



# THE LEADING EDGE

## NEWSLETTER OF MUROC EAA CHAPTER 1000

Voted to Top Ten Newsletters, 1997 McKillop Award Competition

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May 1998

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:

#### No Third Tuesday Meeting This Month! Instead, We Expect You To Participate In:



#### Seventh Annual Scotty Horowitz Going-Away Fly-In--16 May 1998, Rosamond Skypark

Make your plans yesterday! You won't want to miss this! **Glenna Wagner** has been doing her magic again to make sure that we will all be well fed. The Bar-

B-Q will be fired up and operating from 10:00 am to 1:00 pm.

A One-Shot Spot Landing Contest is planned for arriving aircraft. A People's Choice award for the best static display is also planned. You could volunteer to help with this (it's easy!).

Flyers have gone out to surrounding chapters inviting them to join us. You'll want to be there to enjoy the fun! Numerous members of Chapter 1 have confirmed that they will be coming to check on that rumored **Project Police Hospitality**. **DON'T DISAPPOINT THEM!**

**NEWS FLASH:** **Scotty Horowitz** has said by e-mail "Hope to make it to my going away party!" Where else but Chapter 1000 would someone be invited back each year just so we can say goodbye again? Those of you who have never met "Doc" will want to be there to finally meet Chapter 1000's first and favorite astronaut!

### Last Month's Meeting

#### EAA Chapter 1000

Scobee Auditorium, Test Pilot's School, Edwards AFB  
1700, April 21, 1998

**Gary Aldrich**, Presiding

The throng assembled in the TPS Lounge for imbibing and socialization. Several potential new members were noticed and greeted. Noticeably absent were **Charlie** and **Glenna Wagner**, having just recently made good on their

long-standing threat to relocate to Fallon NV. Now Charlie just needs to finish the RV-6A so that he can commute to the Chapter meetings, as he has also threatened to do. Also noticeably absent was our esteemed Secretary, who had previously mentioned that he expected to be absent. He probably gave some excuse, which we can assume was suitably weak. Anyway, you get stuck reading yet more of my drivel as a result.

#### Visitors

Joining us for the first time were **Harry Crawford**, **Jim Williams**, and **Bill Irvine**, all of whom were impressed enough to join our group of wing nuts. See more about them in the New Members section of this newsletter.

#### Announcements

Prezident **Aldrich** read excerpts of a letter from **Mike Pelletier (P5)** to **Mike Meyer** (who, through a quirk of scheduling, was actually able to sneak away from work to attend). **P5** is enjoying his new job at Davis-Monthan as the Senior Maintenance Officer (or something like that). Mike also had a chance to build OPR fodder, having been put in charge of arranging a naming ceremony for the B-2 *Spirit of Arizona* (what are they going to do if they buy more than 50 B-2s? The *Spirit of Guam*?). While this may not sound like much, it is typically the type of thing a Lt Col is put in charge of. Even though P5 is but a Major, they obviously heard about his outstanding record keeping the ne'er-do-wells of the **Project Police** in some semblance of order.

Did you order your EAA Book or Video through the Chapter at ridiculous discounts? No? Well, now you'll have to shell out more money or wait 'til next year.

On the EAA Members Only web site is a press release where EAA once again defends the flight of Experimental-Amateur Built aircraft over populated areas. Seems Ma and Pa Kettle panicked after hearing something about Joe Bag-o'-Donuts flying some experimental flivver he threw together in his garage over their house. The education of the great unwashed continues.

Remember the excitement of buying your class ring back in High School or College? Well, the same folks

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who make those have expanded their market, giving you a chance to relive that thrill all over again (and make themselves some more money). Yes, that's right--you can now get an official EAA ring with the Spirit of St Louis, your EAA number, and who knows what else on it! Prices range from \$138 (fake metal and colored glass, but sure to fool the *Project Police*) to \$358 (real gold, real stone, real expensive). The *Project Police* uniform board has not met to decide if these will be required uniform items. Prezident **Aldrich** has the info if you're interested. Don't all rush in at once.

Again a cry for space went up. An incoming TPS student, who will be here this summer, is looking for space to store his Velocity project. If you don't have a whole lot of room, he can take the wings off. We don't expect he'll need room to work on it, since TPS Staffers like **Aldrich** and **Erb** expect to keep him and his classmates plenty busy for a year.

