The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

October 2024

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Departments

Features

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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.

Insurance & Gear Ups

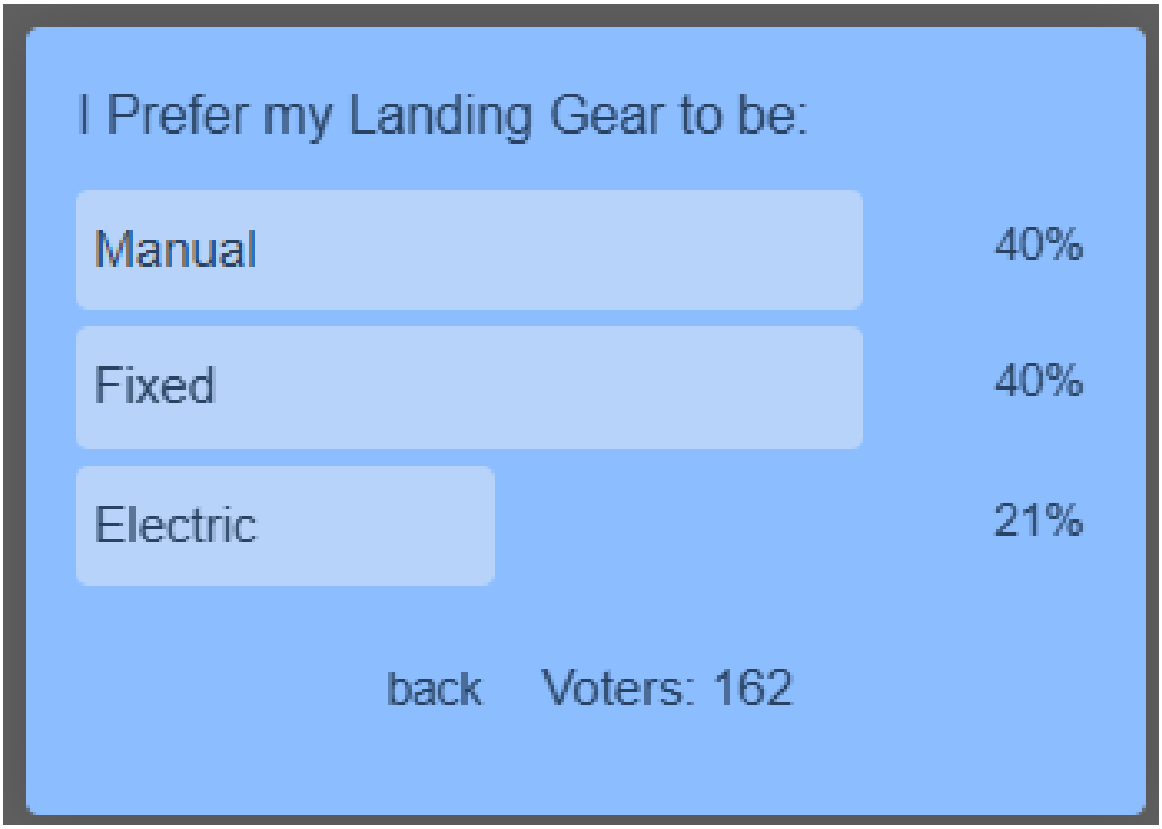
It is no surprise, to any Mooney owner, that insurance rates have skyrocketed in the last few years. This is due, in part, to the rising costs of parts and maintenance.

In addition, a significant event that drives up insurance costs is gear up incidents. There are very few instances of a Mooney's gear collapsing, and those that do collapse on touchdown, are usually caused by incorrect maintenance, or lack of maintenance.

Of course, the main cause of gear ups is pilot error.

What is frustrating to us at The Mooney Flyer is that most, if not all of these events, can be avoided with simple procedures. Clearly GUMPS is the main procedure a PIC can employ to ensure that the gear is down. But there is an even more superior procedure. Let's say you put the gear down just before you enter the pattern. At this point, check that the gear is down and LOCKED. If you have electric gear, don't just trust the light on the annunciator panel, but check the little mechanical window on the floor; it's a more reliable indicator. Then say aloud, "The gear is down and locked." It's important to say this aloud, even if you are alone. When you turn base, say aloud "The gear is down and locked." Then, on final approach, as you approach the runway number, say aloud, "The gear is down and locked." This is a tried-and-true method to avoid, or at least reduce, the chances of a gear up.

I learned this from Rod Machado and it has worked for me, 20 years and counting. Please give it a try. It's free and might save you from a very costly mishap. You will also avoid those bad dreams and continue to maintain your self-esteem at a high and healthy level.



Next month's poll: "Most of my Flying is:"

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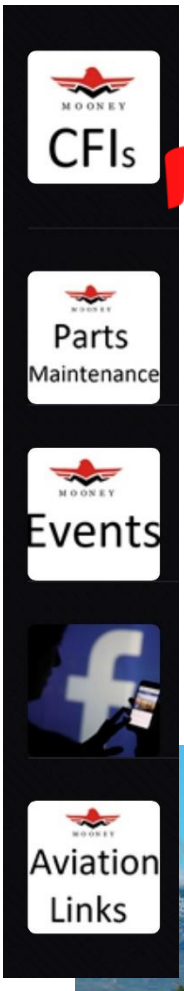

You can also go to https://themooneyflyer.com/ and click on CFIS – (located in the top menu).

You can also click on the CFIs icon, found in the website's right column menu.

CFIs can list their name and contact information on our website. To modify your current CFI listing, send an email to TheMooneyFlyer@gmail.com

Be sure to include your home base and state.

Letters to the EDITOR

TheMooneyFlyer@gmail.com

This is in response to Tom Rouch's column on the Powerflow exhaust in the September issue.

I put a Powerflow on my M20G some 10 years ago. I did not need instruments to tell me there was a significant improvement. I could feel it immediately in acceleration and climb. I also picked up about 5kt in cruise.

In addition, the heater went from mediocre to quite acceptable, even in a Chicago winter.

One thing that was apparent during the installation is that the stock exhaust design is just awful. Anyone who's ever studied engines can see at a glance that it incorporates just about every design inefficiency imaginable. I can't believe that Mooney came up with such an abomination.

John K

Hi Phil and Jim,

First, I love your work and The Mooney Flyer.

Comment on tips to save your engine. You didn't mention anything about cold starts (preheating). Secondly, I have often wondered about the time component; 3 months or four and why you must change the oil. I also heard the same comment from a Lycoming engineer at OSH several years ago.

Thanks, **Randy**

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So, You Had an Annual. Now What?

I have a love-hate relationship with Annuals. I love that it makes my Eagle feel safer. I hate the downtime and the dread of my mechanic finding something expensive, plus the associated expanded downtime to fix the expensive discovery.

However, that is not the subject of this article. Rather, it is about your Post-Annual Pre-Flight Review. It is very scary that one of the more significant causes of airplane mishaps occur after some form of maintenance. Mechanics are human and they can make mistakes. It's the PIC's responsibility to be the "Redundant" checker of all the maintenance. Some things are easy to check out. You may find rags stuffed in your engine, perhaps around and below your new oil filter. Pilots have found tools sitting in the engine compartment. Others have found loose hardware or bolts that have not been torqued correctly. Oil leaks can be problematic. The oil might be left over from the changing of the oil filter or it might be indicative of an oil leak.

First things first. What can you do? My recommendation is to make a customized checklist for your post Annual Pre-Flight and first Flight Check. This list consists of everything you normally perform, but with several things added. More on this later. As you put the specific post annual checklist together, I don't care how much you like or trust your mechanic. "Assume that something is wrong." You and your mechanic, together as a team, need to examine everything that he or she has worked on or touched.

Before Your First Post-Annual Flight

Discuss everything that your mechanic did to your Mooney. Use his worksheet/invoice as a starting point for this discussion. You should have this discussion while the Mooney is un-cowled so you can look at each item. The same is true for work done in the wings/empennage, etc. You are eyeballing that everything looks correct and secure. The added benefit is that your mechanic gets one final look-see.

Don't assume the part(s) replaced were the only parts removed. Ask what was removed and/or disconnected to facilitate the work. Often disassembly needs to be done to get to the inoperative part.

For example:

- Upholstery, seats, tracks, floors, emergency exits
- Interior and exterior access panels especially in hard-to-see places of the aircraft
- Yokes, control cables, linkages, and surfaces
- Equipment and appliances / wires and connectors
- Hydraulic / vacuum / brake / pitot and static / fuel lines

Pay attention to trim positions. Check for unimpeded flight control surface deflections. Make sure they go in the proper direction!

Make sure all inspection panels are secure, and their fasteners are tight. Inspect all control fasteners for missing cotter pins. Inspect locknuts, making sure the bolt or stud extends at least the full round or chamfer through the nut. Flat end bolts, studs, or screws should extend at least 1⁄32 inch through the nut. Check all visible bolts. If there's a hole in the bolt, it requires safety wire. See FAA Advisory Circular AC 43.13-1B for procedures.

