



THE GRAPEVINE



EAA CHAPTER 663 Livermore, California

Vol. XXV, No. 12, December, 2005

There is a very fine line between "hobby" and "mental illness."

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MEETING AND PROGRAM

Our December meeting will take place at 7:30 P.M. on the 1st of December in the Terminal Building at the Livermore Airport. The program is a wee bit iffy at this point, but will probably include pictures of our African Safari and project progress reports from attendees. Come and see the critters you don't want to mess with.

MINUTES: GENERAL MEETING, EAA CHAPTER 663, 11/3/05, 7:30 PM TERMINAL BUILDING, KLVK.

Chapter president Ralph Cloud called the meeting to order.

One guest introduced himself and is considering building a Zodiac XL or a Rans S6.

After correcting the date of the board meeting to

10/20/05 in the general meeting minutes, the minutes for the October meetings were approved as printed in "The Grapevine". Scott Alair wrote the minutes for the board meeting. (Thanks)

There was **no treasurer's** report.

Business: Paul and Victoria Rosales will speak at our annual dinner. The Rosales have flown their RV-6A to all states except Hawaii and have had articles in Sport Aviation about their travels; it promises to be entertaining. The dinner will be Jan 21, 2006 with cocktails at 6 and dinner at 7 pm.

Eric Helms led a discussion of the last Young Eagles rally of the year held a Byron Airport. At least 5 pilots flew close the 20 young people, an enjoyable event.

Ralph Cloud made a pitch for members to renew their memberships outlining all the benefits for \$30 per year. Larry Fish questioned whether that amount could be reduced in light of the treasury standing at close to \$4000. It was decided to bring the matter up at the board of directors meeting.

Announcements: The next board meeting will be at Ralph's place on 11/17/05 at 7:30 pm.

At the City Council meeting on 11/14 decisions will be made on airport sound monitoring and related equipment. Proponents of the airport are encouraged to attend.

Member's forum: Ralph announced the first flights of Bob Steffen's RV-7A and Art DiGrazia's RV-8 in October. Barry Weber made the first flight in Bob's (who was not present) plane and gave a brief summary of the event. Art DiGrazia made the first fly of his RV-

8 staying in the pattern at Oakland Airport where he is based. Jobs were well done, congratulations.

Break and then Program: Scott Alair related his recent experience racing his Lancair Legacy in the sportsman's class the the Reno Air Races. It was an excellent presentation with many, many pictures. Scott managed second place in the Silver Sportsman Class race. Way to go, Scott!

Meeting adjourned for pie.

**MINUTES: BOARD OF DIRECTORS MEETING,
EAA CHAPTER 663, 11/17/05, 7:48 PM, AT
RALPH'S PLACE.**

Ralph Cloud, Darlene Cloud, Scott Alair, Bob Farnam, Brad Olson, Greg Lum, Larry Fish, Jeremy Constant, Sharon Constant, John Meyer, Bill Bunce, Bruce Cruikshank, Paul Weiss, Eric Helms were present, Geoffrey Rutledge and Bill Jepson arrived a bit later.

Business: Dues were the first item. After much discussion it was decided to leave the dues at \$30 per year. It more than covers membership costs, but it was decided to use the excess to cover such things as speaker's expenses and to support the annual dinner.

The annual dinner was the second item. Paul and Victoria Rosales are confirmed as speakers for the January 21st event. The Alamo Women's was accidentally double booked; we were second and lost out. Ralph suggested the Livermore Veterans Hall which would cost \$380 which included expenses to serve alcohol. Eric suggested the Dana Hall. Details were to be worked out Friday so a hall could be confirmed and reserved. Next was the menu using the same caterer as the last couple years.

Menu:

Meat Balls for appetizers

Tri-Tip Roast and Gravy, Roast Turkey and Gravy,

Italian Mix Vegetables, Garlic Herb Mashed Potatoes

Salads: Spinach, Three Bean, and Tomato and Cucumber

Desserts: Pies and maybe a cake to be supplied by us.

