The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

March/April 2025

Editors

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Contributors

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Departments

Editor on the Loose – *Nobody Asked; just our Humble Opinion*

Mooney Mail – *Feedback from our Flyer readers.*

Ask the Top Gun –*Tom Rouch answers your questions*

Product Review – Pilot Coffee Mugs

Upcoming Fly-Ins – *Fly somewhere and have fun!*

Have You Heard? – *This month's Relevant GA news & links*

Mooney CFIs – *The most comprehensive listing in the USA*

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.

Bad Month for Aviation

It was a bad month for aviation, starting with the DCA crash involving an Army Blackhawk helicopter and a Regional Jet. Yesterday, as of this writing, there was a midair collision between a Cessna 172S and a Lancair 360 MK. The latter collision occurred in the pattern at Marana Airport (AVQ) in Arizona.

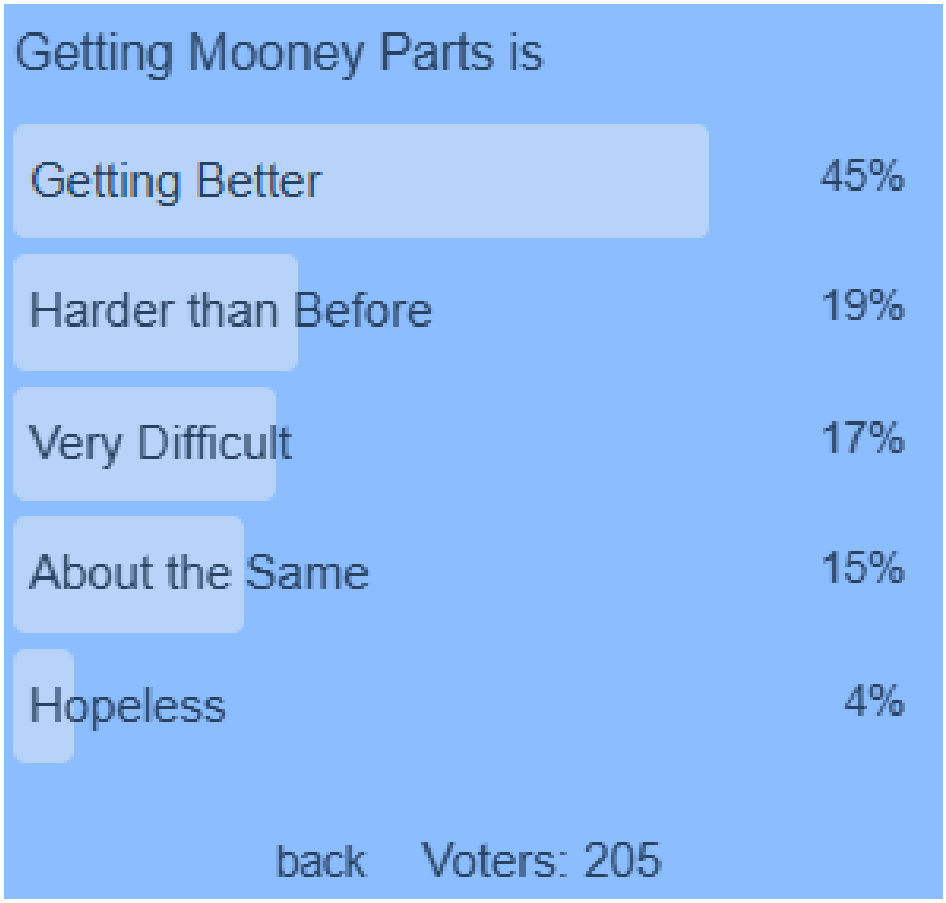
In both cases, the weather was VMC, so it's safe to say that "See and Avoid" failed one or both pilots. The souls in the Lancair perished, but thank goodness, the Cessna landed safely.

It goes without saying that we Mooniacs should increase our "see and avoid" skills to avoid similar fates.

See and Avoid sounds easy, but it is not always that simple. One of the problems is the presumption that many pilots are expecting all other planes in the pattern to enter the pattern in the recommended way, meaning a 45° entry, followed by a downwind, then base and final. The trouble with that thinking is that it is not always accurate.

The second presumption is that other aircraft are on the radio and making appropriate position reports. Again, this is not always the case. Some pilots are sloppy with the radio, some "misreport" their locations, while others might be distracted.

What are we to do? The answer is to expect NORDO aircraft, and also to expect non-standard pattern entries. In other words, keep your head on a swivel and look for aircraft in all directions when you are entering and flying in the pattern. Even at a towered airport, see and avoid is key. Controllers are busy and human. Be a good partner to them by being proactive in "See and Avoid." Keep yourself and those around you safe.

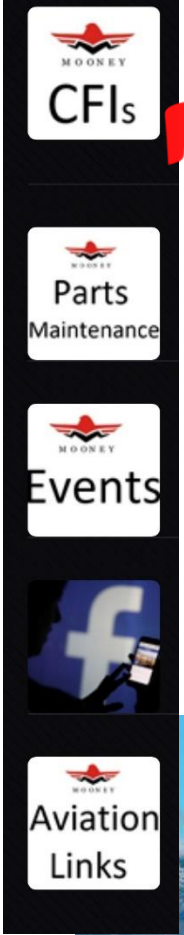


Next month's poll: "When my Engine Reaches TBO, I will"

CLICK HERE to vote

Need a Mooney CFI?

CLICK HERE to find one



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.

Regarding Your Piece on the DCA Crash -- Just reading your editorial on the DC crash. And you asked a couple of questions, so I wanted to shed some light from an Airline Pilot's perspective…

Why was the helicopter vectored through Class B? There are dedicated routes for them through there, basically like a VFR Through Route. That particular unit flies VIP's back and forth through there all the time, so it is very routine.

Does the airliner have TCAS? Yes, it does. And most likely they got a Traffic Alert (TA), which is also very normal in that busy environment. Resolution Advisory (RA) that will tell the aircraft to climb or descend are inhibited below 1000'. I just flew a B-777 into LAX the other night and after midnight, weather permitting, they will land to the east on the north runways and take off simultaneously to the west on the south runways. As we captured the localizer (LOC) on final, we got a TA audio alert for an airplane that just departed. We quickly acknowledged it by saying that is normal and we went back to running our landing checklists. It was also visible on our ND display. My point being, we expected that and because we were busy with landing checklists and descending on final, we didn't spend any more time analyzing the threat. Perhaps the AA crew did the same as they heard the helo crew say they had them insight?

So, my opinion on this, it is a very busy environment in that airspace. I believe listening to the ATC audio, that the helicopter crew might have mistaken the AA plane that was trailing the accident airplane. Maybe that was due to the accident airplane was in a left turning bank lining up with the runway that they were side slipping to and from the helo crews view, there are a million lights out there at night?

Contributing, I think the Air Traffic Controller was very busy and doing the best he could but was tasked saturated. When he queried the helo the second time, he could have instead given a turn to avoid, although it might have been too late by then? But when the helo crew said traffic insight, they took responsibility for seeing and avoiding. In the end, very tragic.

Brian M

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Reduce Wear & Tear on Your Mooney

If you can reduce wear and tear on your Mooney by utilizing some or all of these tips, you will save money and downtime on your Mooney. Let's start with your engine.

Engine Tip #1 (Fly Regularly)

Fly often. There is nothing you can do that is better for your engine than to fly regularly. When an engine sits for too long, moisture builds up inside the crankcase and oxidation/rust results. Once a week is probably good. However, for this to be valuable, you need to fly for at least one hour at cruise. This is how long it takes to burn out all the moisture and contaminants. Turning the prop by hand, or fast taxiing around the airport doesn't do the job.

Engine Tip #2 (Lubrication)

Lubrication is key to the good health of all the moving parts in your engine. Here are three things you should do to ensure that eveything inside your engine is lubed properly:

- Without exception, change your oil every 25-35 hours. Furthermore, if you haven't put enough hours on the engine after 3 elapsed months, consider changing the oil at that time regardless of hours flown. And oh by the way, when you change the oil, always change the filter.
- Use CamGuard. There are two reasons for this: 1) It increases the lubricity within your engine. Think cam and bearings and cylinders, etc. 2) It provides significant, additional rust protection. An engine without CamGuard will lose its rust protection and lubricity after approximately 36 hours. This is really problematic on engines with overhead cams. However, with CamGuard, you lengthen the protection of a dormant engine to 500 hours.
- On startup, once the engine catches, don't let your RPMs exceed 1000 RPM. Give it 15-20 seconds for the oil to get to the top of your engine. In cold weather, this is exacerbated by the oil congealing, so for even longer, there is virtually no oil in the top. The only solution to this is to preheat if the temperatures drop to 32°F or less. Most wear and tear to engines occurs immediately after startup, so be particularly kind during this time.

Engine Tip #3 (Cool CHTs)

Monitor your CHTs and don't let them get above 400°F for a long time. Bad metalurgical things happen to your cylinders/pistons above those temperatures. Higher CHTs seem to occur more frequently on climbout. There are a few things you can do:

- Flatten your climb. This increases airflow in the engine compartment and helps keep the cylinders cooler
- Enrichen the mixture. More fuel helps to mitigate higher CHTs
- If you have cowl flaps, open them wide.

Engine Tip #4 (Taxiing)

When taxiing, lean your mixture until the engine starts to run rough or starts to stall. If you don't lean, you will cause buildup on your sparkplugs which can result in fouling and/or rough enigne.

Engine Tip #5 (Starting)

This tip is actually more for your starter than your engine. If your engine doesn't start after 15-20 seconds, stop cranking. At this point, your starter is pretty hot. Wait a little, adjust your throttle and mixture, maybe boost some fuel, and then try again. If it does not start, wait longer for your starter motor to cool down.

NOTE: *Does your engine have "morning sickness". This refers to an engine that runs a little rough for 15-20 seconds after starting. This can be an early warning signal of a stuck valve. It's worth checking out.*

Engine Tip #6 (Smooth Power)

So you've taxied to the runup, performed your pre-flight runup, and taxied to the runway. As you take the runway to depart, add your power slowly and don't jam the throttle to wide open throttle (WOT). Jamming the power from idle to WOT stresses the engine.

Engine Tip #7 (Stay out of the Red Box)

Whether you fly ROP or LOP, ensure that your mixture is set so that you are operating outside of the "Red Box". Running at 50° ROP is probably the worst place you can run your engine. This causes the highest "internal cylinder pressure" which is what causes excessive wear and tear. CLICK HERE for everything you want to know about the Red Box.