Check the fuel tanks for water, sediment, and the proper fuel grade. Use a sampler cup to drain a small quantity of fuel. Place it in front of a white (not blue) background to see what's in the fuel. Pull the strainer drain knob for about four seconds to clear it of water or sediment.

After an oil change, always check the engine oil level to ensure it has the proper amount of oil.

Always check your logbook and paperwork prior to flight to ensure the correct records have been entered. Check for proper log entries for the work performed and the return to service. If it is not properly entered, the aircraft isn't legal to fly. Always ensure you have your aircraft's correct documents onboard, e.g., airworthiness certificate and registration.

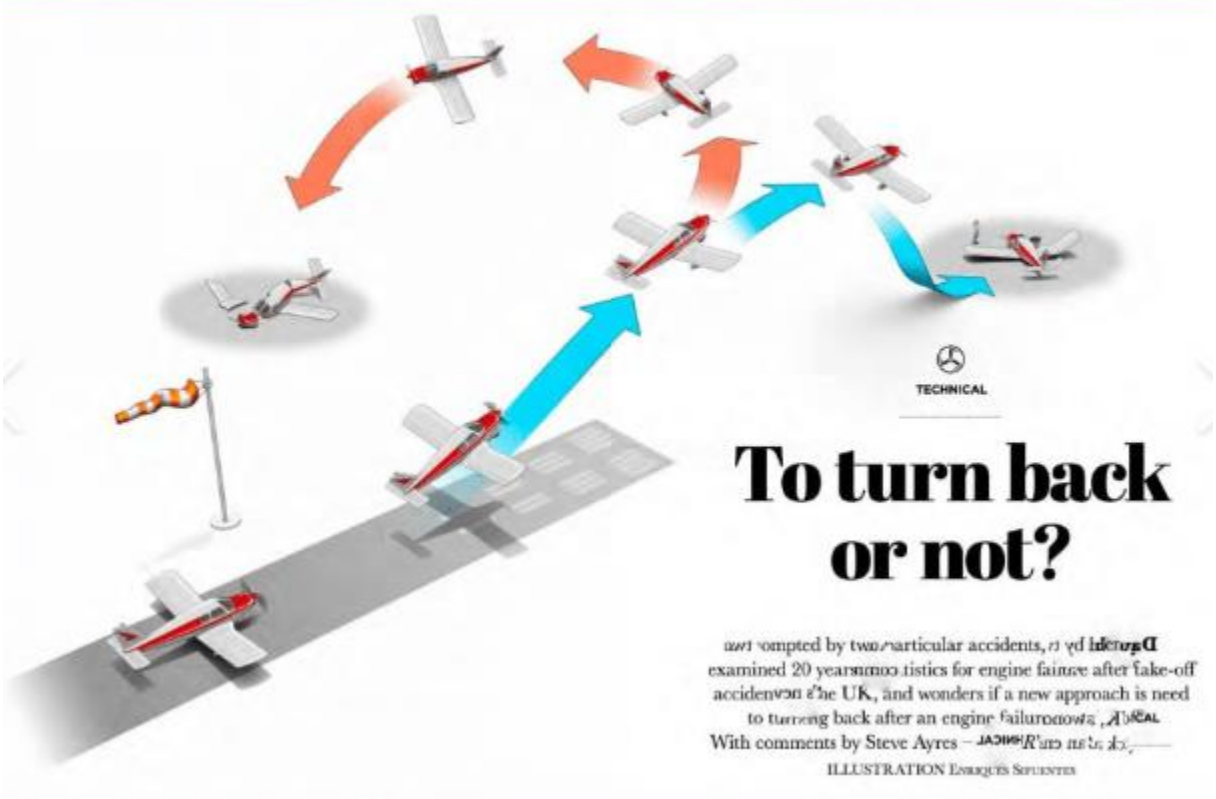
Taxiing to Your First Flight

Trust your gut and your five senses after you start up your Mooney. Does anything feel or smell different. If so, ensure that you understand why before taking the runway. Taxi back to your hangar or tiedown if something feels wrong. Listen to your engine and your airplane? Do you smell anything abnormal. Is your Mooney vibrating in a new or different manner? Do you smell anything electrical?

Takeoff and First Flight

Recheck all your control surfaces to ensure free movement and proper movement of ailerons and elevator.

During the runup, ensure that your constant speed prop is correct.
Maybe you could do an extra pull on the Prop Lever for good luck. During the runup, watch for the proper response to the left and right magneto checks. Anything not normal such as different drops and/or vibration might be a cause for concern. Remember that the sparkplugs were pulled and cleaned; gapped and/or replaced.



On the takeoff roll, ensure you are getting the expected manifold pressure and prop RPM. Anything not up to snuff on the takeoff roll is probably justification to abort the takeoff. It is ALL IMPORTANT that as you add power to takeoff, that your mindset is THERE WILL BE A PROBLEM. Maybe there will be an engine problem, or perhaps the airframe/control surfaces will be wacky. Be ultra-ready to abort. If you have lifted off and incur an engine problem, please continue straight ahead or maybe fly an arc within 30^{o} left or right for an off-field landing. My personal minimum to turn back to the runway is to be at pattern altitude when the engine fails. What is your minimum?

Climb to a safe altitude and fly a wide circle around your airport as you checkout each item that your mechanic worked on, removed, repaired or replaced. It's very useful to have a second pilot in the right seat to call out each checklist item. It's also great to have a second set of eyes as you may become ultra focused on checking out each item.

Plan Now to Become a Safer Pilot in 2024

Attend a Mooney Pilot Proficiency Program. Visit MooneySafety.com to learn more.
You can register at https://www.mooneysafety.com/ppp-registration/

You can also email Lela Hughes, lelahughes49@gmail.com or call 210-289-6939.

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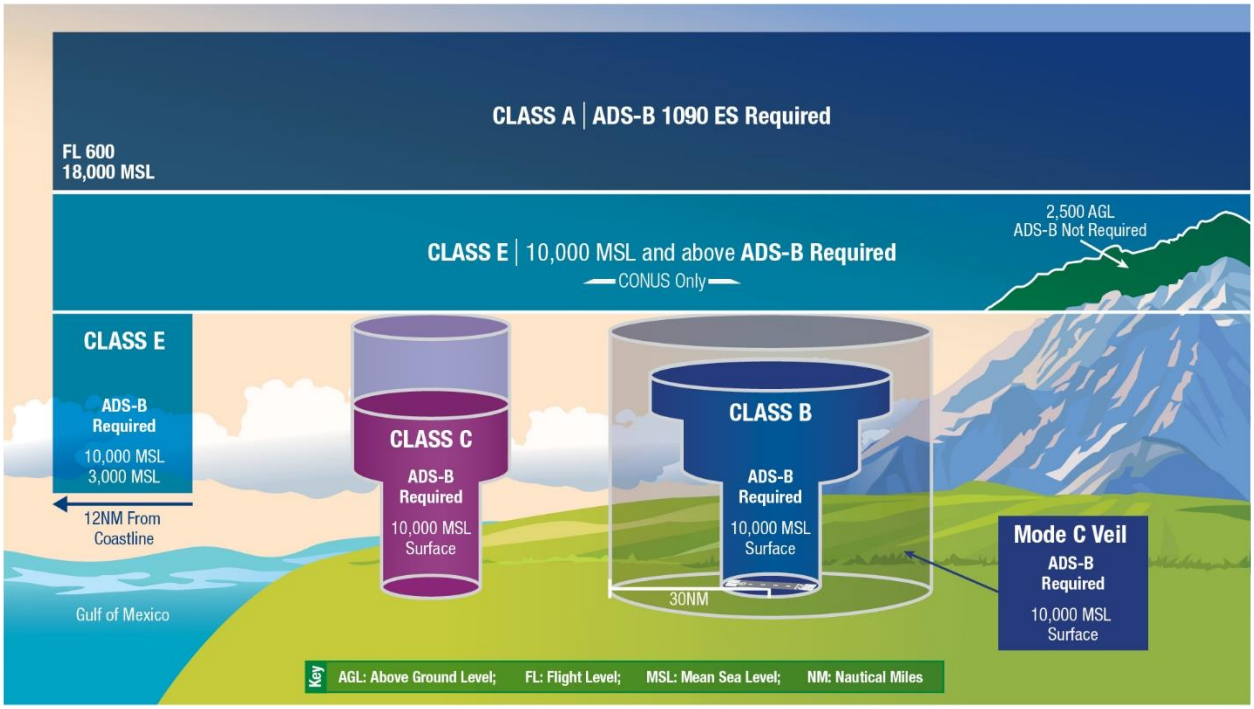
Florida Airports Plan to Impose Landing Fees – Is Your Airport Next?

Florida's airport landing fees may be assessed as early as Oct. 1, 2024. The state of Florida has contracted with a Florida company called Virtower, an airport operations tracking system that collects aircraft movement data in Florida.

In February 2023, Virtower announced their "global strategic partnership" with Vector Airport Systems, which proudly announces on their website that they have generated hundreds of million dollars in aircraft fee revenue. If a county or municipal airport has landing fees, Vector can use the Virtower data and automatically send a bill to the aircraft owner.

