

Chapter 170 San Luis Obispo, CA



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Upcoming Events

June 17: Chapter Meeting at 7:30 PM at home of David Dickey, 2634 Barcelona in Shell Beach to view his Hummel project. Read more in President's report.

July 26-Aug. 1: Air Venture 2010 in Oshkosh.

President's Report

Ernie Billing – President
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Greeting EAA 170. School's is almost out and summer starts any day. We had a light turn out for last month's meeting, but it sparked quite a discussion.

The future of avgas is definitely murky and I think Dean Billing's presentation got those that showed up thinking. If you missed the presentation, you will be able to catch a repeat if you make it to Oshkosh this year.

This month's meeting is a visit to David Dickey's Hummelbird project. Those who wish to attend may first meet at McClintocks on Mattie Road in Shell Beach at 6:00 PM, and we will head over to David's at 2634 Barcelona in Shell Beach around 7:30 PM.

If you do not plan to eat, be sure to get to McClintocks between 7:00 and 7:30, because David lives in a gated community and it would be helpful that we all leave together from McClintocks.

I think it's great that we have another project going in the chapter, and it sounds like David is making great progress.

Be sure to show up for what will be an interesting program on June 17.



Membership meeting

President Ernie opened the meeting a little after 7 PM asking for introductions and any updates from the members. He has been busy and is continuing with some rewiring for the RV-7 and has had time to fly his Cardinal.

Oscar Bayer said that he would get into the air as soon as he gets a new starter for his Starduster.

Bud Brewer remarked that he has come upon some sticky problems (pun attempted) when working with epoxy.

Dave Dickey said he is attempting to devote at least six hours a day to his Hummel H-5, and wants us to believe he has already put in about 3,000 rivets. He clearly is excited about this project.

Jim Buenrostro's C-172's fuselage is now up North and it is being worked on. He expects to haul the wings up north to Lakeport for installation. If it all works out, he might take the airplane to Oshkosh.

Fred Lowerre reports that he is enjoying his Sonerai -2

Patrick Yancey is re-visiting the Chapter and reported he is enjoying flying his Midget Mustang and Baby Great Lakes.

Finally, a drawing was held. The requirements for winning are that the member must be present and must be wearing the chapter badge. Vince Rubatzky won the draw, but because the treasurer was not in attendance the prize could not be awarded. Nevertheless, always wear your badge at chapter meetings, and its helpful if you do attend.

President Ernie Billing called our meeting to order at 7:05 in the classroom building of Zion Lutheran Church at the corner of Santa Rosa and Foothill Ave., San Luis Obispo. Mostly attracted by our guest speaker, Vicki Cruse, there were about twenty members and several guests present.

There was no treasures' report, although Neil Koellish reported that the Winnie Wagon netted about \$280 from hotdog sales at the Oceano Airport Day. A late note from Treasurer Kurt Colvin reported that our chapter checking account contained \$2,235.88 and the petty cash account had \$248.68 for a total liquidity of \$2,484.56.

P.S. Kurt will be spending much of the summer flying his float equipped Husky. We will be looking forward to some good stories and photos.

The Oceano Airport Day was considered to be a great success with a huge attendance of walk-ins and the presence of about 100 aircraft during the event.

Next meeting for the Jeff (*Takeover of Oceano airport*) Edwards saga was postponed. New date was not announced.



Program

Ernie with justifiable pride introduced the program speaker, his dad, Dean Billing. The title of Mr. Billing's talk was "The Fuel Crisis in Sport Aviation." He recently gave this presentation at the past Sun N Fun event. Dean Billing is keenly interested and very proactive about aviation fuel for piston engine aircraft and has spoken often about ethanol, Mogas and 100LL.

His theme was what we can do to prepare for the coming fuel debacle if no timely replacement for 100LL is found? To keep up with this issue there is a General Aviation (GA) fuels Blog written by three private pilots concerned about the future availability of fuels for piston-engine aircraft. They have gotten together and run the aviation fuel blog at: <http://www.generalaviationnews.com/?=525>

The pilots are: Dean Billing (Sisters, OR) – an expert on autogas and ethanol.

Kent Misegades (Cary, NC) – an aerospace engineer and aviation journalist

Todd Peterson (Minden, NE) – former aerial applicator and owner of more than 150 Mogas STC's for aircraft.

Dean began his talk by presenting the reality of the current piston engine aviation fuel situation and its future.

In 2009, 135 billion gallons of unleaded gas was produced in the U.S., whereas in 2008, less than 300 million gallons of Avgas was produced, and Avgas consumption by General Aviation (GA) was less in 2009 and is declining. Currently all Avgas contains tetra-ethyl lead (TEL). Presently Avgas accounts for 0.13% of total U.S. gasoline production, and not too long ago that was produced by about 10 of nearly 150 gasoline refineries. Those now producing Avgas are down to about four.

Several sources indicated in 2003 that 30% of the GA fleet has to have 100LL and uses about 70% of the 100LL consumed, while 70% of the GA fleet consumes about 30% of the 100LL, and most do not need it if they were using 91 AKI premium unleaded auto fuel under STC's.