We are also looking for space for the **Chapter Booth**. Once it is mounted on its trailer, it will be easier to transport, but will exceed the height limit of the door on its current hangar. Go ahead--throw out that pile of junk in the corner of your hangar and offer it up to the chapter!

Please volunteer for helping with Chapter 1000's **Seventh Annual Scotty Horowitz Going-Away Fly-In**. That will be the best (and perhaps only) defense against being drafted.

If there is someone whom you would like to nominate for an **EAA Major Achievement Award**, get the info to Gary Aldrich by May 15.

### Program:

Our speaker was intrepid test pilot and RV-6 builder **Dave Kerzie**. Although Dave has flown many different aircraft in his career, as listed in last month's newsletter, the focus of this discussion was the U-2.

Dave's first introduction to the U-2 was as a young pup flipping through 1958 issue of *Model Airplane News*, where a 3-view drawing of the U-2 was shown. While this may not sound that significant now, remember this was several years before Francis Gary Powers was shot down and the government finally admitted that the U-2 existed. Hmm... The best part of this story was that Dave showed us the actual drawing in the actual issue of *Model Airplane News* that he had first seen it in. Score: 100%--outstanding attention getting step.

While Dave retired from Lockheed last June, he still enjoys talking about the U-2. He brought with him an audio-visual device straight out of the Antique/Classic division, namely a 16mm film projector. Several *Project Police* officers were overheard recounting their glory days in high school of operating the projector.

The history of the U-2 has been well documented in many books, especially Jay Miller's history of the Skunk Works. As such, we'll just mention a few high points here.

The U-2 started in December 1954 when Kelly Johnson submitted an unsolicited proposal to the government for a high flying spy plane. At this same time, **Lee Erb** was settling himself and his new bride in at Edwards AFB, starting a two-year career as an Air Force Flight Test Engineer. Lee knew nothing about the U-2 program and was not involved in any way, but I digress.

For Kelly Johnson, doing the impossible was normal ops. The first U-2 was flying 8 months later. Do that with your F-22. Something about having good people and blowing off bureaucracy and other straphangers. Kelly also understood and emphasized the importance of keeping everything light and simple. That still goes for you and your homebuilt.

The production line was fired up again in 1966 to build the U-2R, which was really a totally new airplane 40% larger than the previous U-2s.

If that wasn't enough, the production line was fired up yet again in 1979 to build another batch of airplanes. For various political reasons, this aircraft was named the TR-1. Several years later, the TR-1 was re-designated back to the U-2S.

Dave described the U-2 as having a fly-by-wire flight control system. That is, you fly it by pulling on wires (cables). It's a big airplane, so the control forces are fairly high. Ailerons are controlled by a large yoke for better mechanical advantage. Remember that you're doing this in a full pressure suit.

Dave then fired up the projector and showed us some historical footage. The first part of the film showed building the original U-2. Of note was the wet wing design. The film quickly moved into initial flight tests, including landing tests for normal landings, maximum sink rate landings, and crosswind landings. Did you know that early U-2s were air refuelable? It was probably more compatible with the KC-97s of the time than the B-47.

Seventeen years after the first flight of the U-2, the Air Force decided that maybe we didn't need to send new U-2 pilots up solo on their first flight in the airplane, and the first 2 seat training version of the U-2 was built.

Like many gliders, the flaps on the U-2 can be set to a negative deflection, known as the "gust relief" position. Some airliners, such as the Lockheed L-1011, also use this concept.

The U-2 is also probably the only Air Force aircraft to routinely fly off of carriers. The U-2 flies a normal arrested landing using a tail hook. No catapult is required for launch, although a clear deck is. With a reasonable wind over deck, the U-2 lifts off after a short deck run.

So what's happening today with the U-2? Recently testing was completed on replacing the engine with the GE F-118, which is similar to the engine used in the B-2. Other than that, like most airplanes the work is in developing and testing new systems.

Dave was asked what was his favorite part of flying the U-2. He listed two things. Above 70,000 feet altitude, you can see the curvature of the earth. The other was the spectacular view on night flights.

*(A video of this meeting (and many others) is available in the Chapter 1000 library. Contact **Russ Erb**)*

### Adjournment:

Somewhere around 6:45 we adjourned and headed over to the BK for the usual round of burgers and socializing.

