

BOT Meeting
4/7/22 @ 7 PM
Club House

General Membership
4/16/22@ 9 AM
(SAT)



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So Where Did All Of The Planes Go? by Charles Burke

If you spend any time looking at the flight schedule you will notice that there always seems to be an aircraft that is not in service. The obvious reason for this is that a problem was found and the aircraft is being serviced. But if you are new to aviation, there are other reasons that you may not be aware of plus factors related to where the required work is being performed. Another major factor involves what the FAA allows the aircraft owner to actually do on their own. Back in the day, aircraft were like cars, when something went wrong, you got out your tool box and went to work. But those days are long gone and the list of things you can actually work on legally is very small.

In general, all of the service work can be divided into two categories, scheduled and responsive.

The responsive category consists of:

A. A problem arises unexpectedly such as lights failing, flat tires, a part breaks, etc.

B. Notices issued by the FAA that direct you to have a service performed. These usually arise when the FAA becomes aware of a potential risk factor. An AD (Airworthiness Directive) is an example of this.

The scheduled category reflects work to be performed usually as specified by the by the plane's manufacturer as well as the FAA. This category consists of:

A. The annual inspection.

B. Oil changes / 50 hour inspection

C. Instrument checks (altimeter, emergency beacon, transponder, etc)

E. TBO (Time to be Overhauled- can run upwards of \$35,000.00 and tie a plane up for months)

F. Upgrades to the aircraft, navigation/communication and instrumentation.

The scheduled services are a combination of required service work keyed to the number of hours put on the engine / air frame or by calendar dates. So two identical planes starting off at zero time on the same day but experience different running times can have very different dates for required service.

Now that you have some idea as to why planes go missing we need to look at another factor, who will do the work? Unlike an automobile where you have lots of service stations that perform all types of work plus can easily be driven to, aircraft work can be highly specialized but it is at a place that is a long way from home. In a worst case scenario, your plane breaks down and the service needed requires a mechanic who is located at a different airport facility! This is why we cannot always use the service facility located at N12. Many problems are indeed corrected at our home airport but very often it is necessary to transport the aircraft to a different location.



In our situation, the club has identified a number of service facilities that provide exceptional work for the least cost. This is why you may find a plane being sent to one facility then, after the work is completed, it's flown to another airport for a different problem. But what happens if you cannot fly the plane and the service work cannot be done by personal at N12? Here is where the mountain has to come to Mohamed. Yes, the service person has to be driven or flown from their home base location to the place where the disabled aircraft is grounded.

In summary, tracking the scheduled maintenance along with repair and upgrade work, keeps our maintenance team busy. This is why not a single day passes during which John Pereira, Tom Griffin or Bill Butler are not working through some level of maintenance issues for our aircraft. Thanks to these guys for their efforts!

Lay of the Land

If you have been to the airport lately, you may have noticed survey marker with a piece of brightly covered ribbon attached. These markers are an initial step being taken for the construction of the proposed new facilities at N12. A call was placed to the facility manager but no further details were provided. So, stay tuned.



Preheater WARNING

While the need to preheat the engine is rapidly passing out of season, it is still important to note that there are safety issues which are extremely critical for operation. Regrettably, misuse has occurred and, in one case, caused damage to the air delivery tube.



If you follow the printed directions, there is nothing stating that the red pressure regulator knob should not be touched. But unfortunately, it sticks out like a sore thumb almost begging to be manipulated. To reduce the chances of this happening again, a protective cover has been placed over the knob with a tag saying, DO NOT TOUCH. Please abide by this directive.

Gliders Program

At the March 19 membership meeting, those in attendance were treated to an outstanding presentation by Mike Friedman, a CFI at Jersey Ridge Soaring, located at Blairstown Airport (1N7). Jersey Ridge Soaring is the family owned business of Kevin and Brenda Martin. It offers an open and friendly atmosphere, with a great deck from which to watch operations.

