

Board Of Trustees:  
7:00 PM 11/7/2019  
Club House

General Meeting:  
9:00 AM 11/16/2019  
CAP Building



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**Inside this issue:**

**Page 1**

Engine out

**Page 2:**

Test  
\$100 Hamburger

**Page 3**

Who is on first?  
A Glitch  
A Good Read  
Aviation Trivia

**Page 4**

Fee changes  
Rub & Scrub  
Maintenance Report

**Page 5**

McGuire Freq shift  
Rules & Regs

**Page 6**

Hacking  
Cartoon  
Takeoffs are Optional..

**ENGINE OUT by:**

**Parvez Dara, MD, ATP, Master CFII, AGI, Gold Seal**

In the unlikely event that you encounter an emergency like the one Sullenberger was faced with, there are a few things that need to be processed immediately and without hesitation to ward off a disaster.

Let's first ask the question: when would a pilot face such an emergency?

To answer that question, one needs to know the contextual basis of the emergency. In this case it would be loss of engine power on take-off. And that means when the pilot has barely raised the prop and cowling above the 1000 feet of altitude and the engine gives up the ghost. Why is this an emergency of an extraordinary nature that needs its own value-based attention?

Easy answer is; it is based on the limit of time and aerodynamics for the required rapid response for safe outcome. In other words, there is very little time for the pilot to rummage through any procedure, in print or in digital format. In this case it is all about Emergency Procedural Memory.

**Emergency Procedural Memory:**

There are seven components to this memorized ritual:

1. **Amplify Lift.** With the Engine at rest and zero thrust attitude of the lazy rod-thrown-or-fuel-contaminated-or-fuel-starved-or-exhausted-engine can only be amplified by flying the aircraft at the aircraft-weight-based Glide Speed (max distance).
2. **Reduce Drag.** Similar to a twin engine where in case of loss of single engine thrust one needs to reduce drag by **GEAR UP** (complex aircraft) and **FLAPS UP**. By the way Full Flaps induce more parasitic drag than the gear in flight. And if you have a constant speed propel ...**PULL THE PROP all the way back to reduce further drag.**



3. **Mixture:** Full Rich
4. **Fuel** on the full tank
5. **Boost pump:** On (In case the engine driven pump has seen a ghost)
6. Pull **ALTERNATE AIR** in case of icing or obstruction at the intake.
7. Check both **Magnetos** individually

However, at Cruise Altitude, you have ample time to resolve the engine anomaly. If still unsuccessful in starting the engine, you need to set the aircraft down, with altitude and airspeed as your friendly angels. I will have more to say on that at a later date.

So, getting back to the emergent situation, Under the 0 to 1000 feet of gained altitude, the only option is to land straight-ahead or, perhaps shallow bank left and right to find a spot where there are no orphanages and school busses. Shallow banks mean less than 20 degrees. It is also a good mental checklist to rehearse such "WHAT IF" scenarios in your mind. And while the going is good, take notice of both the departure and approach ends of any and all runways that you most encounter, including the home field surroundings. Know where you might be likely to settle safely with as little of bent metal as possible at the slowest possible speed, in case of silence.

There is a term called "The Impossible Term." Many people have, spoken about it, written about it or You tubed about it. Yet it remains the Achilles Heel of the distracted and inexperienced pilot who wants to save the aircraft, bring it back to the airport scratch-less and defy the aerodynamic limits of the wings (in an engine out scenario, the aircraft essentially belongs to the Insurance Company, so your safety, the passengers safety and those on the ground is paramount). In a Cessna with 7.4:1

Glide Ratio it might be prudent to use 1000 minimum safe altitude to consider returning to the field. Remembering that the Impossible turn at 1000 feet becomes an Improbable Turn since it needs at least 240 degrees of turn to line up with the runway with a tailwind to boot. Using a bit of mathematics ( $1091 * \text{TAN of Bank Angle} / \text{TAS in knots}$ ) the best Rate of Turn is about 9.9 degrees/second which translates to a 45-degree bank angle with a 5 degree nose down attitude to maintain Glide Speed and have the least amount of altitude loss. (With 45-degree bank at 9.9 degrees/second, it takes an average time of 19 seconds and a loss of 400-500 feet in a 180 degree turn).

