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 *May 2003*

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:

Twelfth Annual Scotty Horowitz Going-Away Fly-In--17 May 2003, High Cay, Rosamond Skypark

Yes, it's that time of the year again—time for EAA Chapter 1000's big annual shindig. Rosamond Skypark will be abuzz with way-cool EAAers like yourself, and you'll want to be there. This is Chapter 1000's annual big event where we invite area EAAers to come hang out with the ***Project Police***.

NOTE

This year's event will be at **High Cay** (**Doug** and **Gail Dodson's** hangar) at 4431 Knox Ave. That's down at the Runway 7 approach end (west end of the field). If you go to the old FBO hangar you'll miss the fun.

Just like last year we will be starting off with a Young Eagles rally. The intent is that the Young Eagles rally will run from 0800 to 1100-ish, with the main fly-in events starting after that. Thus, you can come participate in the Young Eagles rally, then hang around for the fly-in without missing out on either one.

Besides the Young Eagles rally, we will be having our traditional **Spot Landing Contest** (0800-1000) for you to show off your airmanship skills (the line will be 150 feet beyond the displaced threshold). Be sure to read the rules so you know how you will be graded and/or laughed at. Only your first landing WITHOUT Young Eagles aboard counts, and you should declare your landing attempt on the CTAF prior to landing. Also, landing short is disqualifying—think of it as smacking into the carrier fantail or hitting the FAA supplied 50-foot tree. Rumor has it that **Paul Rosales** may be back this year to defend his title, so you'll want to practice up beforehand. The aviator displaying the highest level of aviating proficiency will receive a device (TBD) in keeping with their exploits for posting on her/his hangar wall or other favorite location.

You'll want to get your airplane washed and cleaned up nice too so you have a fighting chance in front of the most critical judges—the assembled masses. All participants will have a chance to vote for their favorite airplane in the **People's Choice** contest. The pilot of the most popular aircraft will also receive a device (TBD) recognizing their recognition. We're expecting **Pat Fagan** to show up with his brand new **Smokey Bearhawk**.

And of course there's the most important part—the imbibing and eating festivities. Rest assured that one of the highly trained ***Project Police*** **Schmoozemeisters** will be there to whip up the usual culinary masterpieces on the renown chapter grill, starting around 1000.

We're looking forward to seeing you there, and be sure to take a few minutes to help out somewhere. You'll be glad you did.

Spot Landing Contest Rules:

1. Only one landing at L00 will be judged. This will be your first landing without Young Eagles aboard
2. Spot landing attempt should be declared on CTAF (122.9) prior to final approach
3. NO SPOT LANDING ATTEMPTS WITH YOUNG EAGLES ABOARD!
4. Target touchdown point is a line 150' beyond displaced threshold
5. Touchdowns prior to the target touchdown point will be disqualified (No landing short)
6. Distance is measured from target line to the first touchdown point of the main landing gear
7. Helicopters, ultralights, VTOL or V/STOL aircraft are not eligible. Aircraft must have a valid registration number (N-number or equivalent)
8. The decisions of the ***Project Police*** judges are final. No Whining.
9. Award will be presented after lunch

Last Month's Meeting

EAA Chapter 1000
Waldo's Workshop, Rosamond CA
1700, Tax Day, 15 April 2003
Gary Aldrich, Presiding

Approximately eighty miles northeast of Los Angeles in the Mojave Desert, behind a massive iron security gate, in a non-descript hangar on a small, remote airfield, 4 rubber-gloved technicians surround a covered object on a table. A dozen observers, some in military uniforms, follow their every move.

Another Fox channel "**Alien Autopsy**"? No.

An intro to "**Saturday Night Live**"? No.

