experimental aircraft association

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 2005*

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:

Chapter Aviation Movie Night

with your Host Mike Machat
Tuesday, 16 August 2005
1700 hrs (5:00 PM Civilian Time)
USAF Test Pilot School Auditorium
Edwards AFB, CA

It seems like when you do the same thing at the same time each year you start to feel like you have to explain why we're doing it again. So, let me just say, for this meeting we're going to do the same thing we did last year. But then again, if you do the same thing at the same time year after year it becomes a "tradition". Mmm, yes, that's it, we're having our traditional movie meeting.

In the past we've used various means to return to the land of yesteryear. The "Way Back Machine", Doc's DeLorean, and the Kommandant's 1953 Studebaker. All I can say is pick any of those vehicles or one of your own choosing because we're going back again to the time when every movie had two names. For instance, **The Pride and the Passion**, **The Old Man and the Sea**, **The Bad and the Beautiful**, or **The Prince and the Showgirl**.

In keeping with "tradition," that is, two names separated by a conjunction in the title, we have "**The High and the Mighty**' sitting on the front burner for you tonight. Starring the Duke, that's right, **John Wayne**, who, as we know, was named after an airport in Southern California...or something like that. Truthfully I have not seen this movie so it will be a new experience for me and I'm looking forward to it. I don't want to spoil it by telling you any more, plus I'm tired of typing, so come on out to the meeting for some fun times.

PPO and aviation historian **Mike Machat** will be traveling via ***Fightin' Skywagon*** express to join us and tell us all about how this movie was the archetype for all aviation disaster flicks (even ***Airplane!***) to come.

There will be the usual chips and dips and the beverage of your choice. The **Schmoozemeister** might even slip in some pre-flick popcorn. Afterwards we'll go over to the BK Lounge for some burger munching and solutions to world hunger and world peace. You know, all the usual stuff. We're looking forward to seeing you out at TPS for this one at 1700.

- George "Knife" Gennuso
Vice Kommandant

Aerospace Walk Of Honor

24 Sep 2005—Your Chapter Needs You! Come represent Sport Aviation in the Antelope Valley and get credit for attending the September meeting (since this IS the September meeting!)

Last Month's Meeting

EAA Chapter 1000
Clearchannel Stadium
Lancaster CA
19 July 2005
Gary Aldrich, Presiding

The July meeting was held in the City of Lancaster Skybox at Clearchannel Stadium (formerly known as "The Hangar"), home of the **Lancaster Jethawks** courtesy of **Mrs. Kommandant Anne Aldrich**. By sheer coincidence, there was a baseball game going on which proved most distracting, so much so that chapter business had to be dispensed with. Refreshments were enjoyed in the form of

our traditional chocolate chip cookies provided by **Anne** and **Donna Drucker**. Mmm, mmm, mmm.

Twenty members, spouses and guests attended to root for the home team against the **San Jose Giants**. Contrary to their advance billing, the so-called **Giants** appeared to be only about an inch tall, at least from our perspective when viewed between finger and thumb held at arms length. However, they proved superior to our beloved Jethawks, whooping them 7 to 4. **Vice-Kommandant "Knife" Genusso** lamented that he could count the number of times that he'd seen the **Jethawks** win on one finger. Hmmm. Let's do the math.

An interesting statistic was that of the 20 people in attendance, 4 were named George. **Vice-Kommandant George Genusso** explained this by stating that one time everybody was named George, but that other names had to be created for those people who proved to be unworthy of the name. **George Fisher** proved to be entirely worthy by winning the bingo contest and was awarded a genuine broken Jethawks bat and four bobble-head dolls.

Sensitive to the home team loss, the **Kommandant** declared a "near victory" at the conclusion of the game. Our thanks to **Anne** and the **City of Lancaster** for the use of the Skybox.