The Intent of the ADS-B Mandate



On January 1, 2020, the FAA mandated that Automatic Dependent Surveillance–Broadcast (ADS-B) Out be installed on aircraft operating in designated airspace. Basically, ADS-B Out is required in most airspace where a Mode C transponder was required prior to Jan 1, 2020. This mandate was to improve safety and efficiency. It was never intended to be used to collect landing fees or assist third party trackers.

Note: AOPA officials state that they are "considering legislative action to make sure ADS-B data is used solely for its intended purpose."

AOPA also reported that "A preliminary review of available budgets suggests not-for-profit airports are already operating at minimal expense to local taxpayers and receive federal grants

that cover 90% of the cost for various projects. Yet they are rushing to finalize local approvals required to implement landing fees of $3 per 1,000 pounds for fixed-wing aircraft."

What is a Not-For-Profit Airport?

Not-For-Profit Airport *is* a term sometimes used for regional or community airports offering a vital service for certain communities. In this model, all profits are re-invested in the airport and benefits should transfer to the users.

Landing Fees to Protect an Airport?

John Eiff is the manager of Florida's DeLand Municipal Airport (KDED). In his managerial reasoning, the fee would protect DeLand from pilots who would prefer to fly to surrounding airports that charge a landing fee, such as Orlando Executive, Kissimmee, Flagler and Ormond Beach. Those pilots, in an effort to avoid a landing fee, would land at DeLand, saturating the DeLand pattern and making it unsafe.

Imposing new landing fees at public, not-for-profit airports to deter operations does not make sense. Especially, when one considers that aircraft traffic provides the lifeline for these airports. Collecting landing fees may violate federal grant assurances and there may be additional legal issues with how these fees are being set, implemented, and collected.

Public airports, much like the federal interstate highway system, receive substantial government funding to offset expenses incurred by state and local communities. These publicly funded assets are not supposed to become profit centers for state and local communities, and federal grants come with various requirements.

The city and county governments considering these new landing fees have collectively, in the past ten years, received $67 million in federal grants.

BOTH WAYS

Governments want landing fees and federal grants. They want it both ways and that's inappropriate!

Flight Level Flying in a Mooney

By: Winslow Bud Johnson, ATP, CFII

"Mooney 97 November, cleared to Flight Level 250." These are words rarely heard by pilots of small general aviation aircraft. It takes an aircraft with certain capabilities and a pilot with certain skills to fly in the Flight Levels. In this article we will discuss what it is like to fly a Mooney above 18,000 feet and the risks and rewards of such high-level flight.

Any flight above 18,000 feet is flying in the Flight Levels. This is Class A airspace and here you are required to fly under instrument flight rules (IFR). You will need an IFR clearance before operating in Class A airspace and will be required to maintain two-way radio communications with ATC at all times. Class A airspace extends from 18,000 feet to 60,000 feet. Interestingly, if you manage to somehow fly your Mooney above 60,000 feet (Flight Level 600), you can cancel your IFR clearance and fly under VFR rules.

A Flight Level is an altitude at standard pressure. All aircraft flying above 18,000 feet MSL are required to set their altimeters to 29.92 inches. This means that all aircraft flying in the flight levels will have the same altimeter setting, so that aircraft can be separated and clear of each other. Aircraft flying in the flight levels fly at thousand-foot levels, allowing aircraft to fly 1,000 feet above and below each other.

Why Fly in the Flight Levels?

One of the advantages of Flight Level flying is the great view, and you don't generally have to worry about traffic. Most airline traffic will be above the levels achievable in a Mooney, and most general aviation traffic will not be flying in the Flight Levels. There is also usually better weather at the Flight Levels, and it gets really quiet up there.

One of the main reasons for climbing into the Flight Levels is speed. The aircraft will fly faster and get more miles per gallon. A Mooney Acclaim, for example, is capable of flying 191 knots at 2,000 feet, but can fly as fast

as 242 knots at Flight Level 250. Should the engine fail, an aircraft can also glide further from the Flight Levels.

Flight Level Flying in a Non-Turbo Mooney

A non-turbocharged Mooney can fly in the Flight Levels. It will, however, take a long time to climb from 12,000 feet into the Flight Levels because it will climb slower and slower; 200 feet per minute or less near the top of the climb. You may find you have to level off a few times to accelerate and the controls will be very mushy. Because of the long time required for the climb and decent in such a flight, the trip has to be long enough to be worth the climb.

Image of a Non-Turbocharged Mooney 201

Most turbocharged Mooneys have built-in oxygen tanks. This is not typically the case in a non-turbo Mooney. When doing high altitude flight in these Mooney's, it is critical to bring an oxygen tank along.

Flight Level Flying in a Turbo Mooney

Climbing to the flight levels in a turbocharged Mooney is much faster than in a non-turbo Mooney. Where the non-turbo Mooney will struggle to achieve 200 feet per minute, a turbocharged Mooney could climb 800 feet per minute or faster depending on the model. Of course, this will also depend on the load and temperature.

Speed is one of the big advantages of flying a Mooney in the Flight Levels, where many turbocharged Mooney's will fly 20 – 30 knots faster. A Mooney 252 recently hit a 280 knots ground speed with a 40-knot tail wind at Flight Level 230.

Image of Turbocharged Mooney Acclaim

The Risks of High-Level Flight

Flying in the Flight Levels is not really flying in a friendly place. You need to be aware that it gets really cold up in the Flight Levels, so make sure the heater is working, and you are dressed properly. Where the temperatures on the ground might be nice and warm, temperatures in the Flight Levels are very cold. The temperature at FL 250 is around minus 30 degrees C. Without the protection of the aluminum and Plexiglas surrounding

the Mooney as well as the supplemental oxygen provided through the oxygen mask, the pilot would be in serious trouble.

Image of Typical Aviation Oxygen Mask

You need to pay close attention to the oxygen levels when flying above 18,000 feet, where there is a serious risk of hypoxia. Hypoxia means low oxygen in the blood, and this can be very dangerous for a pilot. Even if the Mooney is performing well, the pilot must be sure he or she is physically and mentally ready to fly in the Flight Levels. It is generally fine to use a nasal cannula at the lower altitudes, but you must use an oxygen mask when flying in the Flight Levels.

It is not that easy to determine if you are suffering from hypoxia, because it does not happen all at once. You may be mildly confused at first, then severely confused. This could then be followed by loss of consciousness. If you recognize these symptoms and descend or apply oxygen, it can take time for your mind to clear. This is something to carefully think about before climbing into the Flight Levels.

The time of useful consciousness without oxygen for relatively young healthy people varies with altitude. At 15,000 it can be indefinite. At 20,000 feet it is 5-20 minutes. At 25,000 feet it is 2-5 minutes. At 30,000 feet it is 30 seconds to 2 minutes. At 40,000 feet it is 15-20 seconds.

Another thing to think about before high-level flight is the health of the pilot and passengers. At high altitudes, smokers, for example, will not do as well as non-smokers. Pilots or passengers with even moderate lung disease may have problems with high altitude. You should consider that older people often have medical issues.

When you are up in the Flight Levels, you should constantly be monitoring your thinking. Are you doing anything stupid? Are you missing any ATC calls? Do you have to think twice about a new clearance? It can help to have a second person in the cockpit so you can keep an eye on each other.

An oxygen tank is useless when empty. Because of this, checking the oxygen is a very important preflight item. It is also important to pay attention to the type of oxygen carried in the aircraft. Typically, you will want aviation breathing oxygen. You may also be able to use medical oxygen. Medical and aviation oxygen are tested for moisture content. To prevent ice formation and line clogging at altitude, the moisture content needs to be very low for aviation applications. Beware of industrial oxygen because it is typically used for welding and is not tested for moisture.

I would also recommend that you be very careful when filling the built-in oxygen tank in your Mooney. You want to make sure the right fittings are used, and the tank is not overfilled.

A few years ago, I completed a high-altitude flight to Cheyenne, Wyoming and had a serious problem when refilling the oxygen tank. I parked the aircraft and then casually asked the line crew to add fuel and fill the oxygen tank. I was hungry, so I just left the plane with them and went to lunch.

The young man filling the oxygen tank was new, and did not have a lot of experience working with the oxygen tanks in a Mooney. He used the wrong fittings to connect his tanks to the Mooney and wound up damaging the fittings on my aircraft. In addition, he overfilled the tank and damaged the meter inside the Mooney. I believe the young man no longer works at the airport. Because of that incident, I always pay a lot of attention to who is filling the oxygen tank, and how it is being done.

Emergency Oxygen

As an added safety precaution, you may consider carrying a disposable bottle of emergency oxygen, in case of a system failure. These can be purchased online from any aviation supply house. The picture to the left is an example of one of these tanks. It is small and can be hung on the back of the seat. Make sure it is accessible to the pilot if it becomes necessary to use it.

