



From the President

Dear PAC members,

It's been an eventful few weeks since our last meeting. My young friend Preston and I had worked on installing ADS-B in/out in my RV12. After finishing up the project we decided to take it for a flight and get a read from GSO approach on how it was working. Well, we cranked up and did our standard before take-off checks and had one very rough ignition (mag). We could not find the problem at first. After conferring with the Rotax experts in Sebring FL, I moved some electrical connections around and solved the problem.

So, a bit later we went flying again. I had Preston, who has been my flight student from solo to his PPL, Instrument and now almost to his CPL, in the left seat. Checks were normal and we took off and headed towards Warf. He made the landing there to the north on the grass, we taxied up to the north end of the field and made the takeoff to the south on the pavement. After a normal takeoff we were going to fly over Shiloh just to see how the work on the runway was going when I smelled something unusual. I then saw that we were getting smoke in the cockpit and oil on the windshield. Preston commented "I think we're on fire!" We started to head for W88 but thought better of it and headed back to Warf which was only a few mile away. I took the controls and we landed to the north and brought the airplane to a stop as soon as possible. We shut down, got out and un-cowled the engine as quickly as we could.

There was a fair amount of oil, but as you probably know, a little oil goes a long way. We searched every hose that carried oil and could find no source for the oil. A friend who lives in Reidsville came over and a neighbor who lives on the field came over to help. Since I didn't know how much oil I had lost and since the OP gauge was ready zero pressure I got a ride to an auto parts store and picked up 2 quarts of motorcycle oil (The Rotax likes motorcycle oil) and brought the level up close to where it needed to be. I then ran the engine to see if we could find a source. Sure enough we found a hose which led directly to the firewall then to the OP gauge that had a pin hole in it. This hose ran from the front of the engine all the way through the firewall. Over some time it had loosened a bit from the ties that held it and had come up against an exhaust manifold. It was about 6 inches longer than it needed to be so we stretched it out cut it just beyond the pinhole and re-clamped it to the fitting. Since it was about 6" shorter it was well away from the manifold and we tied it securely.

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From the President (cont).....

I did a test run just to check for leaks and all was well. We re-cowled the engine and took off for W88. What did I learn from this? 1. Always check hoses or any other items that may be in danger of coming into contact with exhaust manifolds. 2. When you smell something a little suspicious, land immediately, don't wait. 3. If you do get smoke in the cockpit, get fresh air flowing through quickly. For my RV12 this is not a problem. There are 2 vents that open directly to the outside on each side of the cabin and the canopy is not sealed that tightly so that air is flowing through anyway.

All is well now after draining all of the oil and doing an oil and filter change, flying it around the patch then doing a compression check on it. The compression check came out about as perfect as it could with 79/80 on all four cylinders.

I will bring the oil pressure hose to the next meeting and let you see just how tiny this hole it.

Keep the blue side up, God Bless

Robert



Piedmont Aero Club 2019 Current Event Calendar

Boldface events are sponsored by PAC
(if applicable, free or subsidized ground transport & food)
Underlined dates are firm

| <u>DATE</u> | <u>EVENT</u> |
|--------------------------------|--|
| <u>Jan 31</u> | PAC Monthly meeting — GTCC |
| <u>Feb 21</u> | PAC Monthly Meeting - GTCC |
| <u>March 14</u> | PAC Monthly meeting, Ed Regensburg & Dan Tucker; Cirrus Crash |
| <u>April 18</u> | PAC Monthly meeting, BRIX Wood Fired Pizza |
| <u>May 4&5</u> | Aviators Rendezvous 2019 – Davidson County Airport |
| <u>May 9 /11</u> | AOPA Fly- in, Frederick Md. |
| <u>May 16</u> | PAC Monthly meeting — GTCC |
| <u>May 17/19</u> | Pungo; VA Beach Airport – Warbirds Over the B |
| <u>June 20</u> | PAC Monthly meeting — World of Beer, 1310 Westover Terrace |
| <u>June</u> | Tangier Island Fly-Out |
| <u>July/ August</u> | Poker Run (LeRoy & TAI member) |
| <u>July</u> | Kentucky Bourbon Run (Joshua) |
| <u>July 18</u> | PAC Monthly meeting — Location TBD |
| <u>Sept 2-9</u> | Triple Tree Fly In Week |

If you have suggestions for fun events, please contact Robert Vinroot
(rpvinroot@gmail.com)



Current Event Calendar (cont)

**Boldface events are sponsored by PAC
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Underlined dates are firm

The following events are proposed, but have no potential dates and only one has a sponsor.

