The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

May 2021

Editors

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The views expressed in each author's article are their own.
The Mooney Flyer's goal is to educate, inform, and entertain Mooniacs.

From the Editor

Phil Corman

Our Tenth Year Begins

This issue marks the beginning of our tenth year of publishing The Mooney Flyer. We are very proud of that and appreciate that you have stuck with us through the learning process. Our first cover is illustrated to the right. We sure have come a long way.

The Mooney Flyer is a true labor of love and a way for Jim and I to give something back to the Mooney Community, for it has given us so much.

The Mooney Flyer truly is a community effort. We have had contributions from an amazing and diverse set of authors. Through them, we have become safer, better informed pilots, as we continue to share our love of flying a Mooney.

Please help us keep this going by:

- Considering a donation
- Considering writing an article
- Passing the word along to other Mooniacs, or Mooniacs to be

And please write us to TheMooneyFlyer@gmail.com and let us know how we are doing … articles you love … articles you don't love and additional thoughts. It keeps the magazine informative and entertaining.

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Welcome to the first edition of The Mooney Flyer. There have been VMG fly-ins all over the USA this past year, but this newsletter will focus on the original chapter of the VMG, here in the west.

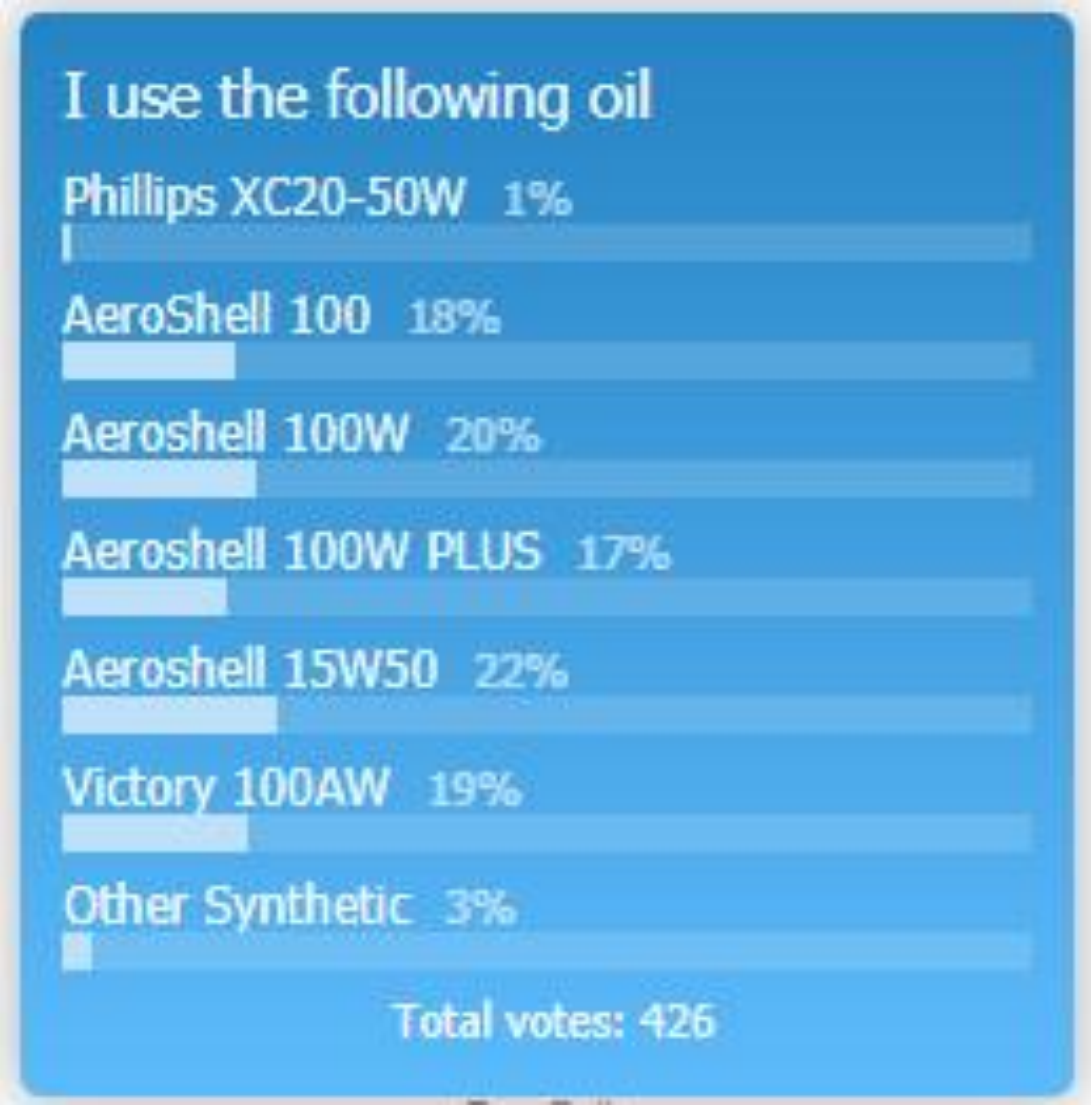
This month, Paul & Shery Loewen made the news by announcing that they have placed LASAR for sale. We just celebrated their 35th Anniversary this past summer and all of this has happened so quickly. Fear not, LASAR isn't going anywhere. They are committed to the business and are hoping for a sale to a worthy new owner. Paul will commit to consulting for the new owner if that is desired. Personally I think that is a huge selling point as Paul probably knows as much about the M20s as anyone on earth. The Loewens are hoping that any buyer will agree to keep the business in Clear Lake and also to keep their phenomenal staff of 14 employees.

Separately, but also related to LASAR, Robert Brown is retiring after 12 ½ years. To me, Robert has been synonymous with LASAR as he has been at LASAR longer than I have owned my 2 Mooneys. Several VMG members flew up to Clear Lake on a beautiful Sunday afternoon and took Robert and his beautiful wife Victoria to lunch at TNT's on the Lake. We'll miss you Robert, but never forget you!

We are planning a tenth anniversary Mooney Flyer Fly-In for September. Please put it on your calendar and let's make this the biggest and most fun fly-in ever.

Camera and Cables Update from Richard Brown

After writing the April article I tested the NFlightCam Audio+Power Cable for GoPro Hero 3, 3+, and 4 with the Drift Ghost X Camera. The Ghost X uses the same USB Type B-Mini input for charging and audio that my GoPro Hero 3+ uses, so I was hopeful it would work. I am happy to report that it does work and records the audio from the radios and intercoms, giving a less expensive option to get in plane audio/video, rather than purchasing a GoPro.



Next month's poll: "I Plan to Attend Oshkosh" **CLICK HERE** to vote.

Letters to the EDITOR

Editor@themooneyflyer.com

I read the piece on the tank sealing ... It looked good and adding the picture made a big difference.

So far, the sealing process has work 100% with no stains from the inspection plate seams or any rivets. Hope it saves some folks a reseal expense.
Nat O

RE: From The Editor: First turbulence. It isn't always a bad thing. I have made many trips along the Owens Valley, Reno to the LA Basin or the reverse. There is a little kink in the middle a bit south of Bishop. The south end points a bit more to the west past that. In calm wind a short, faster route is along the west side. NEVER do that with any wind!!! We lost a well-known fellow near there and I suspect he was sightseeing without knowing of that turbulence. With wind, use the east side, it is likely a faster way then and survivable. Winds are almost always from the west. So, they are rough and going down on the west side. Note that the mountains on the west are the main ridge of the Sierra Nevada! Then after crossing the flat valley floor and reaching the lower ridge to the east they are going up. Smoothed out really well and giving "lift" to save time or fuel. There must be more places like that, but local knowledge is essential.

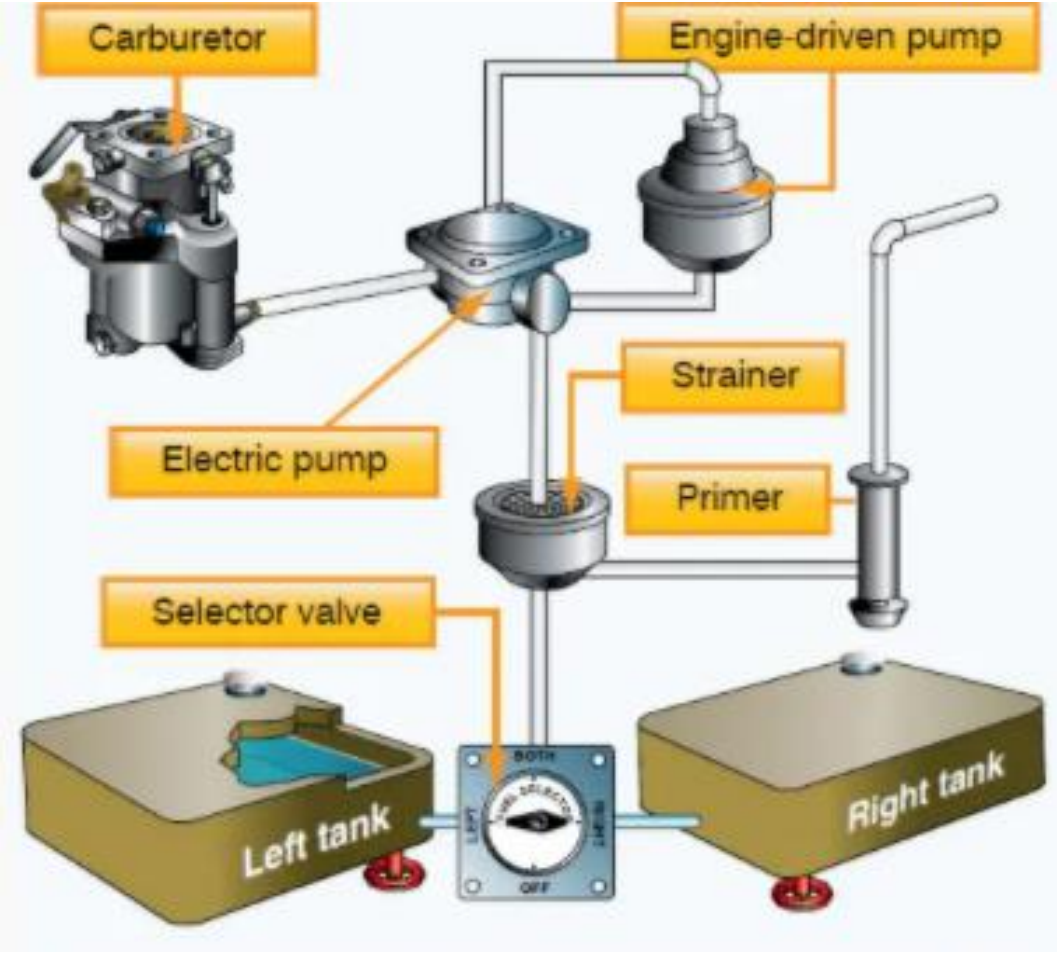
There was one omission about the Lenticulars. They are sequential. The turbulence is the sometimes deadly rotor under the cloud. On top and nearby it is very smooth and is going up or down depending on your location. Their other name is "Wave Clouds." It is best if you are going the proper direction to play sailplane pilot and build speed going down to get to the next area of lift. Unfortunately, that situation is a bit rare. Often in Oxygen country. Be equipped!