Engine Tip #8 (Bore Scoping)

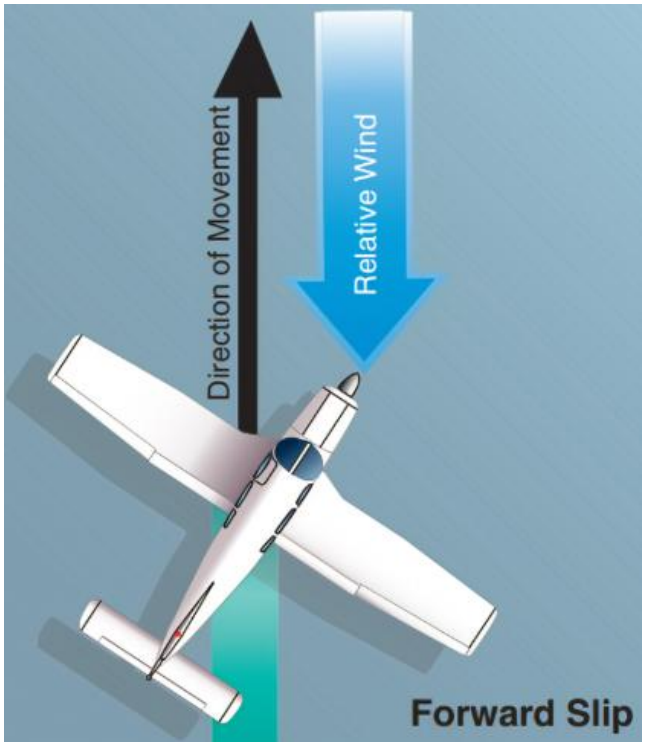
Borescoping all of your cylinders at least every annual and, if possible, 6 months later is cheap and easy. It may reveal an exhaust valve that is failing and/or excessive cylinder wall wear. You can buy a scope that connects to your iPhone for not much money. Learn what to look for.

Tip #8 (Brakes)

Don't ride the brakes. Ensure that your feet aren't applying brakes while taxiing. Be absolutely certain you don't have a lazy foot on the brakes during your takeoff roll. This will wear the brakes down pretty quickly.

The worst culprit is applying brakes on the landing roll, especially when they are not needed. There is little reason to apply brakes in order to make an early exit from the runway. Coasting to the next runway exit is much kinder to your brakes.

Less braking promotes longer tire life. Also, strive for a gentle touchdown, as opposed to plopping it down on your gear/tires and causing undue wear and possibly a blowout.



Tip #10 (Side Loading)

Ensure that your nose is straight down the runway when touching down. This needs more attention in any crosswind landing. I utilize the crab and rudder technique where I kick the rudder and lower the upwind wing just before I touch down. Side loading puts undue stress on your Mooney's gear.

Tip #11 (Hangaring)

If you can secure a hangar, it works miracles for your Mooney. It keeps your Mooney dry. More importantly, it protecs the exterior from the effects of a hot sun. Your avionics are particularly susceptible to heat and cold, and a hangar mitigates this a lot.

Without a hangar, you really need a cover for your Mooney. I'm partial to Bruce's Covers. They last forever, are durable, and are well-made.

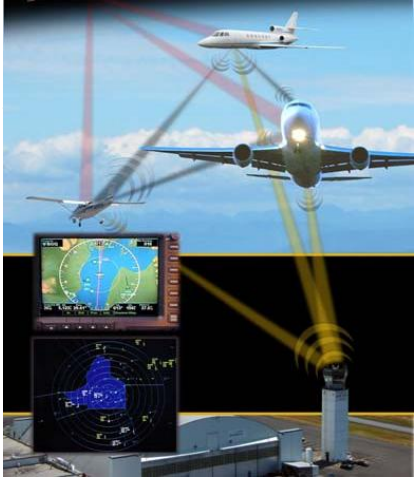
My wife made window shades with suction cups that reflect most of the sun away from the internal cockpit, keeping the internal temperature significantly cooler. These types of shades can be purchased online.

Tip #12 (Tire Pressure)

Tires wear the best when the pressure in them is correct. Over or underpressure causes uneven wear. Just check the pressure regularly. I check mine once per month. Remember that pressure will be under reported on a cold day, so take that into account.

Summary

These tips can reduce wear and tear on your Mooney, thereby saving you money and downtime. If you have additional tips, please send your ideas to us.



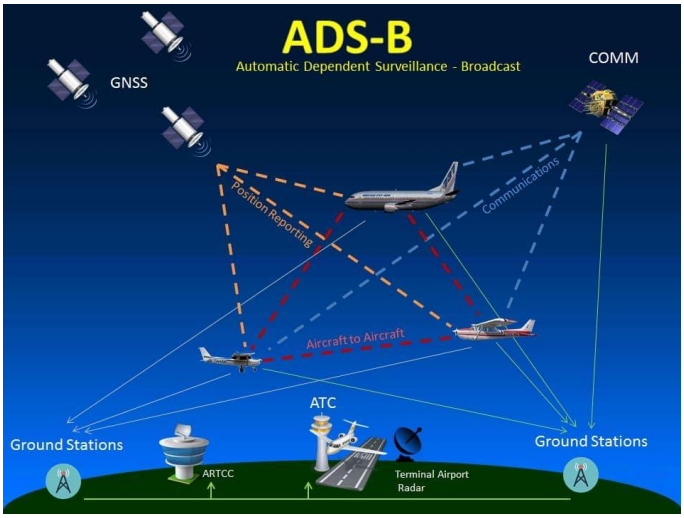
Volume 14 Number 3 March/April 2025

An ADS-B Refresher

ADS-B can be very confusing. Most people know that it's an acronym, but many are unaware of what those letters mean. The purpose of this article is to explain ADS-B, and why you should know about it. You cannot just ignore it because it is important to you and the Controllers.

WHAT is ADS-B?

With ADS-B, aircraft self-report their GPS position so pilots can see the entire air traffic picture around them. ADS-B also includes datalink weather and traffic.

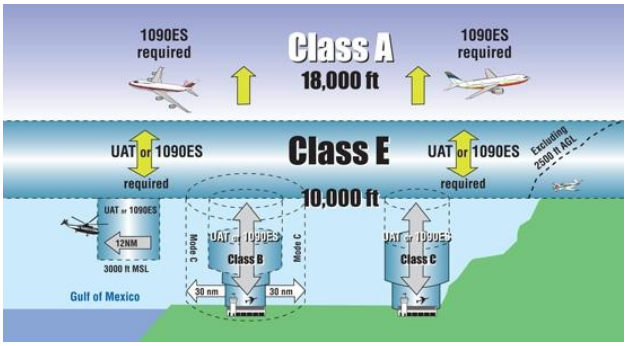


With ADS-B, aircraft get their location from a global navigation satellite system and every second, the aircraft's ADS-B transponder broadcasts the location and other data to the ground stations. The Ground Stations then transmit the aircraft's location to the controllers.

A BRIEF HISTORY

On June 30, 1956, TWA and United Airlines had a midair collision over the Grand Canyon. This terrible accident changed everything. Just one year later, in 1957, radars were installed, and controllers were hired.

Three years later, pilots and aircraft owners were dealing with the 1960 transponder mandate. In 1988, another mandate forced owners to upgrade their transponders to Mode C.



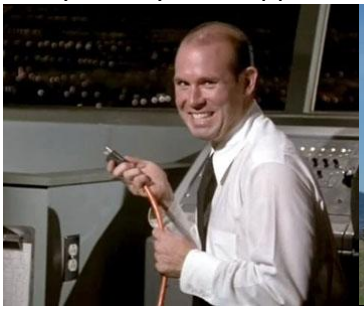
The ADS-B **Out** mandate came along and required owners to install ADS-B no later than January 1, 2020. Aircraft were then required to have ADS-B if they wanted to fly in Class A, B, and C airspace; Class E airspace at or above 10,000 feet msl, excluding airspace at and below 2,500 feet AGL; and within 30 nautical miles of a Class B primary airport (the Mode C veil).

NextGen

ADS-B is a major part of the Next Generation Air Transportation System (NextGen). This is a large-scale FAA initiative to modernize the U.S. National Airspace System (NAS).
Through NextGen, the FAA has revamped air traffic control infrastructure for communications, navigation, surveillance, automation, and information management. The purpose of this effort is to increase the safety, efficiency, capacity, predictability, flexibility, and resiliency of U.S. aviation. NextGen's scope includes airport infrastructure improvements, new air traffic technologies and procedures, and safety and security enhancements.

IT'S A GPS WORLD

You may have noticed that there are fewer VORs, Victor and Jet airways on the IFR maps. That's because, by the end of 2025, NextGen will have pulled the plug on 308 Federal VORs and deleted many airways and approach procedures.



However, the FAA promised that they would retain:

- VORs for coverage at 5,000' AGL and above across the entire CONUS
- VORs to perform ILS, Localizer or VOR approaches within 100 NM of any location in the CONUS
- Most VORs in the Western US Mountainous Area for the Victor airways in high elevation terrain
- VORs for Military Use

ADS-B will eventually replace radar, which currently is Air Traffic Control's primary means for keeping aircraft safe and separated.

The ADS-B acronym stands for:

- **A**utomatic – reporting the aircraft's position every second without the need for radar interrogation.
- **D**ependent - ADS-B depends on aircraft having an approved WAAS GPS on board and an ADS-B Out transmitter
- **S**urveillance - it is a surveillance technology that allows ATC to watch airplanes move around (like radar)
- **B**roadcast - because it transmits the information available to anyone with the appropriate receiving equipment

ADS-B depends on a network of 500 ground stations to receive aircraft reports and send them back to ATC. These stations also transmit weather and traffic information to properly equipped (ADS-B IN) aircraft.

OUT & IN

ADS-B is made up of ADS-B Out and ADS-B In.

ADS-B **Out** is a surveillance technology for tracking. When your aircraft's ADS-B transmitter reports every second, your position, velocity and altitude, this transmission is received by ATC and nearby aircraft and this data makes up the equivalent of a radar display. Most aircraft have been required to have ADS-B Out since the FAA mandated it on January 1, 2020.

ADS-B **In** allows aircraft to receive transmissions from ADS-B ground stations and other aircraft. This is also how pilots can get subscription-free weather and traffic in the cockpit. Adding ADS-B **In** is optional.

VARIOUS COMBINATIONS:

- ADS-B Out - the only equipment required by the FAA
- ADS-B In – can be provided by portable devices like Stratus to receive weather & traffic
- ADS-B In/Out - products that do it all. Remember, there is no such thing as a portable ADS-B Out device. All Out equipment must be panel-installed.