Tail dragger on

Piedmont Soaring club

Hickory airport & museum

Tandem Hang gliding/First Flight (Hunter)

Day at Air Harbor – W88

First Flight / Ocracoke

Warrington, VA – bi-plane rides

Sugar Valley

The Wright Stuff

The Flying Circus Airshow, Warrenton/Fauquier Airport (KHWY)

If anyone would like to take a leadership role for any of the above events, please contact Robert Vinroot: rpvinroot@gmail.com

**If you have suggestions for fun events, please contact Robert Vinroot
(rpvinroot@gmail.com)**

PAC May Meeting...

In the May Newsletter the content of the **Pilot's Tips** lean toward the newer pilots. However, they also offer some food for thought for some of us "older" pilots. With that in mind, we thought we would have an open forum type meeting that would allow the student and newer pilots to ask questions and put forth scenarios that some of the more advanced pilots could handle.

So we started the meeting consuming gourmet grub (Bojangles) and then having the attendees introduce themselves. Well the president had to remind the folk that we were looking for a two minute intro, not a story of their life in aviation. Once the introductions were brought under control, we got into the heart of the meeting.

Eric started with a question about leaning, and we were off and running. The question was: 1. do you lean once at cruise; or 2. do you lean as you climb. One of the more experienced pilots indicated that he used #1. But he explained further that it was because of his engine type and the instrumentation that provided critical temperature information with regard to leaning. A much less experienced pilot said that he was taught to lean at cruise to help keep the workload down.

However, we inexperienced pilots learned that the way we were taught to lean is not the best leaning for the engine. If I understand the concept correctly, leaning until we see RPMs drop then two twist toward rich, puts the engine rich of peak. Some say lean of peak is better for the engine. When asked how you get lean of peak, it was suggested that you lean very slowly, and as soon as you see a drop in RPMs, that is lean of peak. Fascinating!

But now I am intrigued. Which is it – LOP or ROP? Now I'm forced into Googling articles on the subject. I find myself sitting for several hours, going thru different opinions on LOP vs ROP. Well finally I find an article in Flying Magazine that sort of summarizes all the stuff I've been thru. As a matter of fact, Wes and Robert kind of alluded to this during the meeting. The article is by Stephen Pope August 10, 2016. This is the excerpt.

Here's the major point many people are missing in the whole ROP vs. LOP debate: If you want to fly fast, you need to be operating ROP; if you want maximum fuel economy, you can fly LOP. Keep in mind, though, that you're not going to get economy and speed flying LOP. Where people get into trouble is when they start to play around with LOP operation, visit the online forums, listen to the LOP "experts," and gradually start to modify what they learned in the beginning.

PAC May Meeting (cont)

They end up setting the mixture for LOP operation but then decide they're going too slow, so they add a little power without readjusting the mixture. Suddenly, they might be barbecuing a perfectly good cylinder.

*Bottom line: If you want to go fast, stick with ROP. If you want fuel economy, aren't concerned with going as fast as you could, want cooler CHTs and EGTs, have the proper engine analyzer and a fuel-injected engine, and are willing to take the time to learn the proper procedure, by all means, give LOP a try. I fly LOP in my turbocharged Cirrus, which has GAMI-calibrated fuel-injection nozzles and a lean-assist blue target line that matches fuel flow with the proper LOP setting. I've also taken the time to learn how to adjust for LOP without the handy blue line. **When I fly airplanes with carbureted engines or only a single-cylinder CHT or EGT probe, I fly ROP, period.***

Whew! I'm done. Great discussion!

There was a bit of discussion about off airport landings. It was triggered by a question of how diligent should you be about constantly looking for potential off airport landing spots, even when you are doing local training/fun flights. The response was "VERY DILIGENT". And, be particularly aware of the environment at the departure ends of the runways of your home/training airports.

As part of the off airport landing discussion, Eric offered a neat procedure he uses, if practical. First, fly as high as practical. The winds will have a lot to do with that decision. Then:

1. Hop-scotch airports

- ⇒ This will keep you in reasonable proximity of an airport in case of emergency
- ⇒ As you hop-scotch, program in the CTAF/tower frequency of the next airport in case you need to contact airport during the day or click on lights at night.

