Chapter 170 San Luis Obispo, CA

The Leader In Recreational Aviation

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SLO FLYING
PUBLISHED MONTHLY BY SAN LUIS OBISPO CHAPTER 170 OF THE EXPERIMENTAL AIRCRAFT ASSOCIATION, INC

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Flight Advisor	Gerrit Vanderziel	
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Web Master	Ernie Billing	
Young Eagle Coordinator	Liz Dinan	

Upcoming Events

Sept 17: Chapter Meeting at 7:00 PM at Zion Lutheran Church corner of Santa Rosa and Foothill. Kurt Colvin will share photos of his recent Canadian trip and give and update of the RV-7 project.

Sept. 26: San Luis Obispo Airport Day – Get your fill of airplanes and hot dogs.

Oct. 24: San Luis Obispo 99's Pilot Seminar. San Luis Obispo Library San Luis Community Room – 10:00 AM – 12:30 PM

President's Report

Ernie Billing – President
eaa170@yahoo.com

Summer is not officially over until the Reno Air Races. I always know they are around the corner when I see Kevin Eldridge's NXT "Relentless" doing laps over SLO – its and unmistakable sound. Those of you who have not been up to see the air races are missing something special and I highly recommend it.

We had a wonderful presentation last month from our very own Cliff Clark recalling some of his adventures (and even misadventures) to Alaska. Thanks to Cliff and to Tom Hunter who showed off some Oshkosh pictures. I am looking forward to seeing everyone at our September chapter meeting and having lots of help at the San Luis Obispo Airport Day on September 26.

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Membership meeting

President Ernie Billing called the Chapter's August meeting to order at 7:11PM In addition to acting presidential, he also provided beverages and yummy homemade cookies. About 25 members and guests attended, but the fortunate badge-drawing winner was unfortunately absent.

Treasurer's Report: Kurt Colvin reported that we have $3192.04 in cash or deposits, but $500 was pledged for the Airport Day event and with $1,000 in deposits by John Eichler, the committee organizing Airport Day has $1,500 to work with.

New Business

Airport Day Committee Report: Member and Chairman John Eichler declared that EAA Chapter 170 owns the event, so rejoice and participate:

The event is scheduled for September 26, 2009 at SBP. We should be all in place by 9:30 AM and the free event to the public opens at 10:00 AM. Entrance is between the Spirit of San Luis restaurant and the FAA Control Tower.

The SLO Sheriff's Aero-Squadron, in uniform, will again provide TSA-motivated security. No badges or other escorts will be needed.

Member Liz Dinan will be the Honored Aviator at SLO Airport Day, with hoopla commensurate with the prior Oscar Bayer event. Her Daughter, Ms. Dinan will sing and dance again.

Grizzly Academy Cadets will be available for back up, for only 80 hotdogs, drinks, and accouterments at our Weenie Wagon, complements of the Committee.

Member Neal Koellish volunteered to chair the Weenie Wagon, again. A signup sheet was passed around for volunteers for the Weenie Wagon. If you have not already volunteered, please call Neal (805 544-5398). Volunteers to date are: Neal Koellish – Coordinator, Allen Skorgsberg, Ernie Sebby, Ernie Billing, and Vince Rubatzky.

A sign up for Young Eagle pilots/planes and ground crews was also passed around. Present Young Eagle pilot volunteers are: Jim Buenrostro and Cliff Clark. Ramp Volunteers are Kurt Colvin and Nick Camacho. Additional help is always welcome and to help with this activity call Dave Chivens (805 544-0276) or Liz Dinan (805 545-8663).

Program

Prior to the main program, Paso Robles EAA member Tom Hunter showed photos of his 10th-ish pilgrimages to Oshkosh. After trying all other methods of local housing, he had a camper trailer delivered to the show site and easily (almost) visited (almost) all of the displays and exhibits. His T-18 stayed in Paso, where he may or may not stay next year.