About the Author

Winslow Bud Johnson is an ATP rated Director and flight instructor for the MAPA (Mooney) Safety Foundation. He has flown his turbocharged Mooney 231 thousands of hours crossing the United States from coast to coast mostly on business trips.

Running a Tank Dry

By Richard Brown

Everyone has, or should have, personal minimums. My personal minimum for fuel is that I want to be on the ground with 10 gallons on board. The second part of that is I want those 10 gallons in one tank. During my 950 hours in our Mooney, I have only violated that rule once. Last year, on a very long flight during the daytime, I landed with 8 gallons on board. At 9.1 gph, that's about 50 minutes of flight time, which exceeded the daytime FAA VFR minimums of 45 minutes. However, I didn't feel great about it because it didn't meet the "Richard Brown 10 gallons personal minimum."

In addition to personal minimums, we all have different procedures that we are comfortable with and ones that we are not. The topic of running a tank dry generates strong opinions on both sides. I'm not here to say what others should or shouldn't do, but I am going to share what I do, why I do it, and my experience with running tanks dry.

I fly a 1965 Mooney M20D, converted to retractable gear and constant speed prop, essentially making it an M20C. It has a Lycoming O-360-A1D 180 hp carbureted engine. Keep in mind that an injected engine will behave a little differently when the fuel stops flowing, and if you have a turbo and are up high, the restart is very different.

The 1974 M20C POH recommends, **"After takeoff with both tanks full, use fuel from one tank for one hour; then, switch to the other tank and note the time. Use all the fuel from the second tank. The remaining fuel endurance in the first tank can be calculated from the time it took to deplete the second tank, less than one hour."**

This procedure was published by Mooney to provide a way to know your remaining fuel on board. It was written in the days of inaccurate gages, no fuel flow metering or totalizers. Now, with CiES digital fuel senders and a JPI EDM900 engine monitor, I know down to about a tenth of a gallon, the amount of fuel I have remaining. Therefore, I don't follow the POH recommended procedure to know my remaining fuel. I follow it to get maximum range and have all my remaining fuel in one tank when landing.

I have some friends that switch tanks every 30 minutes, some who switch every hour, and other variations. The length of the flight determines my tank switching procedure. If it's a short flight and I can take off and land on the same tank with 10 gallons remaining, I won't even switch tanks. If it's a longer flight, maybe 2 to 2 ½ hours, I'll fly the first hour on one tank and switch over to the other tank for the remainder of the flight. That is because I will still have 10+ in the tank I am landing on. I think you get the idea.

Note this Caution in the M20C POH:

CAUTION: Do not allow the engine to lose power or quit before switching fuel tanks. A red "Fuel Press" annunciator will illuminate when pressure drops to the minimum allowable indicating fuel exhaustion or engine driven fuel pump malfunction. Switch fuel tanks or turn on boost pump as needed. If a tank runs dry and the engine quits, retard the throttle before restarting. Restarting with an advanced throttle may cause engine overspeeding that can lead to mechanical malfunction.

I have a good friend who has an M20C and is preparing to go on a trip from California, essentially flying around the whole country. She's had her plane for a few years, and I've talked to her about running a tank dry and what it is like. But hearing about it and doing it or seeing it done, are very different things. I took her up for a short flight to show her what happens.

A couple of days prior our fuel demonstration flight, I had flown a 3 hour and 51-minute flight from Provo to our home base in SoCal. On that flight, I had run the left tank dry. So, I had the fuel truck put 1.5 gallons in the left tank and top off the right. We would take off on the right tank, level off, head for the practice area, and switch to the left tank to run it dry.

After a little bit, the fuel level in the left tank indicated zero and I hit the cancel button to shut off the red warning light. In my plane, about 5+ minutes later, the fuel stops flowing. If you have an engine monitor with fuel level and warnings, make a note of the time between when it hits zero, and when the fuel stops flowing. It will help you know when to really start watching that fuel pressure.

I told my friend we would keep an eye on the fuel pressure which was sitting at 4.1 psi. The first indication that it is about empty is an up and down fluctuation in the fuel pressure and the fuel flow. This is because it will start to suck a little air, which causes the fuel pressure to drop. Then it gets a little fuel again, which causes the fuel flow to momentarily increase as the pressure comes back up.

If you switch at that point, nothing happens, and you continue on your merry way. I wanted to show her the steady drop in fuel pressure, which is the real tell, so we continued flying on the now almost empty tank. I told her we were looking for that steady drop. I wanted her to see it wasn't instantaneous from the 4.1 to zero. After a few moments, it started the steady drop. If you count down "9, 8, 7, 6, 5, 4," that is about the speed the fuel pressure goes from 4.0 to 3.9

to 3.8 to 3.7, etc. If you are paying attention, you have 15-20 seconds from the time it starts dropping to make the switch. The engine will never stumble, and nobody in the plane will know what transpired.

I reached down, switched to the right tank, and had her watch where the fuel flow momentarily jumped higher than normal before the fuel pressure stabilized and settled back down. The reason that occurs in a carbureted plane is because the bowl, which had been depleted when the fuel stopped flowing, was refilling. Once that occurs, the flow will go back down to normal levels.

There have been three instances when, although I was expecting it to run out when the red light started blinking, I got distracted and didn't notice the fuel pressure dropping. When the engine quit, it had my full immediate attention. On one of those occasions, my wife was with me on the way back from Arizona and it grasped her complete and undivided attention, too! There was some apologizing that took place.

I also wanted my friend to see the engine stumble and stop, so I switched back to the left tank. We watched as the fuel pressure started dropping again, but this time I didn't switch tanks. The pressure reached zero, the engine stumbled, and then it was very quiet, with the prop still windmilling. You need three things for the engine to run: fuel, air, and spark. With the propeller windmilling, there is air and spark, so all you have to do is reintroduce fuel to the equation. I quickly switched back to the right tank, and within a couple of seconds, the engine was running again.

It is important to note that if the engine stops, you do not want to be at wide open throttle when switching tanks. That is because you could potentially overspeed the engine. Before switching tanks, you want to retard the throttle some.

After demonstrating what happens when the tank "runs dry," her response was, "That's it?"

"Yep," I said.

"Thanks for taking the mystery out of it for me," she replied.

I've lost track of the number of times I've run a tank dry. When it's a 3-hour flight, generally I start on a tank, switch over, and then on descent I'm back to the fullest tank so I am landing with 10+ gallons of fuel in it. If it's anything over about a 3 ½ hour flight, I'm running a tank dry.

Again, this is the experience with a carbureted engine. I have never done it in an injected engine, but what I have been told is, that while my engine will stumble when the pressure drops to zero, (courtesy of a little fuel left in the carb bowl), the injected engine will quit! It can also end up with air in the lines to the injectors, making a restart take a little longer than it would in the carbureted birds.

Speaking of air in the lines, it can cause some excitement on your next flight. I had run a tank dry going to Phoenix Mesa Gateway (KIWA) in Arizona a few years back. On the return flight, I started on the tank I had landed on, flew an hour and switched tanks. I always watch the engine monitor when switching tanks and was alarmed to see my fuel pressure begin to drop, along

with the fuel flow. When something goes wrong, you undo the last thing you did, so I switched back.

My mind was running in overdrive, wondering what was wrong, and what could cause the pressure to start dropping. Obviously, it wasn't getting fuel after I switched to what I knew was a full tank. I was considering if I should start looking for an alternate or turn back to where I started. KIWA was only an hour behind me, and I had 1 ½ hours of fuel remaining in the tank I was using. It dawned on me that I probably had air in the feed line from when the tank had run dry on the previous flight. With that in mind, I switched back again. The pressure dropped a little more, and then the fuel flow jumped up high. The pressure stabilized, and the flow came back to the normal range.

Another good thing to know is that if you have an engine monitor that alarms when you have low fuel levels, it is going to continue to alert you for the remainder of your flight. Yes, you have 15 gallons in the tank you are flying on, but it sees the zero in the other tank and will continue to remind you about it.

If you don't already know, the senders are in the rear of the tank, inboard by the fuselage. If you are in a climb, they will show more fuel than what is there; in a descent, they will show less fuel. They are accurate in level flight. Don't be alarmed if you showed 15 gallons when you started your descent, but a few minutes into it, you are only showing around 12 gallons. Those three gallons didn't disappear. The fuel just moved toward the front of the tank.

I have read and heard the arguments against having an empty tank. Here are some of them and my response.

1) **If you have an empty tank, your plane will be unbalanced, and you will have flight issues.** It may be different if you have larger tanks, but in my plane that holds 26 per side, I notice no balance issues even on my recent flight with 24 gallons one side and nothing on the other.

2) **What if all your fuel is in the right tank and you are flying right turns in the pattern? It could un-port and you stall out near the ground.** First, if you are making a coordinated turn, there will be no issue at all. With 10 gallons in the tank, I'm not sure you could put it into an aggressive enough slip to un-port. However, if you have mismanaged your fuel and approach so poorly that you find yourself on final in a forward slip, with a few gallons left, hopefully you have enough bandwidth left to remember to slip the correct direction to force the remaining fuel against the fuselage.