UGH!!! Epoxy on the outside to seal a tank leak! The pictures are really ugly! How do you get that off when a real repair is to be done? Hard work I presume, paint damage maybe. I still miss our late friend the "Mooney Miser" and his substance "Aero Seal." I had Top Gun, Tom Rouch, use that on my Mooney many years ago and it is still working quite well. Is anyone trying to get the patent and STC so they can produce that great inexpensive easy to use product? For those not familiar, the tank is emptied and a vacuum applied. A portable vacuum cleaner on the tank vent is good enough. Use duct tape I suppose. When the inside and cracks are dry the cleaner is applied on the outside to remove any petroleum remaining. The vacuum has remained applied. The cleaner is very volatile and leaves no residue. Then the sealer is applied and sucked into the cracks, sealing the seam as well as the old internal sealer cracks. Any on the outside just wipes off. It hardens only in the cracks. The paperwork cost is the problem in getting to make the sealer kit. I think it is very ordinary stuff, but with one item a bit environmentally bad. But in very small volume. The cleaner smelled just like "trichlor!" I have seen it recently for sale in spray cans as the base for electrical contact cleaners. The sealer itself has to be one of the many forms of a common product. The color, slightly yellowish, and the odor convinced me it is just one of the varieties of the common sealer "Loctite." Maybe the patent tells which one, there are a lot of

those, but I haven't looked. Useless without the STC! So, for now, going to one of the outfits that dissolves the old sealer and uses the new one is the solution there.

Last comment. Cross winds. In the West, a problem, but at times a solution is at hand quicker than to wait for tomorrow. Former Military Base Airports. 150-foot-wide runways and at times taxi ways. When you "have to" land and a crosswind has to be encountered, consider the geometry of the runway. Not all places are like "Vegas. McCarran and North Town with different runway directions and nearby. Landing on the centerline is good for learning, but not always best or possible in the field. Land at an angle to it starting from the downwind edge! Fully or partially compensating for the crosswind. Maybe one main wheel at a time. The other one only a couple of inches up. Be very aware of the side load on the gear. It will take some load, but not much. But this borders on an emergency situation. Once the mains are down and the nose is planted make a long radius turn to line up with the far edge. If the dirt beyond is flat and hard, so much the better. A Tail Dragger with Crosswind Gear is in good shape. Without that, Hope you are good with it. Of course, we are talking to Money pilots here. Take off can be assisted by a wide, even if a stub taxiway. Use all that width to build speed into the wind as best you can and then make the gradual turn as you enter the runway. Plan to be in the air before reaching the far side at some angle. Motivation must be as good as skill! The bad guys with guns behind you for example. Mainly, know your airplane and approach unusual ground maneuvers gradually. Start with light crosswind.

This unusual work is not for beginners I have over 3,000 hours in my Mooney. Getting more may happen. One more medical test in 2 weeks.
Lin M



Don't Do These Things When Starting Your Engine

Phil Corman
Co-Editor

When we turn the ignition switch, we rarely think about the conditions we are initiating inside our engine. But how you start your engine can have a profound effect on wear and tear and maintenance costs. Unless you fly every few days, most of the oil has dripped down into the sump and there's not much left at the top of your engine to protect it until you pump some nice warm oil back up there. That won't happen until a bit after starting. During those initial seconds, you are putting more wear and tear on your engine than you probably do during your entire flight. There are several precautions we can take to minimize the negative effect of starting your engine.

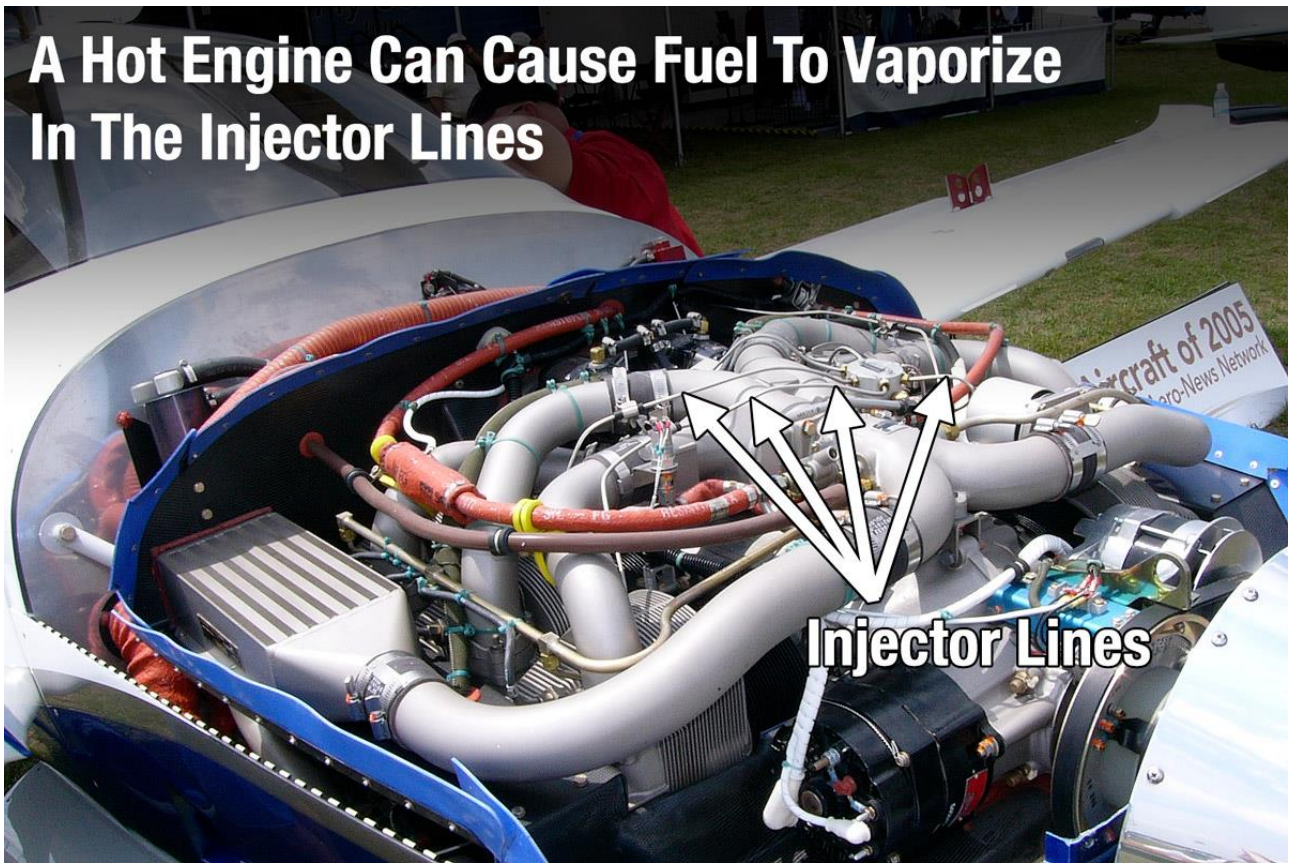
Before we go there, here are a few things to put into your knowledge bag. If you have not flown for a while, YOU SHOULD CONSIDER three things: **First,** turning the prop a few times will do virtually nothing for your engine or moving oil. **Second,** if you do not fly often, keep in mind that performing a fast taxi around the airport to get the oil up to the upper engine will do just that, but it will not burn off any of the condensation that is corroding your engine. To do that, you need to go fly that Mooney for approximately one hour at cruise to burn off all those condensates. **Third,** regular oil will protect your engine in the hangar for 36 hours plus/minus. If you use CamGuard, that protection can be boosted to 500 hours. Seems like a good investment.

Over Priming

If you have a primer, don't over prime. You are essentially pumping oil into the intake manifold. Many pilots over prime, and few under prime. Be conscious of this.

Dealing with Vapor Lock

When you shut down a fuel-injected engine, the fuel lines heat up and vaporize the fuel. In this condition, the fuel pump cannot pump very well. In a Continental, by pulling the mixture to idle cutoff, you can pump all day (20-30 seconds is recommended) to recirculate cooler fuel. You will not flood the engine because the mixture cutoff forces the fuel back into the fuel tanks. Then, you can start. In Lycomings, be careful not to flood the engine. But if you do, utilize your Flooded Engine start procedure.



Engaging the Starter too long or too often

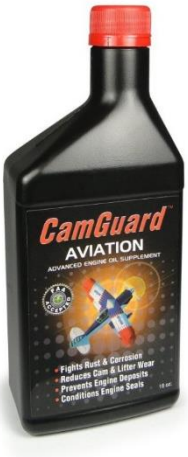
Your starter motor draws a lot of amps. Lots of amps translates into lots of heat and heat is very bad for your starter motor. A good rule of thumb is not to crank more than 15 seconds. Reengaging the starter immediately does not give your starter a chance to cool down. So be kind to your starter motor and it will, in turn, be kind to your wallet.

Too Much Throttle at Startup

Have you ever heard a pilot start up their engine and hear it go to high throttle? This is a quick and easy way to wear your engine down. Remember the first seconds after start, your engine has circulated very little oil, so the moving parts are grinding away.

Cold Weather Starts

Cold weather exacerbates the grinding of the engine after startup. Let's call the weather cold when it is at or below 32°F. In this condition, your oil is very cold and the least viscous it will be all day. It is going to take longer for the oil to warm, circulate and provide lubrication. Your only recourse is to pre-heat your engine. I have a Tanis heater installed which works miraculously in a short period of time. I didn't have one of these in my previous Mooney, so I mounted a light on a board, stuck it under my oil sump and then threw a horse blanket over my cowling. This worked well. Also, you could blow warm air. Just don't set it up so it's a fire hazard. With the oil warmer, you still need to be careful as the dissimilar metals in your cylinders are cold and the pistons/rings might need a little warming.



Following these suggestions can significantly improve the life of your engine and wallet. And, it goes without saying; **1)** Change your oil regularly, **2)** Change the filter each time, **3)** Fly often, and **4)** Use CamGuard.