- Kent "Cobra" Troxel
Secretary

Kommandant's Korner

Panic email from **NLE Erbman**…**E. E. Zurg** is exerting undo pressure to get an early submittal of my monthly missive (Premature Newsletter?). Something about taking the family to Mickey's TFR. I don't know if it's the **Erbs** or the **Zurgs** who are going to the **Happiest Place on Earth©**, but frankly the image of **Zurg** and the little **Zurgettes** terrorizing the **Magic Kingdom™** is pretty disturbing. Nonetheless, I will endeavor to pound out some prose even though the creative juices don't start their normal flow for a week or so.

Since I railed against the politicians last month, how about another flying tale? A couple of weekends ago, **Ms. Kommandant** volunteered the Fightin' Skywagon for a mission to Bermuda Dunes (UDD) as a favor for a sick friend…sort of a humanitarian thing. Anyway, for the geographically challenged, UDD is in the "low desert" not far from Palm Springs (PSP). We had visited Palm Springs several times in the past and always enjoyed this short and convenient excursion. What we had forgotten, was that all our previous trips had been in the early Spring or late Fall. When it occurred to us that it's a tad warm in Palm Springs this time of year, we decided on an early morning departure from WJF. The flight down to UDD was delightful with smooth, cool air and our normal gorgeous mountain and desert vistas. We had a pleasant visit with our friend and proceeded back to the airport for the RTB.

We held the ground ops to an absolute minimum as the AWOS temperature translated to 114 degrees…."check density altitude…" The runway was about 5000 feet long with no significant obstructions. I had four people, no wind, and half gas, so I figured I had the performance to pull off the departure. And, I was right as the mighty Skywagon sluggishly broke ground just past midfield. I nosed over to 100 KIAS or so and checked in with the Palm Springs Approach for the climb through their TRSA (*gee, there's still one of those around? Wouldn't that be like a Class C.5?*). The air flowing through the Cessna "juice-can" vents felt like the output of a blast furnace as we struggled through the turbulent air, clawing for altitude and blessed relief. It was so hot ("how hot was it, Johnny?) that the normal thermal turbulence couldn't get organized and, instead, just tossed us around willy and/or nilly. Cowl flaps? Faggedaboudit! Everything was wide open and the JPI CHTs were creeping past the 400 degree point. Of greater interest, though, was the oil temperature. This figure was exceeding any I had seen in my experience with this Skywagon. Coupled with the soaring oil temperature was an alarming decrease in oil pressure. I have had this explained to me as a phenomenon caused when overheated oil breaks down and loses some of its lubricating properties. Maybe one of you thermodynamic petro-chemists out there can explain this to me.

Anyway, I was about to level off and accelerate for cooling when Approach requested I do just that so I wouldn't swap paint with the Bonanza at my 12-o'clock. So, I reluctantly pushed over, giving up the 100 FPM climb rate I had so painfully attained. It's a tribute to the Continental and Cessna designers that the small increase in IAS was able to extract some of the BTUs from my overheated powerplant. Even though the air here at 4500 ft MSL still felt like about 1000 degrees, this enforced speed-up stopped the oil and CHT temperature rise for the moment. Clear of traffic, I resumed my pitiful attempts to climb through the Banning Pass, finally reaching 10,500 Ft MSL just as we entered the Antelope Valley.

The engine seemed to audibly sigh as we started a long slow descent back into the home-drome. My passengers, by now slow roasted, complimented me on my normal touch-skip-plant it wheel landing. I assume they were just grateful to be out of my airborne convection oven. We stepped out into the balmy 98 degree air and made a mental note…no more Summer trips to the low desert.

I hope your flying adventures are just as exciting….

Check 6 and Fly Safe…and keep cool.

- Gary Aldrich
Kommanding

Fagan Bearhawk Wins More Awards

And so it continues. **Pat** and **Carol Fagan** flew the **Smokey Bearhawk** to the Golden West fly-in back in June. Once again, the airplane that "wasn't built to win

awards" flew away with Grand Champion Custom Built Plans.

Bell Aircraft Naming System

When Ruben Fleet moved Consolidated Aircraft to San Diego for better flying weather to test his flying boats, Larry Bell and Bob Woods stayed in Buffalo, NY. Of course, the fact that Fleet was originally from California might have entered into the decision as well as the Buffalo weather.

Larry and Bob started naming their aircraft starting with "Air a."

