The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

January 2023

Editors

Phil Corman | Jim Price

Contributors

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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.

From the Editor

Phil Corman FTE

How Much of Humanity has Aviated

Want to see some VERY ROUGH math on how blessed we are to be pilots?

First, let me say this math is certainly not perfect. The scientific figures provided are all theory. But this is still fun to think about and the math might not be too far off.

Out of the 300,000 years humans have lived, we have only been flying for 119 years. That gives us a microscopic 0.0004% chance of even being born during a period where aviation exists.

Next, out of the 7.8 billion people today…there's an estimated 1.5 - 2.3 million pilots currently alive. Let's round that up to 2.9 million to include the pilots who have died or are unaccounted for. That means that of all of the humans alive in the age of flying, only around .0384% people have become a pilot.

So, if you only had a 0.0004% chance of being born into the age of aviation, and in that window of time, you only had a .0384% chance of even becoming a pilot.

That means our chance of being pilots is somewhere around a 0.000001536%!

WOW!!!!

Next month's poll: "If I didn't own a Mooney, I would own a"

CLICK HERE to vote.

mail

I no longer own a Mooney and have moved on to a Bonanza. The Mooney was great, but I no longer need the subscription to the magazine. Please remove my email from your list.

I would like to say what a great job you've done keeping it going and providing excellent information! The Mooney community is lucky to have you providing the content you do!

Safe flying,
Sherman

Is it just me… or are the Disk Savers really just Tire Savers? It is still lifting under the shock disks, so it is still squishing them….?????
Derek B

Thanks for taking a swing at the old myth of three prop cycles to check oil pressure, manifold pressure and RPM. Your explanation of the system and reason for checking was "right on". I also have written about that but with little success. I hope your article will help to eliminate this busy work.

Maybe you next can move on to "Any traffic please advise."

Thanks for all you guys do for the Mooney community.
Wally M

Prior to the recent change, a pilot with BasicMed could act as a Safety Pilot, but only if he or she was also acting as PIC. The change allows the BasicMed holder to be Safety Pilot without being PIC. In many cases, maybe most, the Safety Pilot acts as PIC so that both pilots can log the flight time. The Safety pilot as PIC, the person flying, logs PIC as Sole Manipulator of the controls. There are some issues with who can log Cross Country time in this case.
Terry C

SECOND RETIREMENT COMING UP!

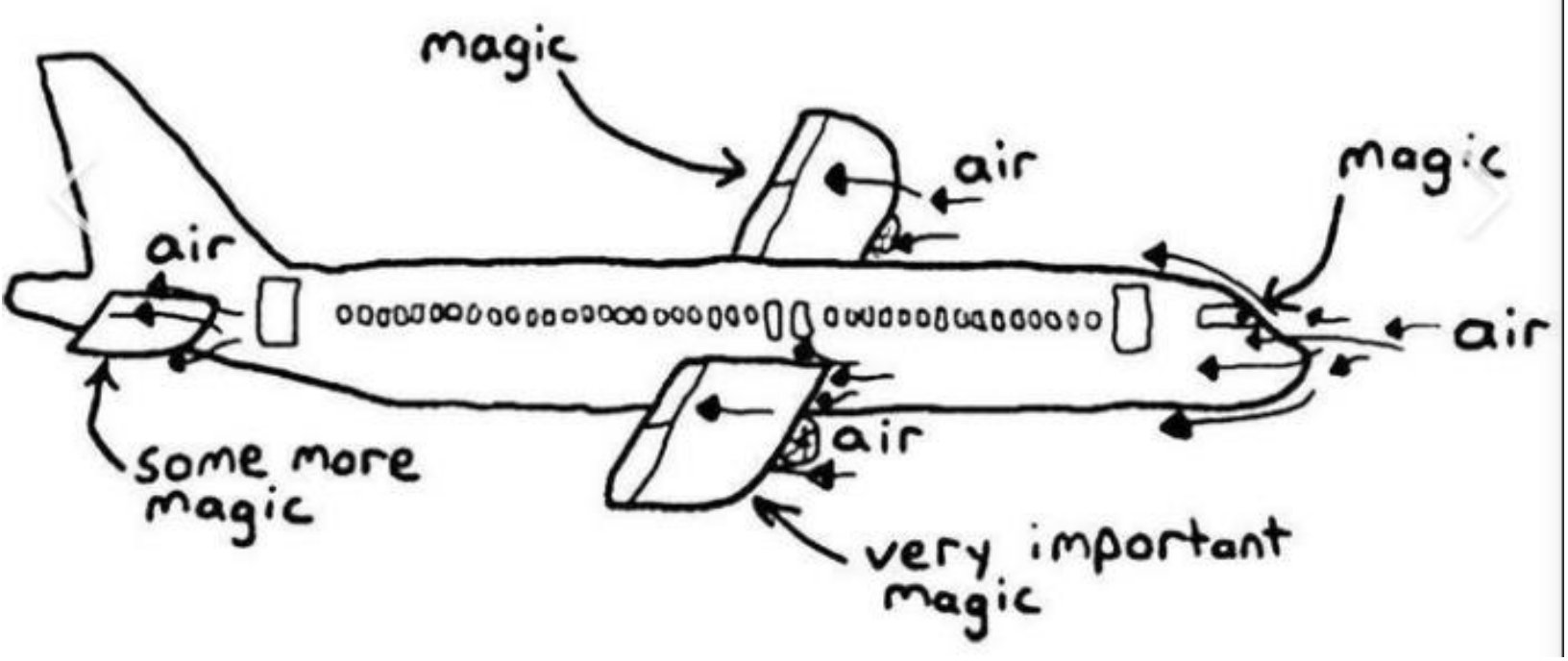
Loewen's Mooney Salvage NEEDS A NEW OWNER!

Paul Loewen has enjoyed over 50 years in the Mooney family……first in the Los Angeles area as a Mooney Service Center at Whiteman Airport in Pacoima. He moved to Lakeport in 1973 and began Lake Aero Styling & Repair (LASAR) in 1975. The rest is history, as they say!