Welcome to "**Waldo's World**"! At the beautiful high desert campus of the **Waldmiller Institute of Technology** (AKA **Waldo Tech** or **WIT**), 21 members and guests (a near-record turn-out) observed **Professor Bob Waldmiller** and volunteers fiberglass the right wingtip of **Russ Erb's Bearhawk**, and then employ the patented "**Suckenation**" process of vacuum cure. ("**Suckenation**" and all derivatives courtesy of the **Kommandant**).

The process was absolutely fascinating to observe. Two layers of 8 oz fiberglass cloth were applied to the styrofoam wingtip (previously expertly shaped by the skilled and knowing hands of the **Vice-Kommandant**) with epoxy resin. This was followed with a layer each of "peel-ply", a porous plastic film (to allow the vacuum assisted extract), and then batting. The wingtip was then sealed in a 5 mil plastic bag and the "suckenation" process was initiated using a small vacuum pump. As the resin was extracted through the porous film, the wingtip took on the appearance of a two hundred pound **Speckled Trout**.

Waldo then performed the *coup de grace*, the *piece de resistance*, by fashioning a "heat tent" using cardboard sheets coated with reflective material (similar to what you would use as a windshield reflector) and a small thermal heater. He stuck in an oven probe and the trout now looked like a turkey basting in an oven. The temperature rapidly rose from ambient air temp of about 60 degrees to around 120. Bake for 24 hours, basting frequently, season to taste.

The **Kommandant** filmed the whole process and we look forward to a special on "Discovery Wings" in the near future.

I, for one, was extremely impressed with the process, and Bob's clear mastery of it, and his ability to fashion relatively inexpensive materials into what was essentially a poor-man's autoclave. I'm telling you, that MacGyver guy has got nothing on Waldo. He could fashion an entire airplane out of a roll of duct tape and a Swiss Army knife, which will be a future "Junkyard Wars" challenge. More on this later.

Old and new business were treated with all respect due them prior to a declaration of "Victory!" by the **Kommandant**. Most present retired to Coach's for libation and sustenance, and the annual telling of the Easter joke.

- Kent "Cobra" Troxel
Secretary

Vacuum Bagging—A Photo Essay

Professor Waldo, our esteemed instructor, prepares the first batch of epoxy

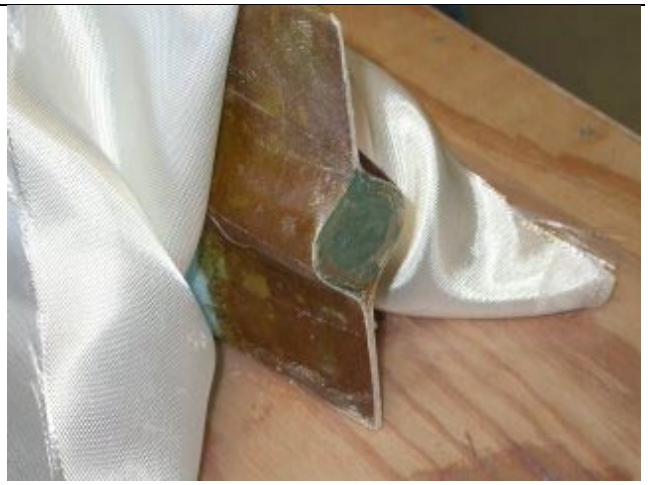
Professor Waldo's lackeys/grad students Russ Erb and Bill Irvine stand by awaiting instructions

Organizer and Fiberglass Master George Gennuso supervises the process, while teaching protégé Kent Troxel to observe and comment on the obvious

First time visitor Tina Visco wonders what sort of loony bin Ron Wilcox has dragged her into

Not thick enough yet--Professor Waldo adds yet more microballoons to the epoxy mixture

The Master expresses his concern with the lack of Grasshopper's progress...then again, when it takes three minutes (or one average song) to mix the epoxy, just how far did he expect them to get? Meanwhile, he discusses the appearance of structural adhesive, described as "gorilla snot". No gorillas were available to confirm this



Modeling clay was packed into the aft position light cavity to keep resin out of the screw holes and keep it easy to dig out the foam underneath