- Erbman

**The Prez Sez...**

Well, I've completed my first month's employment back at the Test Pilot School (TPS) and there's good news and bad news...The good is that I'm enjoying the heck out of my new (old) duties...The bad is that NLE **Erb** now hovers like a raven over roadkill reminding me of my column deadlines! (*Heh, Heh, Heh!*) As you've undoubtedly read on the first page, this month's Chapter 1000 conclave (**Bob M.** - I'm running out of alternatives for 'meeting') will coincide with our traditional fly-in at Rosamond. In typical 1000-fashion, plans are firming up like lime jello in July. Fear not, though, I am confident that even without my shining presence the weather will be mild, the lunch delicious, and Ozzie "spot-on" with his landing. If you signed up to assist in the execution of the event you can expect a friendly reminder call--probably while you are reading this. If you didn't have the opportunity to volunteer, rest assured your help will still be appreciated when you arrive for the festivities.

Looking ahead, I have already attended two organizational meetings for the Edwards Open House and Airshow '98. This year's event will be slightly less intense; being a one-day show on 3 October. This is earlier than previous years and has been moved up to cooperate with the Flight Test Historical Foundation's annual Gathering of Eagles celebration. Even with the smaller scope it promises to be an exciting aviation-saturated week; especially if the F-22 Raptor flies. Circle the date and watch for more details on Chapter 1000 participation in future editions of the Leading Edge. As your building/flying activities accelerate in the coming summer months, be on the lookout for chapter event opportunities. Programs guru **George Gennuso** is always looking for suggestions...and not just third-Tuesday ones. I would like to vary the schedule to stimulate more member participation and I need your ideas to achieve that goal.

Enough rambling....Let's have a exciting and fun summer!

Fly Safe and Check Six!

- Gary Aldrich

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**New Members**

Shortly after the April meeting, new member **Harry Crawford** sent the following note to **Prezident Aldrich**:

"Enjoyed the Chapter 1000 meeting today with talk and movie by **Dave Kerzie**.

I was born on an airline before there was one between Denver and Cheyenne, a little town Milliken.

Joined U.S. Navy July 16 1935 in Denver at 17 years. 18 in San Diego-USNTS. The combined Navy Army Marines put 500 airplanes in the air. As President F.D.R. was there. I saw a man falling from a plane-end of end-stiff as a board. A Chance-Vought cracked up on one of the large black top areas. After boot camp went aboard Kanawltta, an oiler over night to San Pedro. Then several days on flagship of base force, I think it was Argonne. Battleship Arizona to San Fran. Marched in Armistice Day Parade. Back on Cable Car. The bridges were not yet

above the bay. On to Bremerton Puget Sound Navy Yard to board USS Saratoga, Capt William F. Halsey Commanding. I was invited to join the Engine and Pump Room Mates while the majority of my buddies went with the squadrons to North Island, San Diego Harbor. We went to Panama in 1936 and across the Equator. In May 1937 to Navy maneuvers near Midway. Back to Maui for more oil then anchored of Waikiki a few days.

After the Navy I took a master mechanics course at Curtiss-Wright Tech Glendale. For nearly a year worked Douglas El Segundo on first 5 SBDs and a DB7 with aluminum riveted fuel tank. That became A-20 for U.S. Army.

I worked for Southern California Gas in Compton until July 1942, then California Shipbuilding on Terminal Island, then machine shops until I retired in September 1981. Went to Waldbrey Island Washington. Was Charter Member EAA Chapter 818 at Skajit Valley Airport (near Burlington) near Paccars plant where they build Kenworth and Peterbilt trucks.

In 1984 I started building an ultralight kit, a Fisher 303 and a trailer enclosed. I still have it with only 35 minutes break-in time on 277 Rotax. I tied down the tail too tight and maneuvering onto a wider mobile home concrete strips broke of the tail wheel. The sidewalk is unusable and I made it heavy, so it must be removed and another rib made. Left wing trailing edge needs T-88 regluing.

After Whidbey we lived in Westport, WA - Grayland and Brookings OR just 6 miles from California. We came back to So Cal to be near Evelyn's relatives and they have been very helpful.