1090 MHz & 978 MHz

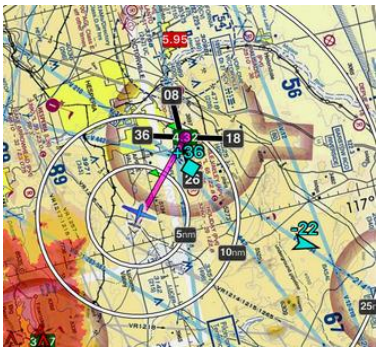
There are two different datalink technologies that meet the ADS-B requirement: 1090 MHz ES (Extended Squitter) and 978 MHz UAT (Universal Access Transceiver). These are simply different frequencies used by the equipment to transmit and receive data.

1090 Extended Squitter (ES) transmits on 1090 MHz, just like our Mode A/C/S transponders. In fact, some Mode S transponders (like Garmin's GTX 330) can be upgraded to an ES transponder by upgrading the software and adding a WAAS GPS. 1090 ES is the only technology accepted outside the US and above 18,000 feet, so it is popular with turbine airplanes. It is also a good choice for piston airplanes that need a new transponder. ES receivers can detect other aircraft with ES transmitters air-to-air, and they can receive other traffic information uplinked from ADS-B ground stations. 1090 MHz does not offer a weather datalink.

978 MHz, sometimes called UAT (Universal Access Transceiver), is only available in the US, and only allowed as a transmitter below 18,000 feet. Like a 1090 ES receiver, UATs can detect other airplanes with transmitters on the same frequency (978 MHz) air-to-air and also receive the rest of the traffic picture from ADS-B ground stations. As an added bonus, weather is also transmitted on 978 MHz.

If you fly above 18,000 feet or outside the US, 1090ES is your only option. If you don't, a 978 UAT could work and save you some money.

If you want ADS-B weather and traffic, your avionics shop can add that to your panel and hook it up to a 978 receiver. You can also use a portable receiver like a Stratus to see traffic and weather on an iPad or iPhone.



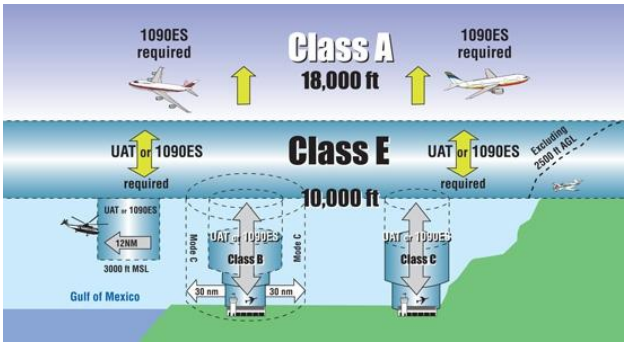
WEATHER AND TRAFFIC

Flight Information Services-Broadcast (FIS-B) is just a short name for datalink weather. It is only available with a 978 MHz receiver. NEXRAD radar, METARs, TAFs, TFRs, AIRMETs and other information is continuously updated in flight, and all this can be displayed on either a panel-mounted MFD or a portable device like an iPad. Unlike SiriusXM Aviation weather, which uses satellites and requires a subscription, ADS-B weather uses the network of ground stations. FIS-B coverage, while pretty good in most parts of the US, is not as universal as SiriusXM Aviation weather.

Traffic Information Services-Broadcast (TIS-B) is datalink traffic. ADS-B traffic is a custom report that is only sent to aircraft with ADS-B Out. You'll get an excellent picture of all traffic within roughly 30 miles of you. If you're not flying with an ADS-B Out transmitter, TIS-B can be unreliable.

ATC

Remember, while datalink weather and traffic are nice, the whole point of ADS-B is to help ATC. Since ADS-B is so much more accurate than radar, ATC can reduce separation minimums. This should lead to more direct routings and increased airspace capacity. Because ADS-B does not require radar, air traffic control will be available in many remote areas that cannot be served by radar. ADS-B will also impact ground operations, giving controllers the ability to prevent runway incursions and ground traffic conflicts.



REGULATIONS

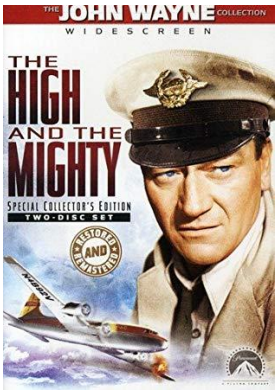
In general, you need ADS-B in most of the places you need a Mode C transponder.

An approved WAAS GPS source is also required, to make sure your reported position is accurate.

FINAL THOUGHTS

As of 2024, the widespread adoption of ADS-B has significantly enhanced safety, efficiency, and situational awareness for both pilots and air traffic controllers. Understanding its components—such as ADS-B Out and In, and the differences between 1090 and 978 MHz frequencies—remains essential for making informed decisions about your equipment.

With the 2020 mandate now fully implemented, most aircraft are equipped with ADS-B Out. However, I still hear of pilots who want to purchase an aircraft, only to learn that the previous owner had not installed ADS-B Out.



Pilots are enjoying more precise traffic information and access to in-flight weather data, leading to safer and more efficient flights.

Having traffic and weather through TIS-B and FIS-B, is like having John Wayne as your co-pilot. It is the ultimate in Cockpit Resource Management (CRM). I assure you that an ADS-B equipped Mooney, with an iPad and a Stratus, displays more advanced weather and traffic information than the airliners I flew 20 years ago.

If you have not yet installed ADS-B, I encourage you to embrace it wholeheartedly. It not only keeps you compliant with regulatory requirements but also allows you to take advantage of technological advancements. Please continue to stay informed and make the most of what ADS-B has to offer, as you prepare you for the exciting future of aviation.

Plan Now to Become a Safer Pilot in 2025

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.

2025
Lakeland, FL Jan 24 – 26
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Branson, MO Oct 17 – 19

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Turbulence is Where you Find it

Over the years, my wife has developed her tolerance for the bumps that we endure. In our first few hundred hours of flight, I learned, that to keep her focused on "why" she was making the flight, there were times that she would picture the grandkids faces as we bumped along.

Measuring turbulence does have some objective factors. NOAA gives the following guidance on reporting turbulence:

> "In reporting turbulence, it is usually classed as light, moderate, severe or extreme. The degree is determined by the nature of the initiating agency and by the degree of stability of the air.
>
> **"Light turbulence** momentarily causes slight changes in altitude and/or attitude or a slight bumpiness. Occupants of the airplane may feel a slight strain against their seat belts.
>
> **"Moderate turbulence** is similar to light turbulence but somewhat more intense. There is, however, no loss of control of the airplane. Occupants will feel a definite strain against their seat belts and unsecured objects will be dislodged.
>
> **"Severe turbulence** causes large and abrupt changes in altitude and/or attitude and, usually, large variations in indicated airspeed. The airplane may momentarily be out of control. Occupants of the airplane will be forced violently against their seat belts.
>
> **"In extreme turbulence**, the airplane is tossed violently about and is impossible to control. It may cause structural damage.
>
> **"Chop** is a type of turbulence that causes rapid and somewhat rhythmic bumpiness."

Turbulence Intensity Classification	
Intensity	**Effect**
Light	Slight erratic changes in altitude and/or attitude
Moderate	Change in altitude and/or attitude, but the aircraft remains in positive control at all times
Severe	Large, abrupt changes in altitude and/or attitude. Aircraft may be momentarily out of control
Extreme	Aircraft is violently tossed about and practically impossible to control. May cause structural damage.

However, measuring turbulence does have a subjective aspect to it and one person's light is another's moderate. I'm sure there were times in those first few hundred hours of flying, that what I thought was light, my wife considered moderate.

We hadn't been back to Arizona to see my dad since mom's funeral December 21st, and I wanted to make the trip. On the weekend of February 8th, everything was lined up, except possibly the weather. I would have things wrapped up at work so I could leave early afternoon on Friday, and we could fly out that evening, spend the day Saturday, and come back Saturday evening.

As the week rolled along, I kept an eye on the weather forecast, and it started to make me a little apprehensive. Friday morning, I went to work with a bag packed for the weekend trip, but I wasn't feeling great about the upcoming flight. There had been rainstorms beginning Wednesday that

were to trail off Friday afternoon, leaving us with an IFR departure followed by in and out of clouds until we passed the Thermal VOR (TRM) and the Salton Sea, about 160 miles east of Fullerton. The freezing level would be well above our 11,000' cruising altitude, so that wasn't a concern. What was eating away at me was the 40+mph winds forecast at 12,000' that would be perpendicular to the San Jacinto Mountain Range. San Jacinto sits at 10,834' and the IFR routing is V64 at 11,000' crossing the range 8 miles south of the peak, where the mountains are only about 7,200'.

There were AIRMETs for moderate turbulence below 18,000'. I told my wife my concerns about the flight, that it would likely be in the clouds bouncing along. I mentioned to her that if I were flying alone, I would do it, but I was certain she wouldn't appreciate the flight, and we should just postpone it a week. After talking to her, I called dad to let him know about the change in plans due to the weather. I laughed a little when he responded, "I'll still be here next week." That evening, I returned home with the bag I had packed that morning.

Fast forward a week and beginning mid-week, again, it was raining off and on. The forecast had the rain ending Friday morning, but again there would be high winds. It was almost a cookie cutter version of the previous week, with one major distinction. If the cloud forecast held true, I could make the entire flight VFR.

The Banning pass runs between San Gorgonio at 11,503' to the north and San Jacinto at 10,834' to the south. From Fullerton to the Banning Pass, the forecast clouds were few at 3,000' and scattered at 6,000' with tops at 9,000'. I could depart VFR, climb through whatever holes there were in the few/scattered layers, and be on top in the clear before getting to the Banning Pass.

Making the flight VFR instead of IFR meant two things. First, if we encountered turbulence, we wouldn't be in the clouds, which makes it more tolerable and, in my opinion, safer. Second, we would be going through the Banning Pass instead of over the ridgeline. The Banning Pass is essentially a straight shot about 4 miles wide at its lowest point of 2,200', and 33 miles wide at the top between the two mountain peaks.

There are stories about turbulence in the Banning Pass. We have been tossed around a little, but generally, even in high winds, if the winds are parallel (east/west) to the pass and you are high and stay in the middle, it is not bad. Why? Because the air is funneled through the relatively straight pass, streamlining the flow, reducing the eddies and turbulence formed when air goes up and over a ridgeline.