Hmmm...looks like peanut butter, spreads like peanut butter, tastes like...oh wait, we probably shouldn't go there

Professor Waldo spreads the peanut butter consistency micro into the divots at the end of the tips. Because the microballoons are filled with air, this mixture is much lighter than epoxy resin alone

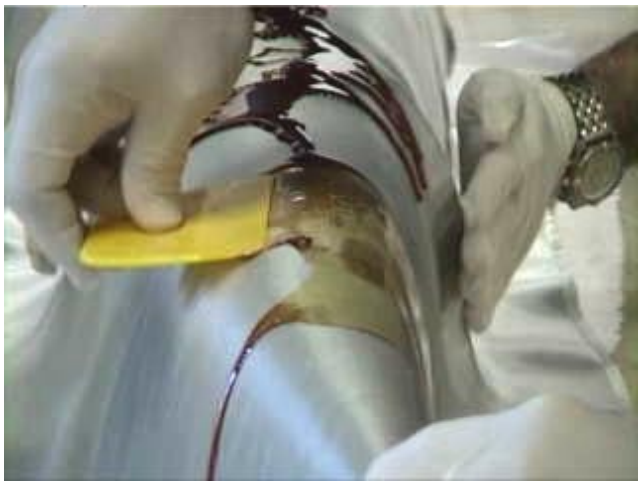
Professor Waldo and his grad students use squeegees to smear the micro all over the foam wingtip to fill the foam surface and give the fiberglass something to adhere to

The Master directs the application of the first layer of fiberglass cloth

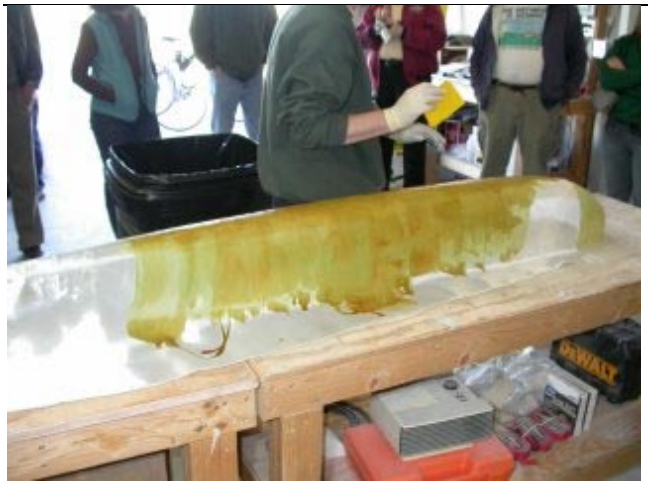
Note the Professor's technique. By pouring the resin in this fashion, more of it goes in the cup and less ends up on the outside of the can

The Master dons and snaps his gloves to start the alien autopsy

Applying the initial slug of resin



Using the plastic squeegee to spread the resin and work it into the weave of the cloth—very much like spreading Bondo or frosting a cake, wherever your experience may lie



Spreading the resin on the first layer of cloth

Professor Waldo cuts the fancy vacuum bag material, which looks suspiciously like the plastic sheeting sold at Home Depot...

Project Police **Supervisor-in-Training Kent Troxel wonders if there is any significance to this other piece of cloth, supposedly cut for the nose of the tip, which nobody has bothered to apply...he carefully plans how to point out the obvious...**

Trimming the excess fiberglass about an inch from the bottom of the wing tip

The peel ply is applied. This Polyester (Dacron) fabric has a very low peel strength with the epoxy, allowing the vacuum bagging materials to be separated after the epoxy has cured

The peel ply is sliced as required and squeegeed into the resin. No resin is added, but the extra resin starts to wick up through the peel ply

Grad student Irvine lifts the alien from the examining table, as grad student Erb folds over the excess fabric

With the "part" resting on one side of the vacuum bag, Professor Waldo applies the perforated release sheet. This plastic sheet has small holes in it to allow the excess resin to pass through into the breather