Paul sold LASAR in 2017, and he would love to see a "Mooney person" acquire the remaining salvage business that provides Mooney parts from a collection of more than the past 50 years. Paul has enjoyed selling parts from his collection that are no longer available new from the Factory to Mooney owners world-wide.

If interested, contact Paul by home phone 707-263-0462, text 707-489-6423 or email PaulL@sonic.net.

LOEWEN'S MOONEY SALVAGE (www.loewensmooneysalvage.com)



The Virtues & Vices of Technology

Last month I pontificated over the virtues and vices of Angle of Attack (AoA) indicators and Landing Height Systems (LHS). We got a strong response from our readers so I thought we would follow-up with additional thoughts on the benefits and risks of other technologies commonly found in our cockpits.

Our main issue last month with AoA indicators, was simple and straight forward. While turning from Base to Final, we thought our attention should be placed outside the Mooney and not watching an AoA device. With a proper scan, it's probably not an issue, but to fixate on the device is risky.

This month I'd like to focus on ADS-B Terrain Annunciation, Traffic Alerts (TIS-B) and Weather (FIS-B).

Terrain Alerts/Annunciation

First let me say that we are huge fans of Terrain Alerts. However, we think it should be a backup to the fact that you should know where you are (i.e., Situational Awareness). If this is always the case, then Terrain Alerts are a definite asset in the cockpit. But if you ever fly into an airport with a hill or mountain, obstruction, the incessant annunciation of "Terrain, Terrain, pull up, pull up" can be a distraction to your awareness of traffic in the pattern and/or listening to radio calls in or near the pattern.

Traffic Alerts

We are also huge fans of Traffic Alerts, both visual and audio. But there are two caveats to our enthusiasm.

The first one is that you should not solely rely on ADS-B traffic. There are at least two reasons for our thinking. First, there is a delay in the updating of traffic. If the other airplanes have ADS-B OUT, then your receiver "receives" that traffic directly. Otherwise, if another airplane does NOT have ADS-B OUT, that traffic information is sent from that aircraft to a ground-based station/tower, where the information is repackaged and sent to your ADS-B IN. This

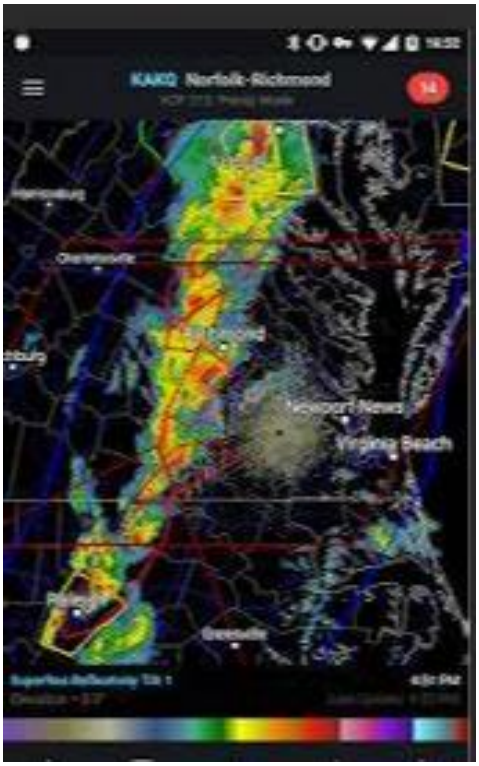
relies on you being within reception of said tower and has a time lag.

Our second caveat is that not every airplane has a transponder, or has it turned on, or is guaranteed to be operating properly. In this case, you will NOT see this traffic on your avionics.

We recommend that you continue to “see and avoid”, primarily with ADS-B traffic as a nice and partial backup picture of traffic.

Another concern: On my maiden departure with a GTN750 and ADS-B IN, we turned downwind and immediately our system gave us a “Yellow, Danger Will Robinson” screen telling us about a C-172 on what appeared to be a 45^{o} entry. Additionally, the voice annunciation aggressively alerted us. Needless to say, we were focused, but had already seen the C-172. What concerned us was that during the annunciation, it stopped showing other traffic. The annunciation’s well meaning “noise” made it difficult to listen or talk to other traffic in the pattern.

ADS-B Weather

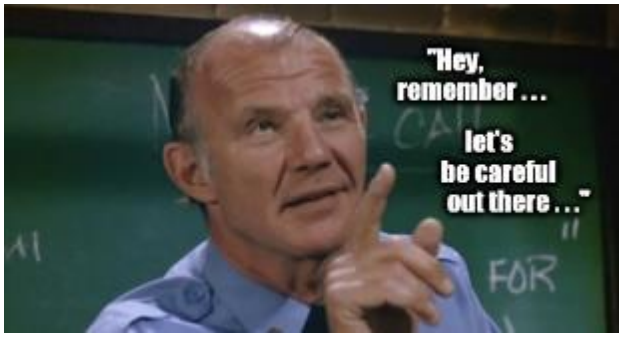


Let us begin by saying that getting weather (Wx) in the cockpit is an amazing tool, but primarily as a backup. Nothing is more useful than a thorough weather briefing on the ground before departure. If you are VFR, your best tool is your eyeballs, as they look at the weather and compare it to your briefing. Wx in the cockpit is extremely useful but remember that there is a time delay in the Wx being presented on your screen. This is particularly important when trying to thread a needle around moderate or severe rain based on your NEXRAD display. Depending on your reception to an FIS-B tower, it could be several minutes old, and a fast moving storm could have already shifted. So, there is virtue and vice to this information.

Summary

Some modern avionics features are extremely useful. Others have been poorly implemented and can actually be a distraction and a risk to safety of flight. Other features need to be fully understood in order to properly assess your situational awareness.

Knowledge is Life. As Phil Esterhaus would say, “Let’s be careful out there.”