Eric also said that if you are flying with a non-pilot passenger and hop-scotching at night, the passenger thinks it's pretty neat how the lights are coming on as you pass over. Yeah, I think that's pretty cool also.

We spent about ten minutes discussing the potential poker run. There are two options and there is an article in this newsletter describing both options.

Anyway, it was a fun and informative session. It could have easily lasted another hour, but folk had to leave close to the usual stop time. Several folk mentioned that we need to have another session like this.

From Our Buddy Al!

Gentlemen-

Attached is a simple flyer advertising my share in in our sweet little Cherokee. I'll drop off a couple copies at W88 this weekend. and would appreciate your help circulating this through the club , W88, and elsewhere nearby.

Thanks!

Al

SHARE OWNERSHIP IN A 180 HP CHEROKEE

Leaving town - must sacrifice excellent partnership in N7201W

- 1963 PA-28-180
- Fresh annual
- New ADSB
- <400-hour engine
- Payload >1100 lb [4 adults + gas]
- Based at Air Harbor, W88



\$15,500 for 1/3 share
Operating cost approx. \$60/month + \$35/hr [dry]
Finance & maintenance records available
Contact Al Lawless 336-422-1093

The PAC Poker Run

Sometime during the July/August timeframe, we are planning a PAC Poker Run. I personally have never been in one, but I understand it is a lot of fun. The key problem that has been mentioned is that folk tend to drop out when they discover that the hand they have been dealt “sucks”. Well, I think I have solved that problem. The cards will be contained in sealed envelopes. If any enveloped is unsealed at the time we are determining the winning hand, that hand will be disqualified.

Here are some excerpts from an EAA planned Poker Run.

1. To participate in the poker run you must be a registered pilot / passenger.
2. The start location is your home airport. The start time up to you and your passengers depending on your plane.
3. The entrance fee is \$XX per hand (Cash only) (exact change is preferred) and is payable upon arriving at the last airport. All hands must be presented in their sealed envelopes at the last airport is no later than 2:00 pm on (insert date here). You may do multiple hands.
4. This is not a race. Your time between airports does not matter. Of course be safe and do exercise good judgement and airmanship.
5. For each hand you play, you will get one sealed envelope at each of the 5 airports.
6. You do not need to fly the entire course. Each hand with one card one envelope from each airport (5 cards) stands a better chance of having a better hand.
7. You can go to the airports in any order except the last airport must be the “headquarters” airport by 2:00 pm. The five airports are as follows:
.....
8. The prize will be ½ the proceeds. You must be present at the awards ceremony which will be at 2:15 pm at the “headquarters” airport.
9. Standard 5 card draw poker rules apply. The eligible participant with the best hand is declared the winner.
10. Since each airport has a representation of a complete deck (Cards 1 – 52), it is possible to get 5 aces or 5 twos, etc. In the unlikely event of exactly duplicated hands each player involved in the tie will draw a card and the best card breaks the tie.
11. Fly heads up – eyes open – safely and have some fun.

The PAC Poker Run (cont)

The other option is called the **Poker Chip Run**. The process is almost the same as the regular Poker Run, except that rather than drawing cards, a player will draw three poker chips at each airport. The beauty of this process is that the value of the chips (red, white, & blue) is not determined until everyone is back at the “headquarters” airport. At the “headquarters” airport, three chips are drawn from a bag. The first color is worth 20 points, the second worth 10 points and the third worth 5 points. Now the registration slips can be completed

Poker Chip Run

Player Name _____ # _____

| | | | |
|----------|-----------|-------------|------------|
| 1st Draw | RED _____ | WHITE _____ | BLUE _____ |
| 2nd Draw | RED _____ | WHITE _____ | BLUE _____ |
| 3rd Draw | RED _____ | WHITE _____ | BLUE _____ |
| 4th Draw | RED _____ | WHITE _____ | BLUE _____ |
| 5th Draw | RED _____ | WHITE _____ | BLUE _____ |

2nd Hand or Passenger Player Name _____ # _____

| | | | |
|----------|-----------|-------------|------------|
| 1st Draw | RED _____ | WHITE _____ | BLUE _____ |
| 2nd Draw | RED _____ | WHITE _____ | BLUE _____ |
| 3rd Draw | RED _____ | WHITE _____ | BLUE _____ |
| 4th Draw | RED _____ | WHITE _____ | BLUE _____ |
| 5th Draw | RED _____ | WHITE _____ | BLUE _____ |

By Participating in this Poker Run, You Agree To The Following

insert waiver here

Driver initials _____ Passenger initials _____

(I don't know what the waiver statement means, but I couldn't delete it :-))

After the registration forms are completed with the value of the chips, the totals can be calculated and the winners determined. Ties can be broken by cutting for the highest card.