Loss of power on take off at 80 knots in most small GA aircraft leads to a decay of airspeed by 50% in 5-7 seconds and that is way below stall speed. Speeding up to 120 knots on takeoff might get you more distance but will half the altitude gain at the 30 seconds of elapsed time from take-off and that becomes more detrimental to your health. Additionally, a 30 degrees bank with ZERO THRUST creates more Drag than Lift. SO, if faced with this emergency, the most prudent course of actions is:

1. **PUSH THE NOSE DOWN** and unload the Wings
2. **CENTER THE BALL** to reduce drag
3. **If able:** Mixture rich, switch Tank and Boost Pump in one quick movement (since 90% of Engine outs in GA Aircraft are Fuel Related).
4. **And FLY THE AIRCRAFT ALLTHE WAY TO THE SCENE OF THE ACCIDENT** -Bob Hoover

If you look at the #3 item in the “prudent course” discussion, I need to further accentuate is with the following: Next time you sit in your favorite cockpit...Close your eyes and place your hands on the following knobs and switches:

**Mixture knob          Propeller knob          Throttle knob          Fuel Tank lever          Boost Pump switch**

Identifying these landmarks in the blind (closed eyes), creates the comfort of an extraordinary experiential reference that comes into play, when faced with an emergency. The brain goes into automatic mode and the hands perform the actions without hesitation (muscle memory).

So please practice the Engine Out scenario mentally as often as you must and practice in the blind every time you sit in the cockpit...the latter takes 5-7 seconds at most to hit all five landmarks. DO IT RELIGIOUSLY and OFTEN! Practice to refine and maintain your proficiency. Learn what works best methods for you as you practice with a qualified instructor. The Law of Primacy always remains in effect and abilities decay over time from disuse.

Practice!  
Practice!  
Practice!



“SAFETY,” as they say, “IS NO ACCIDENT.”

**Test:** If there is no altimeter setting available, what setting should be used for a local flight ?

**\$100 Hamburger by: Mike Bernicker and Charles Burke**



KOQN Westchester Airport

The flight to West Chester Airport, Brandywine, (KOQN) was almost a non-starter because of the quickly changing weather reports. But at the last minute, the skies started to clear and the FSS briefer painted a very positive picture between N12 and KOQN. With that, it was off to the wild blue yonder.

The flight took us out over Northeast Philadelphia (KPNE) and into the Class B of Philadelphia (KPHL) as we aimed for our only way point, Wings (KLOM). Passing over the field from there, it was only a short hop to West Chester which is nestled under the outer ring of KPHL airspace.

The airport itself is a poster child for what a small modern well planned facility should look like. The FBO offered all of the amenities that a pilot would want and was found to be scrupulously clean. Transient parking could not have been better with an ample supply of chocks and tie-down ropes right next to the building.

Walking up to the manager’s desk we were welcomed and immediately directed to the free crew car that was awaiting us in the rear parking lot. The reason this was acted upon is that there is no food services on the airport grounds. With the help of another employee, we were provided with directions and a suggested destination that took us over to Rt 202 and we were quickly on our way.



Continued

But then a problem suddenly arose when a message was received that the Archer, 268BG had been serviced and was at Eagles Nest (31E) waiting to be picked up and flown back to N12. The change in our planned return route would cause a delay, one that we could not afford to stretch out. A line of rain showers was forecast along the route so that meant our dining time had to be cut short.

It only took about 10 minutes to reach a stretch of the highway that was lined with strip malls and small businesses. Within a short distance, the D-K Diner appeared so we pulled in and realized this was a truly classic roadside diner! Its gleaming chrome exterior straddled a small parking lot and a parking space right in front of the door was waiting for us.

With time running short, we were quickly seated and menus were provided. They revealed a nice selection of breakfast and lunch items at extremely reasonable prices. As the waitress took our orders, it was noted that we were under the gun with time so she promised to speed things up, and she did! Within minutes our meals and beverages were provided along with the check. We quickly ate and were back out on Rt 202 heading back to the airport. Another great \$100 Hamburger run completed!

**Who's on first? (A nod to Abbott and Costello) by Mike Bernicker and Charles Burke**

On Friday, September 27, we were flying from N12 to 4N1 (Greenwood Lake Airport) and had to cut through the edge of KEWR's Class B airspace. ATC was super busy and we could not keep up with all that they were doing but did listen for our tail number 268BG. At that time, ATC was handling a steady stream of aircraft that were sailing from west to east and the ADS-B was packed with icons showing planes a few thousand feet above us.

But a problem arose because there were two other aircraft with similar tail numbers, one was 268ES and the other was 542BG. The ATC guy was periodically using only partial tail numbers such as 2BG and sometimes just BG. The 268ES was not really a problem but the similarity added to the mix and this did not help matters. If the traffic was not as hectic, it would have been easy to follow but this was not the case and at one point almost complied with a directive that we thought was directed to us. We finally called ATC and asked if he would use the full tail numbers and he complied. From that point on, there was no confusion or doubt as to who ATC was talking to.