3) **If you run the tank dry it will pick up gunk left in the bottom of the tank.** First, the pickup is raised above the bottom of the tank, specifically so it won't pick up debris from the bottom. Second, you've been flying for hours with the fuel sloshing and bouncing around. Whatever debris is in the tank is likely already floating around and getting sucked up and caught in the filter at the gascolator.

4) **What happens if your tank runs dry and when you go to switch back, the selector doesn't work, or something goes wrong with the tank or lines from the tank you just switched back to?** That would be a bad day. But why would the tank and feed lines that had been working

perfectly a few hours before suddenly stop working? Highly unlikely. Why would the selector stop working? Also, highly unlikely. I will admit that I have a concern about something jamming the selector and I run my finger inside the cup it sits in every time to be sure nothing has fallen in there. Twice in my 950 hours, I have found a tiny pebble that must have fallen off the bottom of my boots. Maybe it would have caused a problem, and maybe not. I'll never know because I check each time.

None of this is to try and change anyone's Standard Operating Procedure or encourage them to do something that would make them feel uncomfortable. I am not a CFI and it has been many years since I slept in a Holiday Inn. There are many more experienced Mooney pilots than I. This article only gives my experience running tanks dry and why I do it. Again, I stress that this is the experience in a carbureted plane. For those with injected planes, I am told that the pressure will steadily drop the same way. If you catch it before zero, the engine never stops, and it's a non-event. If you let it stop in your injected bird, the restart will be a little different.

If you have run a tank dry, I would love to hear your experience. If you think I'm crazy for doing so, feel free to blow up my inbox. 😊

As always, thank you for taking the time to read. If there are things you would like me to write about (or not write about), or if you just want to say hello, drop me an email at richard@intothesky.com. If you're ever in Southern California and want to meet up let me know.

SureFly Update – V3

By: Don Peterson

I spent many years working in the auto parts business, primarily imported cars. A common semi-drama was a car owner bringing back a part claiming that it didn't solve their problems or meet their expectations. This was before Walmart re-wrote the rules on returning things. The economics of that business simply did not support a "try it and see what happens" method of auto repair.

My notes on the SureFly "SIM" have been restricted to "The Mooney Flyer," plus a few online postings in response to owner queries. I continue to see the occasional, "I hear a lot of complaints" about the SureFly causing high cylinder temps. When I bother to ask for specifics, it turns out it is a small number of people, claiming loudly or passing on second-hand rumors. Chats with SureFly reveal a vanishingly small number of returns, which they quickly handle with a refund, as they would rather keep a good reputation for honorable dealing, than spend time solving problems that were NOT caused by their electronic ignition system. I am sympathetic.

We just returned from a year of Mooney-touring around South America. I have hopes of a broader publication of those stories than is possible with TMF, but we had many long legs. Several legs were 5 - 6+ hours, at varying altitudes. We crossed weather systems, giving a variety of temperatures aloft. I have digested the notes and offer here the method for leaning that worked best. My airplane is an M20E, with inner cowling "doghouse," using a fresh factory "Rebuilt" IO360A1A. Unavoidably, other engines and airframes may have different results, but my data was remarkably consistent over about 100 hours of flight time. The best method was:

Climb to your cruise altitude at full rich, and at your maximum preferred RPM. We want to get to altitude as quickly as possible, as the best overall economy requires minimizing the time spent climbing. Don't bother with "cruise climbs." Use best-rate and get up there.

After leveling off, touch nothing for about 4 or 5 minutes. Then, tune your RPM to the note that makes you hum a happy tune. I use 2,450-2,600. Allow speed to build for a minute, then roll

back the mixture to 10 GPH. For my IO360, 10 GPH will be a rich setting at all altitudes above about 6,000'. During this initial period, we want to be slightly rich. Leave the cowl flaps open.

After 3 to 5 minutes, begin leaning in very small bites. We must allow the EGT and CHT to increase slowly. I found that too-rapid leaning results in the CHT climbing toward, and beyond 400F. At a certain point, you'll go into LOP. I look for the onset of slight roughness; VERY slight. Then, I enriched the fuel just enough to reduce or remove any hint of roughness. This should be an LOP condition.

After another 3 or 5 minutes, close the cowl flaps half-way, and see what happens. Usually, nothing changes. Then, after a minute or two, close them all the way, or to a finger-tip open. Whether I end up fully closed or just slightly open depends upon the OAT. My standard is to NOT reach 400F CHT, even though that is within the allowable range.

I found that with tiny adjustments, I could get exactly equal EGTs (+/- 20 degrees) and CHTs all below 400, with the usual suspect #3 being the highest. Normal for #3 has been 375 – 390. On occasion, we would cross a weather front entering a higher OAT. This sometimes would take #3 up to 395 – 400, easily addressed by a tiny correction to the mixture. If the engine was smooth, going leaner could reduce the EGT, while other situations benefited from going slightly richer.

I'll spare my conjectures about the "why" of all this, having given voice to them in a previous article in TMF. A lengthy discussion of thermodynamics and heat vs temperature would put us all to sleep. Try this, be patient, and let us know what you find. Our shared goal might be to identify the engine oddities that keep the SureFly aircraft electronic ignition from delivering its benefits.

"To Lycoming Mooney pilots operating a SureFly with variable timing:

Please test this article's guidance and report your results. Do you achieve a stable sub-400f temp on cylinder #3? If not, what were your results?

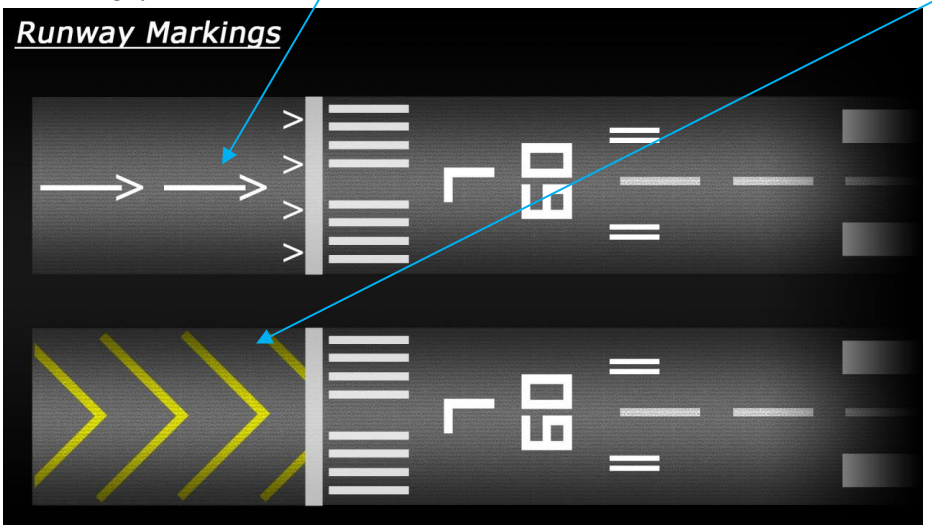
While other methods may work, we wish to validate, or challenge, this technique. With more data, we may fine the best."

The Mooney Flyer QUIZ TIME

1) You're rolling down the runway for takeoff. What color are the runway edge markings on each side of the runway?

Answer: Runway edge markings are solid white lines on each side of the runway.

2) What can the white arrow area be used for? What can the yellow chevron area be used for?

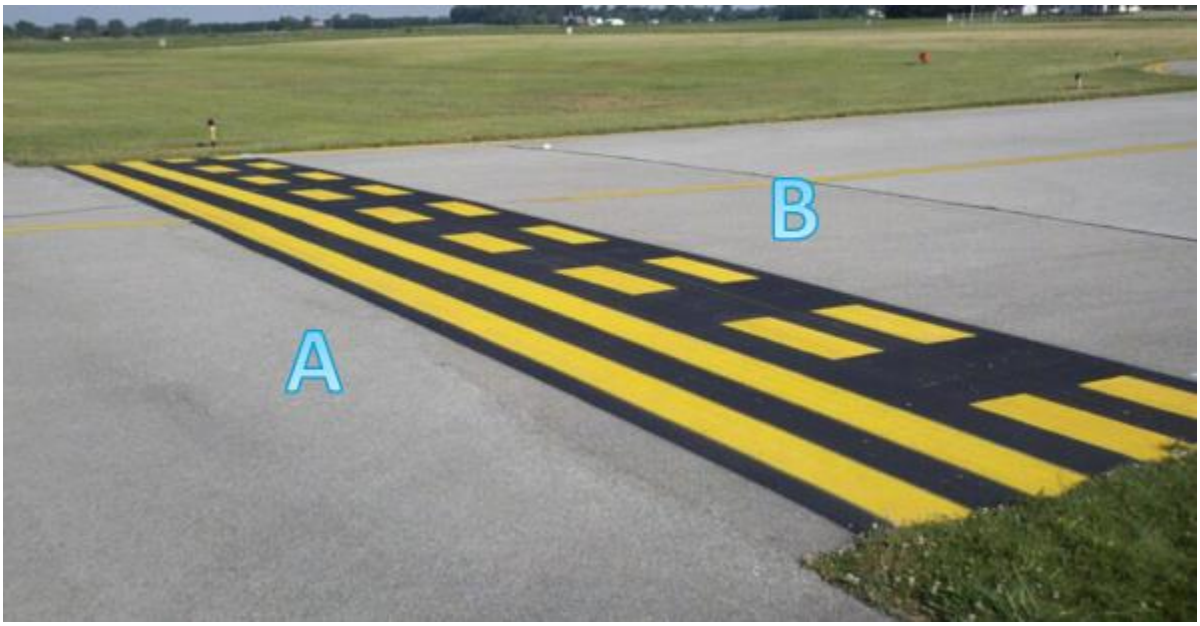


Answer: The White Arrow markings indicate a displaced threshold. Planes should not touch down in the displaced threshold area. However, planes can taxi to this area and use it for takeoff.
Yellow Chevron markings are used to show pavement areas aligned with the runway that are unusable for landing, takeoff, and taxiing.