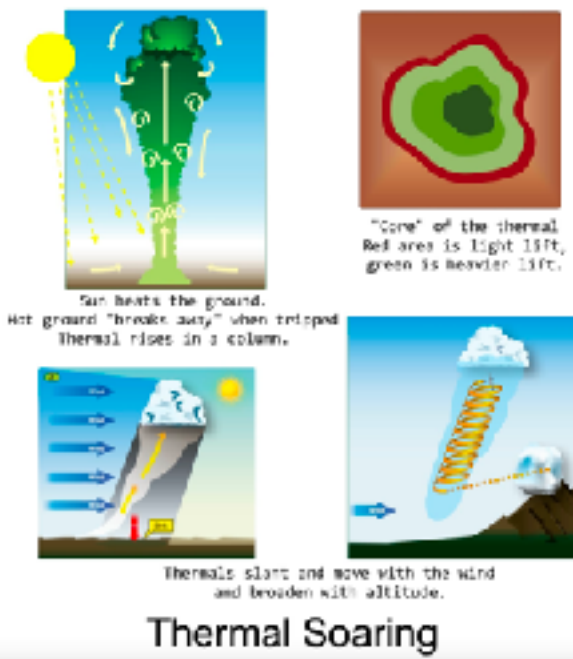


Mike obtained his Private Pilot certificate in 1988 quickly followed by instrument and a commercial glider rating. He recently added a glider CFI and taildragger endorsement and occasionally flies a Piper Pawnee as a tow pilot. His day job is as a design engineer, where he develops embedded microprocessor systems for instrumentation and control. Mike holds several patents for printing press automation systems and one for an electromagnetic instrument. He was also the designer of one of the first, if not the actual first, hand held GPS moving map systems, the Memtec Co-Pilot. Finally, he manufactures a line of Time-Speed-Distance computers, precision odometers and clocks, used in the sport of Road Rallying.

Before talking about modern gliders, Mike pointed out that the Wright Brothers used gliders extensively for testing aerodynamic theories that, when found to be beneficial, were then incorporated into their aircraft designs. This allowed them to utilize inexpensive models that could then be scaled up.



He then provided some amazing stories that include cross country flight, some spanning hundreds of miles, totally without power relying only on thermals and updrafts created by the wind flowing over mountains. On the other end of the spectrum, many flights follow a triangular course running about 60 NM in the area around 1N7. He also noted that using mountain waves, gliders can reach altitudes of 18,000 ft at which time they run into Class A limitations, but also noted that there are some special events, with pre-approval from the FAA, during which they reach up to 25,000 ft. (Until recently the record for glider altitude was 50,700'. The Perlin 2 recently smashed that at 76,000', but this is a highly specialized glider.)



Next he turned to the actual aircraft and some of the amazing (L:D) Lift to Drag ratios. A few of their trainers carry a 22:1 ratio with a sink rate of 200 fpm with one higher performance glider having a 37:1 ratio and 160 FPM sink rate. The wing and body design are such that these aircraft can easily find lift allowing them to venture thousands of feet upwards and then glide for many miles should the wind totally stand still.

While Jersey Ridge Soaring operates only pure gliders, Mike noted that there are power assisted gliders on the market. These range from those that can take off totally under their own power to others with power that is used to simply extend a flight if conditions require a little help in getting back to the airport.

A great deal of time was spent on how gliders utilize the motion of air to generate lift and allow for sustained flight. In most cases, it is simply thermals that are created when the sun warms the earth causing the gas to expand and rise. But there are also geological structures that can generate lift such as those created when air passes over a mountain top or is thrust upward along a ridge.

When it came to various forms of power assist takeoffs, we immediately think of a tow plane and this is probably the most commonly used system in this country. But there are others such as being pulled by a car or truck. He noted that because of the high cost of flying in Europe, they employ a ground launch system in which a line is attached to a stationary mounted winch that spools up the long cable pulling the glider much like the way we launch a kite.

If you are interested in exploring gliders, you can get a good feel for it by taking a lesson with a glider CFI, the cost is only \$120. If you would like to know more about this topic, you can call them at 908-362-1239. You can also take a look at their web site at www.jersayridgesoaring.com. Mike left a stack of flyers that are on the table in the trailer along with a few copies of Soaring magazine.

Last but not least, don't forget that right on the field is a really good restaurant. It has great food, reasonably priced and super service. But the best way to paint a picture of this establishment is to read the article titled, Ripped From the Front Page of The Tattler Magazine-- A marginally true story!, found in the September 2016 newsletter.

Alberta Retiree Builds Replica 737-MAX Simulator in Backyard by Dave Pathe

Many of us MAFC pilots have used flight simulators for training or fun, most in a desktop configuration with monitors and basic flight yoke. But if you are thinking bigger, like building your own replica flight simulator, here is a guy you may want to contact. You might also want to speak with his more-than-understanding wife to find out how they are still married after he spent over a year and (likely) a ton of money on this project (LoL).



Bob Roberts (right), and his wife Dani Roberts (left) as they co-pilot the Boeing 737 Max simulator (Supplied Meghan and Nicole Fland)

Bob Roberts, a private pilot retired from Syncrude, built a "departure lounge" in his backyard and assembled all the equipment for his 737 MAX simulator. The link to the CTV News article also has a short video on his project. Clearly Bob loves flying but could use another hobby to get him out of the house... I'm thinking golf would work! Enjoy!

