

Purdue Pilots Inc. meeting

Sept 28, 2010. 7:00 PM. Physics 333

Attendance list is below. Please send corrections to Rick at westerman@purdue.edu

Grayson Steding presided in place of Peter Schumann.

Rick Westerman took the notes

Pre-meeting

Grayson warmed up the meeting by showing several humorous comics. He then called the meeting to order shortly after 7:00.

New certificates/ratings

We had two new members in attendance.

Events

As per the ASOR meeting: On Monday the "Women in Aviation" club will start selling T-shirts and glasses at the airport as a fund raiser. The Aviation fly-in is scheduled for Oct. 16th, we will probably hear more about this at the next meeting.

Maintenance report

Hannis is sick so there was not a direct report from him.

Other people reported that the seat in 862 continues to be an issue (e.g., it doesn't always lock in place). LafAv is looking into this. The gyro in 862 is drifting and needs resetting more than expected. Keep an eye on this potential problem.

As for 394 (Archer), it was noted that the attitude indicator is off by 5 degrees. It was also reported that the avionics are flaky. Perhaps we should get an GPS unit as a replacement? The engine "roughness" reported last time is more accurately described as a 'flat spot' in power. Right around 1600 RPM you can push the throttle a bit but get no extra power; push it a bit more and power is OK. When you are tweaking the engine output at that RPM level (e.g., in landing) then you need to be aware of this.

A question was asked about the recommended oil level to be used in the engines.. We stick with the LafAv guidelines of 6 quarts for local work and 7 quarts for cross-country. Although the engines can work with much less (2-3 quarts) having the 6-7 quarts is safer.

Treasurer's report

Last month we flew 46+ hours on 862 and 47+ hours on 394 for a total of 93.8 hours – this is the amount of usage that we would like to see. Our yearly total is similarly good. We have 42 members which is a nice number to have. We have around \$65K in checking of which \$20K is reserved for upgrades (maybe that GPS?) and the rest for engine and insurance. 394 is about 150 over TBO but looking good. We still plan to replace the engine over Christmas break (or sometime in the winter). At that time, since the plane will already be down for at least a couple of weeks, it might be a good time to put in a GPS unit (cost somewhere around \$10K) and move one of the radios to 862 so that the plane can be IFR capable.

LafAv is raising their rates. They haven't changed in 5+ years. The hanger cost will go from \$150 to \$200 (I am not sure if this is per week or per month), short inspections from \$460 to \$550. The annual will now be \$900. Overall Grayson expects that it will cost us an extra \$2.40-\$3.40 per hour to operate. At the next meeting he hopes to discuss a price increase with the PPI officers; this will probably be \$3.00/hour.

Swift Enterprises

Our talk of the night was by two Swift employees – Jon and P.J. – who gave a very interesting talk on Swift’s alternative fuel to replace 100LL. The talk went on for about an hour with many questions. Several people stayed afterwards in order to talk with them so I suspect I was not the only person excited by their talk. Some highlights:

- 1) Why a new fuel? Mainly because 100LL (which is only “low lead” compared to the “high” lead of years ago) is now one of the major contributors of lead pollution in the USA. Since lead is (a) toxic (a very low level, 10 micrograms per dL blood-level – which I calculated as 3 mg for an adult male -- can cause problems), (b) has only one world-wide supplier, and (c) is costly to produce (a limited number of refineries and supply vehicles can handle 100LL) it is really a matter of time before 100LL is banned or becomes unavailable. As a side note, one Swift slide indicated that the Purdue airport is responsible for over 400 kilograms of lead emissions a year.
- 2) Despite all of the reasons for getting rid of 100LL it is tough to do. Any replacement fuel must meet all of the existing specifications for 100LL otherwise every engine and airframe would need to be re-certified for the new fuel. Swift believes that they meet most of the 100LL specs and hope that instead of individual engine/frame certifications for their fuel, that their fuel can be certified for larger general groups of planes or perhaps by a general fiat from the FAA; e.g., a ruling that any plane certified to use 100LL can now use Swift’s fuel.
- 3) Replacement fuel also has to make financial sense and not be much heavier than existing fuel. Swift hopes to price their fuel no higher than current AvGas and in the future lower. Their fuel is about a ½ pound heavier per gallon than 100LL but also has more energy content per gallon so overall the energy value per pound is equivalent.
- 4) Replacement fuel also has to intermingle with existing fuel since any plane is likely to fuel at different airports some of which may have the new fuel while other the old fuel. Swift's fuel intermingles.
- 5) The Swift fuel is made from biofuel. Not because they wish to be “green” but rather because they can better control the hydrocarbon input and outputs using biofuel instead of crude oil. Because the 100LL Av fuel market is actually rather small they have calculated that a total replacement of 100LL would only take 400-700 square miles of cropland to produce. Thus Swift fuel is “sustainable.”
- 6) Going along with the smallness of the av fuel market and the large regulatory hurdles involved, Swift does not believe that they have much competition. The other biofuel companies in the world are going after non-aviation fuels. Swift does have extensive memorandums of agreements with all of the distributors in the AvGas field.
- 7) Swift has been partnering with Emory-Riddle to test their fuel. Until recently Purdue has been reluctant to test the fuel. This should be changing soon.
- 8) The major hurdle at the moment is regulatory. Swift believes that they can quickly ramp up their process once the demand is in place. But until the planes are certified then they can not sell their fuel (except to experimental planes). Swift believes that the time is right for a mass certification – their fuel meets most specifications (and certainly the important ones), they have had lots of testing done by outside agencies, the AOPA will support them, the EPA will want to get rid of 100LL. All it takes is for the FAA to make a ruling. Once that happens then, maybe, LafAv will be one of the first airports in the country to sell Swift fuel?

Next meeting is Wednesday October 13, usual 7:00 PM in Physics 333.

PPI attendance list

Date: ___28 – Sep – 2010 _____

___	Adams, George	___	Schirmann, Michael
___	Ali, Hadi	___	Schumann, Peter
___	Beeby, Todd	<input checked="" type="checkbox"/>	Sharp, Scott
<input checked="" type="checkbox"/>	Bongrain, Phillipe	<input checked="" type="checkbox"/>	Spivey, Daniel
___	Budiman, Lynda	<input checked="" type="checkbox"/>	Steding, Grayson
___	Chan, Spencer	___	Tchatchouang, Christelle
___	Clifton, Chris (Bingham)	___	Temitope, Toriola
___	Cooper, James	___	Thompson, Hannis
<input checked="" type="checkbox"/>	Delisio, Luke	<input checked="" type="checkbox"/>	Turkstra, Jeffrey
___	DeRosa, James	<input checked="" type="checkbox"/>	Visharia, Chintan
___	Hadimioglu, Eren	___	Wada, Naoki
<input checked="" type="checkbox"/>	Huang, Rosemary	<input checked="" type="checkbox"/>	Westerman, Rick
___	Jacobson, Sara	<input checked="" type="checkbox"/>	Wilmes, Adam
___	Juliano, Thomas	___	Zhou, Dianyí
<input checked="" type="checkbox"/>	Kulakhmetov, Marat	<input checked="" type="checkbox"/>	Zink, Bob
<input checked="" type="checkbox"/>	Lamont, Warren		
___	Leverenz, Larry		<i>Other people</i>
___	Mallard, John		
___	Mane, Muharrem		Jon Ziulkowski (Swift)
<input checked="" type="checkbox"/>	Marlin, Dan		PJ Catania (Swift)
___	Martinez, Christopher		Matthew Makowki
___	Mukundan, Ashish		Brian Kozak
___	Park, Hwun		Robert Campbell
___	Pena, James		Allen Zhang
___	Perry, Sean		Chris Poeling
<input checked="" type="checkbox"/>	Pomeroy, Brian		Trevor Barnes
___	Poudel, Ujjwal		