3) You're approaching a lit runway. What color are the threshold lights?

Answer: Threshold lights are green.

4) You're taxiing to runway 33, and ground control has instructed you to hold short of the runway. What side of the runway hold position markings do you need to hold short of? A or B?



Answer: You need to hold short of the solid yellow lines (Side A).

5) How wide is this runway?

Answer: Since the above runway has 4 threshold stripes on either side, (8 total) it's 100 feet wide. (You can find all the stripes and associated runway widths in the AIM).

- 2 stripes on either side (4 total) = 60 ft wide
- 3 stripes on either side (6 total) = 75 ft wide
- 4 stripes on either side (8 total) = 100 ft wide
- 6 stripes on either side (12 total) = 150 ft wide
- 8 stripes on either side (16 total) = 200 ft wide

6) What is this marking?

Answer: This is an ILS critical area. When the ceilings are less than 200 feet or RVR 2,000 feet, ATC instructs aircraft to stay clear of the critical area.

Thunderbird Aircraft Sales

Specializing in pre-owned Mooney Sales and Brokerage

Hello Mooney Flyer Gang,
My name is Richard Simile, I am the President of ***Thunderbird Aircraft Sales***. We Specialize in the Sale and Brokerage of late Model Mooney Aircraft. If you are considering the purchase of a newer Mooney, or thinking about selling your current Mooney, we hope you will consider using us. Our objective is to always provide a very pleasant transactional experience for both the Seller, and the Buyer. We have two offices. One in Auburn, AL and one in Chandler AZ. Please give us a call or email. We look forward to the possibility of serving you. Thank you.

richard@thunderbirdaircraft.com or 602-884-2111
www.thunderbirdaircraft.com

MOONEY
WE LOVE TO FLY. FAST.

Good *Repetitive* Habits

Good aviation habits are typically passed along from previous generations of Aviators, which is the case with this little GEM. I do a funny thing called the "Key Jingle." You simply remove your key(s) from the ignition and jingle them in front of your face, above the glare shield. You give them a good shake so that they make noise. I do this right after shutdown, (after the mag check of course), to be sure that the keys are in-fact removed from the ignition. One would ask, "Why are you holding them high up in front of you? Why can't you just simply remove them?" GOOD QUESTION!! You could simply remove them, however, by "Jingling" them high up in front of your face, two things happen. A good habit begins that has you doing the same thing over and over again at shut down. A secondary benefit is that the line guy coming to chalk your nose gear will see that the keys are out of the ignition. But that is not what really matters here. Who it really matters to is the next person to touch the prop and 99% of the time it will be YOU!!!!!! You are the next person who is going to touch the prop to turn it out of the way for your towbar or powered tug to push it back into YOUR hanger. This is why you should always "*JINGLE*" your keys. This is one of those great habits that will never have you questioning whether the keys are removed from the ignition when you touch the prop!! Developing "Good Repetitive Habits" like this will keep you from ever touching a Propeller with an Active (Hot) ignition system after shut-down.

Halfway Down the Runway

By Jerry Proctor, Mooney Safety Foundation

Greetings readers. So, please pause for a minute: Now, focus that you are in your aviation hot rod, smoking halfway down the runway. Just think of all the things going at that point. It is a whole lot, for sure! For example, you may be doing 30-50 knots. You should have looked at the engine gauges and airspeed indicator. But what if you are halfway down the runway and realize, "I didn't …. (fill in the blank)?"

This article is about a fictional (sort of) pilot who, happy as a clam, was just about to fly. When he was halfway down the runway, he realized that there was a pretty good crosswind component. As such, he threw the yoke over into the crosswind. Is he better late than never? Maybe, or maybe not.

Let us dissect this not too rare scenario. In the above, as I saw this pilot put in a fair amount of right aileron, we were almost at rotation speed. Thus, this action certainly raised the left wing. "Whoa," he said. He then took out most of the wind correction, which then lowered the left wing. Also, we were already left of the center line, and that didn't improve. Finally, we were airborne, and all was okay.

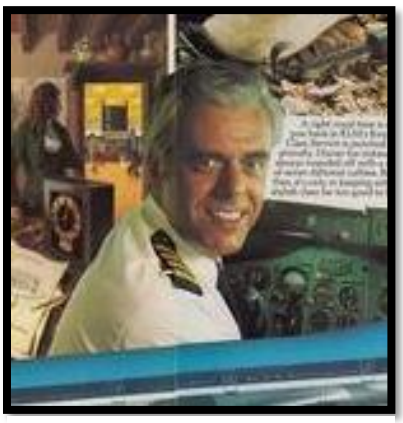
Now, how can one avoid such a situation, or worse? First, I would like to lay out the less than lovely things that could be going on, halfway down the runway. The big item is that the elevator trim could be in the full up position. Most of us, including me, land with our left thumb. So, after landing, my trim is always full nose up. If uncorrected prior to take off, at a minimum, you are in for a scare. Halfway down the runway, this may become obvious. By the way, the electric rudder trim seems to work soooo slow at this critical point. Next is when Ms. airspeed is not registering properly. Once, I was asked by my mechanic to closely see where propeller RPM stabilized. As I began the takeoff, I glanced at my airspeed, but then focused on the prop RPM. When I looked again at the airspeed, it was the same 30KTS that I saw four seconds ago. Oh-oh! By now the runway was too short to abort. Fortunately, I became airborne, and I returned with one of the nicest landings ever. So, what else? Do you already have the next frequencies set in standby? Do you have your initial altitude dialed in? Maybe you forgot the initial heading.

This is starting to sound like a self-confessional. I think I have made my point, so I will stop inditing myself.

Now, the Lesson

Where, in this scenario, do you **PRESS PAUSE**? The pause that all pilots should take to review where they are, what is the weather, are all the buttons and switches in the right place, am I on the full tank, do I know where and how I am going to initially fly, and am I fully ready to leave Mother Earth? Just think of the accidents that you know of, that could have been prevented with *a pause*. For example, taking off with a control lock still in the yoke, or lining up on the wrong runway that is too short or is the wrong one for a night landing.

Finally, the most tragic of all aviation accidents was the 1977 Tenerife airport disaster. 583 people died when a KLM Boeing 747 attempted to take off and collided with a taxiing Pan Am 747 at Los Rodeos Airport on the Canary Island of Tenerife, Spain. The KLM Captain, Jacob Veldhuyzen van Zanten, KLM's chief flight instructor, thought he was cleared for takeoff. However, he did not pause to verify that he was cleared for takeoff. To pause or not to pause, that should never be a question.



Captain van Zanten, featured in a 1977 KLM advertisement.

So, make a note in your check list and habitually do this pause thing. Do it every time and, as much as possible, at the same time.

Fly fast, safe and pause beforehand.

Jerry Proctor

Mooney Safety Foundation, Director Emeritus

Let the Games Be ..... DONE

by Terry Carraway

As per the last update, the avionics work is done, and the more I fly my Mooney, the more I love the new avionics and the layout. At this point, I have about 25 hours experience with the new panel.

There have been several short visits to the avionics shop to tweak a few things, such as configuration settings; nothing major.

I did have the dreaded pitch oscillation, but only when doing an IAS Climb. Initially, it was quite aggressive. Following the Garmin SB, we changed the settings to the alternative gain, and it stopped oscillating and was rock solid. However, I then noticed an issue with the GFC-500 disengaging. The first time was a single event. The next flight it did not happen. On the next flight, it occurred several times and on the last flight, it happened a lot. I contacted Garmin, and sent them logs, but have heard nothing back from them so far. The strange thing is that it only happened after around two hours in flight. Since it only happened on longer flights, I am not sure if this has been an issue all along. Posting on Mooney Space got a response that indicated someone else had the same issue, including the fact that it only happened after two hours in flight.