[Central Alberta man's passion for flying leads to](#)

Spotlight on: Stephen Dinklage

In March 1980, my tractor trailer engine blew leaving me stuck in Waco TX. While waiting for a repair, it was decided to head over to the ACT airport and this is where I took my first flying lesson flying a C150. Since that flight, and up until June 1992, I have flown out of four airports for around 41 hours of instruction all in Cessna 152s. This led to a solo flight in March 1982, and ground school at a local community college. However, since 1992 life got in the way and I haven't flown.

I own and instruct at New Jersey Sailing School & Charter and have been thinking about getting back up and getting my Private Pilot License. While looking into flight schools I came across MAFC and that created a serious desire of taking the next big step. On one of the sailing school charters, Andrey Zelenovsky signed up and we got talking about MAFC. After the charter was completed he assisted me moving a boat and took me flying in the Arrow. We flew to Cape May and Ocean City for dinner, and I was hooked again.



As a licensed USCG Captain and Instructor, much of the training is very similar so I used my existing knowledge along with my past flying instruction and have now completed the ground school along with the FAA exam and completed the physical. After attending the last BOT meeting, it was realized my application could take a while, so I signed up for lessons at Eagles View Flight School and did one lesson in their Warrior but it took four cancellations for weather and repairs. I also went on another flight with Andrey in the C172. As I was getting in my car to drive to Cocoa Beach FL to do some sailing instructor training, a call came in that my application was accepted. I was not only completely surprised but also honored and ecstatic at the possibility of completing my instruction and finally getting licensed at such a great location amongst such a great group of fliers.

N738NY Update

We are one step closer to acquiring N738NY but there are still a few major corners to be turned with the financing. The prospects are looking good so the Aircraft Acquisition Committee is now focusing on instrumentation. Those who attended the March 19 membership meeting received details on the proposed changes that will be made once we acquire NY.

**CME (Corona Mass Ejection) by Charles Burke**

A recent article that appeared in Science News does, on the surface, appear to be totally unrelated to aviation, Corona Mass Ejections. The CME is a massive blob of highly charged matter that is ejected into space carrying with it unimaginable amounts of energy including electromagnetic waves. And here is where it crosses our path in aviation. As noted in a previous article on electricity, electricity and magnetism are the same thing. Much like the two sides of a coin that can look very different, it really just depends on which side are looking at. See www.swpc.noaa.gov/phenomena/coronal-mass-ejections

The Sun runs through an eleven year cycle during which it goes from very calm to extremely turbulent then back to being calm. During the turbulent time periods there are numerous sunspots which indicate that major changes are taking place in the electromagnetic field lines that originate deep within our famous star. When they rise up and twist, they can snap sending large amounts of energy streaming outwards into space marking the birth of a CME.

While most CMEs shoot off away from Earth it is a very different story when we find one slamming into our planet. This is because as the electromagnetic waves pass over wires, they can create extremely large amounts of electricity in them. These induced electrical charges can destroy GPS satellites, power grids, radio transmitters / receivers, etc. We almost had a direct hit just a few years ago that took out a few satellites and caused massive power failures in Canada.



So what does this mean as far as aviation? Speaking in realistic terms, if you were in an aircraft, especially a large commercial plane, the strike could take out the world wide GPS system and sever all radio communications for days. Even our compasses could fail because the magnetic field surrounding the Earth would be twisted and contorted. This would mean that the pilot would be totally isolated from the rest of the world. Sliding down in size to our single engine fleet, it would have the same impact but we would be able to do something an aircraft sailing along at 30,000 ft, could not do, we can see the ground. This means that pulling out a chart, and having a ballpark idea where you are at, will give you some idea as to how to find a place to land. But this simple act may be a bit more complex if you are flying IFR and / or you are working from a tablet as opposed to a paper chart. With satellites out, these devices would also fail.