In 1976 the Oshkosh Fly-In featured a sweepstakes and the first Taylorcraft was given away. I sent in 5 tickets and \$5, and one of those tickets was a winner! I tied it down at Van Nuys Airport for 2-1/4 years. Sold for \$3850, which was about what it cost. A man in Washington state bought it and I saw it several times at Arlington Fly-In with a larger engine than the Continental 65 HP.

My EAA number is 11830 since 1964 - **Harry Crawford**"

Returning for the first time since we saw him at **Charlie Wagner's** Electrical Workshop was **Bill Irvine**. Bill is a system test engineer on the B-2, and lists his project as restoring/rebuilding his Cessna 310. One of his favorite questions is "What model of Cessna 310 is it?" The answer: "It's a Cessna 310." Which, of course, identifies it as one of the first ones. The restoration started as a tire change. Then the brakes could use some work. Then those landing gear struts. Etc, etc, etc. We figure he'll be done about the time he gets to the rotating beacon. Someone has quipped to him that he's rebuilt so much of the airplane, he's getting dangerously close to the 51% rule. He might as well mark it "EXPERIMENTAL" and call it a homebuilt!

**Jim Williams** went searching the "web" for the nearest EAA Chapter to Ridgecrest and found us. Talking with him during schmoooooze time I found out he is considering building a Zodiac. That makes two of them in the chapter, even if the other one is in Australia. I'd tell

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you more about him, except we don't seem to have received his New Member Info Sheet...oops...



## Young Eagles Update

Mr. Niño did it to us again. The April rally was called off on account of expected rain. The next planned rally will be on 13 June at Fox Field, 0800.

### We've Been Duped! *Project Police* Intelligence Officer Fired!

In this space in last month's newsletter, we reported that EAA Chapter 1 Dictator for Life **Jan Johnson** had been ousted as Prezident. Well, Jan, who is known to be supportive of the *Project Police*, although her political position does not allow her to publicly admit it, called us here at HQ on 22 April 1998 to assure us that her diplomatic power was still in place, just as we had left it after *Operation Rubidoux Sundown VI*. The *Project Police* Intelligence Officer responsible for this erroneous information has been appropriately sacked and downgraded for not properly checking his facts. At least one good thing came of this: We found out that "Egg-on-the-face" can be rather tasty if lightly salted. Okay, Jan, can I quit groveling now? Looking forward to seeing you and yours on the 16<sup>th</sup>!

### A NEW AVIATOR

*Project Police* Press Release written by order of the all-knowing *PPHQ Info Czar*.

CLASSIFIED Minimum SECRET/PPSNTK [Project Police Special Need To Know]

At Mountain Valley Airport on April 4th, 1998, **Jason Payne**, a 14 year old self-described "aviationaholic" residing in Rosamond piloted alone, unarmed and unafraid (see below) one heavier than air vehicle sans engine, otherwise known as a Schweizer SGS 2-33 sailplane. His instructor, otherwise known as Dad, deemed the calibration of his sensors (Mark-1 versions of eyeball, ear, and seat-of-pants) suitable, the programming of the flight control software (original issue gray matter) to within FAA spec stability and control standards, and servos (arms and legs) practiced at inputting appropriate stick and rudder deflections. Three times he slipped the surlies with takeoffs and landings within FAA commercial pilot standards.

When asked, "Were you scared?", Jason replied, "No. Dad wouldn't send me solo unless I was really ready!"  
RESPECTFULLY SUBMITTED.

### OFFICER JIM PAYNE

World Record Holder and EAA Chapter 1000 Glider Guru  
YOU BUILD, WE CRITIQUE.

CLASSIFIED Minimum SECRET/PPSNTK

-- END OF MESSAGE --

### Test Report: Initial Taxi Tests

(*Lee Erb recently did some initial taxi tests on his new project, and was nice enough to forward us this report*)

#### Background

After delivery on March 12, the Carburetor Air inlet system was cleaned of a Dirt Dauber Hotel which had restricted airflow to approximately 40 percent of the normal area. The system consists of a vortex sand remover with a standard see-through one-pint glass container (Kerr Mason Jar) and an oil bath cleaner. Obviously the system had been designed like all good agricultural aircraft (fixed wing and rotary wing) to operate in high dust environments.

