

Regular Monthly Meeting

The August Monthly Meeting was held on Friday, August 12, in conjunction with the Autogyro Fly-In.

Flyout

Some Grassroots Aviation

Take a step back in time to a world of freshly mown grass and the rumble of radial-engined biplanes. That's the charm of Massey Air Museum (masseyaero.org) in Massey, MD. In the words of the web site, "The Massey Air Museum is a living airport-museum reminiscent of rural airports of a bygone era. Activities include antique aircraft restoration, annual fly-ins, EAA Young Eagles events, and aviation camaraderie. Experience the sights, sounds and smells of aviation as it was in its earlier days." Massey is our August 28 flyout destination, just a quick 58 nm jaunt.

The field (identifier MD1) has a 3,000 x 100 foot turf runway, in good condition. There's no restaurant, but there are picnic facilities, so the meal on this trip is in your brown bag or cooler. But what could be better than watching taildraggers and antiques on a nice summer day? Of course, we'll be checking for field condition before departure. Our luck with grass airports is mixed this year, so we will have a plan B in mind.

We'll gather at Penn Airways at 1030 for 1100 takeoff. Take a non-pilot or a student along, for an introduction to the world of general aviation—the fun and camaraderie. Contact Gene Poppel (610-647-1332 or genepoppel@comcast.net) and let him know if you'll need a ride or have a seat available in your plane.

From the Prez

Part 1 - Check the Pitch

This long hot summer has brought me to several realizations regarding fixed-pitch-propeller aircraft:

1. HOT - Airplanes do not perform as well for high density altitude takeoff. CSP (Constant Speed Propeller) aircraft performance is not as sensitive to mis-configuration of engine and propeller since the prop will adjust to varying weather and available power. Fixed-pitch prop aircraft performance is more subject to the variability of weather and engine power.
2. LONG - A longer runway is required for peace of mind in high-density altitude situations, but especially in aircraft with cruise-pitched props.

With the summer comes high temperatures and resulting high density altitude. Throw in an under-powered airplane, a cruise prop, grass and an up-hill runway and you will see treetops in more detail during takeoff. Your eyeballs may look more like golf balls. My 145 horse Cessna 172 demonstrated this several times. The solution may be to service it at the Sensenich Prop Shop in Lancaster, PA. Re-pitching the propeller to a climb configuration will allow the Continental O-300 engine to develop more takeoff power and resulting RPM. It currently only climbs at 600 FPM, which is well below book value and the static takeoff tachometer reading indicates 2250 RPM. The engine is rated for 145 horses at 2700 RPM.

I understand from other pilots that re-pitching a prop can result in not only faster takeoff, but faster cruise due to the increased power, if

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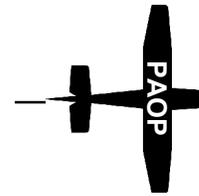
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maximum cruise RPM could be attained before. This may buck conventional wisdom, but if a prop has not been professionally checked in a prop shop in decades, it may be time to at least have it serviced.

Other issues with climb performance may be engine health, including cam lift, compression, carburetor settings, tachometer calibration as well as airframe trim. These will be checked at the next annual inspection in September.

Or, maybe the ole' 172 just needs waxing? Part 2 of this article will describe the results of the prop shop visit.

Tim

Board Minutes

PAOP Executive Board

August 8, 2016



Attendees: Tim Drager, John Green, Bob Nessor, Mike Sehl, Gene Poppel, Laura Poppel, Larry Boyer

Minutes from July 6, 2016 meeting were read. Motion made and carried to approve the minutes.

Treasurer Report: July 2016

Starting balance	\$5,384.76
Expenses	\$ 566.71
Income	\$ 477.00
Ending Balance	\$5,295.05
Gain (Loss)	(89.71)

Motion made and carried to accept the report.

Old Business:

- Mike Sehl and Gene Poppel to work on combining mailing lists as we currently have several members on different email lists.
 - Keeping main mailing list. Have not been able to work through the group listing.
- John Green working on formatting address list into booklet form. Reformatted into Excel, next step to reformat into mailing lists, then into booklet form. DONE Turned over to Erik Forde for getting it put into booklet form. Erik will also pursue getting sponsors.
- Following or changing Constitution and By-Laws: Suggestions for changes should be submitted to Gene Poppel.
 - A few suggestions have already been submitted.
- General discussion on replacing concrete under the pavilion.
 - Remove the 5 pieces on the eastern side. Unanimous Approval.
- Next month's meeting we will vote for priorities on the TASK LIST