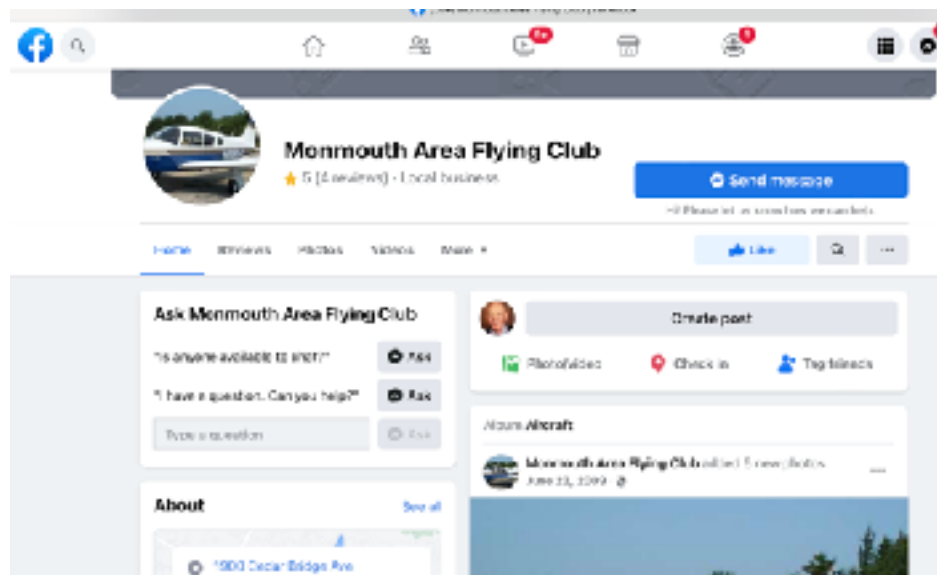
The sunspot cycles is on its way up and will peak around 2024 / 2025. This means that the chances of being impacted by a CME are increasing. But as history has shown, these events can happen at anytime and this occurred just a few years ago during an off-peak period. With this in mind, you might want to consider leaving your pad and GPS off and practice navigating using just a paper chart. The exercise would help to keep you in the loop should you suddenly discover that every piece of navigational and communications equipment you have with you is suddenly worthless. On the flip side, as the radiation crashes into gas molecules in Earth's atmosphere, it causes them to glow... creating the magnificent light shows of the auroras, the Northern Lights and Southern Lights.

MAFC Facebook by Steve Fox

On February 23, 2018 our MAFC Facebook page was created. To date there iare 96 members which share information to make us better pilots. The initial intent was to provide club information to ensure there is an adequate amount of transparency which included some of the following:

- Monthly News Letters
- Monthly Ops reports
- Reference Books and associated materials
- By-Laws and associated club changes

This is an open forum to talk about issues, better flying skills, TFR's, general club information in addition a place to learn from others. We realize that there are new members in the club and am looking forward to adding them into this group. This Facebook page is a closed group and can be reached at <https://www.facebook.com/groups/flymafc/> . This is a great place to help those In training and current certified MAFC pilots be better, safer and enjoy the freedom of flight. Come join us and have some fun.



A Good Read: Pilots Rules of Thumb by Art Parma

This small 4 x 6 inch reference guide is packed with an amazing array of common problem solving tips that all pilots would find of value. It is easy to read and contains many diagrams to help explain concepts plus the problem solving steps can easily be done on a \$5 calculator. If you would like a copy, it is yours for only \$8.95 and you can then see how valuable this little book can be.





Announcements

Flea Market: With the highly successful Aviation Flea Market now in the rear view mirror, a number of members have indicated that they are still looking for things to buy. Acting upon this situation, a new Buy/Sell/Trade column will begin in the next issue.

Hand Brake: Don't use the handbrake after you tie the aircraft down! You may think that is a good idea but it can cause serious problems if service work is required and the plane has to be moved. The mechanic does not have access to the keys and has to literally drag the plane to the hanger. This can ruin the tires since they are in a locked position. Please be assured, when the aircraft is properly tied down and chocks are put on all of the wheels, the plane is safe.

Hannah Umberger: Our former member/BOT just wrote that she has completed her training and is now a First Officer for Missionary Flights International flying out of Ft. Pierce, FL. This nonprofit organization supplies humanitarian support primarily to the Dominican Republic. If anyone would like to touch base with her, please let me know and her contact information will; be provided.



Reading Glasses: Two pair of reading glasses are now available and can be found in a plastic container on the desk. Please remember to leave them after use.

Awesome Paint Jobs: Art Templeton

Aspen: At the April 19 Membership meeting, CFI Darren Mattos will be presenting a program on the new Aspen E5 avionics system that was recently installed in our Piper Archer N268BG



Takeoffs are optional but landings are mandatory



Robbinsville Trenton N87

Top Fliers in February

PILOT	HOURS FLOWN	ACFT
Darren Mattos	8.4	818, KK, 87Q, WT
Chuck McKelvey	7.2	WT, Arrow
Abe Gestelner	7.0	87Q
Bill Geier	4.8	WT
Girish Mandhwani	3.8	Arrow, 87Q, KK

What Did He Say:
Submitted by Nick Billows

'When one engine fails on a twin-engine airplane, you always have enough power left to get you to the scene of the crash.'

-Multi-Engine Training Manual-