At the main program: Very Senior member Cliff Clark told us of his 20-ish solo flying trips to Alaska and a couple of flights on to Siberia. After early attempts to get his Daughters to go with him, he finally settled on several attempts to get the wild bears to co-habitat at his preferred camping and fishing spots. The splendor of Alaska, and the unlimited opportunities to fly low and slow have capped his flying career he started in his 50s (not THE 50'). The numerous stories he related probably should have been recorded and published. These will not be revealed in this newsletter because they need the audio artistry of a good storyteller like Cliff. This is another good reason why members should not miss any meetings.

Other News

Sad News – Vicki cruse, president of the International Aerobatic Club (IAC) and a member of the U.S.Aerobatic Team, died Aug. 22 during a qualifying flight for the Twenty-fifth World Aerobatic Championships in England. The event is conducted every two years.

Cruse was a four-time member of the U.S. Aerobatic Team and was the National Aerobatic Champion in the unlimited category in 2007. As IAC president, she was a member of the EAA Board of Directors. She lived in Santa Paula, California. The accident occurred at Silverstone, Buckingham, England, where an automotive racecourse is co-located with an airport. It is northwest of London.

Those who saw the accident said Cruse was performing her routine for the judges, a performance that was videotaped. It was considered a qualifying round of the championship. She had completed a 90-degree vertical climb, pushing the nose over at the top in order to descend on a vertical down line. On that descent she performed a one and one-quarter snap roll. The objective is to stop rotation after the aircraft has rolled one and one-quarter times, but rotation in this case only slowed. The rotation continued to the ground. The accident is under investigation by British authorities. The Zivco Edge 540 in which she died was based in England and had been borrowed for the contest to avoid the cost of shipping a personal airplane to England.

Vicki honored our Chapter (170) on June 18 of this year with a very enjoyable and informative presentation. We all are deeply saddened by the lost of a wonderful competitor and champion.

The U.S. team did manage a third place (bronze) finish at the competition, where France captured the gold, and Russia the silver.

For Your Attention

San Luis Obispo 99s Pilot Seminar - Surviving In-flight Emergencies
*** Engine Failure/Instrument Failure**
*** Fire/Smoke in the Cockpit**
*** Inadvertent VFR into IMC**
*** In-Flight Emergency Preparedness**
By Gene Hudson, CFI, CFII, MEI, Aviation Author, Safety Specialist and Lecturer
Saturday, October 24, 2009 - 10:00 AM – 12:30 PM
San Luis Obispo Library Community Room 995 Palm Street
Reservations required – Deadline is Monday, October 19th

Please send your tax deductible $35 donation, payable to the SLO 99s, with a contact phone and e-mail address to: SLO 99s - P.O. Box 5214 -San Luis Obispo, CA 93403. For information contact: Camille Nelson or Linda Butler
Donations: The San Luis Obispo Ninety-Nines is a 503(c) non-profit organization that incurs expenses in connection with the course. Funds are used for a variety of local aviation events and scholarships.

For Your Interest

HOW FAST ARE YOU REALLY GOING
Maybe not as fast as you think
By Paul Lipps
Reprinted from a e-EXPERIMENTER article (http://www.eaa/experimenter/articles/

Here I am tooling along in my Fast-Glaster behind that big TIO-540, looking as those two multi-function displays (MFD) showing 280 knots, 322 mph. Hot dog – and I just came from the avionics shop where the avionics tech worked his magic on my pitot-static system while I fed numbers into the computer from my laptop, so I know what it says is true.

Man! Could anything be better than this? After I get back on the ground my "master-of-skepticism" techie buddy gives me that raised-eyebrow look when I lay the numbers on him. "What's wrong? Why are you giving me that fishy look?" I asked. "I just got this thing calibrated to the nth degree, so don't go giving me that 'something's wrong here' look. C'mon. Jump in and I'll show you.