Garmin recommended checking the trim switch as any momentary contact will cause an AP Disconnect. However, we looked at the logs and it logged AP Unusable and no Pitch Trim Disconnects. All the disconnects were during pitch/pitch trim events, (descents or turns). So, my avionics shop suggested going back to the original gain settings to see if it was a gain issue. Interestingly, they checked the latest Garmin GFC-500 Install and STC and found that the "standard" gain settings have changed since they set them back in May. There are at least three sets of gain settings. The "Original Standard" settings, the "Alternate" settings, and the "New Standard" settings. During the short flight home, I tried an IAS climb and there were some oscillations, but only 1 – 2 knots and smooth. The "New Standard" settings are better on my

plane than the “Original Standard.” Now to see if I still get the AP Disconnects on the way to Mooney Summit.

I do have one small gripe about my setup, and that is the updating. I can update the two GTNs with Database Concierge, using the FS-510. Quick works well and then it does a Database Sync to the other GTN. **BUT** the two G3Xs must be updated “manually.” That is, you must insert an SD card into each unit before powering up. This takes longer than the Database Concierge update. G500Txi would have solved this, (for a lot more money).

G500Txi

These modern avionics are complex systems. If you get a chance, have your shop show you the myriad of configuration settings. For logging, I highly recommend keeping an SD card in the appropriate unit. Garmin logs hundreds of parameters, and it can be a huge help in trouble shooting.

A big thumbs up to Smart Avionics, located at Donegal Springs, Pennsylvania (N71). If you are looking for avionics work in the Mid-Atlantic area, contact Ben Travis and tell him I sent you.

For those with sharp eyes, a new CB panel is being made as a couple of labels ended up with a different font.

Finally, about five months late, Mr. Manana finished the interior upgrade.

Letter of Understanding at Alliance Airport

by Jerry W. Johnson, Mooney Safety Foundation

FBO. Alliance Aviation Services "FBO"). Contact person: Brittney Browner, Manager of FBO Services, 817-890-1000. Alliance Airport (KAFW), Fort Worth, TX

GROUP. Mooney Safety Foundation, (herein "Group") is a charitable not-for-profit safety foundation pursuant to §501(c)(3) of the United States Internal Revenue Code. We have been providing recurrent Mooney flight training programs at five different locations across the country for more than 30 years to certified Mooney pilots. The pilots fly their own Mooney airplanes to the training site, and we bring our experienced flight instructors. Contact person: Jerry Johnson, 13308 Thornton Dr., Westlake, TX 76262 (mobile) 817-454-2426. Email: mooney9281v@hotmail.com.

DATES of EVENT. Group will arrive on Thursday, October 17, 2024 and depart on Sunday, October 20, 2024.

PROGRAM. Group will conduct a three-day pilot proficiency program by providing recurrent training to Mooney pilots arriving in their Mooney airplanes.

AIRPLANES.

Thursday and Friday. We would expect around 20-25 Mooney airplanes to arrive at the FBO on Thursday afternoon and some on Friday morning. All of them will require tie-downs until Sunday.

A few of the attendees may commence their flight training on Friday evenings but most of them will not start flight training until Saturday.

Group will conduct a ground school at The Hilton Garden Inn Hotel on Friday from 7:00 a.m. to 4:00 p.m. With some flying Friday late and even after dark.

Sunday. The pilots will complete their training by noon and depart for their home bases.

FBO Courtesies.

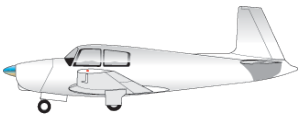
The FBO customarily waives landing, parking and tie-down fees, and offers a discount on the fuel, Some FBOs assists with courtesy transportation to and from the hotel, if available and needed. Most FBOs ask for the credit card of each pilot upon his or her initial arrival, makes an imprint thereof, and runs a tab on that credit card for the pilot's fuel, oil, maintenance, etc. until the program is completed. Then, prior to departing on Sunday, each pilot signs his or her credit card invoice. Obviously, each airplane will require considerable fuel during the weekend in order to complete his or her flight training and fill up on Sunday for the return flight home.

Local Mooney Pilots: Some pilots may be local from other airports in the area.

FAA AUTHORIZATION. Our training program has been authorized and approved by the FAA. At the completion of the program, eligible plots will be endorsed for their flight review, instrument proficiency check, FAA WINGS credits, and will receive an FAA recognized "Certificate Completion of a Mooney-specific recurrent training program". This certificate is very helpful to pilots when they renew their aircraft policies. It often results in a discount on the insurance premium.

When available we would like the local FAA Tower personnel to present specific information about the airport on Friday.

Hotel. Our group will be staying at the Hilton Garden Inn Alliance. Our hotel liaison person is Rick Matherly General Manager. The hotel usually provides a courtesy meeting room on Friday and courtesy transportation to and from the hotel and FBO when available. However, occasions may arise when we ask your facility to assist with transportation as well – provided that it is available.



Mooney Maintenance

Visit our Website for all kinds of maintenance resources

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

CLICK HERE for the FAA's Airworthiness Directives (ADs) for all Mooneys.

Ask the Top Gun

TG

Tom Rouch

Founder of Top Gun Aviation, Stockton, California

Send your questions for Tom to TheMooneyFlyer@gmail.com

What are the top 3-5 things to check on a Pre-Buy?

Tom's Answer

I have a couple of different answers for this question.

First, the only absolute best way to do a pre-buy, and I have done many, is to do an Annual Inspection. For me to recommend an aircraft without a complete inspection comes with a disclaimer or two.

There are some things that can be done, producing a good idea without great cost. For me, the easiest part of the Pre-Buy is spending time going through the aircraft's log books. They reflect the history of that aircraft and how well it was maintained. You would be amazed at how many logbooks I have reviewed that show years of Annaul Inspections without any repairs listed. That is literally impossible. I could take a new plane from the factory and probably find something that needs to be fixed. **In addition to reviewing the logbooks, the "Compromise Pre-Buy," which I have done many times, involves five items:**

- 1) Visually inspect for fuel leaks (very important for a Mooney)
- 2) A compression check

With the plane is on jacks, do 3, 4 & 5:

- 3) A retraction test
- 4) Checking the landing gear for wear and looseness
- 5) Checking the flight controls for wear and looseness

The "compromise pre-buy" takes about 3-6 hours, and it covers most of the high wear items and the items that are costly to repair . . . especially those fuel leaks.

You know the Bonanza. Now get to know the Mooney Executive.

You'll find qualities that have made the Bonanza such a fine airplane in the new Mooney Executive. They're both high-performance retractables and each delivers faster cruise than the other aircraft in their horsepower categories. They both have positive-action electric gear which cycles faster than hydraulic or electro-hydraulic designs. (The Executive's gear is actually a little faster than Bonanza's.) They both appeal to the serious pilot because of rugged, strong construction. (The Executive even has a continuous-spar wing twice as strong as FAA requirements, and energy-absorbing steel roll-bar cabin design.) And they both have the attention to detail and systems to provide years and years of low-maintenance service.

A $20,000 difference.

In an Executive you get the kind of quality and performance you've been dreaming about for a lower initial investment than you may have suspected — and at lower operating costs. The Executive is a bonanza of value. A comparably equipped Bonanza runs about $20,000 more than an Executive and, naturally, costs more per hour to operate because of its larger engine and higher fuel consumption.

Ahead of its class.

In its own price class, the Executive has the numbers. You want performance and load carrying ability... you demand good range. You have a serious need for transportation.

Scrutinize the Mooney Executive. It cruises at 177 mph (up to 26 mph faster than other 200 hp retractables). It delivers up to 100 more miles range with every 50 gallons. The Executive's useful load is virtually the same as the Arrow, Cardinal RG, 112, and Sierra. The Executive has longer range. And only Mooney has these extras: push-pull control rods for precise control; steel roll-bar cabin design; sealed ailerons, elevators, and rudder for less drag and better control, and a continuous spar wing twice as strong as FAA requirements. Get the picture?

Find out more about the Mooney Executive. Reap a bonanza.

Mooney Executive Buyer's Guide

	MOONEY EXECUTIVE	ARROW II	CARDINAL RG	SIERRA	112
Cruise (75% power)	177mph	165mph	171mph	151mph	162mph
Miles per gallon (75% power)	17.4	16.2	15.8	16.1	15.4
Useful load (lbs.)	1,100	1,133	1,140	1,047	1,035
Range (miles, max fuel, 75% power)	1,100	776	949	835	1,049
Climb rate (feet/min)	1,055	900	925	893	920
Max cabin load (lbs.)	830	910	830	970	910

*Comparisons are based on manufacturers' information as published in the 1974 FLYING ANNUAL. Naturally, performance may vary with conditions. Consult FAA-approved aircraft flight manuals for complete details.