The Impossible Turn?

A Vans RV-6 Experience

October 28th, 2006, a Vans RV-6 experienced a loss of engine power at 500 feet AGL during climb out from Turlock Municipal Airport, CA. The pilot responded by initiating a turn back toward the runway. During the maneuver, the airplane stalled, and the pilot attempted to recover. The airplane entered a secondary stall, descended rapidly, and collided with the ground, eventually coming to rest inverted. The pilot and a passenger were seriously injured.

A Mooney M20C Experience

On February 6, 2009, Dave Keller, in his Mooney M20C, took off from his home airport in Anderson, Indiana (KIAD). He had logged over 4,000 hours. He departed on runway 18, and when he was 450 – 500 ft above the ground, the engine failed. The tower controller estimated that Dave was about .5 to 1 mile from runway. Dave instinctively turned the plane around and began a gradual descent and the tower controller called for the emergency equipment. Because Dave had not done this before, he landed a little long and at a faster than normal airspeed, but he made it safely.

Things that Dave wishes he had done:

- Pulled the prop control full aft to limit the drag
- Extended the flaps for landing
- Not tried the impossible turn

The mechanics found that a cylinder had cracked. This was quite a surprise because the last compression check went very well, and the engine had been using a small amount of oil per hour of flying.

Risky

Attempting to return to the airport before reaching pattern altitude is risky and can be fatal. That's because you are low and slow and making a 180-degree turn. Once you slow to your best glide speed, you're descending in the turn, and chances are, you're descending pretty quickly. Additionally, you won't get the benefit of extra airflow over your wings from prop-wash, which decreases lift.
As you roll into a turn, and increase the bank angle, the airspeed bleeds off as the angle of attack increases.

To keep your vertical lift the same (so you don't descend too rapidly), you need to increase total lift by increasing your angle of attack (AOA). So how do you do that? Simple: you apply back pressure on your elevator. This is classic setup for an unrecoverable stall/spin accident. You should be aware of your options before you takeoff.

Returning To The Runway? Keep These Hazards In Mind

You may have taken off with a headwind. If you make a return to the runway, you will now be faced with a tailwind, which increases your groundspeed and rushes your ability to fly a safe approach and stop on the runway.

As your airplane loses altitude during the turn, it is possible you could contact the ground in a bank. This could result in your aircraft cartwheeling across the ground...not an ideal outcome.

The increasing groundspeed due to the tailwind may encourage you to prematurely slow the aircraft below stall speed. With no altitude to trade for airspeed, you will be out of luck in this scenario.

If I lose the engine, should I make a 180-degree turn, land straight ahead, or slightly to the left, or right?

Dave Keller did an outstanding job of flying his Mooney and managing an incredibly risky situation. Everything was in Dave's favor, because:

- He was an experienced pilot
- He owned his airplane and was familiar with it
- He was at his home airport
- He had clear weather during daylight hours

Lessons Learned

- Practice simulated engine-out procedures
- Situational awareness is vital, so at all times, be aware of emergency landing areas
- Land straight ahead if possible
- Stay calm
- Manage your airspeed and slow down before touchdown
- Use emergency checklists if time allows
- Use ATC's help if available

This Is Why You Brief Departures

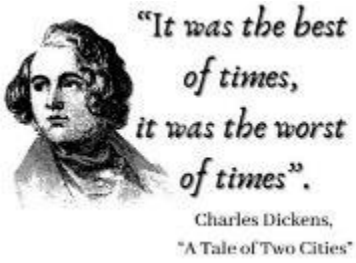
You should have a decision altitude on takeoff for engine failures, as well as a spot when you will plan a return to the airport. During your takeoff briefing, include a go/no-go point for the "impossible turn." If you do not have a number in mind, and knowledge of how much altitude you'll lose in a turn, it is usually better to pick a landing point ahead of you, rather than the runway behind you. Consider wind, altitude, aircraft performance, glide distance, and personal comfort before making the decision.

The "Human Factor"

You may recall the film "Sully," which emphasizes how important the human factor is. It is an important piece of the puzzle, often left out during briefing. It Is hard to predict how a pilot will react when faced with a serious emergency at low altitude, but one thing is certain...**your response will not be immediate**. It will take you time to process the emergency, and you may even try troubleshooting, (not that it's a bad idea)

"Sully" scene, "Can we get serious now?"

The Wind Giveth and The Wind Taketh Away



by Richard Brown

It was the best of times; it was the worst of times. Well, that isn't an entirely accurate statement. I'm talking about a tale of two Thanksgiving trips. Both were in our Mooney, so how could it be "the worst of times", when was cruising along in our Mooney and not stuck with all the poor unfortunate souls that were trudging along on the freeways below. However, one trip was much faster than the other one. In 2018 I had the most epic trip, with tailwinds coming and going. Fast forward four years to 2022 and there were headwinds both ways.

When planning a long cross country, I start watching the ten-day forecast to look for trends. The forecast for the Salt Lake area kept changing from a little rain and snow from Thanksgiving Day into Saturday, to quite a bit of rain and snow. It was looking more and more like we were going to have to drive instead of fly... which would mean returning Saturday to avoid the Sunday traffic. I checked again on Tuesday, and the forecast was predicting clear skies Wednesday and Sunday. If I went to work in the morning and then departed early in the afternoon, we could arrive just after dark, and then fly back Sunday above the maddening crowd, with cars stuck on the freeway.

In 2018, it was myself, my wife, and my two boys plus bags. This meant everyone and everything got on the hangar scale to calculate weight and balance. After the numbers were crunched, the fuel limit would be 34 gallons to stay under max allowable gross weight. This would still allow for my personal minimum of being on the ground with 10 gallons on both legs of the flight. Oh, and my boys would have my backpack between them in the back seat so we could stay within the center of gravity envelope.