Airacuda

The first aircraft was designed to be a ferocious airplane with two 37 mm cannon firing forward and bristling with many machine guns. What could be any more ferocious than the bara"cuda."

Airacobra

The next aircraft for the Army was, in my opinion, an extremely innovative design with features that spit venomous 37 mm shells out the foremost part of its body just like the deadly snake; "cobra."

Airabonita

At the same time as the Army requested the Airacobra, the U.S. Navy wanted a new fighter. What better way to start a design than with one which you are already designing hardware for? "Use the same hardware," just like McNamara demanded 25 years later. Of course, with the different military preferences and requirements it ended up as an entirely new aircraft, but the fuselage was sleek and beautiful, hence, "Air a Beautiful" or Aira"bonita."

KingCobra

Heavier and heavier accruements to the Airacobra were required by the customer and so a growth model meant it was to be the "King" of the Airacobra family. It still spit deadly venom from the foremost part of its body, hence a "KingCobra."

Airacomet

Since the XP-59A was the first U.S. airplane to use unproven jet engines, in my opinion, a large wing area was deemed advisable if the aircraft was to takeoff with under-performing engines. (What kind of performing airplanes would the F3H and F7U have been if the engines had produced the thrust they were supposed to?)

What would have a flame streaming out of its tail as it flashed across the sky? Yes, Aira"comet."

Helicopters

When Bell Helicopter built its second gunship, it spit 20 mm venom out of a Gatling gun from under its nose. It used UH-1 "Huey" parts so what better name than Huey"Cobra."

Did you know that on the prototype HueyCobra the pilot's control stick head was a molded Cobra head? (All the Army pilots wanted souvenirs.) The prototype also had a retractable landing gear, which leads to another fun story, not told here.

- **Lee H. Erb**, aka Erb the Elder
EAA Chap 1000 Det 5, Arlington, TX

What Ever Happened To That Stinson?

Many of you may remember many years ago when ***PPO*s Chuck Firth** and **George Gennuso** owned a Stinson 108-3. They eventually sold it, but what happened to it, and its owners, for that matter? We know what happened to **Knife**, and this e-mail exchange between **Knife** and **Chuck** reveals the rest.

George,

Thought you'd be interested in hearing about the Stinson. If you recall, I sold it a few years back after concluding I couldn't take on a deskinning to work on main spar corrosion and who knows what else structurally, plus an engine overhaul. Well, I ran into the guy I sold it to for the first time yesterday. I was at a local fly in and saw a nice looking 108-3 on the ramp, so I was out immediately to check it out. Turns out it was not ours but it did belong to the guy who bought ours.

Long story short is that about a year ago N6234M burned up on the ramp at Sanford, Maine, on a cold winter day because of an engine fire. The guy had tried to get it started early in the morning and sensed something was wrong. He got out, popped the cowling, and found a small fire near the carburetor. He had an onboard extinguisher but used it up without getting the fire out. Then a guy in a nearby hanger saw what was happening and came running up with one of those industrial bottles but couldn't help because it was empty. To make matters worse, the local fire department was now trying to respond but couldn't clear the field gate because of the width of the truck. Bad day in Maine all around.

What a shame. He showed me a picture of it after he'd finished the restore. Just gorgeous. He'd put in around $55,000 and had redone nearly everything. He said it was as clean an aircraft as he'd ever flown and handled superbly. I only flew it a couple times before I had to do

the inspection that led to the sale, but I remember it as a very stable flyer and easy to handle on the roll out. Anyway, he'd insured it for full value and that's how he was able to get into the new Voyager.

Chuck

Hi Chuck, sad story. That makes two Stinson's that I was involved with that burned up. I may have told you this before but my Dad bought a Stinson V-77 Gullwing. Brought it home and completely restored it. He had it back out at the airport after 3 years and was just getting out a small wrinkle in the Ceconite with a iron when it caught fire. There wasn't time to do anything, the fabric went up like the Hindenberg. I guess I should stay away from Stinsons. Good to hear from you, hope everything is going well for you and the family. Any thoughts of coming back to the west coast?