Wow, we collectively never had this happen before but guess it is something that is worth keeping an eye out for when ATC is located in one of the busiest areas of the country.

If you are too young to recall Abbott and Costello then go to : <https://www.youtube.com/watch?v=kTcRRaXV-fg>

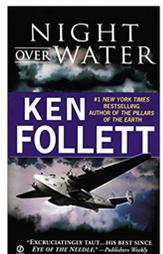
**A Glitch in the Basic Med Program by Art Templeton**

With the advent of Basic Med, thousands of pilots have elected to utilize this alternate pathway for obtaining a medical. This group of aviators also includes a large number who came out of retirement because the steps involved in Basic Med more closely fit their individual needs.

While it was initially met with some skepticism, it is now largely accepted in the aviation community as an acceptable alternate route to being a PIC. But as with all things that deal with complex and legal issues, there are unintended glitches that can pop up and this is the case with Basic Med. These glitches need to be brought to light and then require oversight action because, in this case, it goes against common sense. AOPA is not working on a fix.

**A Good Read, Night over Water by Ken Follett , submitted by John Burke**

September 1939. England is at war with Nazi Germany. In Southampton, the world's most luxurious airliner —the legendary Pan Am Clipper—takes off for its final flight to neutral America. Aboard are the cream of society and the dregs of humanity, all fleeing the war for reasons of their own . . . shadowed by a danger they do not know exists . . . and heading straight into a storm of violence, intrigue, and betrayal.



**Aviation Trivia: submitted by Tom Flieger: What are the top 3 largest Airports?**



**Hartsfield-Jackson International Airport, Atlanta**



**Amsterdam Airport Schiphol**



**Changi Airport, Singapore**

Nov. 1, 2019 C152s \$69 to **\$79**, C172s \$89 to **\$99**, Archer \$100 to **\$115** , Arrow \$120 to **\$140**, WT \$115 to **\$120**

Jan. 1, 2020 Dues from \$35 to **\$40**

**Rub & Scrub** by Karen Barbagelata

There was an excellent turn out for the MAFC Rub n Scrub on Saturday, October 19! More than 40 members and guests showed up on a spectacular fall day and the club now has a much cleaner fleet of airplanes! Janis Blackburn and attending members of the Board were pleased to see members, family and guests come together, especially with a cold snap on the way. Janis said, "Thank you to all who participated!"



**Maintenance Report** by Dan Coles

**N669A77-C152** We are contacting avionics shops to handle a problem with the intercom. They all seem quite busy and Sky Manor's runway was closed when we called them. We should have it taken care of when you are reading this. We have a price of \$1849.70 from Dean Upholstery for recovering the seats and replacing the carpet.



**N67818 C152** This aircraft was at BP Air for an oil change and 50 hour service. It also had the valves adjusted and the seat rail A.D. complied with. While there they discovered the inboard plate on the elevator needs to be replaced and they also found the spar is cracked in half. They contacted a company in Indiana about a rebuilt elevator but they didn't have one. They were going to ship ours to them to have them overhaul it for us. Billy O contacted Cessna and they supplied him with the parts so that he would be able to make the repairs in his shop. We saved about \$1,000.00 by having the work done by BP Air. Three Crown Avionics reserved an October date to install the ADS B transponder. This was pushed back because of the repairs at BP Air. We are installing a GTX 335 transponder and GAE12 encoder. Any other radio issues can be addressed at that time.

**N4287Q-C172-L** This aircraft was at Lakewood grounded because of high CHT readings. Billy O came to the airport and inspected the aircraft. He ran the engine and noted it was getting hot faster than normal. He said it would be ok to fly at a reduced power setting. One of our members flew it to VAY to where he made the necessary repairs to get the temperatures at the proper level.

**N93KK C172 M** The only thing I have for this aircraft is the #1 nav/com is not working properly. The following are 2 Squawks from Flight Circle 1, GPS could not locate airports or fixes - could not use DIRECT-TO or NRST. This was caused by the wrong update being installed in the GPS. The update was for the west coast. 2. Pilot's & copilot's PTT switches function intermittently. This is a continuing intermittent problem. It is at Ocean Aire for the 24 month pitot static check and transponder certification. We will address all of the issues while it is there.