Fueled and loaded, we taxied to the run-up area. The first leg of the flight would be to St George, Utah (KSGU) for a fuel stop. It was the day before Thanksgiving, and it was busy up in the sky. I have always been cleared on course through the Vegas Bravo airspace with instructions to notify ATC prior to any altitude changes. However, that was not going to happen today. LA Center gave me the hand off to Vegas Approach.

Me: "Vegas Approach, Mooney 78878, Niner-thousand five hundred."
Vegas: "November 78878, Vegas Altimeter xx.xx, what is your destination?"
Me: "xx.xx, going to St George, ***Sierra Golf Uniform***."
Vegas: "Are you going direct Boulder City?" (The Boulder City VOR is to the southeast of Vegas)
Me: "No, I was going direct Mormon Mesa and then St George." (Mormon Mesa VOR is southwest of Mesquite and the direct route to it takes you over Vegas just east of Harry Reid International)
Vegas: "I can't clear you direct Mormon Mesa, but if you want to go Boulder City, I can."
Me: "I can do Boulder City."
Vegas: "November 78878, cleared through the ***Bravo***, direct Boulder City, direct Mormon Mesa, notify prior to any altitude changes."
Me: "Cleared through the ***Bravo***, direct Boulder City, direct Mormon Mesa, and will notify before any altitude changes."

With that, I tapped Boulder City VOR on my tablet to insert it into the flight plan and turned to the new heading. As we flew past Lake Meade, I looked down and saw that we were still enjoying the tailwind and were moving along at 185 mph across the ground.

There were multiple aircraft inbound as we descended into St George. There is something beautiful about multiple aircraft, from regional airliners to piston singles, and a twin converging on an un-towered field when everyone is making the correct position calls and working together. From the point when we were switched over from ATC to St George's Common Traffic Advisory Frequency (CTAF), there were two regional jets, a Cessna, a turbo commander, a Cirrus SR-22, and me – all inbound.

The turbo commander passed above us and to our right while we were still about 10 miles out. The Cessna was just landing when the turbo commander was entering the downwind. The first of the two regional jets were on a base leg a little way out. The turbo commander said he was going to land and that he would keep "it in tight to get out of the way." He turned a short final, was on the ground, and off the runway as the jet was still on long final.

I made another position call 2 miles west of the field, indicating that we would be crossing over mid-field for a left downwind to runway 19, and that we would come in behind the Cirrus. (The second regional jet was on its base leg). The Cirrus said that he was going to hold east of the airport and come in behind us. I thanked him and announced we were crossing midfield and turning downwind. I had to extend the downwind slightly, but once the jet had passed, we turned base and then final with the Cirrus behind us. Everything isn't always that smooth at un-towered fields, but I don't think that could have gone any better if there was a tower directing everyone.

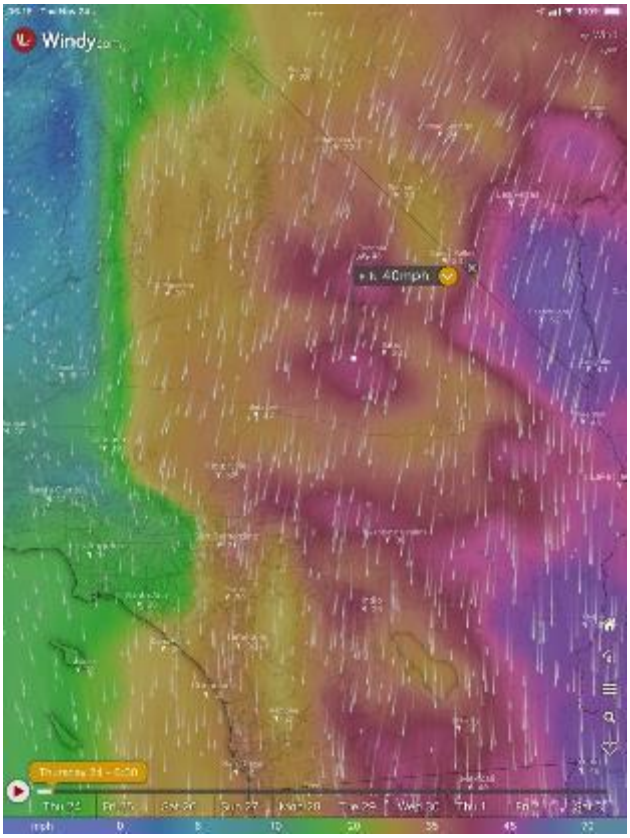
After fueling and a restroom break, we climbed back in and were on our way. I picked up flight following shortly after getting in the air. We were climbing out north through the canyon and there was a Beechcraft descending south, inbound to St George. ATC initially called us out to each other and then

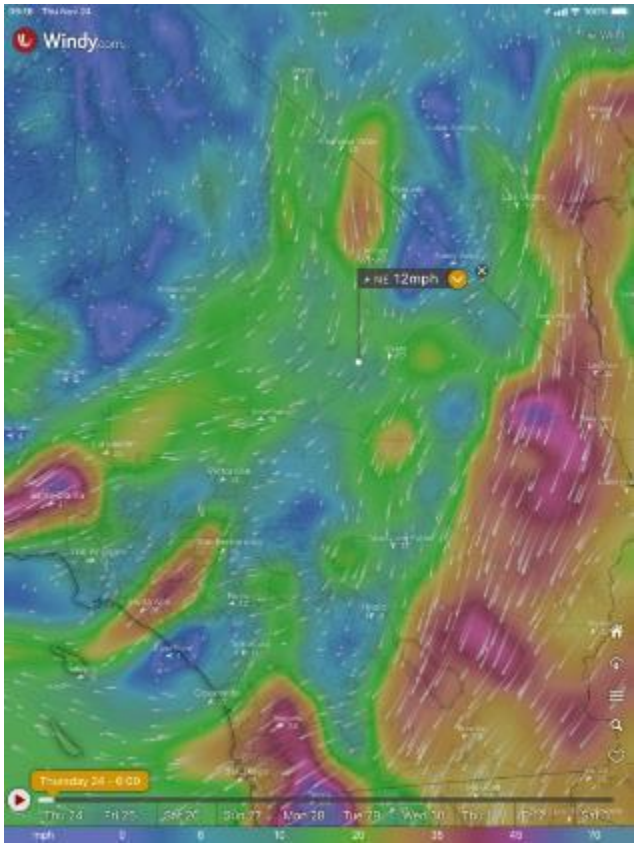
asked what my cruising altitude would be. I told her niner thousand five hundred and she then told the Beechcraft, "Traffic no factor, he is a Mooney and climbing quickly." :)

We continued to have a great tailwind with ground speeds in the 170-180 mph range. As it got dark, we could see the lights of Provo, Utah off in the distance and a solid stream of headlights on the freeway. Descending over Utah Lake, with a groundspeed of 197 mph, it was great to be flying instead of driving.