I left again on a Friday morning with a bag packed for the weekend. There was a SIGMET for occasional, severe turbulence below 12,000' and AIRMETs for moderate turbulence below 18,000'. I checked for pilot reports during the morning along the route. There were two reports from airliners near Palm Springs, and I normally give extra consideration when the big iron is reporting turbulence. However, these didn't cause an alarm. One was during descent to Palm Springs, and one was on climb out from Palm Springs. Both were on the leeward side of San Jacinto, where the air is known to swirl around as the wind goes up and over the mountain and mixes with the wind spilling out into the valley on the east end of the pass. I would be at either 9,500' or 11,500' in the middle of the pass and departing eastward.

I also watched closely on FlightAware for any small planes transiting the area. There was a Cirrus at 13,000' that flew the V64 route late in the morning where I expected turbulence. Flying IFR, I

hoped the Cirrus would submit a pilot report if there was anything worth reporting. Just east of the ridgeline, it reported mountain waves with airspeeds +/- 20 knots, but no turbulence. There was also a Sling and a Cessna 172 flying VFR through the Banning Pass, but no pilot reports from either one. I left work at 1:00 pm to pick up my wife, advising her that it might be a bumpy ride.

Just before 3:00 pm, we were climbing out to the east through giant holes in the clouds. By the time we were 20 miles east of the field, we had passed through 6,000' and were above everything nearby. But, wherever there were mountains, the clouds were piled higher. I knew we were going to need to be at 11,500' to top the clouds through the Banning Pass. We continued the climb before finally leveling off, with our cannulas from the Inogen G5 keeping our O2 levels in the 90's.

As we approached the pass, staying in the middle, I told my wife to expect some bumps and we both tightened our seat belts. To the north, San Gorgonio was covered in clouds, and it wasn't until we were east looking back, that I could see the snow covered peak. To the south, we could see the clouds flowing over the top of San Jacinto, driven by 50-60 mph winds. Amazingly, the ride

in the middle was almost completely smooth. I was expecting some turbulence and hoped that flying in the middle of the pass would minimize it. However, nothing materialized.

I kept an eye on the speeds on my G5's. There was a little mountain wave action, with the true airspeed bleeding off, as the autopilot tried to hold altitude in the downdraft (sink) side. With the quartering tailwind, our groundspeed still held above 200 mph. It was when we were in the updraft, with about 2 degrees nose down, that we hit our highest groundspeed ever of 226 mph.

The landing at Mesa Gateway was a little sporty. Landing on 30C, the winds were from 260 at 22 gusting 31, giving us an 18-26 knot crosswind component. I like to crab on final, straightening out on short final with a sideslip. I know I could take it lower and kick it out just before touchdown, but I like to do it on short final to see if I can hold the centerline. With the right rudder pedal all the way to the floor and the left wing down, I was holding the center fairly well and continued toward touchdown. As I rounded out, I don't know if it was additional gust, lack of enough aileron, or a combination of both, but we touched down about 5' right of centerline. On the 150' wide runway, it was not a big deal. I pride myself on touching down on the centerline and was a bit annoyed for missing it.

The tailwind was amazing! Just east of the CA/AZ border, we began a descent to 7,500' to get below the clouds ahead. We still had about 20 mph winds pushing us along. Our average groundspeed for the flight, including climb out, was 184 mph. I had hoped to arrive in just under two hours, but wheels up to wheels down clocked in at 2:04; still a new record.

We had a wonderful visit with Dad that weekend and got to stop by the cemetery to visit mom's grave. It was good to see him again and we're grateful for the blessing of travelling so far and so fast. When we arrived at the airport Sunday, he came with us to see the new panel and paint job.

The winds from Friday and Saturday had dropped off by the time we flew home Sunday afternoon, and we still touched down in Fullerton in just under 2 ½ hours of flight time.

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.

Thunderbird Aircraft Sales

Specializing in pre-owned Mooney Sales and Brokerage

Hello my fellow Mooniacs,

My name is Richard Simile, and I am the President of Thunderbird Aircraft Sales. Thunderbird Aircraft Sales Specializes 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 Thunderbird Aircraft Sales.

Our objective is always to provide a very pleasant transactional experience for all parties involved and that is a formula that works well. We have three offices, Auburn, AL, Chandler AZ, and Pensacola FL. Please give Thunderbird Aircraft Sales a call, or email today / **602-884-2111** or richard@thunderbirdaircraft.com. We look forward to being of service to you. Thank you.

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The Most Dangerous Part of a Mooney Flight

Richard Simile, Thunderbird Aircraft Sales

Mooney aircraft have excellent long-distance capability, and because of that, PILOTS and PASSENGERS need to be *VERY PATIENT* when egressing the cabin. My very good friend and someone that I consider a MOONEY JEDI MASTER Instructor pilot, Don Kaye, has a wonderful wife named Shirly, (who many in the Mooney community know). Shirly was stepping onto Don's Mooney Bravo and lost her footing backward and hit the ground HARD, hurting herself badly. This has happened to the most sure-footed of us. Be careful getting in or out!! Here is what I have done for years to mitigate the Egress risk. I WARN everyone in the aircraft after landing, and before egress, that they are about to enter "The Most Dangerous Part of the Mooney Flight." I urge them to stand on the wing for a minute to "find their legs," and seriously take their time getting off the aircraft. During this critical time, I always see people rushing. I think they are trying to be considerate so the next person can get out. The real objective should be to slow the entire ingress and egress process down, and in doing so, avoid the terrible injury that poor Shirly, and many others have had to endure with both ingress and egress equilibrium.

Instructing is a Privilege

By Parvez Dara, MD MCFII

In the ordinary world of a flight instructor, there are many extraordinary moments that etch themselves into an invisible memoir stored deep in the recesses of the mind. Many such events lead quiet lives, never restored to their permanence, but some swirl into the mix of one's life, sitting in the right seat as the propellor turns into an almost invisible patch through which the future exists.

Such velocities of emotions and their parabolic dignities create excellent experiences for flight instructors and their pilot students.

On a cloudy morning, the bottom of the clouds seemed to graze the top of a 10-story building and a cellular network tower. My charge, a 400-hour instrument rated pilot sat comfortably in the left seat of his Mooney M20M. He had all his checklists, approach plates, pad, and pencil ready for the go. I asked a few questions about his preparation for the flight that we had discussed the day before. He was ready. "Let's go!" he said.

Barely 400 feet in the air, and we were enveloped in the thicket of the greyish blanket of nothingness. My eyes were glued to the instruments. He was confidently steering the aircraft based on the heading bug. We were 5-7 degrees nose up, but we were barely getting 300 feet per minute in the climb. I looked at the gear switch and saw that it was still down. I simply pointed to the gear handle, and he muttered something and retracted the gear. The aircraft rate of climb picked up, and so did the angle of attack; to nearly 11 degrees. He pushed the nose of the aircraft down and thus started the induced phugoid oscillations of the aircraft. The wind at 1,200 feet was moving the aluminum that encased us from side to side and up and down at 25 knots. His confidence seemed to falter a bit, and I noticed a slight tremor in his previously still fingers. Perhaps, the one minor opening error in the checklist completion task haunted him. The rush of negative emotions was spilling over in his performance that he had targeted for himself, and he was having difficulty in containing or restraining them. His optimism was beginning to feel the chill of the looming shadow of doubt. I pointed to the trim, but did not say a word. He got my message and dutifully trimmed the aircraft for the stable climb out. We were both anticipating the top of the clouds at around 4,000 feet, but lo and behold, we were still in the thick of it. Beads of rainwater from the turgid stratus clouds started trailing across the windshield. He settled a bit, as he reduced the power to cruise and trimmed the aircraft. With the noise of the 2,700 RPM spinning prop reduced, his erratic movements slowed a little.

Heading to the initial approach fix for our first instrument approach, he was hunting for the fix and in so doing, his altitude seemed to vary by as much as 200 feet. Now, I realize that when flying with an instructor, a pilot can put a lot of undue stress on himself. So, I gently pointed to the deviations as they occurred. He seemed to get a handle on the aircraft for a minute, but then the oscillations began again.

There are a lot of instructors out there and that is not lost on me. I have had the privilege of flying with quite a few of them. Some take over the aircraft with the slightest of deviation, thus enabling the tattered fragmented fetishism of "do this and that." A few let it go until the aerodynamics of the wing and the tail are about to be overwhelmed. My personal philosophy is to allow the pilot to correct for a deviation by pointing it out, rather than overwhelm the pilot with the feeling of inadequacy. The velocity of bad emotions can ruin learning as well as rob the pilot's confidence, which can have a profound deleterious effect on him or her.

In this case, I suggested that if his actions were causing any deviation, I would gently tap on the boom microphone of my headset, and he would know something was amiss.

A quiet brain can comprehend and evaluate a large amount of data being fed to it. However, one that is in the throes of confusion is hampered in its executive function. So just a gentle tap, tap, tap, and the fixation error would be removed accordingly. Yet even with that, I decided after our two approaches, to limit the tapping. I feared I would be of indulging his brain with the constant need of the "tap" when I was not in the right seat and the trigger would not be there. It is in the allowance of the pilot's interior world that must undergo a symphonic transformation from the learning. So, we were back to him flying the aircraft without any interference from me. The thing about the Mooney Aircraft is that it is an awesome flying machine; an excellent VFR and IFR platform. If you "Fly them by the Numbers" with PAC (Power, Attitude, and Configuration), they are putty in your hands.

After completing the two approaches, we requested VFR on top and shot through the greyish blanket into the blue sky. We practiced Flight by the numbers "VFR on Top" at 5,500 feet with the soft blanket of the clouds stretching as far as the eye could see. He got very comfortable with the aircraft and once we were back in the clouds, he was like the autopilot guiding his beautiful magic carpet. Achieving that composure, this singular of all possible eventualities in perfecting his command of the aircraft, was a testament to his plasticity of mind, the openness to learn, and drowning out the voices of distress.

We landed after a perfect approach without any tapping, talking or suggestions, and upon exiting the aircraft, while he was still stowing things away in the cockpit, I detected the smile of exhilaration on his face. He had found his oasis of refuge; an accomplishment he richly deserved for his performance.

Instructing another pilot is a privilege, but instructing can also be a challenge. It's a challenge to allow for minor correctable deviations with a gentle reminder, and also try to build confidence in the pilot so he or she can have total mastery of the aircraft he or she is commanding. The gentle tug of an intellectual surrender to a cohesive thread of action composed by another human being is both rewarding in its gentleness and its meaning, that perseveres well past its broadcast time. After all, he or she is the Pilot in Command and understanding must persevere over time for future flights!