George

George,

Good to hear from you too. Agree on the Stinson. Bad ending after so much work to get it back into flying shape. As for my location, no real plans on coming west again. This is home now. New Hampshire is really a very pretty place and I've become something of a Yankee (not to be confused with the ones who root for the New York baseball team). That's not to say I won't visit if I get the chance. There's a lot I miss about California and I'd like to come out for a little while. I also have family in Oregon and Washington, so I may try to get a vacation worked out that allows me to do the entire coast. Hi to all the group, at work and at Edwards.

Chuck

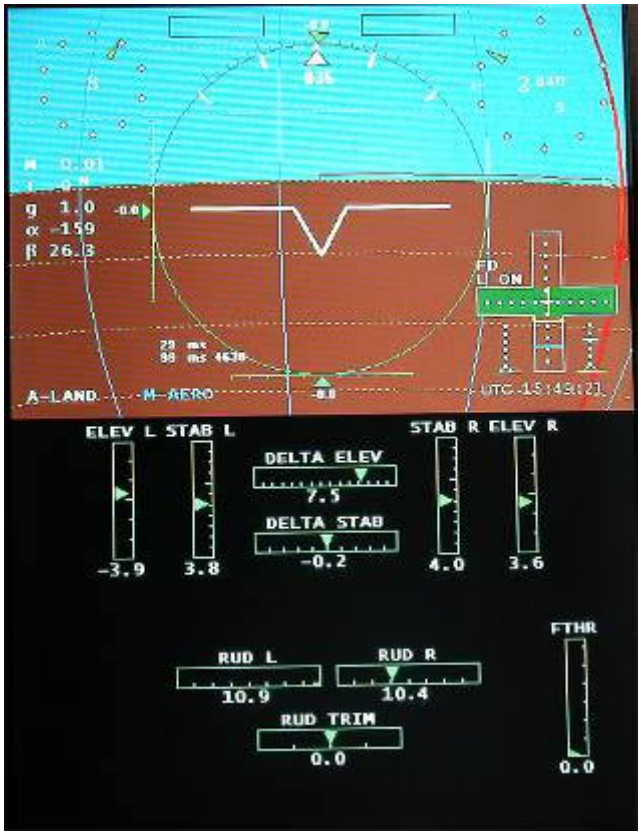
SpaceShipOne Glass Cockpit

(*With all of the hoopla at Oshkosh over seeing SpaceShipOne, which is pretty much yesterday's news to the* ***Project Police****, we present you a description of the Primary Flight Display as written by budd davisson after "flying" the SS1 simulator for the Bearhawk discussion group. This was in addition to the articles published in Sport Aviation..)*

The entire SS-1 is simple. Almost rudimentary in it's systems but brilliant in its concept. Also, keep in mind that the entire simulator and the Tier One Navigation Unit (TONU) we're talking about was designed and executed in-house at SCALED. Scary!

First, the bottom half that has the scales in it is a flippable page. It has about a dozen pages that display every possible bit of information you can think of about the airplane. I wish it had had the navigation page up, when I took the picture, because that's really trick. Besides having an icon of SS1 and showing it's relationship to the airport and the surrounding vicinity (I had to land on Van Nuys Blvd on my second flight), it has an energy/prediction bar that is attached to the airplane icon and whips around constantly: what it is showing is at that given amount of bank, speed, etc, where it'll be when it hits 8500 feet. The trick is to keep the end of the "whip" on the airport because 8500 feet is the high key position to start the landing approach from and it had better be in the general vicinity of the airport.

The artificial horizon shown is a 360 degree presentation, a so-called 8-ball, so the instrument can show straight up, straight down, upside down and backwards.



The pale blue bar just off center to the left of it is the desired path to be flown during launch. When the rocket is lit, TONU instantly computes the energy and angle needed to optimize climb and a bug appears on that line. The pilot flies the gullwing up to that bug, which moves around some as energy changes, and does his best to keep it there. Angle up is something like 80 degrees.