I probably should have purchased a lottery ticket, because four days later, the winds had shifted, and we had tailwinds on the way home. How often do you have tailwinds on both the outbound and inbound flights? The Sunday after Thanksgiving, we looked down on the miles and miles of bumper-to-bumper traffic south of Las Vegas. While everyone on the highway tried to get home, we were enjoying ground speeds of 180+ mph. It was a beautiful thing.

Fast forward four years to 2022. All the kids are out of the house, and my wife and I are flying to St George for Thanksgiving. My youngest son is at college there. My other son is coming down from Idaho Falls, Idaho, and my wife's dad and his wife live there. It will be great to see them all.





The weather forecast was clear, but the winds were going to be brutal. Two months earlier I had scrubbed a trip to St George when the winds at 10,000' were blowing perpendicular to our path across the 11,503' top of San Gorgonio Mountain, (south of Big Bear Lake). That wasn't a ride I had any interest in participating in. This time the winds were forecast just as strong but would be coming from the north across the high desert, but no tall peaks. I had already received my preflight briefing when a friend sent me pics of the winds at 10,000 and 3,000 along with, "You might want to stay lower."

My plan was fly at 9,500' until past the mountains north of San Bernardino, California. This would give me extra altitude in the event of some mountain wave. A few years ago, an M20E crashed over those same mountains. The M20E was a little heavy and got in a downdraft that they couldn't climb out of. Once over the high desert, I planned to descend to 7,500', where hopefully the winds would be a little friendlier. Spoiler alert, they weren't. I couldn't go any lower than that because up ahead, there are high mountains.

We left Fullerton (KFUL) and started climbing out to the northeast. We could see clouds of dust, kicked up by the winds. As we passed over Chino, California (KCNO), I saw my tablet update that despite the clear skies, KCNO was IFR due to that dust.

We enjoyed some nice lift for a few minutes while in the updraft side of the mountain wave and leveled off at 9,500'. As we entered the downdraft side. it was surprisingly smooth, but we struggled to maintain altitude and our IAS dropped to 106 mph. My wife looked at the tablet in front of her and pointing to the distance to the next waypoint asked, "Is that our ground speed?"

"No, pointing to the 70 mph, "That is." I'm glad we were in a Mooney and not a Cessna. We were on a heading of 020° with 63 mph winds coming from 350°- a 54 mph headwind component.

The winds didn't get much better after that, but at least we didn't have much in the way of up and downdrafts. Our average ground speed for the entire flight was 132 mph. My plane trues out at 166 mph (144 knots), and as long as we have 150 mph groundspeed, I'm feeling pretty good. That allows for 16 mph headwinds. Groundspeeds between 110-130 mph makes me feel like I will never get there.

Despite the winds it was a surprisingly smooth flight with just a few bumps in the typical places. Finally, we were in the descent to St George and joined a fairly quiet pattern. However, there was one more hurdle to jump. There was supposed to be a rental car waiting for us, but when I walked inside the FBO, they didn't have anything for me. It was 11:45 am and the counter at the airline terminal, which was about a mile away, was closing at noon, and they weren't answering the phone. The guy at the FBO offered to give me a ride to the terminal. He dropped me off and waited outside while I made sure they hadn't closed early. Thankfully there was still someone at the counter, so I waved a thank you to the FBO guy and went back in to get my car.

Thanksgiving weekend was great. We had dinner with my wife's dad, his wife and my two boys. Sunday after church, it was time to fly home. It was only three days later, but any hopes that some of those 40 - 60 mph headwinds would be blowing in our favor were dashed to pieces. Four years earlier the Gods had smiled down on us, giving us tailwinds both ways. But, as mentioned earlier, this year they were making up for it.

We were able to average 151 mph over the ground on the way back, so it fell into the "respectable range" for my plane. However, it would have been nice to have just a touch of those northern winds hanging around for our trip home.

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.

Low Altitude Alert!

Jim Price
Co-Editor

Sunday, November 27, 2022, a Mooney M20J made US news when it crashed into power lines in Gaithersburg, Maryland. It came to rest, hanging on a power transmission tower about 1.2 miles (2 kilometers) from runway 14.