The breather applied over the perf ply. The breather material is essentially the same as batting used in making quilts. Its purpose is to provide an air path between the perf ply and the plastic bag and to absorb the excess resin

The bag is wrapped around the alien, and the top sheet is carefully pushed down into the sealing tape

Because of the large lump under the plastic, the top sheet will not lay flat on the bottom sheet. Professor Waldo takes up the extra by forming the excess plastic into a "T" section

The vacuum pump, aka "Suckenator," stands by ready to remove the excess air. A bleed valve allows setting the vacuum pressure drawn

The specks on the Speckled Trout start to appear as the vacuum reaches –8 psig. Note the wrinkles in the bag—these will lead to resin ridges requiring sanding off later

Pressure gauge on the Suckenator, showing about 8.5 psig vacuum

Preparing the heat tent. With the ambient temperature hovering around 59° F (15° C), the epoxy does not flow as well (higher viscosity) and takes longer to cure. This simple heat tent fixes both problems

The heat source, an electric space heater specially modified by Waldo to allow it to run at higher temperatures without cutting out

Composite aircraft builder Hojo inspects the heat tent while Erbman already starts exaggerating the size of the Speckled Trout

The Master Gennuso reviews the details of the vacuum bagging process for Rick Lipinski while Kent checks it against his notes

High Tech *Project Police* Instrumentation, on its way up to about 120° F

The Day After: One Speckled Trout after coming out of the oven. Note the relative lack of excess resin thanks to the Professor's exquisite squeegeeing skills

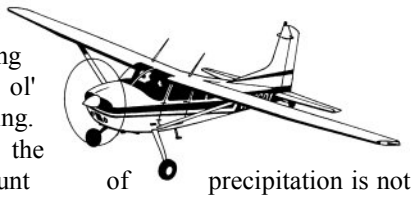
Surface of the wing tip after removing the peel ply and associated bagging materials

Professor Waldo inspects the wing tip and pronounces it good. Actually, he pronounced it more like "wing tip"

Close up of wing tip surface. Note resin ridges from where the bag wrinkled. These will need to be sanded off

And now for something completely different—this Skycrane was on the field that day getting an engine change. It had put down in a field about 3 miles away when the "Check Engine" light illuminated

Kommandant's Korner



"What's with this weather?" We've been hearing this a lot around the ol' schoolhouse this spring. Seems that getting the "normal" amount of precipitation is not conducive to sport flying activities here in the Antelope Valley. Of course, along with the moisture we've also had the "normal" winds. Both of these issues have conspired to slow the time-building efforts on the **Fightin' Skywagon's** mighty re-built engine. N61691's junior partner and senior mechanic, **Dave Lazerson**, has been continually frustrated in his attempts to combine reasonable weather with work/family schedules to polish up his rusty tailwheel skills. After the obligatory overhead-the-home-drome-drone, I've had the airplane to Death Valley (with ***PPO*** and Tech Counselor **Irvine**) and to San Diego (MYF). That's only put a little over 13 hours on her, but the good news is that oil consumption has apparently "stabilized" with the level staying about 10 qt. The engine temperatures have proven to be easily managed in the recommended range with cowl flaps and judicious use of airspeed in the climbout. With any luck, there will be another 10 hours or so and an oil change accomplished before our next big adventure to Banff in June.