Top left circle-

Airspeed in KEAS, Knots Equivalent Air Speed. It's IAS corrected for compressibility. In the picture it's showing knots. It was hysterical in the climb to watch the Mach number be between 1 and 2 but the KEAS winding down to zero. On the way down, you'd be seeing Mach 3.0 or better but KEAS of around 130 knots. This is the secret to his "carefree reentry"—keep it slow and nothing is critical.

Numbers under circle:

M – Mach
G – G
β – yaw
T - I don't know
α - angle of attack

Circle upper right –

Incidentally, the pointer in the circle is just there to show trends since everything goes up at the beginning then reverses. This shows the peak of altitude and bottom of speed range.

Top number in circle = altitude

bottom number (shows a 5) = rate of climb

At one point I was going through 200,000 feet at a ROC of 150,000 fpm :-) That's nearly 1700 mph going straight up. My best flight touched 400,000 when I nailed the pitch bug all the way. On the 200,000 foot flight I was still trying figure things out and ended up in Van Nuys, coasting in for an In & Out Burger.

Cross Middle Right

This shows both the trim and stick position for pitch and yaw, all of which is hyper critical. The airplane has such a strong roll/yaw couple that any yaw at all starts a strong roll that's hard to stop. I haven't heard an explanation for Mike's rolls on the X-prize flight, but it's based in yaw somewhere. Maybe unpredicted nozzle erosion at the end of the burn, a rudder trim going haywire, hard to tell.

The gray bar going crossways in the bottom of the cross is the correct stick position for launch.

The dotted lines under either side are rudder trim position. It shows the right rudder is .5 further out than the left. The rudders act independent of either other, like a Long EZ.

The FDL indication just above and to the left of the cross is the feather indicator. It shows down and Lock On. When you unlock the feather and activate it, an arrow icon appears that pivots out of the cross and shows the feather traversing upward. That's always a welcome indication because the airplane gets so stable with the feather out. Even more welcome is when retracting it and seeing the L-ON indication meaning the feather is locked into glider mode and you can fly home.

Bottom Screen just shows all the relative control positions.

The entire TONU unit is beyond brilliant, like everything else in the entire program. We are blessed to have Rutan and his guys in our midst and it makes you feel all warm and fuzzy knowing that SCALED got its start in homebuilding. Maybe we'll have a Bearhawk derivative in space someday, although I think we'll issue Bearhawk astronaut wings at the 20,000 foot level.

- budd davisson

Lubricates Better! Lasts Longer!

(*More from the Bearhawk list...*)

Regards list,

Liked the engine oil thread.

You might find this response on oil production interesting since it was written by a retired Petroleum Engineer.

I had an auto repair shop in Houston, Texas, which happens to be the petrochemical capital of the world. I have had many conversations with Chemical engineers at oil companies as well as Forensic Chemists at analysis laboratories. I also performed EPA and DOT conversions on European Gray market cars in the 80's. These cars had to pass rigid emission testing at federally approved testing labs. I have also spoken with automotive engineers for Ford and Chevrolet. So forgive me for being soooooooo opinionated about this subject matter.

There are two schools of thought regarding multi-grade motor oils.

First school says, multi grades make engines last longer because they circulate quicker at start-up when most of the engine wear takes place.

Second school says, straight grades make engines last longer because they have better shear characteristics and do a better job of lubricating the rings, which makes them last longer.

Both of these schools have error in thought and implementation and don't address all of the aspects of the oil.

I maintain a third school of thought, which says a clean engine is a happy engine.

I use Delo 400 30W by Chevron. It has all of the ratings including diesel, gas, and turbo. This motor oil is not advertised at racetracks and other than truckers; nobody knows what the hell it is. According to the engineers at Chevron, Delo has the highest level of detergents and dispersants of any motor oil. This means it will keep a motor clean and/or clean a dirty motor.

18-wheelers that have diesel engines with turbochargers and superchargers use this oil.

So here is the poop. Multi grade motor oils are made from low grade crude.

These are man-made molecules created in a cat-cracker, short for catalytic cracker - a chemical reactor for converting oils with high boiling points into fuels with lower boiling points in the presence of a catalyst.