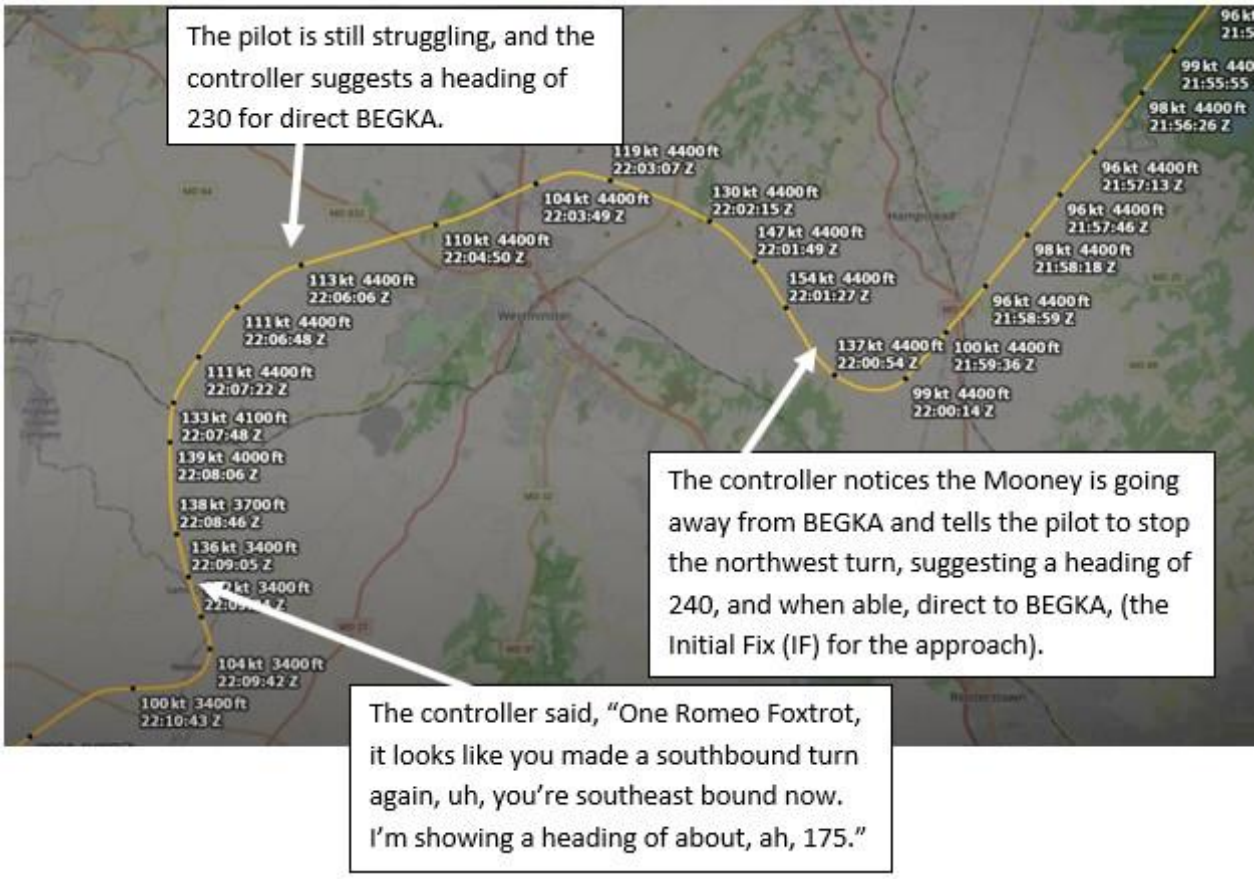
0900 hours – KAIG to KHPN

The 66 year old pilot and his passenger departed Montgomery County Airpark (KAIG) in Gaithersburg, Maryland just before 9:00 am local time. They flew to Westchester County Airport in White Plains, New York (KHPN) for a day trip.

The pilot has confirmed that he is rated for instrument flying and said that he had been flying for over 30 years. However, in a later interview, he said he'd taken a ten year break from flying, after a crash that occurred thirty years ago. He had 1,400 total hours and a Class II Medical.

1500 hours – Departing for KGAI

The flight to New York was uneventful. A few hours later, at 3:00 pm local time, the Mooney departed KHPN for the return to KGAI. The flight was expected to take about two hours. The LiveATC.net recording of the pilot's flight indicates that as the pilot neared the final approach fix, he was struggling to maintain the correct course, causing some concern to the controller. LiveATC.net only captured the controller's voice.



1715 hours – Arrival and Approach

The weather at KGAI had deteriorated since 9:00 am. Now, there was heavy rain and mist. The ceiling was 200 feet with visibility of 1.25 miles (2 kilometers). The pilot initially requested the RNAV (GPS)-A approach, circle to land runway 32. However, this approach requires at least a 600 foot ceiling and one mile of visibility. The controller told the pilot that he may wish to reconsider his approach.