Send me 30 pages of serious reading. I'm particularly interested in:

☐ Mooney Ranger 180hp/172mph ☐ Mooney Chaparral 200hp/184mph ☐ Mooney Executive 200hp/177mph Stretched Cabin

Name _____ AO-1

Address _____ City _____

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I ☐ own ☐ rent: Make _____ Model _____ Year _____

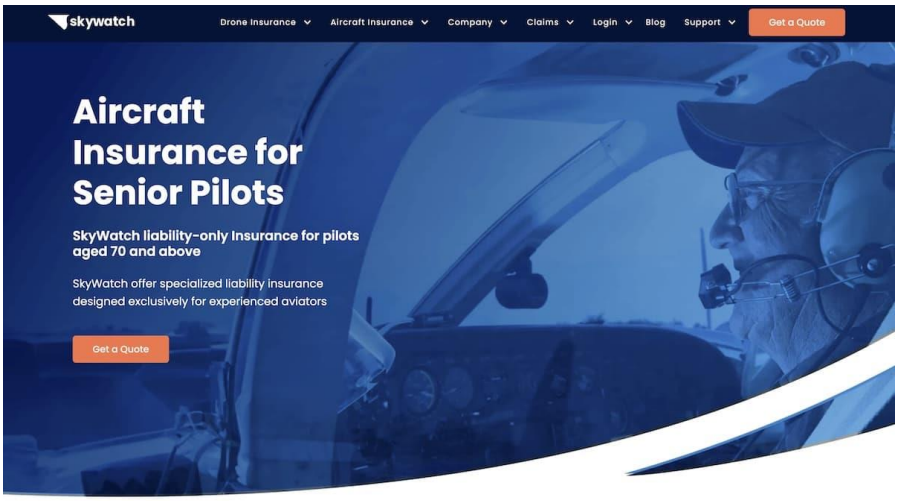
MOONEY

Aircraft Corporation

Subsidiary of Republic Steel / Kerrville, Texas 78028 / (512) 257-4043

CIRCLE NO. 46 ON READER SERVICE CARD

SkyWatch Introduces Insurance Solution for Pilots Aged 70 or Older



According to SkyWatch officials, "Recognizing the challenges faced by pilots aged 70 and older in obtaining affordable, comprehensive insurance, this new offering allows them to continue flying with the necessary liability coverage."

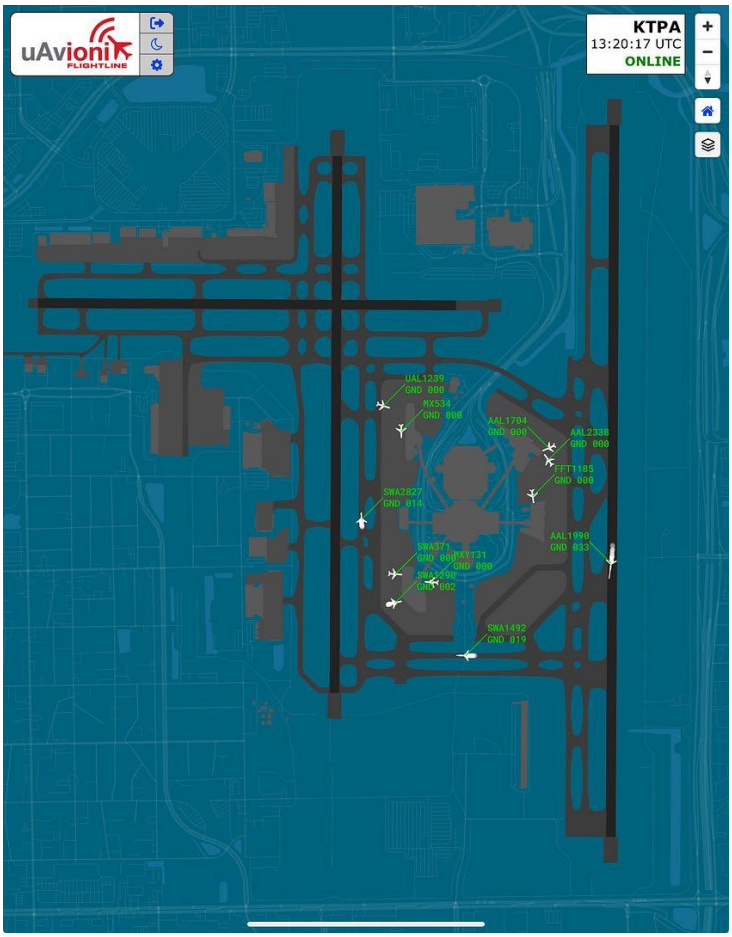
They noted that the new insurance option was developed "in response to in-depth conversations between SkyWatch and the Aircraft Owners and Pilots Association (AOPA) regarding the unique challenges faced by senior pilots. Together, we identified the importance of providing insurance solutions that allow experienced aviators to continue their passion while adhering to necessary insurance requirements."

Available through SkyWatch's online platform, the policy provides flexible coverage options and instant quotes.

"This offering is a game-changer for our senior members," said Mark Baker, AOPA president and CEO. "We're pleased to see SkyWatch addressing a critical need in the market, allowing our seasoned pilots to stay in the skies safely and affordably."

For more information: Skywatch.ai

uAvionix to install FlightLine System at Six Additional Airports



uAvionix has been awarded contracts by the FAA to install its FlightLine surface situational awareness system at six more U.S. airports, following successful deployments earlier this year.

The installations, part of the FAA's Surface Awareness Initiative, aim to enhance safety and efficiency on airport surfaces, company officials explain.

The new airports include Tampa, Jacksonville, Orlando Sanford, Daytona Beach, Miami Executive, and Palm Beach International, with all systems expected to be operational by Thanksgiving 2024.

The FlightLine system provides real-time data on aircraft and ground vehicle movements, helping air traffic controllers monitor surface activity more effectively. By reducing the risk of runway incursions and improving operational efficiency, the system is designed to support safer airport environments, particularly during busy travel seasons. The next uAvionix installation might be at YOUR airport.

Mooney M20 Control Wheel Shaft Fatigue Cracks

Notice Number: NOTC3947

The FAA is investigating the report of a control wheel separation on a Mooney M20C aircraft due to fatigue cracks in the control shaft or control wheel attachment hub. This failure might result in momentary loss of control of the aircraft until the pilot or copilot is able to regain control with the second control wheel. This may reduce the capability of the airplane or the ability of the crew to cope with adverse operating conditions to the extent that there may be a significant reduction in safety margins, especially in certain phases of flight, such as takeoff and landing.

The FAA's Aircraft Certification Service recently issued an Airworthiness Concern Sheet (ACS) to highlight this concern and the ongoing investigation including a photograph of the failed part. The FAA is recommending operators visually inspect the control wheel and provide

information including description of damage, available photos, airplane serial number, and time in service since installation.
To view the Airworthiness Concern Sheet please select this link or paste the address into your browser: https://www.faasafety.gov/files/notices/2024/Sep/2024-09-25_Mooney_Control_Wheel.pdf
If you have any questions or comments, please contact the Aircraft Certification Service through Jacob Fitch at Jacob.Fitch@faa.gov.

Events

	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 October 12: Flagler (FIN) November 9: Sebring (SEF)
	Sign Up at https://www.mooneysafety.com/ppp-registration/ **Remaining 2024 Event locations:** Dallas Ft Worth, TX, Oct 18-20
	Learn more at https://www.empoa.eu/index.php/en/

SwitcheOn 15 Amp Base Remote Power Switch

SwitcheOn Remote Power Control is the ultimate remote power switching device. It is easy to use and can be controlled by a smart phone enabled app for easy switching on and off. There is no WiFi, hotspot or additional SIM/service required and comes available in 2 or 4 channels. This device is perfect for remotely turning on engine block heaters in aircraft.

SwitcheOn can only operate within the United States due to service coverage limitations****

- 2 or 4 channels and up to 15 amps (1800 watts)
- Temperature sensor
- Bright OLED display Local and ZULU time
- Signal status
- Power/port status
- Temperature
- Mobile apps for iOS and Android
- 1st-year service included renews for $50/year
- Automations for each channel
- Uses LTE-M and NB-IoT bands deployed as part of 5G rollouts
- Operates much further from cellular towers than normal 3G or 4G W
- Warranted as long as service is maintained

CLICK HERE for a video by Tom Haines

CLICK HERE for more information on the product

Parts for Sale

1959 Mooney 20A - Seeking Mooney Purist * $17,000

Hangar stored for years, now ready for overhaul(s) and refurbish. * Airframe and engine 1439.1 TT. McAuley prop. O360 engine. Wood-wing.

* Would consider selling only the engine and prop. However, sentimentally prefer to find a Mooney Lover seeking a great project. * Telephone: 419 591 6477 for further information.

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)

Mooney gear actuator and parts FOR SALE

- Manual extension Spool and Cable for Plessey. Installed 2021, 206 hours.

Best offer.

Contact: CarolAnn Garratt, cagarratt@gmail.com or leave msg at 352-342-7182.

For Sale: Complete exhaust system from 1975 M20C. Excellent condition. Drilled for EGT sensors. Approximate 2,750 hours TT. Removed for Power Flow upgrade. $350. For information: 541-382-6752; 541-410-1121; jhl1csrs@yahoo.com

For Sale: Polished Hartzell 3 blade spinner P/N: A-2295-4P. Fits Mooney M20J and M20C with STC and other applications. Complete with bulkhead. $500. For information: 541-382-6752; 541-410-1121; jhl1csrs@yahoo.com