These manmade molecules break down faster and create more deposits than the molecules found in straight grade motor oil. Straight grade motor oil is made from premium crude, which is expensive and sometimes in short supply.

For the reason just stated, oil companies love multi-grades because they can be made from junk and they are a value added product.

Automakers began to use multi-grade motor oils because of ever-tightening emission standards. The automotive engineers determined that the thin multi-grade motor oils sealed the rings better during cold starts and therefore caused fewer emissions. For those of you that are familiar, the entire focus these days on emissions, are concerned with the first five minutes of cold start, because that is about the only area of radical improvement that can be made. That is why preheated oxygen sensors were developed and why they are trying to develop preheated catalysts for the exhaust. Well, the EPA, in their infinite wisdom, told the manufactures if they wanted to use multi-grade motor oils to pass the emission testing, that they would have to recommend the usage of multi-grades all the time.

Hence the beginning of the oil recommendations we see today. As you may have noticed, over time the recommendations have gone from 20-50 to 10-40 to 5-30. The trend is due to the ever-tightening EPA requirements.

When the automakers need to make cleaner tail pipe emissions, for the next belt tightening, they just recommend thinner oil. About this time you should be feeling like a fool!!

I experimented with this while attempting to pass European Gray market cars through the EPA labs, and found this to be true. Pipe up out there if you are an automotive engineer or a petrochemical engineer of automotive products.

I bought a 1988 Sea Ray in 1988. The boat had a 260 HP Chevrolet 350 cid motor. I did not trust the boat dealership and wanted to service my boat myself. I owned a repair shop and was completely capable and competent. I also wanted to maintain my warranty with the boat dealer, just in case.

After performing my first oil change, I stopped at the dealer and informed them of my oil change and provided them with the receipt from their parts department for the filter. They said that there is no oil on this receipt.

What kind of oil did you use? I told them Delo 400 30W by Chevron.

They said good, you didn't use a multi-grade motor oil. If you had used a multi grade, we would have to cancel your engine warranty. You see, there are no emission requirements on boats!

You mentioned the word "cling" in your description of synthetics.

The most "clingy" oils are the ones with a high paraffin content (wax), which historically are the Pennsylvania crudes. As evidence, have you ever noticed on the old Pennzoil commercials, how they always use a farmer to talk about how well the oil works in his tractor? Well, there is a damn good reason for that! Tractors are not operated everyday. They sometimes sit for long periods of time without usage. Then when they are started, there can have an exaggerated amount of crank bearing wear due to the oil running off during storage. Pennzoil would leave a waxy residue that would help lubricate the bearings until the oil flow began. Their best spokesman would have to be a person who is cheap, and leaves their engines idle for long periods, like a farmer!

Although this above characterization also sounds like a classic car buff or a Pantera owner, I would not recommend high paraffin crudes. They suffer from the same problem as multi-grades, they break down faster and leave more deposits (waxy looking deposits).

Synthetics were developed for jet aircraft turbine engines. In the early days of turbine engines, the motor oil would break down and leave deposits and cause engine damage, which would crash the plane. Synthetics allowed higher operating temperatures with almost no breakdown (visualize the synthetic oil commercial where they fry conventional oil in a pan and then scrape the deposits with a spatula). However, in jet engines, the oil does not seal the combustion chamber like in a car engine. In the early marketing days of synthetic motor oil marketing, the salesman said you could leave the oil in the car for 50,000 miles, just change the filter once or twice in this period and it will be fine. They used to sell special filter brackets that held two filters and it was bolted to a fender or something.

Well, the engineers and salesman were only considering the breakdown aspect of the oil, not the accumulation of combustion acids. Synthetics are the best, but must be changed as frequently at regular motor oil to prevent combustion acid damage.

There are some cars that are so hot that they have to run synthetics or engine deposits will form and cause engine damage even at 3000 mile oil change intervals. The new aluminum engine corvettes are a good example of this trend. High output motors that generate a lot of heat or that are operated in high RPM conditions like boats, Panteras, turbine engines, etc.