I like either option, but it's up to you guys.

Hopefully we can get staff at the participating airports to handle the cards or chips, so that all of our pilots can fly/play. We will need help from PAC members to pull this off, so stay tuned. Also, we will invite any pilots we know outside of PAC.

Pilot's Tip of the Week

from Pilotworkshop.com)

Engine Failure on Takeoff

Featuring Tom Turner

Subscriber question:

"Engine failure on takeoff: I've heard so many opinions on a safe altitude to turn back. Do you have any real experience or results on how pilots perform in this area?" - Pete B.

Tom:

"Many years ago I taught Beechcraft Bonanza simulator training at the Beech factory airport in Wichita. Engine failure immediately after takeoff provides the least margin and the greatest chance for disastrous results, so it received special emphasis. Simulators provide the only opportunity to practice this emergency safely.

In the preflight briefing, I would ask my student what he or she felt was the lowest altitude at which the engine would quit and the pilot could make it back to the runway. The most common answer I'd get was 800 feet above ground level. So I'd tell my student that's exactly what we'd do. With plenty of warning the engine would quit at **800 AGL**. The pilot then had to bank to 45 degrees at the best-glide pitch attitude, while simultaneously pulling the controllable-pitch propeller control to the low rpm position to attain maximum glide performance. In four years of presenting this scenario, I don't recall a single pilot successfully making it back to the runway from 800 feet above ground level the first time he or she tried—even when knowing beforehand exactly when the engine failure would occur.

Next, we'd try it from **1000 feet AGL**. Again, the pilot knew exactly when the engine would quit. He or she would also have just practiced the procedure. A few pilots would make it back to the runway from 1000 feet AGL, with advance warning and very recent practice. But most still could not.

What I found was that most pilots could make it back to the runway if the engine quit at **1200 feet above ground level**, but only after two practice attempts immediately before the successful turn back, and only with precise knowledge of when the engine would quit.

We'd then try it from **1500 feet AGL**. On an average-length runway in calm winds, pilots could easily get the airplane turned around and aligned with the runway from this height, but in most cases they were too far away from the runway to glide all the way back to the pavement.

Then, I added a little realism to the exercise. To account for the element of surprise, I'd set the pilot up for a fifth takeoff, telling him or her the engine would quit at **1200 feet AGL**. I told the pilot, however, to hold attitude straight ahead for five seconds to simulate the time it takes to recognize the problem, choose a response, and initiate corrective action. With this simulation of surprise, almost no one in four years made it back to the runway...even though they had significant recent experience practicing the turn back maneuver.

What can we learn from this experience? There is really no option of turning back to the runway if an engine quits shortly after takeoff. It may be possible to make a slight turn to the left or right for the best landing option. But the standard guidance is correct: if an engine quits on takeoff, keep the wings level and land straight ahead."



Pilot's Tip of the Week

from Pilotworkshop.com)

Starting a Flooded Engine

Featuring Bob Nardiello

Subscriber question:

"What should I do if my engine becomes flooded during start up?"
- Brendan W.

Bob:

"Over-priming an engine may prevent it from starting. The presence of a strong fuel smell in the exhaust pipe indicates a flooded condition.

This situation may occur in cold weather when successive attempts to start the engine are unsuccessful. Preheating the engine in cold weather reduces the likelihood of engine flooding.

Look at your POH (Pilot's Operating Handbook) for the flooded start procedure if the engine won't start and you suspect flooding. Whether you have a carbureted engine or a fuel injected engine, the general procedure for a flooded start is to move the mixture to idle cutoff and the throttle to wide open while cranking the engine. The idea here is to allow excess fuel to exit the engine through the exhaust. Eventually, when enough fuel clears the cylinders you reach a proper ratio of fuel to air and the engine should begin firing. Once it does, remember to richen the mixture and pull the throttle back for a smooth idle.



Letting the engine sit for a while also helps get rid of excess fuel.

Engine flooding can also set you up for an engine fire during startup. Review your POH for specific procedures for your aircraft for an engine fire during startup so that if it ever happens you will be prepared to respond properly."