The fluid dynamics of what we are taught and what we learn from experience are the unique marbelizing of our thought and future actions. These dynamics are a cautionary tale both for the pilot in the left seat as well as the "tapper" in the right seat.

A note to Pilots and Students:

1. Find a good fit for an instructor.
2. Practice procedures in VFR condition.
3. Use Simulator for understanding and managing procedures.
4. Practice in real IFR condition with a qualified instructor.
5. Then practice some more.

A note for Flight Instructors:

1. Be kind in thought and action.
2. Do not condescend.
3. Do not impart your insecurities to the pilot.
4. Be gentle in prodding against deviations.
5. Have defined limits of deviation.
6. Make it fun.

Aerial Vagabond

By Don Peterson

My 64E, "Rambo", has been with me for 46 years, and is on his 4th motor. Most of Rambo's hours were used flying to and from clients in the US and Canada. When I was younger, just flying was fun, and I'd often volunteer to take friends to fly-ins, airport restaurants, Tangier Island in the Chesapeake Bay, or the Bahamas and Caribbean. Rambo was kept busy, and I became reasonably fluent with IFR and oceans. Most of my early approaches were NDB, and the occasional VOR. Time passed, and my impulsive use faded away, being replaced by enthusiasm for much longer trips.

We recently returned from a year of flying around in South America – a series of articles soon to appear in a popular aviation magazine. I just turned 74 and accept that my South American flying is done. Maybe we'll revisit Mexico or Canada, which I consider "local" flights.

We've all seen the ants' nests of RV parks scattered along the highways, filled with Geriatrics who are seeing America while they still can. Yup, that's now me in a Mooney.

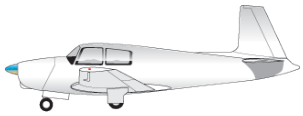
I've been all over the USA, mainly in my work, so we're now cruising the airways from one interesting site to the next. So far, we've visited Bryce Canyon, Taos, Santa Fe, Carlsbad Caverns, Houston, San Antonio, and Bloomington, IN. From here we'll press on to "The grass patch" – VA61, Richmond, Gatlinburg, Ft. Worth, and Carson City. Sounds normal, but the trip began October 1 and will end up in Carson City about May 15.

We've nearly finished booking the first stop in the subsequent phase of aerial RV-ing, beginning at the end of June. We'll spend July in Tucson, and I can hear the sharp intake of breath from here. Then, probably Oshkosh if it gets too hot in Tucson, which it will.

There's a deeper thread here. The list of stops often figured importantly in my youth. When I was 5-years old, there was Trout fishing outside of Taos. There was early schooling in Ft. Worth where I met my first girlfriend at a high school in Houston. There was a trip through Carlsbad when I was 6, plus a visit with my grandson when he was about 11. I lived near Bloomington for my first two years as a traveling salesman. Then, there was a move to Richmond with my just-bought Mooney, as I began a series of insufficiently qualified promotions. My mom's family originated near Gatlinburg. We visited them more than once in the 50's and 60's, staying with Great Aunts and meeting relatives that had been born during the end of the Civil War. They told us second-hand stories of the preceding family participants. These tales have grown richer with retelling.

We're hoping for a year, or more, of just cruising, spending weeks and months along the way. I previously commented on using Home Exchanges to keep the budget from exploding, and it is working so far. The only thing better might be doing it in my old 1945 Stampe SV4, but that's a story for another day and place.

No idea what lies beyond Oshkosh. We expect to meet up with a couple of new friends we met during our recent visits to Brazil and Uruguay. It's a small world, in a Mooney. Stay tuned.



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A COMPLEX TRANSITION, "Tales of a Skyhawk Driver"

by Vic Dover

DREAMS REVEAL THEMSELVES in many cameos and colors. My favorites come in sky blue.

The ancient Skyhawk I had been flogging for lo these many years, had long lost its luster and the ragged interior – “upgraded” at some decade – was hued of a browned-out disco-era vibe of besmirched velour. The airframe carried all the speedy exuberance of a winged potato behind a rubber band prop - the innate design, the time-warped uneven edges, the unfaired wheels on dangling legs, and the plethora of perturbating protuberances yielded a heady 115 or so knots and a minimal concern of exceeding V_{no}. That still beat the fenders off a four-wheeled conveyance, even though sometimes given the wind direction … seemingly not by much. I was blessed to have been both its student and its master, but it was time for a new ride.

As an IFR rated single-engine-land pilot with about ninety-five percent of my time in Skyhawks, I wasn’t looking to double my troubles by twinning up on propulsion devices. I wanted a speedy machine and a good climber that could come up out of the hole of a valley with its lumpy surrounding hills, bristling with hardwood canopy, that I call home field. Then, cheerfully loft up to the 7000’/8000’ IFR MEA's that hover above the southern Appalachian Mountains, proximally to the north.

So, an armchair’s analysis ensued. I scraped all the websites, invoked all the searches, and debated all the specifications in trying to come up with the best set of wings for my circumstances. I wanted enough gas on board to mollify my IFR fuel anxieties, along with illuminative glass avionics and an autopilot that could carve three dimensions like an aerial samurai. It needed to carry a person or three with a dash of luggage and a toothbrush, and at a cost to acquire and operate that didn't involve auctioning a kidney. It took a year and a day to catch a bird and put it in the hangar.

My search quickly narrowed down to putting an airframe around a Lycoming O-360, considering this time-vetted four cylinder was about as universal and robust as any produced. The turbocharged stuff was appealing but came with expected additional costs for maintenance and fuel burn and on this east side of the Country along the Appalachians where I fly, there is no mountain you can’t readily hop over normally aspirated. An O-360 under the hood would hopefully rummage around less deeply in my wallet than a throaty six cylinder or a heavy breather with a huffing snail, given past experience, there was a decent chance that with a bit of lovin’, it would make the projected TBO.

All the usual websites contained their overwhelming and confusing number of listings of everything with two wings and three wheels. Some were shiny and proud, while others had the appearance of having emerged from the penalty corner of a forgotten hangar, with the attendant caking of dust beaten off with a broom and the corpse propped up for a photo to be marketed to those willing to stitch the Frankenstein back together.

Asking prices were often – aspirational. Many of the panels harbored devolved avionics, curious relics from the age of Indiana Jones, up to about the introduction of Pong. Quotes to replace them with shiny new eye-candied immersive glass with enhanced reality images, were about the same as lavishly vacationing abroad twice a year for the next several years, and stated lead times for replacement lingered just short of the incubation of your next-born.

Recently, I had garnered some forty-ish hours in an Archer, The relatively stable airframe handled itself well through light IFR down to a crosswind landing, so I looked towards a Piper Arrow. But finding one with a suite of desirable avionics and modest time on the engine and airframe proved to be a combo too far. Some of the owners' comments alluded to airspeeds that didn't exactly tear up the sky.

Prior to that, I had enjoyed another forty or so hours in a Diamond DA40 and came to appreciate the efficiency of modern design and construction. Even with fixed gear, the tattered-seat trainer I flew sans wheel pants was happy to hustle along at 130-ish knots, and the constant speed prop coupled with glider-like wings got it up off the ground and climbing nicely. The stick in lieu of a yoke made it plain fun to fly. But, there's not many on the market at any given time and the pricing seemed to be artificially high.

I dissected the remaining list of aircraft that harbored an O-360. Each had attractive attributes, and all came with a demerit or three.

The more I looked, the more the future looked like a Mooney. I had initially dismissed the breed because of their meandering reputations of daunting landing characteristics and compressing cockpits. They promised lots more speed than the Skyhawk and Archer I'd been flying. Word on the skyways was that they were a solid and stable IFR machine, and they carried some five hours' worth of usable fuel. With two hundred restless horses twirling a

constant-speed prop, the Mooney promised to get you off the ground and up to cruising altitude without ATC having to ask your intentions.

So, the search began. By fortuitous chance and after a long gestation, a possible candidate raised its hand only an hour's drive away and I set up a time to go view. The owner met me there and flipped the lights on. I walked over to Lil' Miss M20J. She was lithe and sleek; well dressed in blue on white with a red rouge pin line. She was bejeweled with pretty glass displays and colorful avionics, and best of all - a digital Garmin GFC 500 coupled autopilot. I was smitten.

After a short CFI-supervised test flight, a bit of paperwork and a pre-buy inspection, a willing business partner, along with a hard squeeze of the ole' piggy bank - all in a few short days, and we were ready to boogie.

Having minimal time in retractable gear aircraft, the insurance company proposed that if I wanted them to cover both my back side and the aircraft's tender underbelly, I would undergo enough dual time instruction and landings to prove I could get back to Mother Earth with all attendees unbent before I could go launch by myself.

Polarized opinions particularly were towards the landing characteristics balanced on one side by the hopefully entitled video, "How to Land a Mooney Without Floating" and an amusingly titled antonymic spoof "How to Float a Mooney Without Landing". I reached out to the savvy CFI who took me along for the test flight and he agreed to take me on for the requisite training.

The former owner had graciously allowed me to continue to house the plane in his hangar at PDK for the few days of my training. Driving to the airport proved to be at least an hour's vexation through snarky Atlanta traffic, alternately via sprinting then stalling freeways before getting to appreciate the depth of color in the interminable run of red lights along City streets.

I finally arrived and there she was, waiting for me in the hanger. I walked up in some trepidation to this saucy Texas lass who appraised me with a skeptical eye and conveyed, "Well, do you wanna box or do you wanna dance?" Considering myself less pugilist and more paramour, I hastily aspired to the latter.

Entering the aircraft proves to be just plain awkward. You bend in through the small single door and inelegantly flop down onto your knees into the co-pilot's seat. Then you twist and extend your legs out and scootch over to the pilot's side. If you're a plus size biped, you're going to find it taxing to fold up and squeeze in and a scramble to get out.

From the doorway and with the front seats all the way back, at first blush it appeared only legless passengers need apply for the rear seat accommodations. But pulling the fronts seats forward to command position, extends decent legroom back there for average-size humanoids.

Once in the pilot's seat it's a long reach to the panel area to pull yourself forward where you sit with your feet tucked in far beneath the panel and the yoke close in to your belly.

Then there was some bad news. Your Big Slurpee ain't gonna fit up front. Mooney cleverly designed a cockpit devoid of pockets and cubbyholes. There's hardly anywhere up front to park a checklist, and a kneeboard tended to get in the way. So, I decided to remove mine and chunk it into the back seat before landing.