The Story Behind "*High Flight*"

In 1922, John Gillespie Magee was born in Shanghai, China, where his parents were serving as Anglican missionaries. His father was from Pittsburg, Pennsylvania and his mother was a native of Helmingham, Suffolk, England. John spoke Chinese before he spoke English.

In 1929, at age seven, he began his education at the American School in Nanking. When he was nine years old, he moved with his mother to England. He spent the following four years (1935 – 1939) at Rugby, a Kent County preparatory school for boys. There, he developed the ambition to become a poet and won Rugby's Poetry Prize in 1938.

Magee visited the United States in 1939 and because of the outbreak of World War II, he was unable to return to Rugby for his final school year, so, his senior year was spent at Avon Old Farms School in Avon, Connecticut. There, he won a Scholarship to Yale, but instead, in late 1940, John joined the Royal Canadian Air Force. He attended pilot training in Canada and later, was sent to Britain for fighter training.

He was posted to No. 53 Operational Training Unit at RAF Llandow, in Wales. His first flight in a Spitfire occurred on 7 August 1941. On 18 August, on his 7th Spitfire flight, he flew to 33,000 feet. This was by far his highest flight to date and is the flight usually accepted as having inspired his famous poem.

As he climbed upward, he was struck by words he had read in another poem — "To touch the face of God." Soon, after landing, Magee completed his poem and called it "High Flight".

"Oh! I have slipped the surly bonds of Earth
And danced the skies on laughter-silvered wings;
Sunward I've climbed, and joined the tumbling mirth
of sun-split clouds, — and done a hundred things
You have not dreamed of – wheeled and soared and swung
High in the sunlit silence. Hov'ring there,
I've chased the shouting wind along, and flung
My eager craft through footless halls of air....

Up, up the long, delirious, burning blue
I've topped the wind-swept heights with easy grace.
Where never lark, or even eagle flew —
And, while with silent, lifting mind I've trod
The high untrespassed sanctity of space,
– Put out my hand, and touched the face of God."

About a month later, in a letter dated 3 September 1941, Magee sent the poem to his parents. His father, then curate of Saint John's Episcopal Church in Washington, DC, reprinted it in church publications.

After completing his training with No. 53 Operational Training Unit, he was assigned to No. 412 (Fighter) Squadron, Royal Canadian Air Force. This squadron had been formed at RAF Digby on 30 June 1941. There, he continued his Spitfire training.

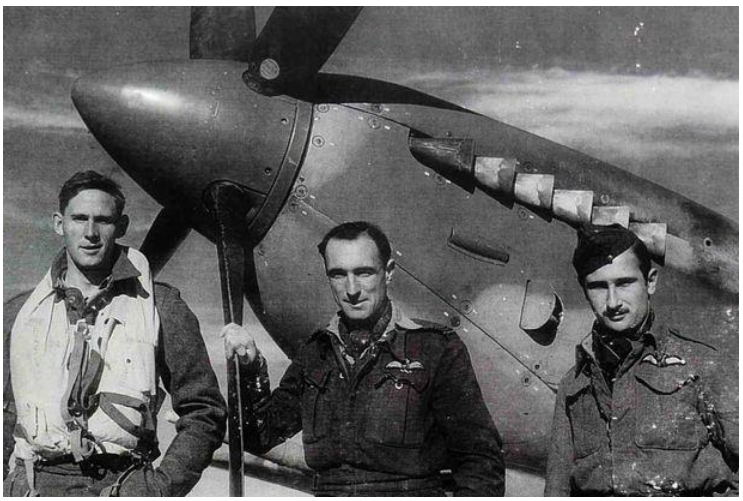
On 20 October 1941, he took part in a convoy patrol, and on that same day the Squadron moved from the Digby Aerodrome to nearby RAF Wellingore in Lincolnshire, a satellite station of Digby.

On 8 November 1941, he took part in a sortie to Occupied France escorting bombers whose mission was to attack the railway workshops at Lille. Twelve Spitfires (three four ship sections) headed out over the English Channel near RAF Manston. They crossed the hostile coast east of Dunkirk, encountering flak, and were attacked by Luftwaffe fighters. Of Magee's four-ship section, only he survived. In late November- early December 1941 Magee took part in three more convoy patrols.

On December 11, 1941, Magee departed RAF Wellingore with other members of the Spitfire Squadron, to practice air fighting tactics. Also in the area was an Airspeed Oxford trainer flying out of RAF Cranwell. It was piloted by 19-year-old Leading Aircraftman/Pilot Under-Training Ernest Aubrey Griffin. Over the hamlet of Roxholme, which lies between RAF Cranwell and RAF Digby, in Lincolnshire, Magee and Griffin collided just below the cloud base at about 1,400 feet AGL. Magee succeeded in opening the canopy and bailing out, but because of the low altitude, his parachute did not have time to deploy. Both men died. They were just 19 years old.

Magee's body was buried in the graveyard of Holy Cross Church in the village of Scopwick in Lincolnshire. On the gravestone are inscribed the first and last lines from his poem *High Flight*.

Because Magee was a U.S. citizen, he was among the first American casualties of the war. His parents were interviewed by Washington newspaper reporters and his father gave the journalists a copy of “High Flight.” The poem became more widely known through the efforts of Archibald MacLeish, then Librarian of Congress, who included it in a 1942 Library of Congress exhibition of poems called "Faith and Freedom". The manuscript copy of the poem remains at the Library of Congress. There, it was displayed with two renowned World War I poems, John McCrae’s “In Flanders Fields” and Rupert Brooke’s “The Soldier.”



“*High Flight*” quickly became one of the best-known poems of the war. British pilots often flew with a copy in their flight suits and the RCAF distributed plaques with the words inscribed, to all airfields and training stations.

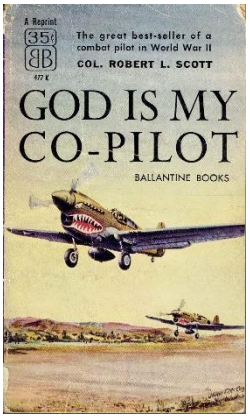
During April and May 1942, many Hollywood stars including Laurel and Hardy, Groucho Marx, Cary Grant, Bing Crosby, and Bob Hope joined the Hollywood Victory Caravan as it toured the United States on a mission to raise war bonds. Actress Merle Oberon recited *High Flight* as part of this show. During the performance on 30 April 1942, at the Loew's Capitol Theatre in Washington, D.C., before her recitation of *High Flight*, Oberon acknowledged the attendance of his father, John Magee, and brother Christopher Magee.

Orson Welles read it numerous times on radio programs throughout the war.

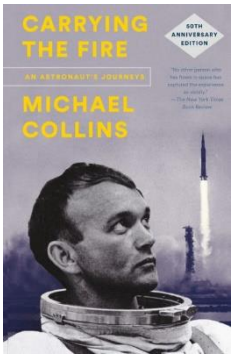
High Flight has been a favorite poem amongst both aviators and astronauts. It is the official poem of the Royal Canadian Air Force and the Royal Air Force. It must be recited from memory by fourth class cadets at the United States Air Force Academy. It is on display in the USAFA Cadet Field House.

Portions of the poem appear on many of the headstones in the Arlington National Cemetery, and it is inscribed in full on the back of the Space Shuttle Challenger Memorial.

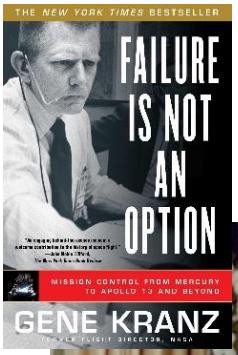
It is displayed on panels at the Canadian War Museum in Ottawa and the National Air Force Museum of Canada, in Trenton, Ontario. It is the subject of a permanent display at the National Museum of the United States Air Force, in Dayton, Ohio.



General Robert Lee Scott Jr. included it in his book *God is My Co-Pilot*.

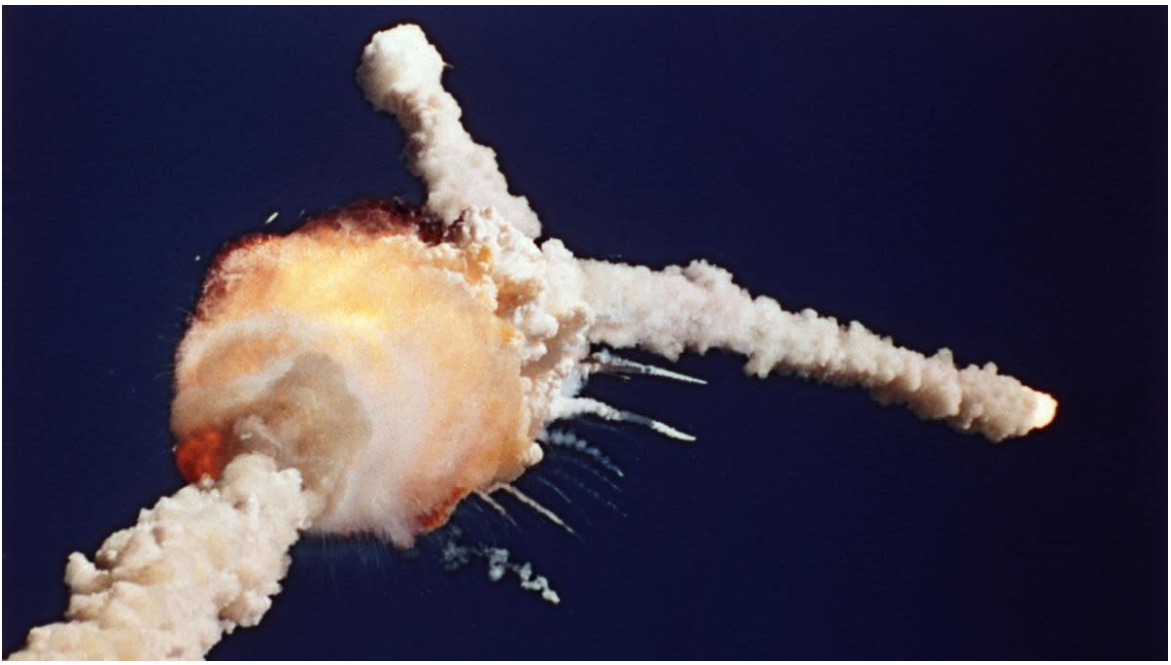


On his Gemini 10 flight, Astronaut Michael Collins brought an index card with the poem typed on it. He also included the poem in his autobiography, *Carrying the Fire*.



Former NASA Flight Director Gene Kranz quoted the first line of the poem in his book, *Failure Is Not an Option*.

U.S. President Ronald Reagan used part of *High Flight* in a speech on the night after the Challenger disaster on 28 January 1986.