**N268BG-PA28-181** We had the oil changed and a 50 hour service done at Ocean Aire.

**N55804-PA28-28** I received a squawk that the electric trim was not working and the manual was very stiff. The aircraft was taken to Ocean Aire they got the electric to work with some assistance on the manual trim wheel. It needs to have the servo replaced. A member reported "left brake pads low and missing 2 screws from inspection cover on same wing". We will have it taken care of at the next oil change and 50 hour service, which should be completed when you read this.

**N61WT** The oil was changed and a 50 hour service was done at Ocean Aire. While at Ocean Aire, they replaced the worn out nut plates and bolts that secure the oil cooler.

**8. Repair Charges, Fines, etc.**

FROM:

4. Dues are levied on the first of the month. Payment must be received on or before the first day of each month. Also, flying fees must be paid in advance ("block time") or at the end of the flight. If a member's debit balance equals or exceeds \$70.00 at any time, a \$10 fine will be assessed. If the balance equals or exceeds \$105, a \$20 fine will be assessed. Members who persistently fail to keep their accounts in good order will be grounded or expelled. *Club policy is that we want to impose as few fines as possible --- the objective is to promote compliance with the rules. We are happy to rescind a fine if it turns out to be unfair or unnecessary as determined by the BOT.*

TO:

3. Dues are levied on the first of the month. Payment must be received on or before the first day of each month. Also, flying fees must be paid in advance ("block time") or at the end of the flight. If a member's debit balance equals or exceeds \$35.00 after the first of the month, a \$10 fine will be assessed. If a member's balance exceeds \$100, the member will receive a letter and/or email requesting immediate payment. If no payment and/or response is received within 7 days, the member will be considered for termination. Members who consistently fail to keep their accounts in good order will be grounded or expelled. *Club policy is that we want to impose as few fines as possible --- the objective is to promote compliance with the rules. We are happy to rescind a fine if it turns out to be unfair or unnecessary as determined by the BOT.*

**9. Maintenance, etc.**

DELETE THIS PARAGRAPH IN IT'S ENTIRETY AND RENUMBER SUBSEQUENT PARAGRAPHS ACCORDINGLY:

3. Crew letters: Members are encouraged to talk with each other. To improve communication, the Usage Books contain "Crew Letters." A Crew Letter can be on any topic. For example,

- If you find inoperative instruments or equipment in accordance with FAR 91.213, you are strongly encouraged to mention this in a Crew Letter.
- You can use a Crew Letter to request that the pilot before you refuel the plane to a higher or lower level than usual, to help you meet weight & balance or range objectives.
- You can use a Crew Letter to report weather or runway conditions.
- You can use a Crew Letter to request or provide routine advice on pilot technique.

Nobody has any obligation to answer Crew Letters. Post filled out Crew Letters on the board in the Clubhouse so that the Maintenance Officer and fellow pilots can read the Crew Letters. Do not take Crew Letters into the airplane.

FROM:

5. In the clubhouse there should be an information board for each airplane. The information board has two areas, one for routine Crew Letters and an area marked in red for Crew Letters indicating caution or special attention for the next pilot.

TO:

4. In the clubhouse there is an information board that shows squawks for each airplane. The information board is filled out voluntarily by members. It may not be complete or up-to-date. It is ultimately the responsibility of each pilot to determine whether an aircraft is airworthy or not.

**McGuire Approach Frequency Change** by Steve Fox

The McGuire approach frequency will now be 126.475 Mhz. starting as of October 23 2019 and will probably become permanent. In an effort to understand why this shift in frequencies took place, a call was placed to ATC at McGuire. According to the spokesperson, a facility in New England operates on the same frequency and this has, at times, caused interference at both bases. By shifting McGuire's frequency, it is believed that the problem will be eliminated. During the next few months, the new system will be monitored and, if it proves to be successful, will become permanent.



Answers to the test: Use the airports height above sea level.



Hacking: Submitted by Nick Billows

WASHINGTON (AP) — The Department of Homeland Security issued a security alert Tuesday for small planes, warning that modern flight systems are vulnerable to hacking if someone manages to gain physical access to the aircraft.

The FAA recommends that plane owners ensure they restrict unauthorized physical access to their aircraft until the industry develops safeguards to address the issue, which was discovered by a Boston-based cybersecurity company and reported to the federal government.

**REMEMBER: The new Approach frequency for McGuire is 126.475 Mhz**

**Announcements!**



Charles Elliott successfully completed his First Solo!!  
Javier Perez Instructor



**Takeoffs are optional but landings are mandatory**