The interior fuselage curved in more intimately than anything I had flown before, just over my left shoulder and rounding out over my head. You can forget the cowboy hat because the brim would ricochet off the side window and leave you with a crick in your neck. At first this curvature was distracting, but after a couple of hours, I acclimated and there's a ready armrest for your left elbow. The seat adjusts up and down and the seatback tilts to allow for a comfortable perch from which to while away the hours, and there's tons of legroom for an average-sized pilot.

Once you're in, visibility out and around is quite expansive, and the setting is not claustrophobic at all. The cowling drops away in front. You can see a bit down as well as forward and the panel is just beneath your gaze and not blocking the view. There's a touch more interior width than a Skyhawk and just enough that I didn't rub shoulders with the CFI, nor did he have to place a brotherly arm across my seatback to keep us from trading shirt threads.

Fired up and taxiing to the runway, anything but the smoothest pavement revealed a bucking hobby-horse wheelbarrow of a flying device. Plainly, the ground is merely tolerated, and the aerial environment is where it thrives.

In the Archer I last flew – in humid and ninety-ish degree Georgia summer conditions – the CFI who checked me out suggested that both us and the aircraft would prefer hanging on to the ground run up to about 70 knots before rotating. Otherwise, the experience was less of a launch and more of a

lurch with a sluggish climb to go with it. The Mooney doesn't go for that. Along about Vr, it started skipping and skittering and sniffing for the grass off the sides of the runway. It conveyed in no uncertain terms that I should quit dragging my backside and get off the ground.

If you're an aspirational Mooney pilot, let me save you some experimentation on something. Do not place the checklist or anything else on the floor between the pilot and copilot's seat. It could grind itself beneath the trim wheel located there, and render the trim inoperable in an attitude you may not want to be in. Ahem.

My training area was within the Metro area of some frenetic airfield called Hartsfield-Jackson Atlanta International Airport. It seemed that every general aviation airport around had a flight training facility or three onsite, with the attendant student pilots occupying every single pattern segment of every runway. The required brainpower just to keep up with all the aerial activity and slot in safely for landing, was second only to the gray matter necessitated to assimilate a broken dam's worth of information and stimuli coming at me. There was a lot going on.

Approaching downwind my CFI offered in dry admonition, "People tend to fly a Mooney too fast and too steep when they're coming in for a landing." I took careful measure of the advice.

It took nearly all the insurance-required fifteen landings before I was able to roll one on gracefully. Most arrivals were accompanied by a slightly rude bump or a tiny bounce, all of which were safe, but not acceptable to the standard I strive for. I made darn sure to hold the landing attitude at touchdown and be mindful to not let the nosewheel slam down on the tarmac and bounce me back into the air – and degrade into the oscillations that allegedly proceed the dreaded Mooney three-porpoise prop strike.

I was glad for my previous stints in a DA40 and Archer and felt the low-wing perspective helped me better gauge the landing attitude and height at touchdown of the Mooney, versus the more elevated seating position of a Skyhawk.

Compared to the floppy-eared controls on a Skyhawk, the Mooney's are short-coupled and schnauzer-crisp sensitive with an immediacy accompanied by a somewhat heavy but tactile fluidity. They rotate only a handful of degrees left and right and there's not much push and pull there either. On landing you may need a bit of muscle to go with the finesse and you work harder to keep things reined into a full stall landing, versus a Skyhawk.

It's all about speed management. The best way I can describe the feel is that a Mooney wants to carry more momentum than all the aircraft I had previously flown. The first step is to get the gear down and then a further deceleration to a stable pattern-traversing airspeed will fall into place.

There's a long span of flaps on a Mooney, but they don't throw the anchors out like the picnic tables adapted to a Cessna. Every action of flapping comes with an equal and opposite reaction of pitching down. Matching the flap transition with an equal amount of convenient electric up-trim, negated that characteristic and allowed me to focus on the all-important task of managing the air speed without neglecting to fly the aircraft. A Skyhawk has some ability on final to both go down and slow down. Not so much with the svelte Mooney.

The POH says use 71 knots on final and I determined that's for a maximum gross weight machine. Come hot and you may prefer the runway the B-52 uses at Edwards Air Force Base. I found that by milking the air speed back a bit as landing is assured on final, then focusing down the runway to gauge the flare and hold the landing attitude to continue to bleed off airspeed, helped ensure a dignified landing. The feeling at your fingertips is that if you try to force it onto the runway, it will bite back.

Perusing the Mooney forums, some of the members posit that a careful application of 1.2 Vso calculated for the actual weight of the aircraft in appropriate and non-gusty conditions, better assured a relatively short use of the runway. I took some inspiration from Ryan of the Missionary Bush Pilot channel on YouTube and remanded myself to count every knot for landing.

I would call a Skyhawk - forgiving. All my ham-handed training indiscretions and occasional later indelicacies were shrugged off in a mostly cheerful demeanor. The Mooney I would deem…compliant. Like a Spec-Ops K9, and with immediacy, it will do precisely what you overtly or subliminally ask of it. Wield it carefully.

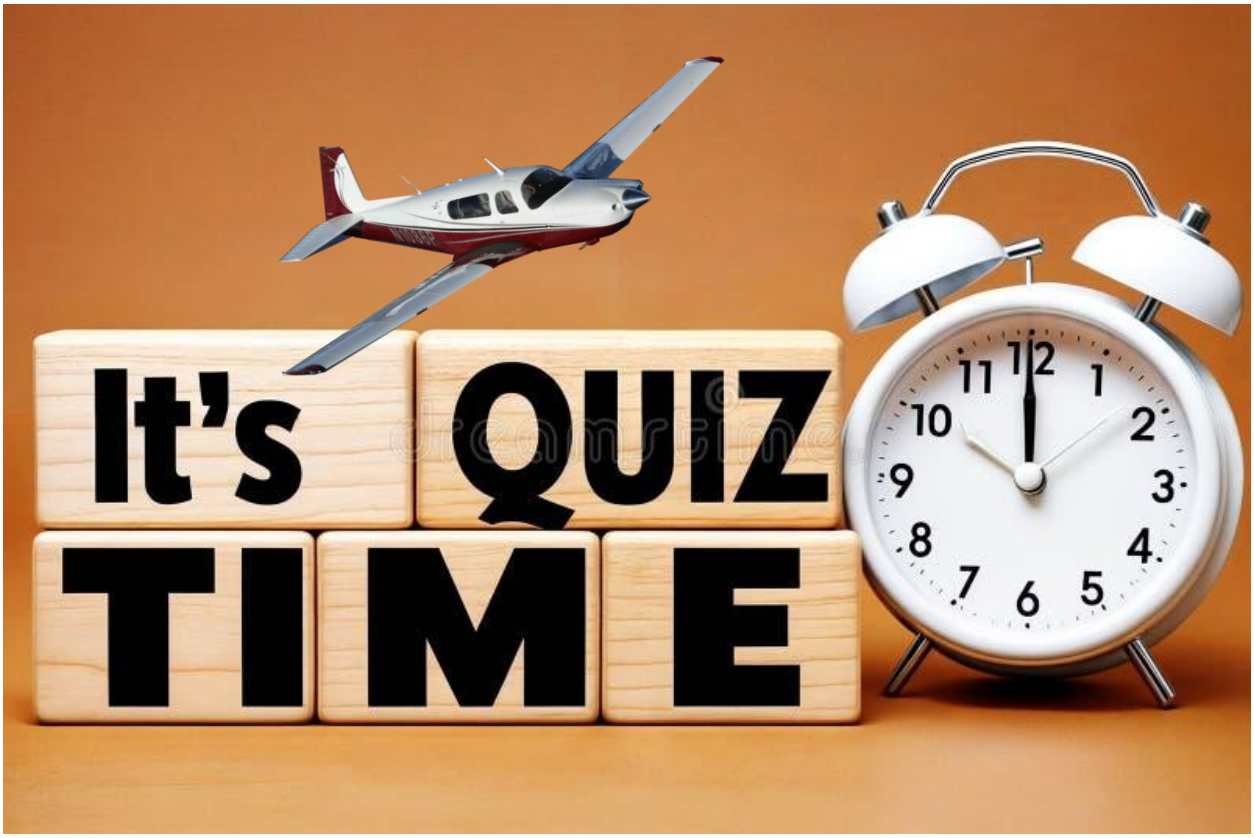
The drop-away cowling compared to a Skyhawk, lends a sight picture to the uninitiated, that the aircraft is in a descent, and you may find yourself tugging on the yoke to rectify your previously ingrained sight picture. Which can render a brisk vault above your intended altitude. ATC may take notice.

The Mooney felt more heavily planted in summer turbulence than the trainers I've flown and exhibited no tendency to test a back-seat passengers' partially digested lunch with bobbling yaw. A reputation for a robust airframe buffered by a generous non-turbulent permissible airspeed, offers a bit of mental comfort to the pilot, that the plane won't shed its wings in a speedy descent through smooth air.

Ah…the speed! After slogging along at a trainer's pace for these many years, flying the Mooney felt like hopping off a Moped and saddling up a Ducati. The speed difference is substantial, with the Mooney outgunning the Archer and Skyhawk by some thirty-five knots. Toss in an able-bodied rate of climb, coupled with about five hours endurance, and the previous destinations I'd been flying to suddenly got closer. This is a traveling companion meant to wander afar and a crisp delight to fly, comfortable and speedy enough for this Skyhawk driver, that the trip became a pleasure not a chore.

On the last day of training, my CFI and I flew into my home field for the first time. A disciplined approach brought me into the down-in-a-hole 3,000' strip with plenty of room to spare and minimal need for brakes. We did the final required landings, threw in a couple of extras for good measure, then stopped and completed the ground training. Signed off and good to go, I ferried the CFI back to PDK and reimbarked to home plate.

As I lifted off at PDK, the silence and emptiness of the co-pilot's seat was profound, and I felt somewhat like a student pilot on their first solo again. Once clear of the Class D airspace, the controller bid me goodwill and I pointed north, suffused in the elation of that brief but utter freedom of answering to only myself and Fate.



1) 1) You're at a tower-controlled airport, and you're receiving taxi instructions from ground control. Is ATC required to give you runway crossing instructions if you're going to taxi across a runway that isn't being used?

A – Yes B – No

The answer is A – Yes. According to 91.129, at Class D airports, ATC gives you instructions to cross any runway, one at a time. And, if you're crossing multiple runways, you need to cross 1 runway before ATC will give you instructions to cross the next one.

2) Which of the choices below is **not** an appropriate use of UNICOM?

A – Notifying the FBO that you need fuel. B – Closing your Flight Plan C – Asking the FBO where you should park.