Indeed, the sentiment in High Flight means a great deal to aviators around the world. Its beautiful poetic words resonate in our hearts. For without a doubt, we have "*done a hundred things [others] have not dreamed of*". We have flown our "eager [Mooney] through footless halls of air . . ." and "touched the face of God".

Skipped Checklists, Distractions, and Mistakes

Jerry Proctor wrote an excellent article in last month's Mooney Flyer, which drew some correlations between how we drive and how we fly. If you missed it, then please, go back and read it. At the end of the article, he mentioned keeping a journal or diary of your flights, including the mistakes. This will help prevent making them again. I don't have a journal, but I have kept a blog of most of my flights and try to include the good, the bad, and the ugly. I also typically call my dad on the drive home from the airport to chat about the flight and sometimes hear stories of when he flew. Jerry's article got me thinking about mistakes I have made flying. It should come as no surprise that many of them have involved distractions and/or skipped checklists.

What is wrong with this picture?

If you said my gear is still down, you are correct. This was about five minutes after taking off and about four miles from the departure end of the runway. What is even worse, I didn't realize it until almost 15 minutes later when I reached my cruising altitude of 8,500'. What went wrong? I was distracted, out of my routine, and the plane was behaving as I expected, based on previous experience. No, not experience forgetting to pull up the gear, experience departing from St George, Utah (KSGU) to the southwest.

This was the second flight of the day. We had just landed after a short sightseeing flight with my father-in-law, celebrating his 81st birthday. We were departing on runway 19 with a 4-knot quartering tailwind. 19 is the preferred runway and at 9,300' long, we had plenty of runway. As we lifted off, there was a little push to the left and cognizant of the winds, I was keeping a close eye on my vertical speed. Add to that the distraction of a couple calls heard over the radio and I made my crosswind departure without raising my gear. Despite having the gear down, the climb was not much different than what I have experienced in the past at KSGU when the winds aloft are coming out of the northwest. Climbing over the gorge you will go from 1,500 fpm down to nothing and back up as you pass through lifting waves. I expected this type of climb from the winds aloft we had on our previous flight, and the climb was what I expected to see.
Leveling off in cruise, all the gauges looked good. I adjusted my RPM. The manifold pressure was good, but my speed did not make sense. It just was not increasing even though I had leveled off. As I started going back through my checklists, I realized my gear was still down. How embarrassing.

We are conditioned to be on guard for distractions when taking off and when landing, because of the critical nature of those phases of flights. However, distractions in cruise can cause problems as well and once led to me busting the Vegas Bravo. Southern California to Salt Lake to visit family is a common flight for us. My typical altitude going to Utah is 9,500' and my route takes me right over Vegas. I have not been denied Bravo clearance, although sometimes they route me to the East over Boulder City. Frequently they will wait until the last minute before clearing me through. Once I even started a turn away, called up and requested clearance because they had forgotten about me.

On this flight I had a friend with me and after the handoff, we were busy chatting about flying, the solar farms at the State Line, and just enjoying the flight. I was distracted by the conversation and did not notice that the radio had been quiet since the handoff. Also, despite knowing I was approaching the Bravo, I was not paying attention to my location on my tablet. We were about a mile inside the Bravo when I realized where I was and began an immediate right turn to exit while making a radio call.

Me: "Vegas Approach, Mooney 78878, are we cleared into the Bravo?"
Silence……

Me: "Vegas Approach, Mooney 78878, are we cleared into the Bravo?"
Unknown: "You're on Guard."

Crap! My normal procedure when the SL-40 was my #1 COM, was to contact the next controller on the handoff, then dial in Guard (121.5) and hit monitor. I had checked in with Vegas Approach and dialed in Guard, but instead of hitting monitor I hit the flip/flop key. Distracted by conversation, I did not notice the radios had been quiet. I quickly hit the flip/flop.

Me: "Vegas Approach, Mooney 78878, are we cleared into the Bravo?"
Approach: "Mooney 78878, what is your intended route of flight?"
Me: "Direct Mormon Mesa."
Approach: "Mooney 78878, cleared through the Bravo, advise prior to any altitude changes."
Me: "Cleared through the Bravo, will advise before any altitude changes, 878."

I waited for a telephone number to call, but none was given, and the flight continued without any issues.

Other than two hours in a Cessna in Hawaii, the only plane I have flown for the past 500 flight hours is my Mooney. Complacency is a dangerous thing. I know some pilots that rely on flows instead of checklists and some that backup their flow with a checklist. When I have been complacent, thinking that I have "done this so many times" and skipped a checklist, it has not always worked out.

On a recent Fullerton, (KFUL) to Santa Barbara (KSBD) IFR training flight with my CFII, we landed at KSBD. After taxi back to depart, we reviewed the plan for the flight back and I went through my checklist to configure for departure – with one exception. I usually lean the engine on the ground – so lean that applying power makes the engine stumble. Just before taking the runway, I usually adjust the mixture and turn on the electric fuel pump. These two steps are at the end of my pre-takeoff checklist. Like the other items, I verbalize them out loud. However, on this occasion, I did not. Despite not completing and verbalizing the checklist, I did turn on the electric pump before

taking the runway. I failed to adjust the mixture, but it was not lean enough to make the engine stumble, so it sounded right, and the RPM was correct. We were off the ground where I had expected, but my EGT's were climbing and climbing fast. As I was looking at the EDM900, I tried to figure out what was going wrong. Then, my CFII said, "Mixture." I pushed the mixture to "rich" and everything came in line; we continued the flight. Neglecting to verbalize the last part of my checklist bit me.

One last checklist failure. A few years ago, we were on a long cross country and I made a fuel stop in Delta, Utah (KDTA). The airport was on our route at about the halfway point, and it had the cheapest 100LL around. It was the perfect stop. It was summer and the DA was over 8,000' but Delta has a 5,500' runway and despite being in Utah, it sits in a relatively flat valley that is over 100 miles long. This allows plenty of time for my O-360 to climb out.

We landed and my wife and son went into the pilot lounge for a restroom break and to hangout in the air conditioning while I fueled the plane. I finished fueling, made a quick stop at the restroom, and we climbed back in to continue our journey. I have started the plane and taken off many times. I had used the start checklist just a few hours earlier when we left CA, and I skipped my startup and run-up checklists. It should also be noted that I had skipped my after-landing checklist. On the exceptionally long taxi to runway 17, I did a quick mag check, not wanting to be sitting on the ground in the heat any longer than necessary. Flaps and trim were set, everyone was buckled up, the luggage and cabin door were closed, and there was no other traffic, so we took the runway to depart.

During summer climb outs, it is not uncommon for me to see my CHT's on #3 and #4 at 415-420°. However, just after takeoff, they were climbing past 420°. With plenty of flat ground and no obstructions to worry about, I pushed the nose over for more speed to help with the cooling. But now they were past 425° and heading for 430°. This was not normal and was not good. I checked mixture and started to level off for even more speed and cooling while reducing power with intent to return and land. Suddenly, I saw that my cowl flaps were closed. I opened the cowl flaps, continued level flight for a moment and watched my CHT's come down to normal range. I then resumed my climb. If I had used my after-landing checklist, or my startup checklist, or my run-up checklist, I would have caught that the cowl flaps were closed and saved myself possible cylinder damage and those nervous moments right after take-off.

Learn from your mistakes, and mine too. Distractions, while especially dangerous during the critical phases of takeoff and landing, can also cause problems during any phase of flight. Complacency and skipping checklists because "you've done them 100 or 1,000 times" can also come up and bite you. There are a lot of reasons the professionals have a better safety track record than General Aviation. We don't always have a two-person crew to help with resource management, but we can establish procedures and checklists and resolve to always follow them, even on a hot summer day during a fuel stop when we just want to be in the cooler air at altitude. Flying may just be a hobby for many of us, but we do not have to treat it as a hobby. If we take a professional approach, we will see an improvement in all aspects of our flying.

Fatal Distractions

By Richard A. Simile
Thunderbird Aircraft Sales

A few years back, my Mooney Aircraft Sales partner Lee Drumheller and I were displaying two Brand New Mooneys for the Texas Aircraft Expo at the West Houston airport. Our display was on the ramp, but very close to the single runway, so we were naturally drawn to watching the constant take-offs and landings. On this day, we observed something horrific. We saw a 350HP Piper Lance departing with full fuel and four people on board. The firewall baggage door opened and distracted the pilot beyond his capability of controlling the airplane. It appears that he was going for The Baggage Door "Trip Save" and made an extremely low crosswind turn at a lower power setting. Then, in the downwind turn, the aircraft started to descend. As he "poured all the coals to it", the high torque rolled it straight in from about 300 feet. Four people, (two young couples), perished in this needless accident.

The subject today is distractions and how to cope with them. This accident effected Lee and I a lot and we started randomly asking people if they ever practiced for distractions. Not one person said that they had. It is understandable that they don't, but I can tell you that both Lee and I were completely distraught for the rest of the month, because of what we had witnessed on that day.

We decided we were going to try and do something about it. I was scheduled to give a safety presentation at the Mooney Summit in Panama City, Florida. We decided to shift my typical safety presentation to a direct focus on distractions. We thought it would be interesting to do an experiment, so we took all the paper out of the printer and put it in my car. We picked a very slow part of the day and I drove down the taxiway at 70 miles an hour with all the windows open. I know it sounds very funny, but I must tell you that something very interesting happened. We discovered that even though I knew the flurry of papers was coming, I almost completely lost it when I reached 70 miles an hour while trying to demonstrate how to handle a distraction. YES!!! It was that distracting, even though I knew it was coming!!!!!

What happened next was very interesting. We did a second experiment, but this time I solidly focused on driving and chanting in the loudest voice possible, "***Fly the plane, fly the plane, fly the plane".*** This time, I was rock steady on the wheel and completely focused on the task at hand.

THE CHANT REALLY WORKED!!! We did it again; same thing. The Chant was the only thing that really kept me focused.

Right now, I would say to anybody who is reading these words that no matter what happens in an airplane, just follow these three steps:

1) Fly the airplane and continuously CHANT LOUDLY “Fly the Plane, Fly the Plane!!!

2) Make your GAME PLAN to fly wings level to an altitude of 1,500' before you do one thing.

3) Figure it out from there.

Chant all the way up until your heart rate is down and the higher altitude calms you.

It was a remarkably interesting and educational experiment. Although we almost killed ourselves in the 1st attempt, as we tried to accurately demonstrate how to handle a major distraction, we survived and learned something very substantial. The bottom line is that CHANTING WORKS in any distraction!!! Please USE IT.

I am sure I do not have to tell anyone who is reading these words, who's ever been on a cell phone in a car and missed their turn, that you're not all there while you’re on a cell phone. Therefore, why should you continue a preflight without all your faculties focused on the task at hand? You shouldn’t. You can mitigate distractions during your preflight inspection by not talking on your cell phone. Give the inspection your full attention and you will make sure that your baggage door is locked.