Planned eye surgery (it was highly successful) on the Test Engineer resulted in delaying initial taxi tests. This permitted complete cleaning, sand blasting, and painting of the air inlet system. Even new vibration reducing couplings and clamps were obtained.

New electrical cables were obtained and installed along with the restored air inlet system during the recuperation period. A new battery was obtained but was not permanently installed to prevent accidental discharge due to inclement weather.

#### Test Planning

On April 25 the last minute equipment required for the engine start and initial taxi tests were staged. Modern video equipment (shoulder mounted) was prepared and two still cameras with telescopic lens were included. The mental equipment checklist was reviewed with many "what ifs" for emergency wrenches of various sizes, gasoline additive, and pillows for the ground crew.

A mental test plan was conceived with alternate scenarios depending upon the weather (changing) forecast and the number of the ground crew personnel that would be participating.

No test plan was written for in the heyday of this Flight Test Engineer they were considered somewhat restrictive. The pilots would sometimes come to early morning takeoff and get strapped in before taking on extra oxygen and asking, "What are we going to do today?" Fortunately I did not have project pilots that "needed extra oxygen" (We did not have any oxygen on board.)

#### The Day Arrived

On April 26, a quick review of the handbook description of the engine and operational controls was made before traveling 55 miles to the test site.

The battery was installed after electrical system review and minor modifications were made to the wiring system (enlarged the hole in the ground cable so that it would go on the starter attachment bolt). The gas cock was fully opened and the test engineer, wearing a common

**Project Police** (jungle) hat, blue denims, and blue chambray shirt, climbed up to the cockpit. The SFTE emblomed jacket was not worn because of relatively warm ambient temperature.

After giving proper warning to the ground crew (now photographers) and assuring all was clear, the ignition switch was pulled and the starter button was engaged. Unfortunately the power cables to the starter relay were reversed and nothing clicked when the starter button was engaged.

The Test Engineer dismounted from the seat and nearly fell due to the lack of properly located steps. The gas cock was closed. The Electrical system was reworked. This rework requirement was not unexpected since no electrical system diagram was available since the system was changed from a positive ground to a negative ground and the generator had been replaced with an alternator of higher voltage.

The Test Engineer remounted, warned the ground crew (now photographers), the ignition switch pulled and the starter button engaged. Rewiring the power cables to the starter relay produced the proper clicking but no reaction from the starter motor.

The taxi lights were turned on and functioned properly. They were turned off as they were not needed although rain clouds had darkened the afternoon sky and a light mist sometimes appeared.

The Test Engineer dismounted taking the route directly to the starter motor. Inspection of the cabling to the starter confirmed that the power line had been secured finger tight during the previous wire installation session. At once the cabling was secured with the proper sized wrench. Now that success was imminent, the gas cock was fully open. (Partially open would probably have resulted in a gasoline leak onto the electrical system.)

## Engine Start!

The Test Engineer remounted, warned the ground crew (now photographers), the ignition switch pulled and the starter button engaged. The starter operated properly. Adjusting the governor and with a little erratic excitation of the choke, the engine sprung to life with a couple of puffs of oil smoke belching from the exhaust stack. (It must have been that *Liquid Wrench* that did not separate the pieces of the exhaust system like it was supposed to do.)

The sound of the engine start was recorded by a shoulder mounted video recorder. However, no specific engineering noise data were recorded or attempts made to determine if Cat II or Cat III noise requirements had been met. (We had left our Cat I (Tosha) with our Bulldog I (Little Mack). Someday we will tell you about our Little Mack 'n' Tosha at home.) One ground crew member did remark that the engine "ran soft."

## Technical Discussion

The engine was permitted to idle a bit. Governor response was checked and appeared to have immediate response to control inputs. (Nothing like those 10-second responses of the Westinghouse J-22's in the Phantom (Phantom ONE that is) or the greatly improved 5-second response of the J-34's in the Banshee.)

Due to low system rpm (450 idle), the alternator was excited by the alternator exciter button so that it would charge. The battery was initially charged at about 12 amps and gradually reduced to approximately 2 amps.

Engaging the engine to the motive-power units was not smooth due to the high gain built into the control unit. Also, even though the foot print was large, the pressure had been sufficient to settle the wheels into the sand an extra two inches between March 12 and April 26. This required a bit of rocking to get the wheels out of the sand.