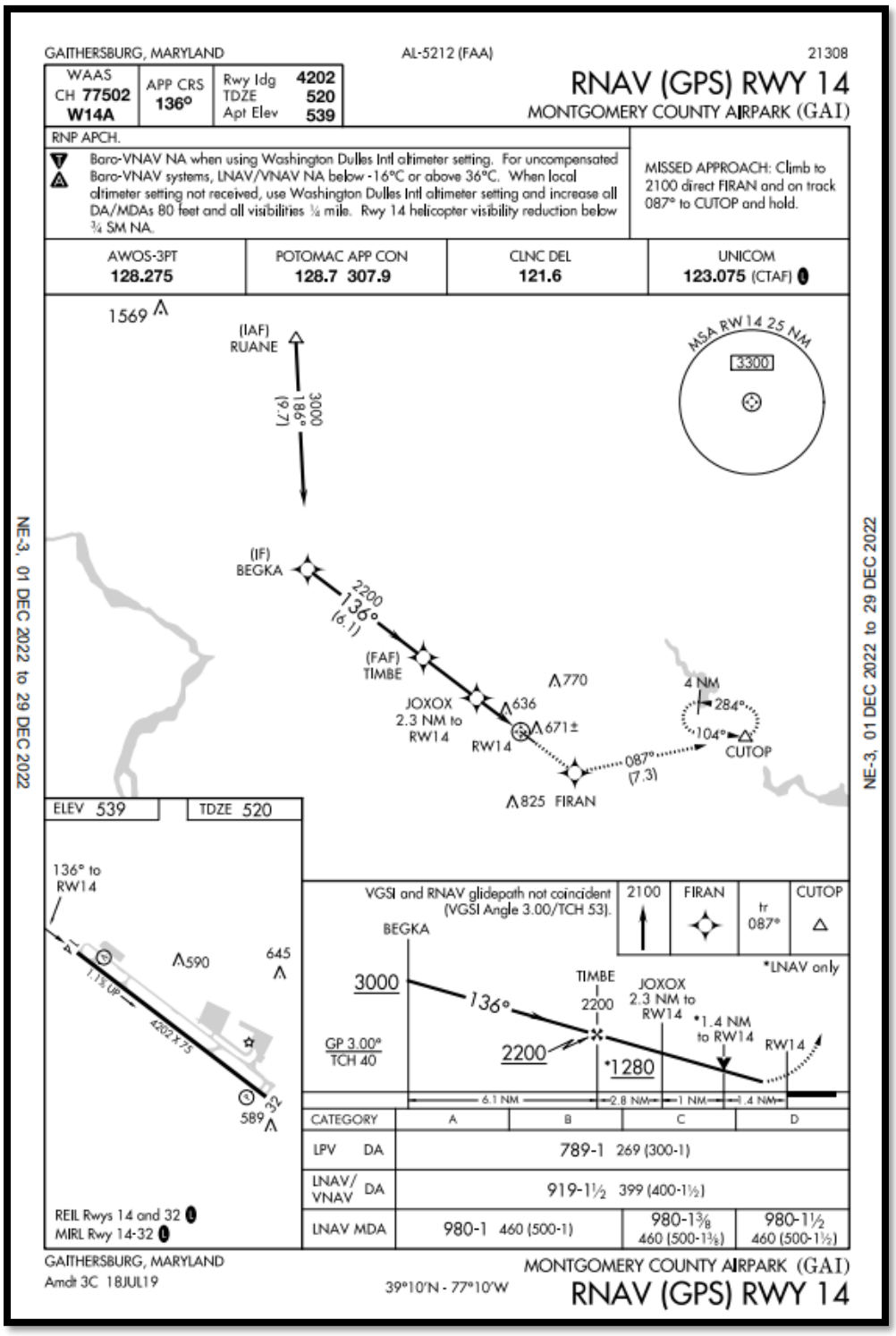
The controller cleared the flight for the RNAV (GPS) approach for runway 14. This LPV approach requires at least a 300 foot ceiling and one mile visibility. The controller then asked the pilot to change to the KAIG's CTAF frequency, 123.075.

During the approach, the pilot flew well below the Localizer Performance with Vertical Guidance (LPV) glide slope. Staying on the LPV's Glide Slope would have protected he and his passenger from any high terrain or obstacles before they reached the Decision Altitude (DA)/Missed Approach point.

1740 hours – the Crash

The pilot had switched to the CTAF frequency and did not hear, "Low altitude alert! November 2-0-1 Romeo Foxtrot, Baltimore altimeter is 29.44. November 2-0-1 Romeo Foxtrot, if you hear this transmission, low altitude alert! Baltimore altimeter is 29.44. The lowest useable altitude is 3,500 if you're not on approach."

N201RF hit the Potomac Electric Power Company (PEPCO) power lines which crossed the flight path about 1 ½ miles from the runway. This severed the live high-voltage wires. Suddenly they found themselves precariously jammed into a power transmission tower.



PEPCO Transmission Towers are shown below

The pilot used his mobile phone to call emergency services

Dispatcher: "Montgomery County 911; what's the address of your emergency?"

Mooney pilot: "I've flown into a tower to the northwest of Gaithersburg Airport. It's one of the electrical towers. Believe it or not, the aircraft is pinned on the tower, and I don't know how long we are going to be able to stay here and I don't know . . ."

Dispatcher: "Wait, are you the airplane pilot?"

Mooney pilot: "Yeah, I'm the pilot."

Dispatcher: "OK, stay on the line with me."

Mooney pilot: "We are *in the tower*. We are still in the plane. And we are in a…and now, we have a light that's coming at us, checking to see how we are doing. (shouts) Hey, how ya doing!"

The pilot was very concerned about his passenger, who was hurt in the impact. He had initially wanted to climb out of the aircraft. But then when the aircraft shifted in the wind, he changed his mind.

Mooney pilot: "I don't think there's even room for me to stand on this tower, even if I do get out."

The dispatcher agreed that the best thing to do was to stay as still as possible and wait for emergency services to get up to them.

The pilot knocked out the windscreen so they would have an escape path if the Mooney started to slip further.

Dispatcher: "You are doing a great job, OK? I know at this point it seems like forever. I'm sorry that this happened. I'll be with you guys here until they can get up to you, OK?"

Meanwhile, a member of the Montgomery County Fire and Rescue in Maryland contacted his chief to say that the firehouse had lost power. The chief responded that the power was out for miles around. Then they saw the active call appear on the board, with a note that a plane had crashed into a transmission tower.

The dispatcher stayed on the line with the pilot for an hour and a half, during which the pilot spoke about what happened.

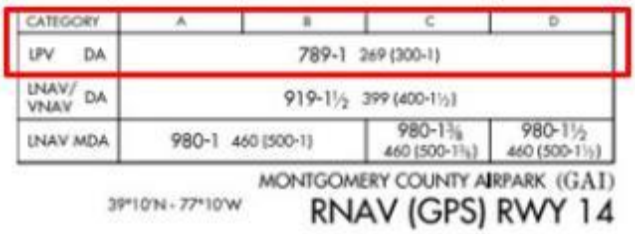
The Pilot's Story

"Totally a visibility issue. We were looking for the airport. I descended to the minimum altitude and, uh, then, apparently, I got down a little bit lower than I should have."

The pilot expressed concerns about the altimeter's accuracy. However, post-crash testing, under the supervision of the NTSB found the altimeter was "well within the test allowable error at all ranges." (See the NTSB preliminary report)

The Decision Altitude (DA) for the LPV approach is 789 feet, which is 269 feet above touchdown.

The Mooney struck the power lines and tower at 100 feet above the ground, 169 feet below the LPV Decision Altitude.



The Rescue

When Emergency Services appeared on the scene with mobile cranes, one firefighter noticed that the aircraft was moving, and the pilot was attempting to climb out of a window.