Distractions have killed many people in airplanes and, incidentally, they are responsible for 90% of all gear up landings. A few weeks after I gave the revised presentation at the Mooney Summit, several people called to tell me how helpful it was, as they Chanted away some take-off distractions and climbed to 1,500’. They felt very safe with that game plan. I can tell you that was utterly rewarding for me to hear. One was a dramatic case of a Bose headset with depleted batteries that started screeching just after take-off. That has happened to me too!! It was satisfying and rewarding for me to hear how that issue was safely handled.

In the Mooney world, in flight baggage door openings are a non-issue, however, they will scare the crap out of those in the cockpit. Fly the plane up to 1,500' and figure it out from there. If that ever happens, you might as well just say to yourself right then, that the door is toast, but we are going to 1,500’ to safety look up the insurance company’s phone number ;-). If we keep our cool and tell ourselves to “***Fly the Plane, Fly the Plane, Fly the Plane”,*** all will be well.

Circle Like a Dog Before You Sit Down

by Jerry Proctor, CFII

I love dogs. Most of us do and a large percent of Mooney pilots and families have dogs and some love to fly with them. None of mine were that well behaved, and I do have a story about a puppy whizzing on the radio console in a Mohawk . . . but I digress.

Speaking of digression, it is known among those that study past human culture development, that the domesticated wolf, or dog, was critical to the progress beyond the hunter gather stage. It happened about 20-30,000 years ago when many areas started taming wolfs. Why are they key? Well, what do dogs do in the night when a stranger comes? Ask Sherlock Holmes. They bark. The dogs guarding the camp kept invaders away. Thus, clans could stay in one place and then develop specializations; things like, merchant, health provider, builder, leader, and of course, Mooney Pilot.

So, dogs are rather special. They are great companions because they are fun and playful. What do many dogs do before they sit or lie down? They circle around and then settle in.

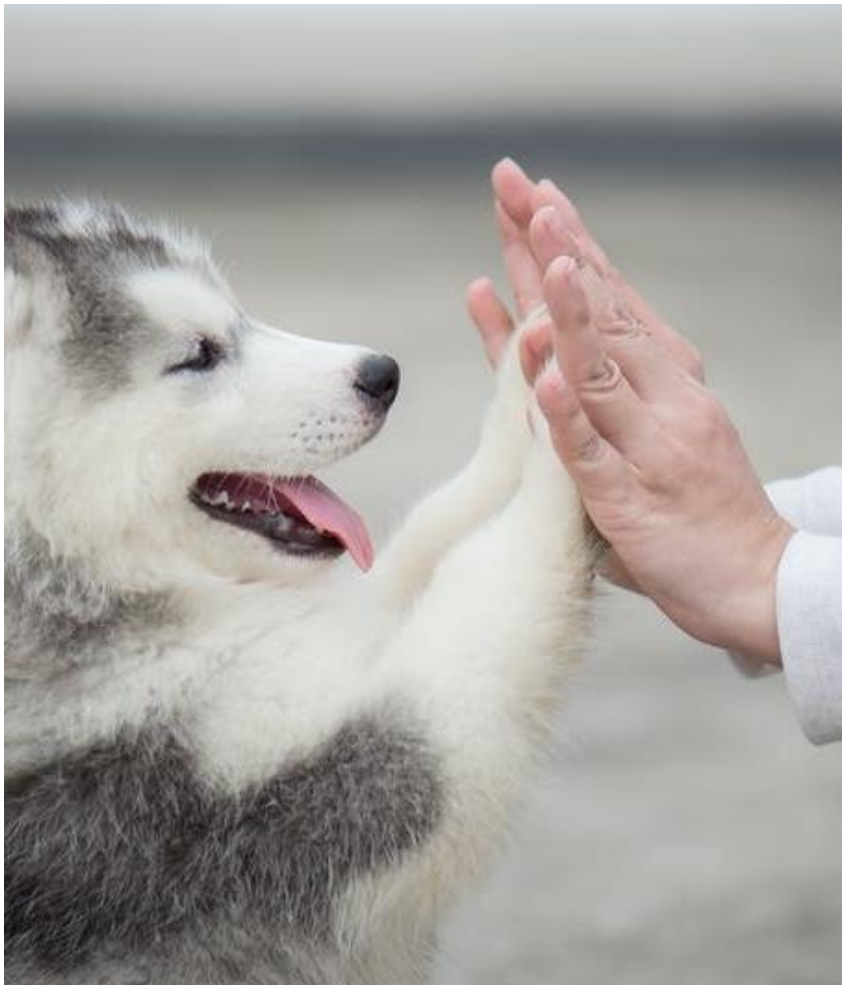
Well, I admit that I have taken a lesson from my dog. I circle around each Mooney I fly in, AFTER the preflight is done. It may seem strange, that after I have done the preflight, I stand back about 10 feet and slowly do a counterclockwise circle and look at the plane from a distance. I learned to do this by watching another pilot. When I was still a student pilot, this guy loaded up a couple of buddies, started up and tried unsuccessfully to taxi – without untying the tail hook. The red-faced pilot had to shut down, untie, and try again. Note to Self, **always double check.**

As a MAPA SF CFII, I get to watch lots of aircraft preflights. Some are rather quick. I call this recognizing their Mooney two out of three times. Others are very methodical, almost to an obsession. I usually just observe and make a comment about an area of interest.

When complete, they are ready to get in, and this is where I do my dog trick and circle around the plane – double checking for things like wheels unchocked, general condition, oil door closed, truss visual, pitot tube uncovered, and trim, etc. I don't want to be, 'that' pilot that has to shut down to remove something.

It only takes a minute or two, but it sure adds that extra feeling of assurance that the plane is ready to go.

So, be like your pup and try it. I think it will help set your mind on the serious but fun activity you are about to pursue. And while you are doing so, thank your doggie. Woof.



Wisconsin Aviation Expands Aircraft Interiors Service with the Acquisition of Jaeger Aviation & Its Spatial Interior

Wisconsin Aviation, Inc., announces the expansion of its aircraft interiors department with the acquisition of Jaeger Aviation, based in Willmar, Minnesota.

With its roots stemming back to 1945, Jaeger Aviation's sixty-four years of specializing in Mooney Aircraft sales and service made a new interior design for the vintage Mooney a natural. The "Spatial Interior," as this new design was labeled, allows for a simpler and better way to increase cabin space and expedite service while giving the Mooney a look it deserves. The Spatial Interior, now 15 years in the making, is recognized worldwide.

For more details, visit: www.WisconsinAviation.com or www.JaegerAviation.com

Wisconsin Aviation's aircraft interiors department, located in Watertown, Wisconsin (RYV), accommodates all types of general aviation aircraft. Its services include minor repairs to complete customized interior replacements. The Jaeger Aviation products and experience will help continue to grow this department.

Wisconsin Aviation offers a complete line of general aviation services including air charter, aircraft maintenance, avionics repair and installation, flight training and aircraft rental, aircraft management, aircraft brokerage, and fueling services. The corporation has locations in Madison, Watertown, and Juneau, Wisconsin.

For more information about Wisconsin Aviation, send email to Interiors@WisAv.com or call 920-261-4567.

Angle of Attack – Teaching Pilots

eleventh in the series

by Ron Blum

While attending Sun-N-Fun about a month ago, I went by the National Association of Flight Instructors (NAFI) booth to pick up a copy of the March/April "Mentor". A friend had written an article on loss of control and our work on American Society for Testing Materials (ASTM), entitled "Breaking the Chain." As all good hangar flying goes for me, I ended up adding another monkey on my back ... I need to write an angle of attack (AOA) article for NAFI. I can talk about AOA, non-stop, for hours on end, but NAFI added a twist … and you're my trial audience. I am not a CFI, but they want to know how CFIs should teach learners about AOA. For me, this adds a complexity and challenge to an otherwise easy task.

We'll spend the next couple pages discussing what AOA is and what it is not, and some truths and myths that surround this value. We're only touching the iceberg tip, so let's hear your comments, questions and concerns.

Most Loss of Control fatalities occur on takeoff/go-around and not the base to final turn

Aircraft flight characteristics and AOA is where CFIs come into the picture. We need to get to the pilot before the aircraft stalls/spins/spirals. What we know is that 97% of fatal loss of control events begin at or below pattern altitude and only 3% initiate above pattern altitude. In other words, good or bad spin characteristics of an airplane won't significantly change the fatality rate. In addition, most fatal accidents occur on takeoff/go-around and not the base to final turn. High power aggravates the issue.

CFIs (and Learners) are taught that AOA is the acute (small) angle between the chord line and the relative wind, which is equal but opposite to the direction of travel. Although the first statement is true (chord line and relative wind), the part about direction of travel of the aircraft is not true. What? Really? This is what we have all been taught … for decades … and by Wolfgang of "Stick and Rudder" fame!

The relative wind being equal and opposite to the direction of travel statement is true only if the air (atmosphere) itself is not moving. The question I then get asked is, **"How much can the atmosphere's vertical movement change AOA? It's minor; right?" In a word, "No." Let's take a quick look.**

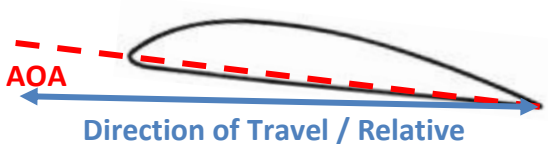


Figure 1A – AOA (direction of aircraft)

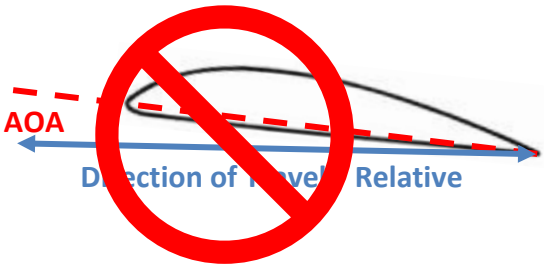


Figure 1B – AOA (direction of aircraft)

In figures 1A/1B above, we see what has been taught for decades. Relative wind is equal and opposite the direction of travel. This is valid for perfectly calm air. But is air ever calm? Think about all those little (and at times big) bumps we experience while flying … both up and down. Those bumps are the vertical movement of the air changing AOA. Let's take Figure 1A and add in

atmospheric vertical movement to get Figure 2. Note: if the air is totally calm, **AOA** is right. If vertical movement of the air is included, AOA could be **AOA1** or **AOA2**. One can see that this change is not minor.