At some point in the longitudinal dynamics of moving from the hangar ramp (parking area) the exhaust stack moved and hit the cowling. There was no dangerous condition apparent for initial taxi tests so the testing was continued. (The exhaust stack is a planned replacement LRU before major operations are conducted and when funding becomes available.)

Taxi tests were conducted for approximately 10 minutes. Nose wheel steering gain and response were evaluated. The gain was relatively low. The nose wheel response was immediate, however, the vehicle response was sluggish. The nose wheel tended to slide sidewise in the sand. At this time no effort has been expended to determine if it is due to a tire design defect, influenced by the vehicle c.g. location, or is inherent in the narrow tracking of the dual nose wheels.

## Shutdown

After being parked next to neighbor's industrial tractor, the engine was shut down by reducing governor rpm setting and closing the ignition switch. Following instructions in the Operator's Handbook, the primary control lever was placed in neutral. No tie downs were installed because the Hangar Owner was going move it after he cleaned the hangar and stored his newly acquired lumber.

Two minutes later the force of gravity produced a horizontal lateral movement in the reverse direction. Fortunately the castering nose wheel castered 90-degrees in the sand and thereby produced a horizontal force that reacted against the horizontal gravitational force and the vehicle momentum. No damage was induced before it was reparked and chocked.

## Analysis

Several still JPEG photos have been reduced from the video and a 10-second .WAV file was produced from the same source. The development of the still photography film will be subcontracted in the near future to the local grocery store.

Considering that it has been 30 years since the Test Engineer had soloed a similar vehicle, and it has been 60 years since he had dual instruction on a narrow tracking dual nose wheel arrangement, and he did not get bucked off (no seat belt but a strong Control Wheel) due to the high gain of the motive control unit; the engine start and initial taxi test were deemed highly successful.

## Future Testing

Next taxi tests are tentatively scheduled for May 3 depending upon weather. Tests will include attempts to reduce the gain in the clutch. Other tests will be

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determined by the availability of a "slow moving vehicle" plate and condition of the driveway at the Texas Buckeye Ranch.

### Epilogue

And, alas, immediately after reaching home base it was realized that the gasoline additive had not been added to the old gasoline. The gasoline in the tank has been there only six months and had not congealed yet. There will be another week to add the additive.

Ya know, maybe a written test plan would have helped.

"And then it rained."

- Lee H. Erb

EAA Chap 1000 Det 5, Arlington TX; EAA Chap 34  
LeeErb@compuserve.com or (817) 275-8768

*(Clutch? Slow Moving Vehicle plate? WHUT in the HAYLE is he talkin' about?! Turn to page 7 to see a documentation photo from the taxi tests. All will be made clear...)*

### Project Police Peruse Pitts P-seudo Project

The following *PPTAF* mission summary has been declassified and released to limited distribution:

In a daring solo raid, *PPTAF Kommandant Aldrich* inspected Chapter 1000 member **Chris Reeder's** pseudo-project. Cleverly disguised as an itinerant tow pilot, Aldrich discovered Reeder hiding in Hangar 1 at Mountain Valley Airport (L94) Saturday (25 April 1998) surrounded by his Pitts. The diminutive biplane looked like the Strawman after a Flying Monkey attack. In a statement reminiscent of **Norm Howell**, Reeder stated his intention to "fly in four days"--although there was a perceptible lack of conviction in his voice. The airplane fuselage had only just arrived from BFL where it received a new covering of Ceconite and dope as well as a fresh paint job. Chris's schedule is driven not only by his desire to fly as much as his desire not to truck the airplane to his new assignment in Texas (teaching the USAF flight instructors how to fly). Workmanship on the project is impressive, considering the time crunch under which Chris is working. The new wooden turtledeck is gorgeous (Thanks to Chapter 1000 Woodwork-meister **Bob Waldmiller's** advice and counsel). The official *PPTAF* project assessment will have to wait since, if Chris holds to his schedule, he will be winging his way east before another raid can be mounted. In addition, *PPO* Aldrich did not carry the dreaded **P<sup>2</sup>3DI** for fear of it falling into enemy hands. Finally, although Chris did not personally provide HFS, the *Raven's Nest* restaurant obliged with their 'to die for' rendition of the *PPTAF*-staple **C<sup>3</sup>** (chocolate chip cookie).