We zip on up to 7,500 feet and level off. He asks me to slow to 90 knots indicated. After a while of staring at the panel, he makes a note and tells me "to give it all she's got." He then asks me to put it on autopilot and altitude hold, and then twirl the heading knob to keep us in a continuous turn. He makes more notes, then after a little more than one turn, he tells me to take up a certain heading. I pointed with unconcealed glee as the true airspeed numbers on the MFD slowly climb to 279 knots! A few minutes and many scribbled notes later, he had me turn 180 degrees. More minutes and notes and he said to land.

He then got on his cell phone, and I heard him give my plane's registration number and then ask for surface barometer setting and forecast temperature and winds at 7,500 feet in our area. He wrote those down, looked at this notes, entered some numbers on his calculator, pushed the buttons, and then said, "You are not going to like what I tell you."

The first thing I had you do, slowing to 90 knots indicated airspeed was so I could see what your outside air temperature (OST) was at that speed; it came within 11 degree of forecast. That's good! When we flew in a circle, with your autopilot keeping altitude constant, I watched your groundspeed and track on the GPS display, and noted the track associated with the highest and lowest speeds. That gave me the wind direction and speed. Next I had you fly with the wind until groundspeed stabilized, then against the wind. During those two runs I wrote down IAS, groundspeed, altitude, density altitude, OAT, true airspeed, and fuel flow. Averaging the groundspeeds from the runs in both directions gave me your true airspeed."

"So tell me, what was it?" I asked.

“First, let me tell you what I found,” he replied. “As we went from 90 knots to your top speed, your OAT increased from 17° to 25°C, a total of 8°C. This is what is called stagnation temperature rise. It is due to the impact, not friction, of the air molecules striking anything in their path, such as your temperature sensor. It is the same thing that heats up SR-71’s and burns up meteors and shuttles. This temperature error caused your computer to think your density altitude was 10,320 feet rather than 9,410 feet, a 910-foot error, which caused it to give a +1.4 percent error in calculating your TAS. However, the location of your static ports appears to be where the actual pressure is 0.1 inch less than true static pressure. As a result, your indicated airspeed is 4.5 knots high at 238.5 knots, rather than 234 knots.”

“All of that is great, but will you please tell me, what do you think my true airspeed is?” I asked.
I won’t keep you in the dark any longer.,” he said. “Your true airspeed is 270 knots, 311 mph, which is still spectacular, although a full 10 knots lower than you thought.”

“What can I do to fix this?” I asked. “First, we need to move your temperature sensor into some shielded, stagnant location where it is out of the direct flow of air and the engine and cooling exhaust,” he said. “I have two sensors in my plane, one behind the rear spar and ahead of the flap, and the other inside, above, and in back of the elevator spar clearance hone in the fuselage tail cone. They usually agree within 1°C and show no rise with increasing airspeed. Next, we’ll put two or three layers of cellophane tape just behind the static ports. That will increase the pressure slightly. We only need 0.1 inch. They we’ll go test these modifications the same way we did on this flight.”

So now I have true airspeed. Actually, I like what I had better. But I’ll tell you this; when I go to sell the plane, guess what happens to the tape and temperature sensor?

The following is a submission from Bud Brewer, a very pound RV-12 builder.

Image 1--The Empennage.
Image 1--The Empennage.

The Vertical Stabilizer frame has been riveted, and the Main Skin attached to the frame with clecoes. The Clecoes will be replaced with LP-3-4 pulled rivets. Besides rivets, Van's Aircraft uses hundreds of nutplates on the RV-12 as fasteners. A nutplate (or nut plate, or plate nut) is a powerful fastener that can hold a screw or bolt tightly. Nutplates spread the stress/ force over a much larger area than a rivet does. The rivets are not there to add strength to the nutplate. The rivets keep the nutplate from spinning when the screws are inserted.