As an example of the change in AOA due to vertical air movement, let's look at V_A (design maneuvering airspeed). At airspeeds at or below V_A, the airplane will stall before structural damage (typically 3.8G in a normal category airplane). At airspeeds above V_A, the airplane could have structural damage before stalling. Looking at this from an AOA perspective, the AOA could change from 4^o - 5^o (typical cruise AOA) to stalled (typically 12^o-15^o), due to the vertical movement of the atmosphere itself. It's not a minor change. Ironically, the slower the airplane is moving forward, the more the AOA will change due to vertical movements in the atmosphere.

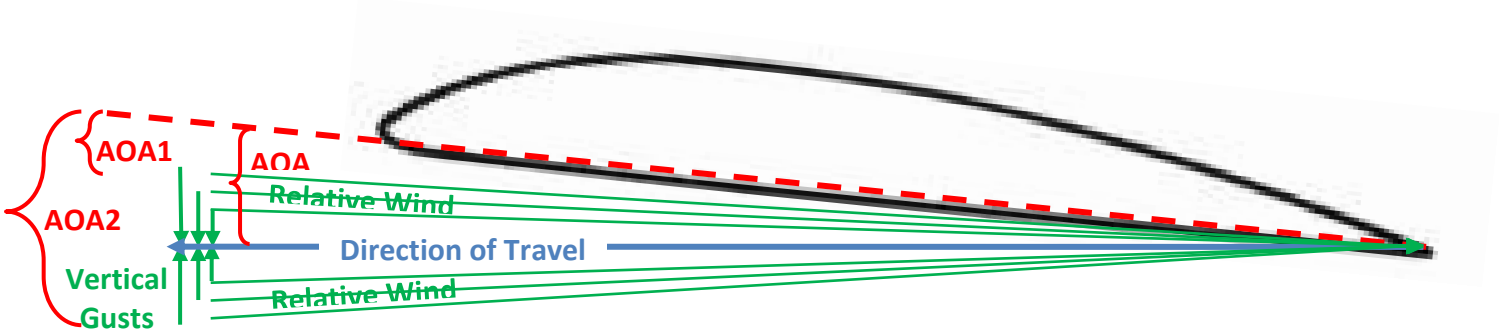


Figure 2 – AOA (relative wind)

Let's look at sailplanes for just a bit. In Kansas, the rate of climb of a sailplane due to a summer thermal may be 600 to 800 fpm. If the normal sink rate of the sailplane is 200 fpm, then the thermal (rising air) is going up at 800 to 1000 fpm … roughly 10 mph. If you're flying around at 65 mph when the airplane encounters this vertically rising air, the AOA will increase by roughly 9^o. Again, not a trivial amount.

Measuring and calibrating AOA – these are other areas to be discussed. All measured AOAs are local AOA. With our airplanes having a single, centerline, propeller, AOA should be measured on the wing. Location is critical. At some locations near the wing, the local AOA will not change with a change in aircraft AOA, and at other locations the local AOA will change much more than the aircraft AOA. This is why AOA needs to be calibrated throughout the entire range.

A vane will always measure local angle of attack. Vanes still need to be calibrated throughout the range of aircraft AOA. Differential pressure alone cannot measure AOA. Differential pressure divided by Q_C can be related to AOA. Again, a full aircraft AOA calibration is required. Both systems are used on high-end Part 23 airplanes (turboprops and jets) and all Part 25 aircraft, but they are expensive ($60K and higher per system).

What should an AOA system be doing for the pilot? It should visually give the pilot the weight corrected V_{APP} and V_{REF} airspeeds (1.3 times V_S at the current aircraft weight and configuration). It should also aurally or through a tactile function, warn the pilot of an approaching stall. AOA systems are better for the low airspeed ranges of the envelope. Airspeed indicators are still better for the high-speed end of the arc, such as redlines, flap speeds, V_A, etc.

Although I will say what can and cannot work correctly, technically (I'm an Engineer), we don't need to get into the politics of particular systems. If ANY system makes you fly more safely, I support it!

Next month: How do the current stall warning devices really work?

I really want to read your comments, questions and concerns about this article. I appreciate suggestions on where to take these articles and/or answer any questions you may have. Please email me at solutions@blueontop.com. Until next time keep the blue on top.

Ron Blum is an aeronautical/astronautical engineer with a 35+ year career managing general aviation Flight Test and Aerodynamics departments from shore to shore and border to border. He was Chief Engineer of the Mooney M-10 in Chino, CA. He founded Blue on Top LLC, providing engineering and management consulting, Flight Analyst DER services and keynote speaking.

ForeFlight Hacks

Runway Extended Centerlines and Runway Information

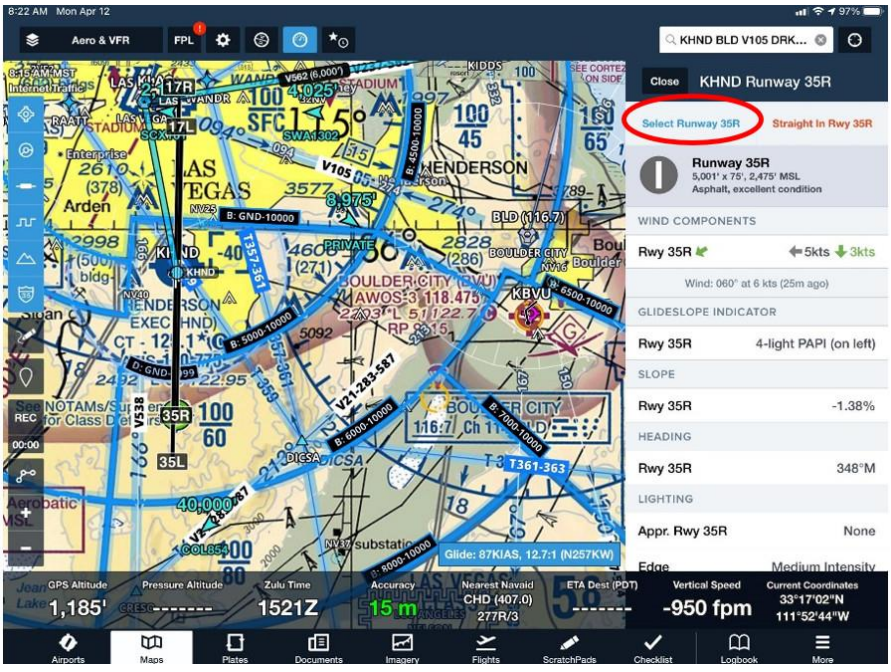
To ensure that you have "Extended Centerlines" enabled, **1)** Touch "More" at the bottom right of the screen. Then, click on the  icon at the top right of the menu.

Settings

2) Scroll down a bit and enable "Extended Centerlines".

When you enter a flight plan, the departure and destination airports will display runway extended centerlines.

Touch the name of the runway you plan to use.
In this case, Runway 35R.



A sidebar will appear. If your iPad is connected to WiFi or an ADS-B receiver, like a Stratus, you'll see the Wind Components, (based on the last time the METAR/AWOS/ASOS was updated). The sidebar also includes what type of Glideslope indicator is installed, runway slope, approaches to that runway and the touchdown elevation.

If you touch "Select Runway" (circled in red), a dashed **blue line** with little arrows will overlay and highlight the selected runway extended centerline. If you plan to fly a Straight In approach to that runway, touch "Straight In" and ForeFlight will draw a suggested course to that runway.

STOP SIGNS

by Ray Reher

You have probably threatened to self-immolate if you see another article on Runway Incursions. OK, but at least read these two points, before you decide.

1. With all the attention given by the FAA, air traffic controllers and airport management at many GA airports, the situation has gotten worse, not better. The FAA estimates that approximately three runway incursions happen every day at towered airports in the United States. Some airports have recently moved up a category on the FAA's bad-dog (watch) list due to a rash of recent incidents. Pilots are getting in trouble, with a potential for someone to get hurt.

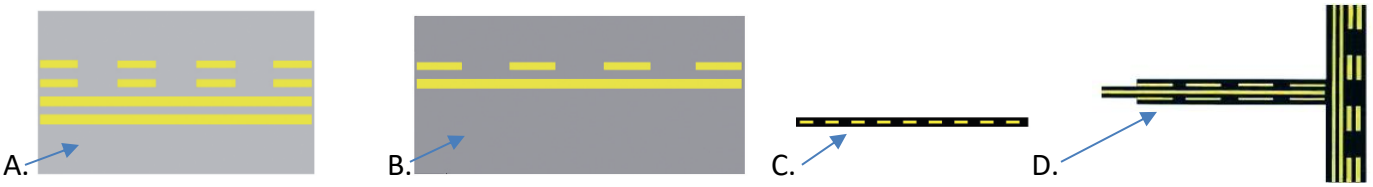
2. No one is immune. Although GA accounts for 65% of runway incursions, there are plenty of airline pilots with flying hours numbering in the tens of thousands, who have deviations/violations on file for this very issue. It is surprising just how common it is with the big shots. The airline crew standing joke is, "The hard part is getting to the runway and back to a gate without getting in trouble. The rest of the flight is easy." No one wants to see a pilot get in trouble, especially on the ground. Controllers just hate reporting incursion incidents, but they have no choice.

This all sounds simple, sitting here at zero airspeed, but things happen fast, and taxi routes can be confusing. Commercial carriers have taken off on wrong runways with tragic consequences. You got your heart started landing at your crosswind limits. You're trying to keep it under control without doing a ground loop demo for the restaurant patrons, …" turn here or there, continue to, or hold short of, ground point 8 when clear", there's a yellow line, what kind, what NOW?! Maybe programming flashing warnings in the mental circuits, using a few bare bones basics can help reduce your vulnerability. I offer what follows.

Airports have STOP SIGNS; in the pavement, and not on poles because we have those pesky wings sticking out. **DON'T PASS THE STOP SIGN**, unless you are **100% SURE** – NOT 99%, but **100%** sure you have the right-of-way**.** On uncontrolled airfields these STOP Signs apply to right-of-way rules (final approach right-of-way over traffic holding short etc.) On controlled airfields, we have traffic cops that sort out the right-of-way. This statement may sound over simplified, but it is only meant to trigger a warning signal through the mental circuit boards. If you do not think you are at the 100% level, you MUST **STOP** and ASK. In the history of mankind, no one has been violated for asking a controller to repeat, clarify or confirm a clearance.

Conversely…. **YELLOW LINES** should flash red lights or scream at your mental circuits.