Slow warm up periods also add a lot of combustion acids to the oil and can be more harmful than driving cold. Driving forces the engine to warm up faster and changes the combustion chamber temperature and chemistry. So my recommendation on oil, Delo 400 30W by Chevron or Synthetic oil changed frequently. Warm up a little, but not a lot. Start the car and use it rather than allowing long periods of inactivity.

With a bottomless budget, use straight 30W or a heavy synthetic like 20-50W, use an oil preheater and an electric oil pump to circulate low pressure oil in the engine before cranking (like a turbine engine). Change the oil before it discolors or every 3000 miles (or 3 months if it sits a lot). Use multi grades in cold climates where 20 degree F or below start-ups are expected. Cold climate is about the only really good use for multi- grades.

Synthetic multi-grades do not suffer from the same problems as natural crude multi-grades. They are made multi-grade because of the manufacturer requirements, which are EPA requirements. OMG, Spark plugs I will let someone else explain.

- Richard Schulze, P. E.

Copperstate 2004

Our regularly scheduled coverage of the Copperstate Fly-in in October 2004 was delayed because of required coverage of **Vince Sei's** rocketry experiments.

Subject fly-in was attended by at least two ***Project Police Aerial Assault Vehicles***, namely the ***Fightin' Skywagon*** and the ***Giles RG-202*** very non-stealthy recce bird. As you may recall, the latter was an award winner. The ***Fightin' Skywagon*** was withheld from judging to protect certain ***Project Police*** classified information. It's an unwritten rule, except for the fact that it was just written earlier in this paragraph. **KRAP!!** Time for another session of unwriting...

The Fightin' Skywagon crew, with the Kommandant, Ben Wilson, and Mike Lampley. Look backwards from this picture to see Erbman behind the camera.

Upon arriving, a *PPOs* gotta do what a *PPOs* gotta do...

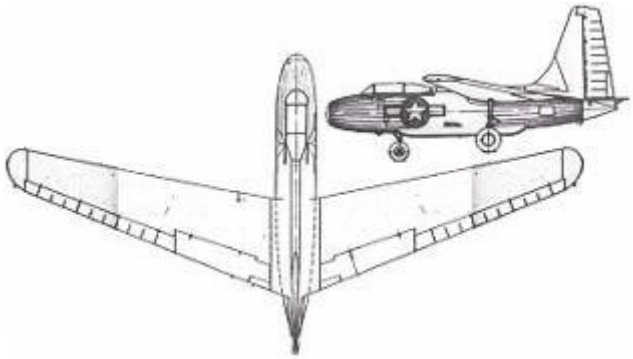
World's first full-scale electric helicopter. The Kommandant points to where you plug it in.

We would have thought the power cord would have been a larger cable. We hope the extension cord is strain relieved better than this picture would indicate.

A new meaning to the term "Bird Strike". How this duck made it through the propeller and smacked right in front of the starter is a mystery to us

Project Police Aircraft Spotters Quiz

Evil Editor Zurg let you have a month off since he had filled the pages with other exciting stuff. Here's one that's been sitting in the hopper for a while. No, it's not an X-29.



Your job is to simply identify the aircraft shown above and send that information to erbman@pobox.com or to the editor's address seen on the last page of this newsletter. Include any other information you know, such as the historical event that this airplane is famous for. 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 31 July 2005, the hit counter stood at **100192**, for a hit rate of about 22 hits/day for the last month. **Yep, we finally broke 100,000!** The things some people will read....

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

Sep 6: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

Sep 20: NO EAA Chapter 1000 Monthly Meeting, go to AWOH instead

Sep 24: Aerospace Walk Of Honor Street Faire, Lancaster CA. (661) 609-0942

Oct 4: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

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

Nov 1: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

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

Dec 6: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

Dec 20: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. Watch for change of venue. (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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THE LEADING EDGE
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ADDRESS CORRECTION REQUESTED

THIS MONTH'S HIGHLIGHTS:
CHAPTER FLICK FESTIVAL 16 AUG @ TPS
AIRBORNE CONVECTION OVEN
SPACESHIP ONE TONU
SINGLE OR MULTIGRADE OIL?

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