The cost break even-point came to just over \$20 per

person. So the fee will be \$20 per attendee (see above).

Eric Helms is working on getting an AeroElectric (Bob Nuckolls) Seminar arranged for some place locally next year (2006.)

The large attendance this evening was to smooth the transition in chapter officers and directors.

The merits of purchasing a Voltage Standing Wave Ratio (VSWR) Meter and a Signal Strength meter were discussed.

A missing Password is all that is separating the chapter from having a new web master. It may still happen.

Eric Helms reported the chapter flew 122 Young Eagles this year, 22 more than he promised EAA Headquarters.

The program for December will be project progress reports from attendees as no speaker is planned.

Items from those attending: Paul Weiss mentioned the possibility of the chapter helping with having some kind an automatic camera device that would identify aircraft involved in noisy late night operations. The idea would be to show neighbors of the airport that we aviators are interested in helping to control airport noise. It was decided that this was a bit beyond scope and capabilities of the chapter.

Meeting adjourned for pie.

Respectfully submitted Bruce Cruikshank Secretary

**XCOR GOING FOR THE MANNED ROCKET
DISTANCE RECORD!**

XCOR Aerospace Corporation has filed an application with NAA to set a distance record for manned rocket-powered flight with their twin rocket-powered Long EZ. This is in class C1-b which is defined as having a takeoff weight of less than 1,000 kg (2204.6 lbs). The plane has been flying since July 24, 2001 and is quite unique. For more on the plane and XCOR go to

<<http://www.xcor.com>> where you'll find a ton of info and lots of pictures. Dick Rutan will be flying the plane and the record attempt flight will be on December 3, 2005 at Mojave Airport (MHV). This record attempt will go from MHV to the airport at California City (L71), a distance of 9 nm/17 km. Be still, my heart! Needless to say, there is no current distance record for this weight class.

FROM HOOTERS, THIS JUST OUT!



Hooters Air is citing sagging support -- and increased competition -- in its decision to phase out service to Rockford International Airport. Northwest and United have both added service to Rockford, effectively squeezing the upstart Hooters out.

"ONE SECOND IN THE LIFE OF A RACER"

from the Ch. 170 N/L by Tom Fey

The Unlimiteds go flashing through the racecourse, engines howling, air shearing, heat waves streaming. Four hundred eighty miles an hour is 8 miles a minute, and the elite racers take about 70 seconds to cover the 9.4-mile Reno course. If you could take a souped-up P-51 racer flying the circuit at Reno, slow time down, and examine just one second of its operation, what would you find?

In that one second, the V-12 Rolls-Royce Merlin engine would have gone through 60 revolutions,

with each of the 48 valves slamming open and closed 30 times. The twenty-four spark plugs have fired 720 times. Each piston has traveled a total of 60 feet in linear distance at an average speed of 41 miles per hour, with the direction of movement reversing 180 degrees after every 6 inches. Three hundred and sixty power pulses have been transmitted to the crankshaft, making 360 sonic booms as the exhaust gas is expelled from the cylinder with a velocity exceeding the speed of sound.

The water pump impeller has spun 90 revolutions, sending 4 gallons of coolant surging through the engine and radiators. The oil pumps have forced 47 fluid ounces, roughly one-third gallon, of oil through the engine, oil cooler, and oil tank, transferring heat and lubricating the flailing machinery. Perhaps 1/8 fluid ounce of engine oil has been either combusted or blown overboard via the crankcase breather tube. The supercharger rotor has completed 348 revolutions, its rim spinning at Mach 1, forcing 4.2 pounds or 55 cu. ft of ambient air into the combustion chambers under 3 atmospheres of boost pressure. Around 9 fluid ounces of high-octane aviation fuel, 7843 BTU's worth of energy, has been injected into the carburetor along with 5.3 fluid ounces of methanol/water anti-detonant injection fluid.