SOLID versus DASHED



When you see solid yellow lines paralleled with dashed lines, it's a **STOP** Sign. If you are approaching from the solid side, apply the **100% Sure Rule** or **STOP**! If approaching from the dashed line side it's an Exit Sign and unless otherwise instructed, you can cross it. Symbol (A.) (Runway Boundary) guards the runway. Symbol (B.) (Movement Area Boundary). Here is another **STOP** Sign, separating areas under ATC control (generally parking ramps from taxiway entry). Again, do not cross from the Solid Side unless you are **100% SURE** you are cleared. Symbol (C.) (Holding Position Marking). Although no Solid Line accompanies the dashed line, it is a **HOLD** point for a crossing taxiway, and may be a **STOP** Sign if ATC instructs you to hold short of that taxiway. The only other exception I know of to the Solid/Dashed combination is Symbol (D.) (Enhanced Taxiway Centerline Marking), a 150 ft solid line with dashes on both sides. It is simply a warning on the taxiway centerline that the Runway Boundary (**STOP** Sign) is ahead.

OK Smarty Pants. I'm in Flagstaff, AZ in the winter, and the taxiway and Runway Boundary (Yellow Lines) are obscured with snow? Or perhaps it's dark and the headlights on my vintage beauty aren't that great to see the pavement, or lousy markings, or something?

RED SIGNS go with YELLOW LINES

The Red Sign will be adjacent to and even with the Boundary Marker (**STOP** Sign). Sign (A.) will coincide with the Runway Boundary Marker (D.). Sign (B.) is much the same, except it **STOP**s you (until further cleared) from crossing under a final approach on a taxiway that does not comply with minimum clearance standards. The **STOP** Sign in the pavement will be identical (Marking D.). Sign (C.) simply says "DON'T GO THERE" or you may be on a One-Way the Wrong-Way, a Dead-End, or All-Terrain tires are required beyond that point.

The remaining Yellow Lines deal with taxiway boundaries and are simple. Never cross the double solid line. Anything over the lines is "not intended for use by aircraft" and/or may not be load bearing. You may even see these on what appears to be contiguous

pavement, but do not cross it. The dashed taxiway edge lines separate the taxiway from aprons/ramps etc. and may be crossed to exit the taxiway. The taxiway centerline is always solid.

A couple more points to keep your bacon out of the pan:

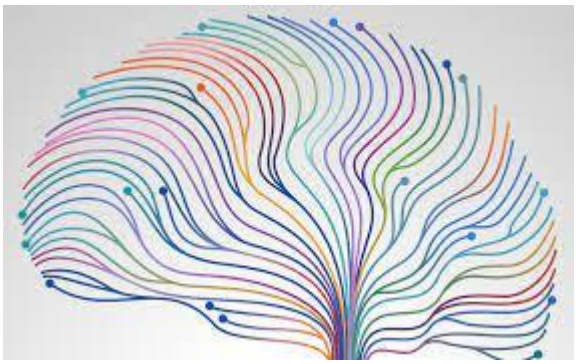
"The following procedures must be followed after landing and reaching taxi speed."

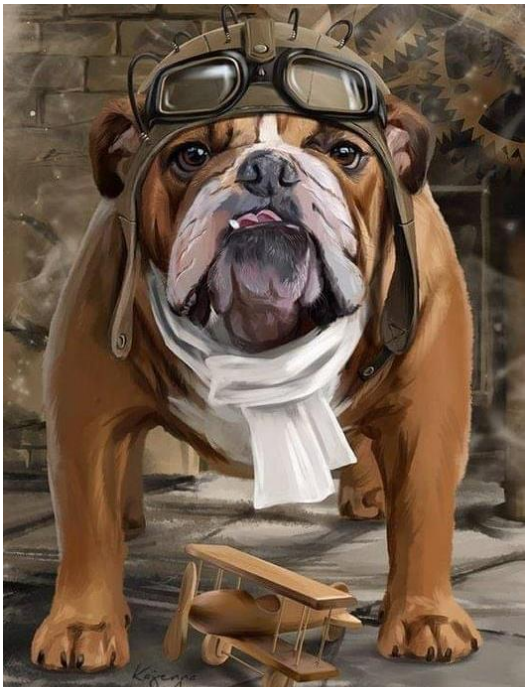
1. "Exit the runway without delay at the first available taxiway or on a taxiway as instructed by ATC. …must not exit… onto another runway unless authorized by ATC." At controlled airports… "should not stop or reverse course on the runway without first obtaining ATC approval". Exiting the landing runway to a reverse hi-speed taxiway without approval is considered stopping or reversing course.
2. "In the absence of ATC instructions, the pilot is expected to… taxi beyond the runway holding position markings (**STOP** Sign), even if that requires the aircraft to protrude into or cross another taxiway or ramp area. Once all parts of the aircraft have crossed the runway holding position markings (**STOP** Sign) … **HOLD** unless further instructions have been issued by ATC." These procedures are quoted from AIM 4-3-20 which some argue is non-regulatory. However, if you read the fine print at the bottom of the section, it "satisfies the requirements of 14 CFR 91.129."
3. One more issue on exiting. DO NOT automatically switch to Ground Control. You are not authorized to change frequencies unless and until you are directed.

I would guess that a great percentage of incursion incidents are due to a misunderstanding of ATC instructions rather than misunderstandings of signage. A comm technique to mitigate risk both on the ground and in the air, is attempting to mimic ATC as closely as possible when reading back their instructions. If you are accurate, think about what was said, and if you hear no correction from the controller, you are almost guaranteed to avoid a misunderstanding.

These are only the basics of airport signage and control issues, but probably the ones most likely to keep you out of the penalty box. Deer Valley Airport (KDVT), in North Phoenix is one of the simpler airports, with virtually all taxiways and runways parallel or perpendicular. But somehow, many DVT pilots seem to get into trouble.

You probably already know these basics. I probably know these basics, but that's not the point. This review may reprogram warning signals in your mental circuit boards, to make these **STOP** Signs flash almost without thinking. Remember, the reward for perfect compliance is no punishment. Another reward may be staying out of the body shop.



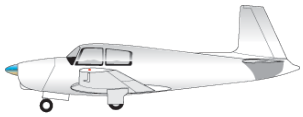


How I Feel After Nailing My Landing

There is a big inventory of serviceable airframe parts, including wings for M20C, E, F, G, J, K & R models, empennage assemblies, fuselages, rebuilt controls, rudders, elevators, ailerons, flaps, cowls, engine mounts, landing gear and small parts.

Paul Loewen is offering them online, or by phone. The website is www.LoewensMooneySalvage.com, and he can be contacted in Lakeport, California at **707 263-0462** or by cell at **707 272-8638.** Email is PaulLoewen98@gmail.com. The used inventory is also still available through LASAR Parts at 707. 263-0581

Mooney Maintenance



Search Mooney's new website for Service Bulletins (SBs) and Service Instructions applicable to your Mooney

Click here

Download and search LASAR's Airworthiness Directive (AD) Log – all models

Click here

LASAR
Fanatically Mooney. Exceptionally Fast.

Ask the Top Gun

Tom Rouch

Founder of Top Gun Aviation, Stockton, California

Send your questions for Tom to TheMooneyFlyer@gmail.com

Dear Tom,

Question: I am a new Mooney owner and have heard about the leaking fuel tanks on Mooneys. My question to you is, what causes these leaks and what can I do as an owner to reduce the chances of a leak? I have heard that keeping the tanks full in the hangar helps. Is this effective? And another pilot told me that worn gear donuts can hurt. What do you say?

Answer: Leaking tanks on wet wing aircraft is a common problem. Wet wing tanks are made when a tank is formed using wing skins and ribs to form a tank by using a sealant on all edges to form the tank. This is an engineering procedure which is especially important when trying to keep the gross weight lower, allowing for increased range.

Your info is correct on the most frequent cause of leaks. Leaving the tanks low or empty can cause the sealant to dry and the tank will eventually leak.

Worn landing gear discs (donuts) cause an extra shock to the wing structure on landing. This can also cause wing tank sealant to separate, especially when the sealant is dried out. Age of course has an effect, especially on planes that sit out in the sun all the time. How long do shock discs last? Given all else being equal, a C model with light gross weight, may have discs that last for many years, but the discs on a heavy TLS may only last a few years. I will note that through the years, Mooney has improved the sealant composition, so newer models have fewer leaks. I think with the J model Mooney, a slide on dust cover was installed above the main gear discs to keep "crud" from falling on them. It was a good idea, but through the years, on inspection, we found most of these covers were missing. We kind of gave up replacing them. Resealing a tank is a man-hour consuming job. It is awfully expensive ($5,000 – 7,000 per tank). It is also extremely difficult, so most Service Centers don't do it and refer owners to just a few shops in the country that specialize in resealing. The same applies to installing tanks inside the wing.

To extend the life of the fuel tank:

- Keep your plane in a hanger.
- Keep the fuel tanks at least half full.
- Replace the discs when necessary.
- Land as softly as you can.

13 to 1 GLIDE RATIO

PROP STOPPED

How is that for performance?
The clean, drag-free design of the Mooney spells performance. Cut the power on a Mark 21 or Super 21, trim it back to about 80 mph and just sit back and enjoy the view. You'll think you're soaring. The efficient laminar wing and clean lines of the Mooney give it one of the highest glide ratios in the business aircraft field. Notice the similarity in the clean uncluttered lines of the glider soaring in formation with the Mark 21 in the photo above. What does this mean to you? It means performance.
Every mile you fly with wheels down, with drag producing wing struts, robs you of speed, performance and flying ease. Sixty more horsepower and four more gallons of fuel per hour in old fashioned designs drag you through the air at slower speeds than the Mooney. Why not get all you're paying for in performance? Let us show you how much better flying can be when you pick up your wheels and go modern. Join the move to modern flying — go Mooney — the fast selling retractables.

Compare and discover why Mooney is the fastest selling retractable.

Write for free comparative study of Mooney with five competitive aircraft.

FLY fly modern — fly Mooney with PC

MOONEY AIRCRAFT, INC. KERRVILLE, TEXAS

• Where experienced engineers find new challenge and wholesome living

CIRCLE NO. 18 ON READER SERVICE PAGE

New LED Landing and Taxi Light

AeroLEDs is introducing what company officials call a first of its kind: The new SunSpot Equinox, a true dual-function LED landing and taxi light.

The Equinox is designed for single light applications or for the pilot who cannot decide whether to install a landing or a taxi light.

