attitudes of winch or auto tow were all reasons to utter that phrase, but the epitome was being taught the fine art of crosscountry aero tow while working for a foreign sailplane distributor based in Long Beach, California. Known as Aerosport, this small but highly efficient operation was singly responsible for importing the now-classic Blanik L-13 two-seater back in the early-1970s, spreading the gospel of the many attributes of this exotic all-metal sailplane from Czechoslovakia with forward-swept wings and a 28-knot stall speed.



As the company's resident graphic artist and commercial pilot, I was responsible for physically painting registration numbers on the airplanes and then delivering them to customers throughout the western United States. So how do you get a sailplane to some faraway destination in less than 24 hours? Simple. You tow it behind a powerful airplane at high altitude and in still air at very high speed. Like a 285-hp Beechcraft Bonanza V35B. Like at 10,000 feet MSL and 100 knots IAS. A two-fisted endeavor for the Blanik pilot, those long trips were made

bearable by sharing the flying duties with my best pilot buddy, **Rick**, who would bring the obligatory Winchell's doughnuts that were logged-in on the manifest as "fuel."



Delivering factory fresh
Blaniks to their happy new owners in California, Oregon,
Utah, Nevada, and Arizona was the ultimate dream job for
a young glider pilot, and flying back home in the Bonanza
was the finishing touch, as Rick and I were always imbued
with the joy and satisfaction of having brought a brand
new airplane into some lucky pilot's life.

Perhaps the most significant long-term effect resulting from a soaring flight was when I proposed to my wife in a sailplane. Having always enjoyed flying, **Sheri** was eager to go up with this new guy she'd been dating who flew gliders. On her very first sailplane ride, however, we gazed out over a dramatic Pacific Ocean sunset and I asked her to marry me. "Either say yes, or get out," I intoned, but 27 years and two beautiful daughters later, it seems to be working out OK. A custom-built model of that particular Blanik now graces the desk in my office and is considered a prized family heirloom.

So after more than 30 years in the sport and 2,000 soaring flights, I've seen sailplanes advance to being equipped with the latest technological wizardry and achieving levels of performance once considered science fiction. However, the true magic of the soaring experience always comes back to those wondrous first impressions of someone stepping out of a sailplane after their very first orientation ride. After all, we simply wouldn't have all the great soaring pilots in the world today without that.

- Mike Machat (aka "Evil Editor Mike")

The Saga Of The Bare Naked Crankshaft

Operation PHOENIX NOISEMAKER took an unexpected turn shortly after the publication deadline of the previous *Leading Edge*. While hanging the engine, I looked up to confirm that the exhaust ports had been resurfaced as I had requested. When I looked up the exhaust port of cylinder #1, this is what I saw.



Yes, that's what you think it is—the biggest, ugliest crack you have ever seen, extending from the exhaust port all of the way down to the exhaust valve seat. The following thoughts ran through my mind in very rapid succession:

- 1. That's a big ugly crack.
- 2. Does that make the cylinder non-airworthy?
- 3. I don't want to know the answer to #2!

Further checking found that this crack did not extend to the outer surface of the cylinder. Similar but smaller cracks were found in at least two other cylinders.

After struggling with the guidance given to me back in 1982 at Edwards AFB ("Don't ask the question if you can't stand the answer"), I finally showed the cylinders to **Project Police** maintenance guru **Bill Irvine** who responded by repeating #1 and #2 above. He then started

showing the picture above to other experienced engine guys, both at NASA and on the Cessna Owners forum.

Soon the answers started coming back, and they were all disturbingly consistent—various paraphrases of "that cylinder is trashed." After a few rounds of different options, we decided that the best way to go would be to get six new cylinders from Lycoming and sell off the airworthy ones. (The non-airworthy cylinders will become educational visual aids.) That would give me the best chance at a long running reliable engine that would likely make a 2000 hour TBO.

Given the history of the engine and a desire to further increase the probability of reaching TBO, Bill insisted that we disassemble the rest of the engine, inspect and repair as necessary (IRAN), and then reassemble it. More or less a complete overhaul. Several other knowledgeable people echoed that sentiment. Bill assured me that it would be easy, fun, and educational. He assured me that he had done this sort of thing many times before and was very good at it. I thought he meant it would be educational for me (and it is), but later I would find out that this was his first Lycoming. No matter, since I was safely armed with the Lycoming overhaul manual. What else could we need?

Since Bill's shop wasn't quite ready to accept the engine yet, he suggested that I remove the cylinders with it still hanging on the airframe. Knowing that some of the steps would require more than two hands, I assembled my crack team of mechanics, namely **Stormy** and **Tim**. As the day approached, I found out that an Alaskan Bearhawker **Paul Minelga** was trapped "down below" because his flight back to Alaska was cancelled (too much snow in Seattle), so I asked him to join us as well.

On 23 December 2008, the intrepid crew met to remove the cylinders, confident in their abilities, since every one of them had missed **Bill Irvine's** Continental cylinder removal demonstration at the July 2008 Chapter 1000 meeting. No negative transfer of training here!