Various formulations of unleaded gas have been developed. Three companies are reaching production and use of 100 octane unleaded. These are Swift Enterprises, Virent Energy Systems (Shell), and GAMI.

Because Avgas contains TEL it requires special handling in order not to contaminate the unleaded gasoline infrastructure, which means it is not shipped by pipeline, but is distributed (more expensively) by tanker trucks. Only one company (it happens to be in England) produces TEL. The worldwide demand for TEL is declining. The production facility is old and should there be breakdowns the probability of discontinued production is a possibility. Furthermore, it is expected that by October 2010, EPA will publish the demise of TEL.

OK! - If 100LL disappears, use Mogas, but where to get it? There are relatively few airports that carry it. Only about 3% of the FBO's sell unleaded auto fuel on the airport and that number is decreasing. This trend is important, as it will influence the future availability of 94 UL if that fuel becomes available. A solution for 70-80% of current 100LL users for now is ethanol-free unleaded premium gasoline.

EAA Chapter 170 San Luis Obispo, CA

In the past the lack of Mogas pumps at airfields was mostly due to unwillingness of FBO's to add a second fuel tank for piston engine aircraft because of economic reasons, and perhaps because of brand label identification competition.

Dean said a lot about Mogas STC for various engines. However, another complication about the use of Mogas that many are not aware of is that the STC applies for the engine and also for the airframe.

Interestingly, what is legal Avgas? There are no specifics as to its composition and uses. The FAA is not involved, and there is no FAR for Avgas.

The use of ethanol in fuel is a problem for many piston engine aircraft including sport aircraft. Presently there are no certified aircraft to use ethanol. Experimental builders can use ethanol if the builder specifies that use in the operating documentation. Sport aircraft can use ethanol fuel if the manufacture specifies that use. However, there is no Federal or State testing of ethanol level in unleaded auto gas supply.

The gasoline fuel from the refinery is unleaded, and it is the distributor that blends in the ethanol, and then that product is what is delivered to retailers. If ethanol gets cheaper, would there be a tendency to add more to the gasoline? Perhaps. Many states, including California do not have label laws regarding ethanol content in gasoline.

Many are concerned that ethanol is creeping into Mogas sources. Various state regulations are confusing this possibility. Ethanol is not good for many airplane engines, as well as for marine and for many auxiliary engine uses, such as medical devices, etc.

While some aircraft engines can operate with E10, no manufacture recommends its use. No aircraft engines are currently approved for E15, and the engine power loss because of the higher ethanol level may make operation unsafe.

Want more bad news? Even with some reports of bad results of vehicles burning E15, it is predicted that the EPA will soon approve raising the current limit of ethanol in fuels from 10% to 15%.

Here is another problem to think about. Automobiles built before 2001 may not be able to use E15, and will have to continue using E10. This poses a problem for gas stations offering multiple fuels with different levels of ethanol.

We in General Aviation can work (put pressure) on our various aviation organizations to support two pumps on every airport selling fuel. This was mostly the case about 20 years ago. This proposal is not new; it has been talked about and a two-fuel solution was suggested especially during any transition from 100LL.

Dean proposed that aviation interests start acting like the ethanol industry. He asks, if Congress provides subsidies and tax credits to the ethanol industry, and tax credits for gas station infrastructure upgrades for ethanol use, why not tax credits for adding fueling infrastructure on public use airports?

Dean's big complaint is that there are organizations campaigning for and promoting airplanes, equipment, and requirements, but there are no strong advocates for fuel; and yet we all know that fuel does make aviation go.

Unfortunately we did not have a stenographer present to record the many more points and data that Dean presented.

Etc.

"A Recent Trip through SoCal" – Ernie Billing

I always used to be a little hesitant to fly through Southern California airspace. Much like the SoCal freeways, the airspace can be fairly crowded. My mother lives in Moreno Valley, so it's a necessary evil. It was time to go visit mom, so over the Memorial Day weekend, we flew the Cardinal down to Redlands. It certainly beat driving in three-day weekend traffic. Boy, the airspace was the absolute opposite of the freeways - no traffic to speak of. We always get flight following to help us stay out of everyone's way, but it almost wasn't necessary. Almost always we get some vectors over Burbank/Van Nuys or Ontario for airline or bizjet traffic, but didn't get so much as a "watch out for the Southwest 737 restricted above you..." I mean, nothing! It was a definite change from trips past. I have noticed a drop in private planes in the last year or so, but the lack of business jets and airliners down south was a surprise. It was even easy to get a word in edgewise over SoCal approach frequencies. There was only one sector where the controller was talking a mile a minute. I don't really miss having to worry about 737-wake turbulence, but it's sad to see how much aviation is suffering.

If you have nothing to do this summer think – 2010 AirVenture @ Oshkosh during July 26 to August 1.

Peter Garrison, our chapter dinner meeting guest speaker has a favorable mention of his SLO visit in his Technicalities article in the June 2010 issue of *Flying* magazine.