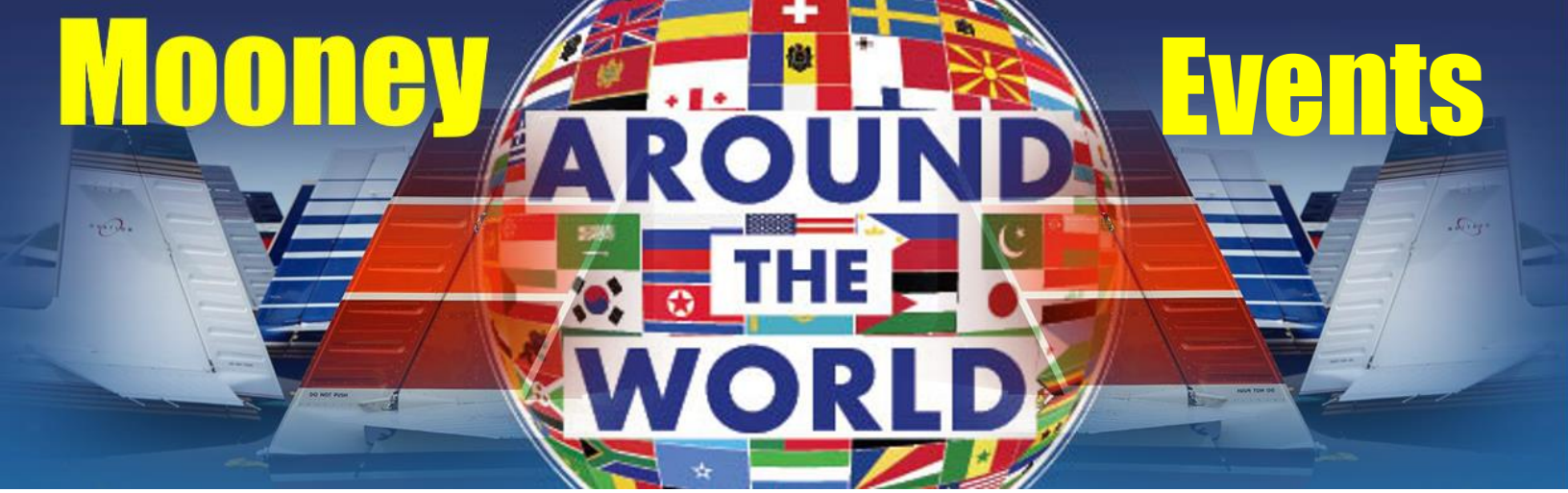
In landing mode, the Equinox will output a 20°X20° bright white beam for high-speed takeoffs and landings. Visibility, both on the ground and in the air, should be up to 30 miles away.

While in taxi mode, the light produces a wider 20°X50° beam spread that outputs a solid and evenly distributed light pattern for illumination of the runway/taxiway without impairing the vision of other pilots.

The first release in the series will fit PAR 36 configurations and will be a 28-volt, 100 watt dual-function LED. It will output 11,000 lumens and 150,000 candela and come standard with integrated pulse (Wig-Wag), providing optimum visibility during extreme operating conditions and negating the need and extra weight of external pulse light boxes.

The light can be left on in all phases of flight as it draws 40% less power, significantly reducing the electrical load on the airplane's battery and alternator system. It also maintains its full light output even at low engine RPM, which is critical for landing configuration.

SunSpot Equinox will be a drop-in replacement for both Par36 and Par46 applications. It will be available for both 12v and 24v systems.



Florida Mooney Lunch Group	*Contact Dave at daveanruth@aol.com or (352) 343-3196, before coming to the restaurant, to have an accurate count. Events begin at 11:30* May 8: Sebring (KSEF) June 12: Winter Haven (KGIF) July 10: Williston (X60)
Mooney Caravan	
MooneySafety.com MAPA Safety Foundation Pilot Proficiency Program	**2021** June 18-20: Fort Worth, TX Sep 10-12: Chicopee, MA Oct 15-17: Wichita, KS **Sign Up at** https://www.mooneysafety.com/ppp-registration/
MOONEYSUMMIT	CLICK HERE for details
Australian Mooney Pilots Association	October 8. 2021 Spring Fly-in, Merimbula, NSW. CLICK HERE for the AMPA website.
EMPOA	CLICK HERE for details
Other Mooney Events	May 14-16: The 8th Annual Mooney Caravan Formation Flying Clinic at KHYI (San Marcos, TX). FBO: Berry Aviation at KHYI: (512) 353-2379. Meeting Area: CAF Hanger (at East end of Ramp) MORE INFO Sep 10-12: The Mooney Flyer Fly-In to Paso Robles (KPRB) – Wine & Food Friday Evening, Saturday presentations, wine tasting, and hot air balloon rides, Dinner and more.

TMF PRODUCT REVIEW

Arctic Air Portable Air Conditioner

It is still early spring, but the warmer weather is just around the corner. I hate jumping into my Mooney when the cabin is 100+^{o} in the summer.

Here's a solution from Arctic Air. It is portable, so place it in your aircraft when you need during the hot months of flying.

Features:

- No installation
- High and low settings
- Cools over three hours on low
- High setting can change the temperature as much as 35 degrees
- Fan will not interfere with the radio
- Totally portable
- Does not pull power from the engine
- No STCs required
- Does not add humidity to the air

Included drainage tube allows you to leave Arctic Air in the plane and pump the water out and on to the ground. Included flexible tubing aims the cool air where it is most needed. Available in 24-volt models and designed to run off the voltage from the cigarette lighter. Most aircraft put out 12V from the cigarette lighter plug; consult your POH to find the appropriate voltage for your aircraft. Power cord 7 1/2' long.

Measures 17"w x 17"h x 10"d; 2.5 amps; 14 lbs. empty weight; and 34 lbs. approx. full weight.

You can buy this through Sporty's at: Portable Air Conditioners - Aircraft Supplies (sportys.com). There are different sizes and shapes available so you can find the product that fits your needs.

Parts for Sale

This Cowling was removed from a M20E and replaced with a M20J (201) cowling. The cowling is located at Fullerton Airport (KFUL) and is in excellent condition. Offers accepted.

Contact: Bernard Lee – leebern@msn.com (562-865-2547)

P/N 310309-501
P/N 310309-502

These fairings are new and priced @ $280.00 each or $525.00 for both. Priced elsewhere @ $362.69 each.

Contact: Bernard Lee – leebern@msn.com (562-865-2547)

Bushing P/N 914007-003 - 2- Bushings in the original package @ $35.00 each. Priced elsewhere @ $45.00 each.

Bushing P/N 914007-005
1-Bushing in the original package @ $59.00
1-Bushing loose @ $50.00
Priced elsewhere @ $69.00 each

Contact: Bernard Lee – leebern@msn.com (562-865-2547)

Access Covers P/N 3000-901 (2-available) - 1-without nuts attached.
Make offer. Contact: Bernard Lee – leebern@msn.com (562-865-2547)

N9426V
1970 Mooney M20F s/n 700029

5725 Total Time
475 SMOH in 2013
1384 SNEW Prop, 3 Blade Hartzell $69.900

Paint: AcraGlo in 2010. Condition 8, normal wear
Interior: 2002. Grey Leather. Condition 6

Avionics:
#1 Nav/Com King KX155 w/ GS. Coupled to HSI
#2 Nav/Com King KX170B
King KCS55 Slaved HSI
Narco AT-150 Linked to Uavionix Tail Beacon, ADS-B Out
JPI EDM 930. Full function with Fuel Flow
PS Engineering 4 Place Intercom
Airtex 406 ELT
Vertical Card Compass

Airframe:
201 Windshield and ¼ Side Glass
Aero Resources Cowl Fairing and Landing Light Cover
Lake Aero Gap Seals
StandBy Vacuum System
Brackett Air Filter
M20 Air/Oil Seperator
Spin on Oil Filter
Throttle Quadrant
Fuel Tank Reseal in 2007, No Leaks

Useful Load: 1036 lbs.

Annual 6/2020 IFR/ALT/TXP 5/2019

Damage:
Gear Up Landings in 1981, 1984, and 1997. 337's for repairs with Factory Parts

Contact John Echols at echolsjt@geospectrum.com or 432-559-3119

1/3 SHARE FOR SALE

Two partners are offering the final 1/3 co-ownership share in this excellent, incredibly unique and well-equipped aircraft. Over $50,000 spent over the last two years, upgrading and sorting it out. The share price is $45,000.
TTAF is about 3160, engine SMOH About 1320 (Mattituck Red/Gold). We have Calculated that 1/3 of the fixed expenses will be around $5,250 per year. Reserves TBD. Photos and all records can be provided. The plane is hangered at KCCR Concord, CA.

- Garmin GNS 430 WAAS
- King KX 155 N/C/LOC/GS
- Castleberry electric back AI
- King KFC 150 FD/AP alt hold, climb/descend, simulated GPSS
- King KCS 55A HIS
- Garmin GTX 330 ES TXP with traffic, ADS-B out
- Newly Overhauled KX 256 AI ($1,730)
- King KN 64 DME
- New Garmin GMA 345 Audio Panel
- New JPI 830 with *all* options
- ADS-B in including traffic, weather, Sirius XM, etc. via a new certified Garmin GDL 52R hard wired to a panel mounted Garmin Aera 660. A new yoke mounted Aera 760 will be hard wired to provide IFR charts and Additional features. More Bluetooth connections for portables and iPad available from the GDL 52R
- Newly Overhauled BFG WX 1000+ stormscope, display and processor ($1,890)
- 28-volt electrical system
- Astrotech LC-2 clock
- Electric trim with CWS
- Yoke mounted AP disconnect and ident.
- Electric Back-up vacuum
- New STC'd gear and stall audio alarm ($1,100)
- Built-in CO2 detector
- Speed brakes completely overhauled January 2020 ($2,800)
- Four place intercom
- 2900 GW STC
- Two built-in David Clark 20-10X ANR headset jacks with headsets
- CYA 100 AOA with custom housing, (not yet wired) ($1,690)
- Useful load 992 lbs.
- Air/Oil Separator
- Reiff Preheater, 2 sides
- Removable back seats
- Articulating seats
- Inflatable lumbar support
- Indirect interior lighting
- Kool scoop
- Wing mounted fuel gauges
- Two place Sky Ox oxygen tank with custom rack
- Sidewinder electric power tug
- B-Cool ice cooler with remote switch
- Annual completed February 2020 by Top Gun Stockton MSC.
- Tan leather interior redone 2012, good condition, front sheepskins coming soon
- Custom black front floor mats, custom cover, cowl plugs
- Original paint. Pleasing colors. Looks very good at 8'.
- The plane starts right up hot or cold, good compressions, does not use much oil, good oil analysis, runs very smoothly, flies great.
- Recent avionics fan, fuel pump, starter, battery, airstop tubes on mains
- New shock discs 2 1/2 years
- No back clutch spring was installed 2 1/2 years ago

Give me a call anytime at 510 377 0129 or email bradinc@astound.net. Thanks! Steve


Rusty Pilot or Old Pro
INSTRUMENT PROFICIENCY CHECK
Study Guide
J D Price, CFII, MEI, ATP
FLIGHT REVIEW
Study Guide
J D Price, CFII, MEI, ATP
Prepare online
FREE
JDPriceCFI.com