In that one second, the hard-running Merlin has turned the propeller through 25 complete revolutions, with each of the blade tips having arced through a distance of 884 feet at a rotational velocity of 0.8 Mach. Fifteen fluid ounces of spray bar water has been atomized and spread across the face of the radiator to accelerate the transfer of waste heat from the cooling system to the atmosphere. In that one second, the aircraft itself has traveled 704 feet, close to 1/8 mile, or roughly 1.5% of a single lap. Over 1.65 million foot-pounds of work have been done, the equivalent of lifting a station wagon to the top of the Statue of Liberty.

The pilot's heart has taken 1.5 beats, pumping 5.4 fluid ounces of blood through his body at a peak pressure of 4.7 inches of mercury over ambient pressure. Our pilot happened to inhale during our measured second, inhaling approximately 30 cubic inches (0.5 liter) of oxygen from the on-board system, and 2.4 million, yes, million, new red blood cells have been formed in the pilot's bone marrow.

In just one second, an amazing sequence of events have taken place beneath those polished cowlings and visored helmets. It's the world's fastest motor sport.

Don't blink!

RIVETING MATERIAL

By Bill Marvel

A couple of months ago I sent the following post to the So. Cal RV group. At the time I was not subscribed to the matronics list. Since the subject is real life testing I had done to determine the strength of improperly set rivets, I think you will be interested in the results. And since the bill just arrived (\$280), I need to share the knowledge with a lot of people to get my money's worth!! Here's the post:

Two days ago I got around to doing something that I had planned last year -- actual pull tests on riveted aluminum coupons to see how critical it is to drive rivets to the correct height. All of us building or with completed RVs (as will those those planning on it in the future) have had to wonder which imperfect rivets to drill out and which are OK. The answer is obvious when there is a severe cosmetic problem, but when strength is at issue, how much does a slightly under or overdriven rivet affect strength? How much does a grossly under or overdriven rivet affect it? Frankly, I had made the decision that the risk of damage from drilling out a flush rivet is greater than the benefit of doing so, unless an obvious cosmetic defect or really bad rivet is at issue. Now I have some hard data to go by.

What I did was to make up 10 test coupons. Each of these consisted of two pieces of .032 2024-T3 sheet 1.5 inches wide and 4 inches long. These two pieces were overlapped by 1.5 inches and riveted together with two parallel rows of 3 rivets each. Of the 10 total coupons, five involved the use of universal head AN 470 AD3 rivets and the other 5 used AN 426 AD3 flush rivets. In the latter case, both pieces of aluminum were dimpled at each rivet location, as is routinely done in Van's airplanes. In fact, the coupon construction is similar to the double rivet line where the lower outboard wing skin overlaps the lower inboard wing skin. This joint is loaded in tension normally for positive G flight and gave me the idea to

mimic it for the pull tests.

To get the *rest of the story*, just go to:

<http://www.kilohotel.com/rv8/rvlinks/marvelrivets.html>

THE LAST WORD

I hope everyone enjoyed their Thanksgiving. Darlene and I are spent our holiday in Maui.

Thanks to Brad Olsen, our Vice President Elect, we have confirmed our new venue for the January dinner. It will be at the Veteran's Memorial Hall in Livermore. (5th & L Streets). The date, January 21st remains the same. We have set the price at \$25 per person. Make your reservations soon by contacting Sharon or Bill Bunce, Treasurer Elect, at our next meeting. Our speakers for the event are Paul and Victoria Rosales. I hope you are looking forward to this event as much as I am.

Our last meeting of the year is coming up, and that will be my last meeting as your Chapter President.

As my thoughts as I write this are of how much I appreciate the members of our Livermore EAA Chapter. This is the best EAA chapter without question. There is a good balance of builders, flyers and airplane nuts (for lack of a better word). The builders are balanced, with a variety of aircraft in the works and flying. With this mix, it's easy to find someone in the chapter to lend a hand or advise when needed. Truly a great bunch. All in all, it makes the job of President easy.

I look forward to passing the gavel on to Bob Farnam.

See all of you at the dinner!

Ralph

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