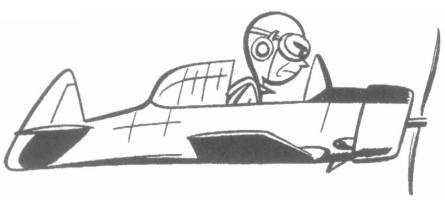
Speaking of June....That would be a good time to round up the family and make the short trek down Hwy 58 to the town of **Boron**. Last month, **NLE Erb**, **Mrs. Kommandant**, and I witnessed (with a hundred or so others) the grand opening of the **Col Vern Saxon Aerospace Museum**. This nifty little collection of aerospace stuff was developed by the local Boron-ites with volunteer sweat and money. There are some really interesting displays already in place, with more on the way. No, you can't fly there since the airspace is pretty well smothered by R-2515; but the drive isn't long or crowded. And, there is the added benefit of being able to imbibe at Domingo's before or after the museum. I'd recommend the trip highly and I'll buy a margarita for the first non-Erb ***PPO*** to tell me where my signature is on display (besides the guest book).

Don't forget to come on out for the annual **Scotty Horowitz Going Away** party at its new venue (see elsewhere in this issue for details). We're planning the classic ***Project Police*** casual, low-intensity activities. Should be fun for all...and you never know if **Doc** will show up with some of his space buddies.

I'll close now, keeping this shorter than usual so Russ has more room for his photos....

Fly safe and often, check 6 (and the TFRs)

- Gary Aldrich
Kommanding



Project Police Aircraft Spotters Quiz

Well, either **Evil Editor Zurg** is getting easier on y'all, or you're just getting smarter. We actually got 2 ***PPOs*** to correctly identify the mystery aircraft besides the usual correct response from ***Project Police Master Aircraft Spotter*** **Jim Piavis.**

Jim Piavis didn't make his 10 minute time limit, but the judges have accepted acceptable mitigating circumstances. To wit:

"Oh yawnnnnnn.

I had this diaper thing, then this feeding thing, followed by this spitting up thing, more feeding, then the diaper thing again...

Douglas DC-5....

http://www.geocities.com/lastdingo/aviation/dc-5.htm

Almost fell for a DeHavilland, but thought better...."

Lee Erb also responded with "Douglas designed the **DC-5** when there was thought that people wanted to look out the window at the terrain. Safety considerations made most airlines go back to low wings.

I can't tell if this is the Marines R3D-1 or -2. The -1 was 16 passenger and crew of 4. The -2 was primarily cargo.

78 foot wing span, 20,000 lb GW, 900 hp R-1820 (Wrights)."

Murry Rozansky also gets credit for a correct response.

Web Site Update

As of 9 May 03, the hit counter stood at **82611**, bringing the hit rate down to 20 hits/day for the last month. Now if we could just get the webmeister to do something.

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

May 17: Young Eagles Rally, 8:00 am, Rosamond Skypark, Rosamond CA. (661) 822-0806

May 17: Twelfth Annual Scotty Horowitz Going Away Fly-In, Rosamond Skypark (L00), Rosamond CA. (661) 258-6335

Jun 3: EAA Chapter 49 Monthly Meeting, 7:30 p.m., General William J. Fox Field, Lancaster, CA. (661) 948-0646

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

Jun 14: Young Eagles Rally, 8:00 am, Mojave Airport, Mojave CA. (661) 822-0806

Jun 17: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

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

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

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

Jul 26: Young Eagles Rally, 8:00 am, General William J. Fox Field, Lancaster, CA. (661) 822-0806

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

Aug 16: Young Eagles Rally, 8:00 am, General William J. Fox Field, Lancaster, CA. (661) 822-0806

Aug 19: EAA Chapter 1000 Monthly Meeting, 5:00 p.m., Edwards AFB. USAF Test Pilot School, Scobee Auditorium. (661) 609-0942

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

Sep 20: Young Eagles Rally, 8:00 am, Rosamond Skypark, Rosamond CA. (661) 822-0806

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.

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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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MUROC EAA CHAPTER 1000 NEWSLETTER
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http://www.eaa1000.av.org

ADDRESS CORRECTION REQUESTED

THIS MONTH'S HIGHLIGHTS:
12th ANNUAL FLY-IN 17 MAY ROSAMOND
REPORT ON VACUUM BAGGING
VACUUM BAGGING PHOTO ESSAY
SO THAT'S WHAT A DC-5 IS...