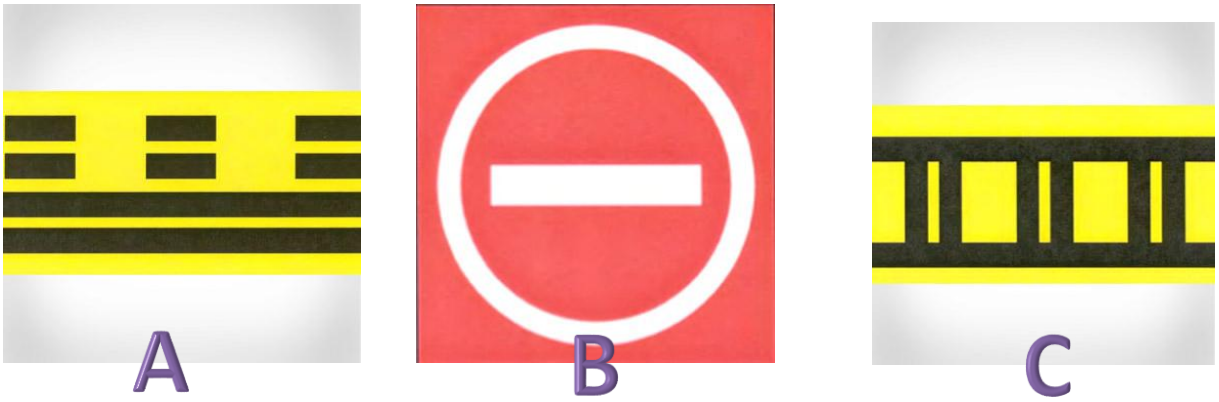
The answer is B. You should never rely on an FBO to close your flight plan for you. You should always contact Fight Service to close your flight plan.

3) Touchdown zone markers are spaced in _____ foot increments.

A – 300 feet **B – 500 feet** **C – 1,000 feet**

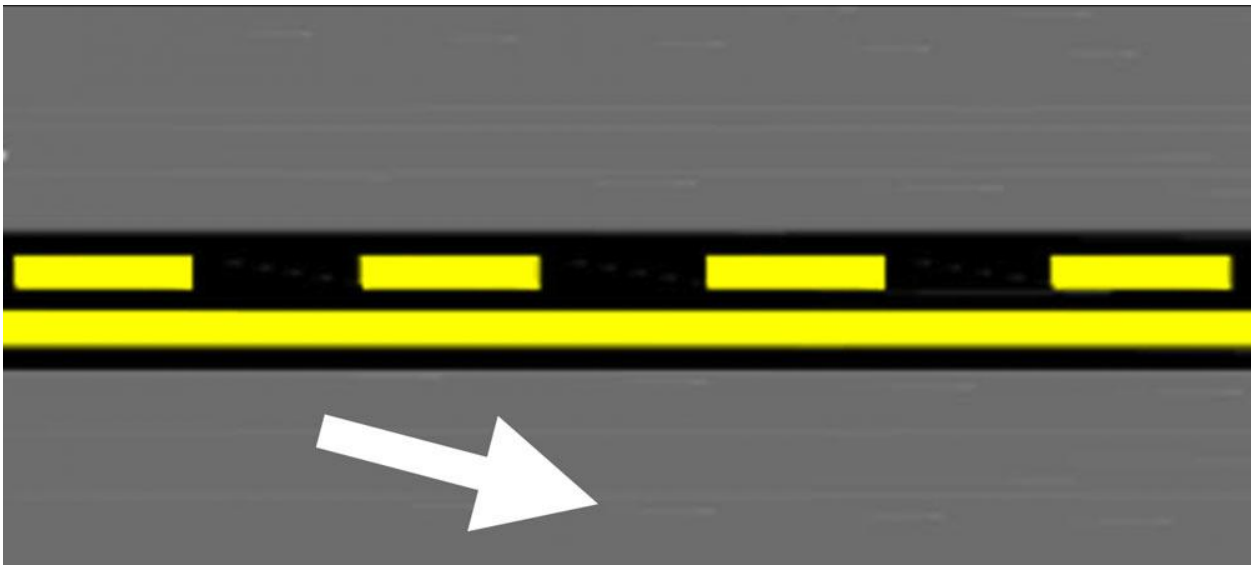
The answer is B. Touchdown zone markers are spaced in 500-foot increments.

4) Ground control tells you to hold short of the runway. What symbol are you looking for?



The answer is A. Remember to hold short of the sold Hold Short lines. When clearing a runway, "dash" across the dashed lines.

5) What can you do in a non-movement area?



A – Must have a taxi clearance from Ground Control B – Taxi without talking to Ground Control.

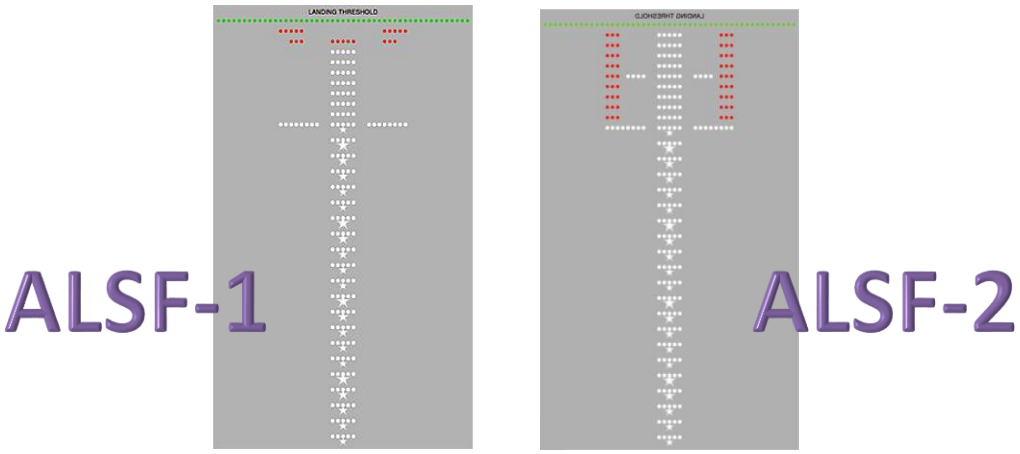
The Answer is B. As long as you are in the area noted by the white arrow, you can taxi your heart out without talking to Ground Control.

6) **FOR INSTRUMENT RATED PILOTS:** Which approach lighting systems have red terminating or red side row bars?

A – Only MALSF and MALSR have red terminating or red side row bars.

B – Only ALSF -1 and ALSF -2 have red terminating or red side row bars.

The Answer is B. ALSF-1 has red terminating bars and ALSF-2 has red side row bars. If you shoot an IMC approach to a runway that doesn't have an ALSF-1 or ALSF-2 approach lighting system, you can't descend below 100' above TDZE without having another airport environment reference in sight.

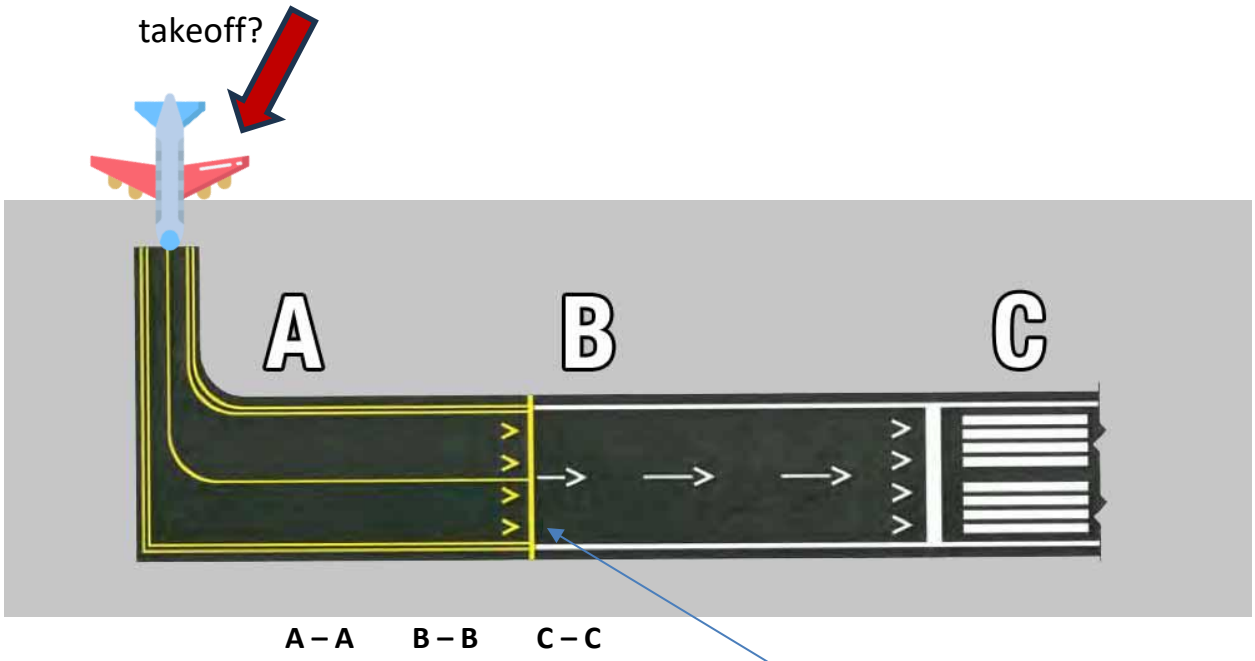


7) How long is the longest runway at Austin Executive airport?

A – 620 feet B – 6,000 feet

The Answer is B – The longest runway is 6,000 feet.

8) You are here and have been cleared for takeoff. Where can you start your takeoff?



A – A B – B C – C

The answer is B. You need to taxi past the yellow demarcation bar before you start your takeoff roll.

Ask the Top Gun

TG

Tom Rouch

Founder of Top Gun Aviation, Stockton, California

Send your questions for Tom to TheMooneyFlyer@gmail.com

Dear Tom, Thank you for your helpful monthly question and answers. They are very valuable. Because I am considering my first Mooney, can you please tell me what are the typical "additional" items that must be looked at and maintained for a Mooney versus other GA airplanes? I am just trying to get a feel for what it takes to maintain a Mooney.