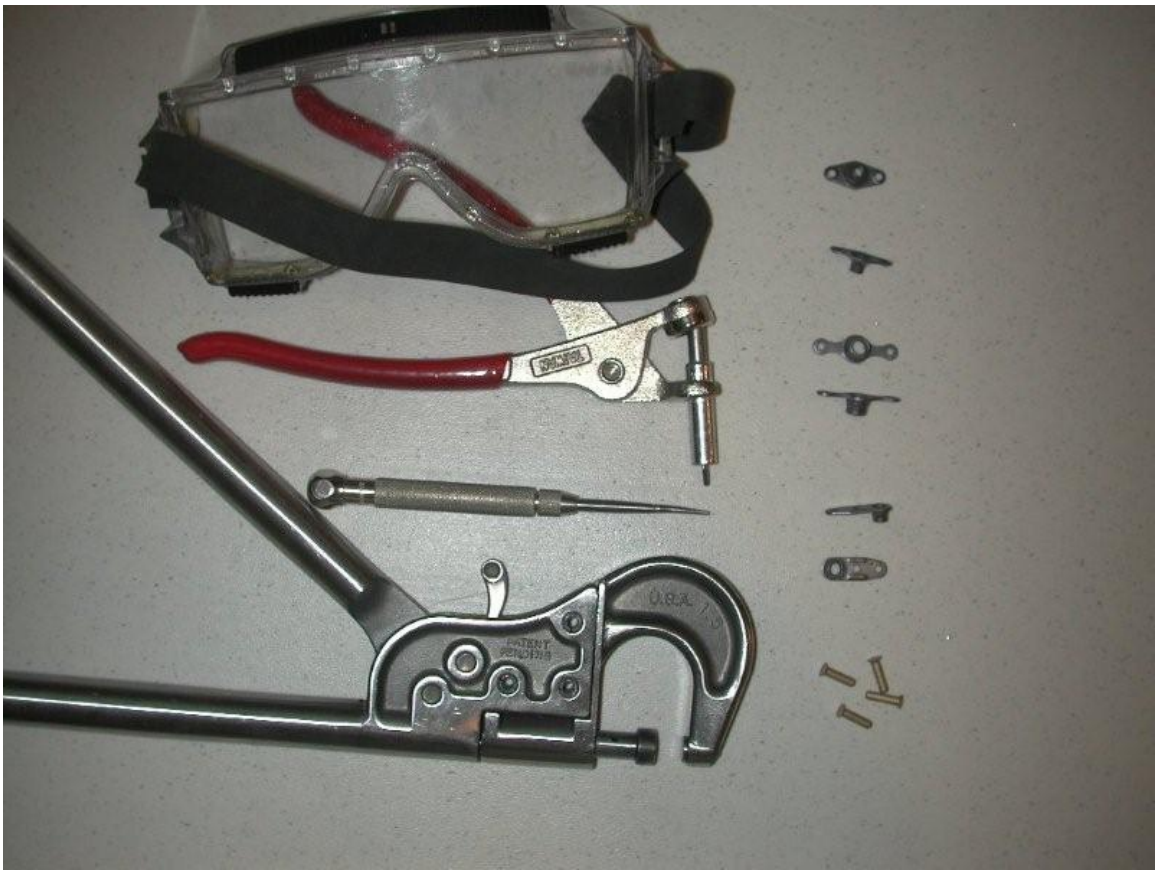

Image 2--Tools and nutplates.

Not everyone will agree, but I believe the most important tool, when there is a chance of flying metal, are Safety Goggles. Eyeglasses may not be enough to protect your eyes from harm, and eye transplants are a thing of the future. Two Safety Goggles allow you swap when the first pair of Goggles fogs up. The first pair will clear before the second pair fog up.
A Cleco in a rivet hole holds the nutplate in place while you're riveting the other hole, and are quicker than inserting a screw or bolt through the nutplate. A scribe allows you to quickly line up the nutplate hole with the sheet metal hole, and the reliable hand squeezer fastens the solid, flat head rivets.
On the right side are some nutplate examples. There are at least a dozen different varieties supplied by Van's so far. The flathead rivets in the picture are way too long for nutplates, but they show up better in the photograph.