Respectfully submitted,

- Gary Aldrich, *PPO/CC*

*(Having received this report Monday, 27 April 1998, the Project Police Information Czar launched a follow-up raid that afternoon, now cleverly disguised as a soaring*

*student after a successful mission of beating up thermals, and found the facts as stated heretofore to contain at least the daily minimum allowance of truth. A second follow-up raid on Thursday revealed the "fly in four days" to be a pipe (tubing?) dream, as the schedule was merrily slipping to the right...)*

### Bryan Duke Swimming Upstream!

In a day when pilots continue to leave the Air Force in droves (whatever those are), our own **Bryan Duke** is bucking the system. A Texas A&M Graduate, Varieze pilot, NASA Dryden engineer, Chapter 1000 member, and all around good guy, Bryan apparently kept looking up into the sky and seeing what those Air Force pilots were doing. Thinking to himself, "You know, I betcha I could do that!" and not seeking any counsel from the *Project Police*, Bryan applied for and was accepted for **Air Force Pilot Training!** Now, if you're thinking that he's a civilian and they only let Air Force Officers do that sort of thing, you'd be right. Before going to pilot training, Bryan will attend the Air Force **Officer Training School** (OTS to those of us in the "biz") to become a 90-day-wonder Second Lieutenant, USAF. Who knows, maybe **Chris Reeder** will be his Instructor Pilot (IP)?

Good luck, Bryan, and we'll be saving that coveted position of **Chapter Librarian** for you when you come back in a few years as a TPS student!

### Major Surgery on Brian Martinez's Q-200

*(Now that I have you totally confused...I realized I had published these articles out of order. Last month you read about the flight tests of Brian Martinez's Q-200 after changing the incidence of the rear wing. Here's the answer to why he did that in the first place...)*

What I've seen since day one on 557BM is a back wing that wants to go flying before everybody else on the airplane. Having a copilot on board really helps the thing behave better. I had assumed that my original leveling boards were good and that the aircraft was set up right. The first hint that something might be a little different was when my taxi testing got fast and the tail went up in the air.

During first flight I ended up driving my reflexer to maximum aileron trailing edge up. Then I had to dial in 8 degrees of trailing edge down elevator. There is still a good bit of pitch authority there, but you are carrying trim drag and I essentially lost a great trimming device in the reflexer (mine is powered by a electric actuator via a coolie hat switch on my control stick) because it needs to stay where it is. Several months into flying the thing Gene Sheehan stopped by to see how everything was going and I told him about my laundry list of problems. After fixing the venting problem that vexed my Ellison (By the way, I'm back to using the TBI with good results) I again spoke to Gene about the 8 degree trim thing. He said based upon his experience I would need to change the incidence of one of the flying surfaces. He estimated about 2.5 - 3

degrees. He also said that you "got what you got" no matter what you set the wings to. Gene said I could change the canard or the wing. He said another option was to change the outboard slot cores on the wing to a little trailing edge up, but I never liked that since that's another trim drag problem. He also told me to just keep flying it as long as I felt comfortable with the handling qualities, which is what I did. I figured I'd eventually do the back wing since there was less to move around.

Anyhow, I was getting a little irritated with not having my reflexer fully engaged and tired of the trim so I decided to do a little research into what I had. I made up some new leveling boards with the little angle finders epoxied to the level lines and it showed up a 2 degree error.

So, Saturday I got started and by 1800 Sunday I had the wing free. It took me 16 man hours working alone to get this far. I don't care what a lot of other folks have said...this is a major pain-in-the-butt. I had to split the seat back bulkhead and the FS-94 Bulkhead at the top. I'll have a number of repairs to do before its all over. Sometime this week I should be able to get back up to Mojave to finish the sanding and get the wing retacked. I'm estimating a three and a half week down time.

I went through 100 fluid ounces of water at Mojave today (I wear a Camelback hydration system when I work on the plane up there and I just plain sucked it dry) and I was still parched. As I write this, I still have a dehydration headache.

You don't ever want to have to do this, friend, because it puts you back on the emotional roller coaster. And, of course...I'm itching all over from the glass dust.

- Brian Martinez

Web Site Update - 14079 hits (8 May 1998), 41/day!