I brought my camera to document this activity, but it turns out that if you leave the camera in the "0N" mode all night, it fails to function. Fortunately **Paul** had his camera and took most of the photos you see here. He also made a video of some of the nonsense which you can see at http://www.youtube.com/watch?v=Lmd4k7-6otg.



With the special non-Lycoming part number crankshaft turner-doofer installed, **Tim** pulls out the hammer and starts beating away at the lock plate on a nut. Yes, the lock plate is a mandatory replacement item.



With the #2 cylinder removed, **Tim** works on getting the piston pin out. We didn't use **Bill Irvine's** trick with the hair dryer because we missed that meeting.



"Connecting Rod. *PPO*s, can you say connecting rod? That's right. I knew you could."



The assembled crew with the new narrow-nosed Bearhawk: Paul Minelga, Stormy Weathers, Tim Brien, and Erbman

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"So here's the theory: Remove the cylinders so that we can build a narrower, more streamlined cowling. The drag is reduced, but we're having a little problem with power production."



After removing six cylinders and a full and satisfying lunch, **Stormy** and **Erbman** return to the house to find the infamous Lycoming box, filled to the brim with six brand new cylinders.



Engine core on stand at Hangar Irvine



Accessory case gears. Tall shaft on left is oil pump drive shaft on the end of the crankshaft. Two similar gears are idler gears that drive magneto gears (not installed). Top idler gear drives camshaft (right side). Long shaft on camshaft drives tachometer cable.



Crankshaft before removing connecting rods and counterweights (which are actually dampers)



Crankcase half, camshaft, lifters, and other parts



Adult Content Warning: Bare Naked Crankshaft

So what now? Visual inspection of the crankshaft and camshaft found no obvious cracks, rust, pitting, or other such nastiness. Measurements of the main journals found them at the minimum diameter, and the rod journals slightly undersize. This isn't the problem that it might seem, since the proper clearances can be met using "undersize" bearings (which are actually thicker than the standard bearings). The bushings for the counterweights were worn beyond limits, and the rollers were noticeably worn. The connecting rod small end bushings were also worn out of limits.

The solution to these issues are to send the crankshaft, counterweights, and connecting rods on a trip to an exclusive engine spa in Dallas TX where they will be pampered, rebushed, gently reamed, and dressed up with the latest in fashionable yellow tags. Upon their return they will be reassembled into a fire-breathing monster. Look for that story in the next edition of the 'Edge or the one after that.

- Erbman

Possible Candidate for Kommandant?

Jim Piavis, the first **Kommandant** of EAA Chapter 1000, is taking his flying RV-7 from Seattle WA to Texas to get it painted. He writes:

"The closer I get, the more I think I'm going to take the long route to TX, weather permitting. Probably go from Seattle to L00 in one easy day with possibly a lunch stop at Half Moon Bay. Then day 2 head to Del Rio to see a buddy who's a T-6 IP. Then it's a short hop to Dallas. I'm out of here the first weather window I get starting the 17 Jan.

Going to be around the end of January? There's a couple guys from my UPT class there as well so I anticipate there may be some adult beverages in order."



Thus, we probably won't know exactly when Jim will be coming until maybe the day before. If you would like to meet with Jim the one evening he will be here, notify **Erbman**.

Evil Editor Zurg's Caption Contest

The photo shown below was found thrown in with the other **Three Sigma** cylinder removal photos. No explanation was found of what was going on here.

Evil Editor Zurg suspects that you might know what is going on here. Even if you don't, that shouldn't stop you from guessing. The funnier the better. Enter as



many times as you like. Send your captions to **Evil Editor Zurg** at <u>eez@pobox.com</u>. If you don't have e-mail, use your imagination to come up with an alternate method to get your comedic genius to **EEZ**.

To see a higher resolution version of this photo, go to http://www.eaa1000.org/captioncontest.jpg . (Copy that very carefully—there's no ".av" in there)



Web Site Update

As of 10 January 2009, the hit counter showed **124845**, for a hit rate of 16 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.

MUROC EAA CHAPTER 1000 NEWSLETTER

Chapter 1000 Calendar

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

Feb 3: No EAA Chapter 49 Monthly Meeting

Feb 10: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (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

Mar 3: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

Mar 10: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m., High Cay, 4431 Knox Ave, Rosamond CA. (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 7: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

Apr TBD: B-17 *Aluminum Overcast* hosted by EAA Chapter 1000, General William J. Fox Field, Lancaster, CA. (661) 317-9453

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

May 5: EAA Chapter 49 Monthly Meeting, 7:00 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

May 16: Seventeenth Annual Scotty Horowitz Going Away Fly-In, Rosamond Skypark (L00), Rosamond CA. (661) 256-3806

May 19: No meeting. Go to Fly-In instead

Jul 25 – Aug 1: Bearhawk/Skywagon Deployment to OSH. Sign on now! (661) 609-0942 or (661) 256-3806

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!

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http://www.eaa1000.av.org

ADDRESS SERVICE REQUESTED

THIS MONTH'S HIGHLIGHTS:
REGULAR MEETING 20 JAN @ TPS
GUEST EVIL EDITORIAL
KOMMANDANTIAL WHINING
PAY YOUR DUES DAMMIT!