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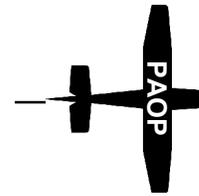
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- Discussion on replacing Yahoo Groups with Google Groups as a better method of reaching out on social media. Gene to find out more on using Google Groups.
 - Gene has set up a calendar of events using Google Calendar. He will share the calendar login information with the board.
 - Gene Poppel spoke with the insurance agent, Charlie Bilelli. It would cost about ~\$600 annually to get additional liability insurance for airplane event coverage. We are targeting getting the coverage before the Gyro Fly-In in August. Tim Drager to talk to C. Jordan regarding integrating our insurance with the Penn Airways policy.
 - Airport insurance covers everything except the contents of the Flyers Roost. Will hold this item open for more discussion with Mike Sehl and/or Gene Poppel.
 - Discussion on duties for pancake breakfast Sept. 11th.
 - Tabled discussion on mosquito traps
- New Business:**
- Tim Drager to schedule meeting with Penn Airways management to further discuss insurance coverage required of PAOP.
 - Larry Boyer presented on Gyro copter Fly In Aug. 10th-14th. PAOP to provide utensils, plates, hamburgers, hot dogs, rolls, condiments, onions and tomatoes. Larry to purchase the sides. Cost to everyone will be \$6. Email invite will request everyone to bring a side or dessert. Will also run a 50-50 raffle. This will be our regular monthly meeting for August.
 - Discussion on duties for pancake breakfast Sept. 11th.
- Laura Poppel as Food Director has a list of duties for food prep
 - Gave pricing from 3 vendors - Benjamin Foods, Hurter, and Burt's Farm. We will meet in 2 weeks (Aug. 22 @ 6:00 PM) for further refinement of supplier, based on refrigeration capacity.
 - Barry Kerchner to purchase the griddle - COMPLETE.
 - Will need to plug in outdoor refrigerator a week prior to breakfast.
 - Safety: Bob Nesspor
 1. Flight Line: John Green (need 7 people)
 2. Parking Safety: Bob Nesspor (need 5 people)
 - Roving coordinator: Mike Sehl
 - Food Prep: Sue Green
 - Cooking:
 - Table rental: Tim Drager
 - Ticket Sales:
 - Signage: Erik Forde and Dennis Galvin
 - Raffle for GoPro: Mike Sehl/ Gene Poppel
 - Flyer: Tim Drager
 - Social Media: Tim Drager
 - T-shirts for 2016: Mike Sehl
 - Chairs, tables, portable toilets: Tim Drager
 - Setup set for 09:00 on Sept. 10th
- Aug. Fly Out to Massey Aerodrome (MD1) in Md.

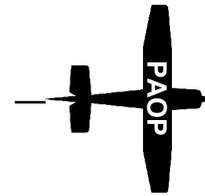
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Motion made and carried to adjourn at 09:00 PM

Respectfully submitted,

John Green

From Mike

As they say in the TV commercial – “What’s in your wallet?”. Well my issue isn’t really your wallet, but what’s really in your fuel tank.

Fuel remaining and gauges..... 1983 Piper Archer....

I have been a partner in a 1983 Piper Archer II for over six years now. During those six years I have flown to Ocean City (26N) many times, with Suzanne, with my daughter and the grandchildren. I have flown to New Hampshire and back both by myself and with Suzanne by my side. Along the way, I have flown to many other airports solo or with others, some close, some more distant.

Along with getting to know my aircraft, and staying safe is flight management, weight and balance, runway type and length, and to a lesser degree – fuel management.

On the way to Oshkosh in 2014, We landed in Ohio to fuel up, no real challenge there, before you get down to ¼ fuel in each tank, you should be landing to refuel. And overflying Pennsylvania, Ohio, and Indiana there was no shortage of airports to refresh and refuel. On the way to New Hampshire, I calculated that I could refuel after landing with plenty of daylight or night reserves.

But it wasn’t until this week (August of 2016) that I found myself doing fuel remaining calculations while enroute to Syracuse from Heritage Field in Limerick. I had plenty of fuel for the direct flight to KSYR, but my question

was would I have enough fuel left in both tanks to safely and legally fly back to Heritage (174 nautical miles) with the person I was picking up for the return?

The calculations are pretty straightforward; we average 11 gallons per hour of usage from start up to shut down on any trip covering a reasonable distance. So, if the flight back would take two hours, that would be 22 gallons used with a reserve for daytime of 5.5 gallons (less than a pound of fuel) for a total of approximately 27 gallons. Of course, climbing, head and tailwinds affect the actual usage.

I landed at Syracuse with less than 34 gallons on board. How do I know that? Well the low wing airplane holds 25 gallons in each wing tank, with 24 gallons being usable fuel. And the good people at Piper placed a metal tab in each tank just below the filler, which approximates a level of 17 gallons in each tank. I can’t tell you how much less, but each tank was well below the tabs, and I believe each of the fuel indicator gauges inside the cockpit showed the level at about the number “10”.

Now here is where it gets interesting or murky, and here is where you say so what, after six years he should know what’s left. I roughly calculated that I landed with about (underline about) 16 gallons or more onboard. Now you ask the first question – why didn’t he just look at the gauges and have a better handle on the amount?

Then knowing that I would be flying at least two hours back, instead of having them fill the plane to the tabs (34 gallons), I had them add 7 gallons to each tank, which took the levels in each tank above the tabs. More than enough to safely make it back to PTW. So what’s this all about?