Here he is, **Lee Erb** deftly executing the initial taxi tests of his new project. Eventually this project will be employed in the building of grass runways at the Texas Buckeye Ranch, suitable for use by a Bearhawk.

The following is a paid advertisement...

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**Chapter 1000 Calendar**

**May 16: Seventh Annual Scotty Horowitz Going Away Fly-In,**  
Rosamond Skypark (L00), Rosamond CA.

Jun 3: EAA Chapter 49 Monthly Meeting, 7:30 p.m., Sunnydale School.  
1233 S. Ave. J-8, Lancaster, CA. (805) 948-0646

Jun 6: Flyout to Merced (MCE) (805) 943-9343

Jun 9: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m.,  
Edwards AFB. Test Pilot School, MOL Room (805) 490-1476

Jun 13: EAA Chapters 1000/49 Young Eagles Rally, 8:00 a.m., General  
William J. Fox Field, Lancaster CA. (805) 256-4829

**Jun 16: EAA Chapter 1000 Monthly Meeting, 5:00 p.m.,** Edwards  
AFB. USAF Test Pilot School, Scobee Auditorium. (805) 490-1476

Jul 1: EAA Chapter 49 Monthly Meeting, 7:30 p.m., Sunnydale School.  
1233 S. Ave. J-8, Lancaster, CA. (805) 948-0646

Jul 8-12: Northwest EAA Regional Fly-In, Arlington WA

Jul 11: EAA Chapters 1000/49 Young Eagles Rally, 8:00 a.m., General  
William J. Fox Field, Lancaster CA. (805) 256-4829

Jul 11: Flyout to Oceano (L52) (805) 943-9343

Jul 14: EAA Chapter 1000 Board of Directors Meeting, 5:00 p.m.,  
Edwards AFB. Test Pilot School, MOL Room (805) 490-1476

**Jul 21: EAA Chapter 1000 Monthly Meeting, 5:00 p.m.,** Edwards  
AFB. USAF Test Pilot School, Scobee Auditorium. (805) 490-1476

Jul 29-Aug 4: 46th Annual EAA AirVenture Oshkosh, Oshkosh WI

Aug 8: EAA Chapters 1000/49 Young Eagles Rally, 8:00 a.m., General  
William J. Fox Field, Lancaster CA. (805) 256-4829

Aug 8: Flyout to Fresno Sky Park (O6O) (805) 943-9343

**Aug 18: EAA Chapter 1000 Monthly Meeting, 5:00 p.m.,** Edwards  
AFB. USAF Test Pilot School, Scobee Auditorium. (805) 490-1476

Sep 12: EAA Chapters 1000/49 Young Eagles Rally, 8:00 a.m., General  
William J. Fox Field, Lancaster CA. (805) 256-4829

**Sep 15: EAA Chapter 1000 Monthly Meeting, 5:00 p.m.,** Edwards  
AFB. USAF Test Pilot School, Scobee Auditorium. (805) 490-1476

Sep 25-27: Golden West EAA Regional Fly-In, Castle Airport, Atwater,  
CA

Sep 27: Bohunk Fly-In, Bohunk Airpark (805) 942-7080

Oct 3: Edwards AFB Open House and Airshow

Oct 8-11: Copperstate EAA Regional Fly-In, Mesa AZ

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*To join Chapter 1000, send your name, address, EAA number, and \$15 dues to: EAA Chapter 1000, Gary Aldrich, 42370 61<sup>st</sup> St. W, Quartz Hill CA 93536. Membership in National EAA (\$40, 1-800-843-3612) is required.*

*Contact our officers by e-mail:*

*Gary Aldrich: gary\_aldrich@pobox.com*

*George Gennuso: pulsar1@qnet.com*

*Miles Bowen: miles\_bowen@ple.af.mil*

*Inputs for the newsletter or any comments can be sent to Russ Erb, 805-258-6335, by e-mail to erbman@compuserve.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**

**6708 Doolittle Dr**

**Edwards CA 93523-2106**

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

**ADDRESS CORRECTION REQUESTED**

**THIS MONTH'S HIGHLIGHTS:**

**SCOTTY HOROWITZ GOING AWAY FLY-IN 16 MAY**

**LEE ERB'S TAXI TESTS**

**BRYAN DUKE TO CHANGE CAREERS**

**Q200 WING REINCIDENCE - WHY**