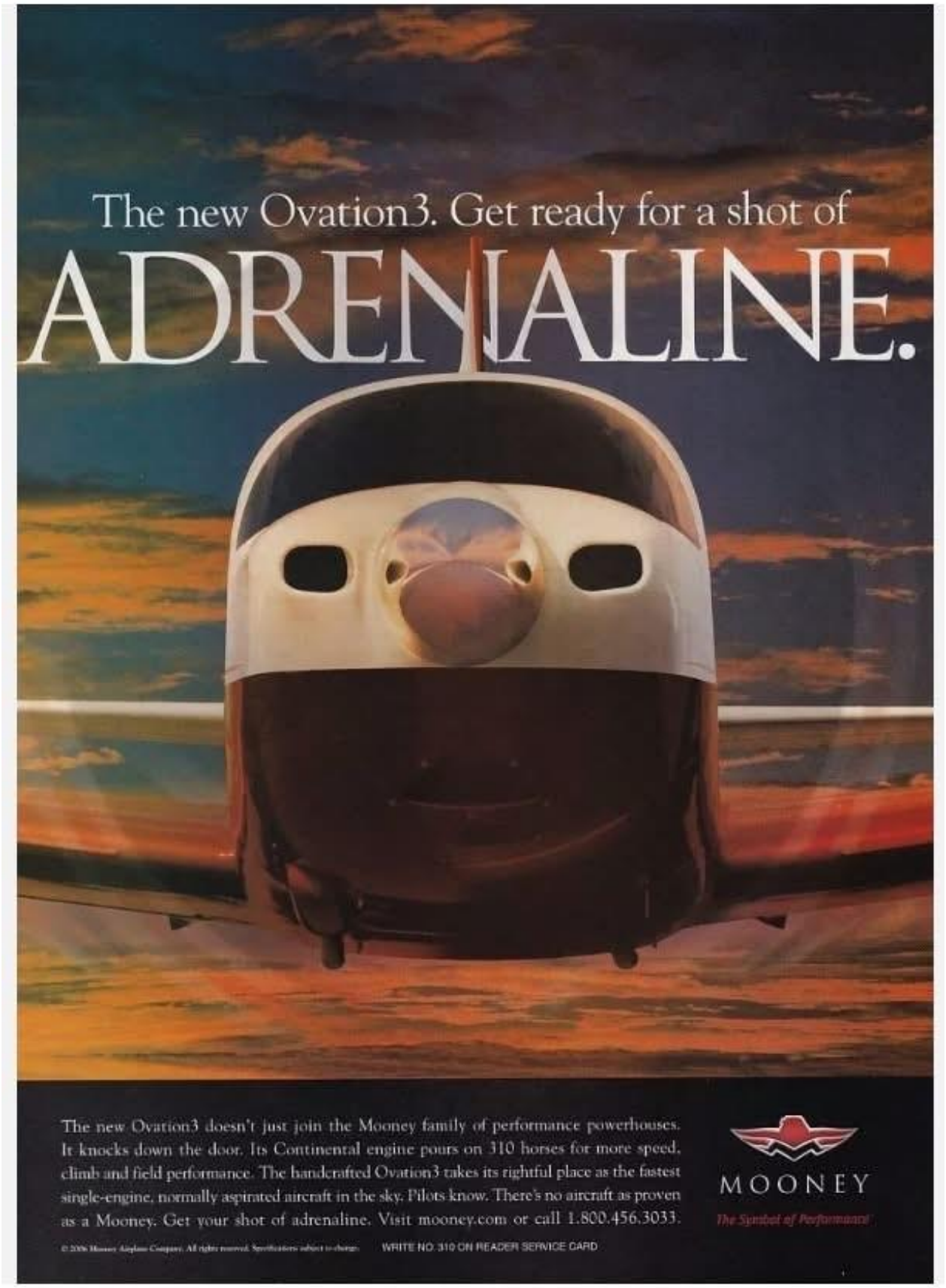
Let us concentrate on the main differences the Mooney offers. **Engines:** Everyone uses the same basic engines, such as TCM or Lycoming. However, Mooney did not have a very good experience when they tried the Porsche engine.

The Tail Assembly: It is unusual because the entire tail assembly is movable with adjustable Horizonal Stabilizers. Therefore, you don't need an elevator trim tab. Few aircraft have this feature, except the Lockheed Jetstar and many other large aircraft. **The Horizontal Jackscrew:** This tilts the tail assembly on two pivot points where the empennage attaches to the fuselage. The jackscrew wears out with time and should be inspected annually. This feature is very useful because it is electrically trimmed, making it easy to keep the plane level or trimmed for landing.

The Landing Gear: All 3 gears use "rubber" shock discs instead of hydraulic piston gears that are found on other aircraft. The advantage is they have almost no maintenance and last for years with no service required. The downside is when the rubber shock discs age, they become hard and lose their cushioning effect. Another landing gear feature in early models is that they are operated by a lever, allowing you to raise and lower the gear with one hand. In the mid 60's, Mooney installed an electric gear actuator, so you only move one small switch to operate the gear. However, there's a downside to the gear actuator. It has wear-points and requires some maintenance. I want to add that the most frequent Mooney accidents are gear up landings, mostly because the pilot forgot to lower the gear. The gear system has a very good emergency gear extension system which is easy to operate.

The Flight Control System: It uses a push/pull tube system, (not the standard control cables found in most aircraft). The advantage is that they are almost trouble free with very little maintenance. Because the flight control system is so solid, the plane does not need trim tabs to level the plane and thus has less control drag. **The Fuel Tanks:** These are actually part of the wing skins and are formed by sealing the interior of the wing. This lightens the weight which helps with the speed of the Mooney. However, with age, the tank sealant hardens, and leaks develop. This process is exacerbated by old and hard landing shock discs. Upon landing, hard discs no longer soften the landing shock, transmitting that shock to the wings and tank sealant. Fuel leaks are very difficult to repair and can result in large costs. There is an aftermarket kit available to install bladder tanks, but it adds weight and is very costly.

The Mooney is mostly hand built and designed for record speeds, so it does require extra care. It is not a Ford F-150. It's more like a Corvette.


The new Ovation3. Get ready for a shot of
ADRENALINE.
The new Ovation3 doesn't just join the Mooney family of performance powerhouses. It knocks down the door. Its Continental engine pours on 310 horses for more speed, climb and field performance. The handcrafted Ovation3 takes its rightful place as the fastest single-engine, normally aspirated aircraft in the sky. Pilots know. There's no aircraft as proven as a Mooney. Get your shot of adrenaline. Visit mooney.com or call 1.800.456.3033.
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WRITE NO. 310 ON READER SERVICE CARD

He said, He said – Who do You Believe? ***AVweb, Feb 6, 2025***

California A&P Michael Luvara says he's been told by the owner of a Cirrus SR22 that its composite structure has been damaged by exposure to GAMI's G100UL unleaded fuel to the point where it will have to be ferried to an authorized repair center to be fixed. But GAMI founder George Braly says he's personally inspected the same airplane, and the damage is cosmetic only. George also said the fuel has been extensively tested in collaboration with Cirrus and does not damage the structure. Braly's full statement appears below.

READ MORE

Thinking of Replacing Your Prop?

Hartzell Propeller offers $1,000 discount to AOPA members

Hartzell Propeller is offering a $1,000 discount on any new carbon fiber composite propeller through the end of 2025 to members of the Aircraft Owners and Pilots Association (AOPA).

To qualify for the $1,000 discount, AOPA members must confirm their active membership via an online process. Additionally, the composite Top Prop must be purchased directly from Hartzell Propeller, company officials stated. (Aviation News, February 14, 2025)

READ MORE

Events

Mooney Florida 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 March 8: Bartow (**KBOW**) April 12: Fort Pierce (**KFPR**)
MooneySafety.com	Sign Up at https://www.mooneysafety.com/ppp-registration/ Apr 4-6: Henderson, NV Jun 6-8: Cheyenne, WY Sep 12-14: Groton, CT Oct 17-19: Branson, MO
Australian Mooney Pilots Association Ltd	
EMPOA	**Learn more at** https://www.empoa.eu/index.php/en/
The Mooney Flyer	September 5-7: Wings to Walla Walla Fly In (KALW) Join us for a weekend of wine and food. As always, hosted by Henry Hochberg.

Pilot Coffee Mugs

This airline pilot coffee mug is an ideal choice for those looking for unique pilot gifts. Whether for airline pilot retirement or cool gifts for pilots, this tumbler offers style and always says, "You are the best pilot."

Made from high-quality materials, it's designed to keep drinks hot or cold for hours, making it a must-have for any pilot's essentials. Aviation gifts often miss the mark on practicality, but this pilot cup hits the spot. Pilots will appreciate it.

Perfect for All Occasions – Pilot Birthday to Christmas: From pilot gifts for women to thoughtful gifts for pilots in training, it serves as an excellent aviation gift.

Ideal for Everyday Use – From Office to Cockpit: It's perfect for airplane cup and pilot mug enthusiasts. Whether it's a pilot travel mug or an aviation coffee mug, it's an essential part of pilot gear. This aviation gift truly stands out in both function and design. An ideal gift for any pilot.

CLICK HERE for more details and options.

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)

1997 MOONEY BRAVO FOR SALE
$298,000

This 1997 Mooney Bravo offers a rare combination of performance, reliability, and modern avionics. With a low total time and an upgraded avionics suite, it's ready to meet the needs of both experienced pilots and first-time owners. Equipped with FIKI certification and precise speed brakes, this aircraft is ideal for cross-country and all-weather flying.

Contact Information:

- **Email: aeroncadoc@comcast.net**
- **Phone: 425 780 9483**

Key Features

Engine and Airframe Time:

- **Total Time:** 1860 Hours
- **Engine Hours:** 1100 Hours (Since New)

Avionics:

- **Garmin GTN 750:** Primary Navigation/Communication System
- **Garmin 430:** Secondary Communication System (Comm2)
- **Garmin 500 GFC Autopilot:** Advanced Flight Control
- **Dual Garmin G5s:** Attitude Indicator (AI) and Horizontal Situation Indicator (HSI)
- **Garmin GTX 345:** ADS-B In/Out with Bluetooth Connectivity
- **JPI 730:** Advanced Engine Monitoring System

Additional Equipment:

- **FIKI Certified:** (Flight Into Known Icing)
- **Precise Flight Speed Brakes:** For Enhanced Control
- **LED Lights:** Modern, Efficient Lighting
- **Shadin Fuel Flow Monitor:** Secondary Fuel Monitoring
- **Built-In Oxygen System:** For High-Altitude Flights

Recent Updates:

- **New Paint:** Completed in 2023—Immaculate Condition
- **New Front Seats** – Interior is in great condition

Aircraft Location:

- Based at **KPAE (Paine Field)**