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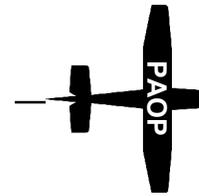
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Well, Piper has a gauge in the panel for each fuel tank. Remember the 25 gallons (24 useable) in each wing tank? The good people at Piper marked the gauge at the top with five vertical lines. From the left the first line is marked with a Zero; the second line towards the right has no number marking it; the third line to the right which is halfway across the gauge is marked with the number ten; the next or fourth line to the right is marked with the number fifteen (and is about $\frac{3}{4}$ of the way across the gauge; followed by the last mark on the far right bearing a capital “F”. I assume the “F” represents the word “Full”, it makes sense.



So, here’s the dilemma: If we assume Full is 25 (only 24 of which are useable) then why is the middle mark labeled “10”? Why is the $\frac{3}{4}$ mark labeled “15”, $\frac{3}{4}$ of 25 is 18.75 gallons, half of 25 is 12.5 gallons, not 10. $\frac{3}{4}$ of 24 is 18 and $\frac{1}{2}$ of 24 is 12. So, in any form the numbers are

not directly related to the amount of fuel in the tanks in U.S. Gallons.

I’m sure Piper Aircraft, at the time the Archer and Archer II were designed and built, employed engineers or aviation engineering companies to at least check their designs and aircraft. Even the FAA has to certify them before they are sold to the public. Many of our Pilots are Engineers. We have pilots with all kinds of degrees and expertise, so why would an entire aviation community accept fuel gauges that are not properly calibrated to the airplane? Or am I wrong in my observation?

Here’s my question: Who is going to explain to me where I am wrong, and that the numbers and markings on the fuel gauges are accurate and correct for the airplane? It could be E, 12, 18 and F. But, I mean how about zero, $\frac{1}{2}$, $\frac{3}{4}$ and Full? Maybe it’s like believing in Santa Claus...

Sky-hawk

Aka Mike Sehl

PAOP, AOPA and EAA 1250 member

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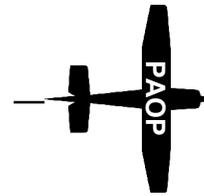
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Tentative 2016 PAOP Event Calendar

Date	Event	Comment
1/6/16	Board Meeting	
1/28/16	ANNUAL Meeting (Including Elections & Speaker)	Copperfield Inn at Lakeside
1/31/16	Flyout— Millville (KMIV) Brunch	
2/3/16	Board Meeting	
2/25/16	Monthly Meeting	Copperfield Inn at Lakeside
2/28/16	Flyout— Sky Manor, Pittstown.NJ (N40)	Brunch
3/2/16	Board Meeting	
3/20/16	Flyout—Smoketown, PA (S37)	Breakfast and Old Plane Collection
3/31/16	Monthly Meeting	Copperfield Inn at Lakeside
4/6/16	Board Meeting	
4/??/16	Cleanup	Roost 9AM
4/24/16	Flyout— Sky Acres Millbrook, NJ (44N)	Brunch
4/23/16	Monthly Meeting	AOPA Presentation
5/4/16	Board Meeting	
5/13-15/16	Scouts at PTW	Roost
5/14-15/16	99's Pennies a Pound at PTW	
5/26/16	Monthly Meeting @ The Roost	Steak
5/21/16 (Sat)	Flyout— Grimes, Bethel, PA (8N1)	Golden Age Museum
6/1/16	Board Meeting	
6/26/16	Flyout— Kentmorr Marina, Stevensville, MD (3W3)	Crabs!
6/30/16	Monthly Meeting @ The Roost	Chicken*
7/6/16	Board Meeting	
7/28/16	Monthly Meeting @ The Roost	Steak
7/31/16	Flyout— St. Michaels, MD (Fly to Easton, MD)	Lunch and Maritime Museum
8/3/16	Board Meeting	
8/25/16	Monthly Meeting @ The Roost	
8/28/16	Flyout— Massey Aerodrome, Massey, MD (MD1)	Massey Air Museum
9/7/16	Board Meeting	
9/11/16*	Annual Fly-In/Drive-In Breakfast	
9/25/16	Flyout—Sullivan County, Monticello, NY (KMSV)	Brunch at the New Restaurant
9/29/16	Monthly Meeting @ The Roost	Lobster (and optional steak)
10/5/16	Board Meeting	
10/27/16	Monthly Meeting @ The Roost	
10/29/16 (Sat)	Flyout— Cherry Ridge, Honesdale, PA (N30)	Brunch
11/2/16	Board Meeting	
11/27/16	Flyout— South Jersey Regional, Mt. Holly, NJ (KVAZ)	Brunch and Air Victory Museum
11/17/16	Monthly Meeting	
12/7/16	Board Meeting	New Slate of Officers
12/29/16	Monthly Meeting – Christmas Party	Cutillos
12/18/16	Flyout— Frederick, MD (KFDK)	
1/4/17	Board Meeting	New Slate of Officers
1/26/17	Monthly Meeting	Copperfield Inn at Lakeside
1/29/17	Flyout— Greenwood Lake, West Milford, NJ (4N1)	Brunch and a visit to a Constellation

* Steak is also available at these meeting

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