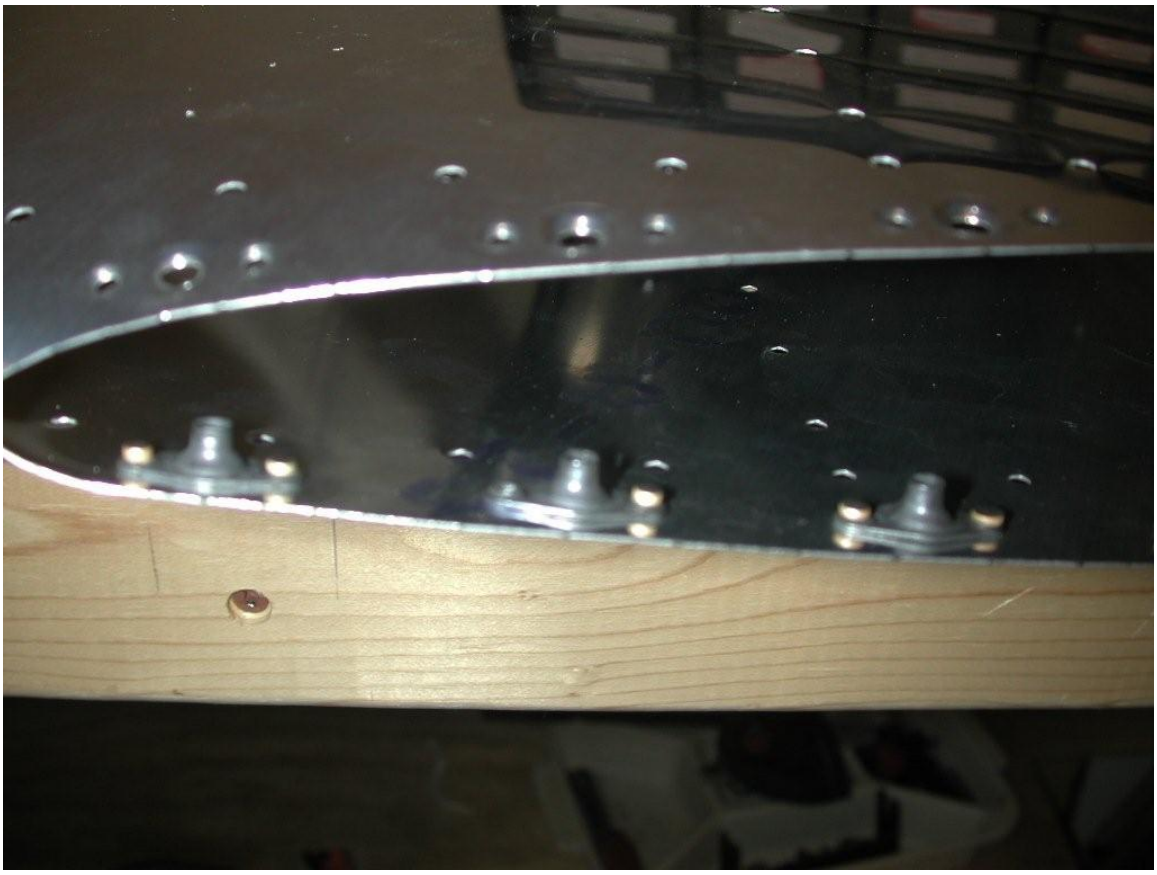

Image 3--K1100-08 nutplates in action.

Note 5 large dimpled holes on the top skin (for size #8 screws) and 10 dimpled #40 holes on each side of the #8 holes. (for the 3-3.5 rivets) Note the 5 nutplates on the lower edge of the main skin. Note that your correspondent failed to rivet one of the #40 holes!

Special P.S.

Congratulations to Dave Dickey for his resumption of his pilot's currency status. Many happy hours, Dave.