The firefighter was warned that despite the outage, touching any of the power lines could be fatal. Even the cables that had been sheared through could contain static electricity strong enough to shock a man into unconsciousness. The firefighter was then lifted near, but not touching the aircraft.

PEPCO Engineers had to test and ground every affected power line before the first responders could even consider a rescue. They put clamps or cables onto the wires to ensure there was no risk from residual power. **This took six hours**.

2330 hours – The All-Clear
PEPCO engineers finally gave emergency services the all-clear at 11:30 pm.

0035 hours – On the Ground

Finally, at 12: 35 am, seven hours after the crash, both the pilot and passenger were safely on the ground.

An ambulance took them to a hospital where they were admitted with life threatening injuries, including hypothermia and trauma.

The passenger had several broken ribs and required stitches on her forehead.

The pilot had broken his nose and because of a head wound, he had lost two pints of blood (over a liter).

What can we learn?

This story had a relatively happy ending because although they were injured, they lived.

Remember, you are not invincible, so don't be overconfident. Never go below approach minimums unless you can distinctly identify one of the approved visual references for the runway. Gee, I guess that's why each approach has approach minimums and visibility requirements. If you don't see the runway, just go around! When you are comfortable and safe, develop a plan to land safely at another, more weather friendly airport. Don't depend on luck to be on your side.

Consider the actual and forecast weather, your ratings, qualifications, experience, and personal minimums. Also, think about your physical condition (health and rest).

Fly Safe, Jim

An Amazing Caribbean Flying Adventure

by Vincent Dunn

November 29 was launch day for the beginning of my Odessey from Salem, Oregon (KSLE) to the tropical isle of Martinique, a French possession in the southern Caribbean. It was just me and scant gear packed into a 56 year old Mooney who's glory days were in the later part of the previous century. With fuel tanks filled and IFR flight plan filed, I departed runway 16 into clouds that were reported as 800 foot scattered. With fingers crossed and hopes high, I climbed in and out of IMC conditions with only a trace of ice on the windscreen and leading edges. I eventually broke out of the soup, just as I soared across the California border. I arrived at my fuel stop, Nut Tree airport (KVCB) in Vacaville, CA. The second, and final leg of the day into Santa Monica, CA (KSMO) was uneventful.

The following days took me eastward across Arizona and New Mexico. I overnighted in Clovis, NM (KCVN), sleeping on the FBO couch. The next night was spent in a tent beside the Mooney in Natchez, MS. Cheap fuel and nice people at the FBO made camping in the grass a joy. The 1,800 foot runway at Cedar Key, FL (KCDK) was the next leg. It's a tiny islet just off the west coast of north Florida. With the tent pitched next to the Mighty Mooney, I marched a mile or so into the quaint little town for dinner at a hotel that was erected in the 1880s. And finally, the last two hour leg was into Fort Lauderdale Executive (KFXE) to meet the rest of the Caribbean team.

This trip was organized by International Air Rally of Toronto, Canada. They set the schedule for the 10-day Caribbean outing, booked hotel rooms, organized transportation to and from airports, eased us through customs and immigration requirements, arranged breakfasts, island activities and some dinners too. The twenty private aircraft and 45 or so people involved could relax and enjoy the flying and island life. About half of the participants were Canadians, half were Americans, and two guys from Norway who flew commercially to the US and rented a C-172 for the Caribbean portion. Air Rally also conducted a pre-flight briefing the night before each flight and helped us complete required paperwork for each stop.

From KFXE, the first leg of the Caribbean portion was to the island of Providentiales in the Turks and Caicos. There, we cleared customs and fueled our aircraft. Then, it was a short 30 minute hop to Grand Turk island and a couple of nights at the lovely seaside Oasis Hotel. Of course, there was great food and walks on the beach.

The next flight was Grand Turk to Nevis with a fuel stop in Puerto Rico and an unscheduled stop in St Kitts. Okay, I confess, I landed in St Kitts by mistake! It's only 8 miles from Nevis and I confused the two airports. There was no harm done and I got to check St Kitts off my list of islands, too! After a couple of nights in Nevis, we were off again to our southern terminus of Martinique. Sightseeing and a boat tour were the highlights here. No sooner had I revived my high school French than we were flying north to the Dominican Republic, where Spanish is the Lingua Franca. We spent several nights in another excellent seaside hotel, complete with restaurant and pool. Choppy seas kept us out of the water and delayed our snorkeling outing to another year, so we were forced to relax poolside, wander the town, or both.

The last 711 nautical mile leg back to Fort Lauderdale was the longest. Some planes stopped for fuel and others, with greater range, did not. Set for economy cruise, the Mighty Mooney made the trip in just under 6 hours on 42 gallons of fuel with 10 gallons of reserve. Thanks, Mooney!

I returned home to Salem, Oregon by approximately the same route I had come and was home on December 23. The flights home were significantly colder and rainier, but I was lucky to arrive in Salem on the odd VFR day in sunny skies. This was my fourth trip to the Caribbean with International Air Rally. Round trip, it was about 8,400 nm and I burned about 540 gallons of a gas. I'm looking forward to flying with them again in 2024, when Air Rally is planning a trip to Rio de Janeiro, Brazil.

And Now the Rest of The Story

by Robert Elliott

Several decades ago, when growing up in Northwestern Wisconsin, my Dad would tune in WCCO or WJMC on our kitchen AM radio for the latest news and weather. As winter temperatures neared minus 30°F – a magic number deemed unsafe for school kids, I'd listen for "Spooner Schools" to be read in the long list of school closings, hoping for an unplanned winter vacation day.

Although school closings were few and far between, Paul Harvey News was a regular feature. In his deep, gravelly voice, Mr. Harvey would begin a news story, and as he went to a commercial break he'd say, "In a moment … the rest of the story." After the break, there was always a unique or surprising twist to the story's ending, and so he ended each segment by saying, "Now you know … the rest of the story."

So, here's "My Story"

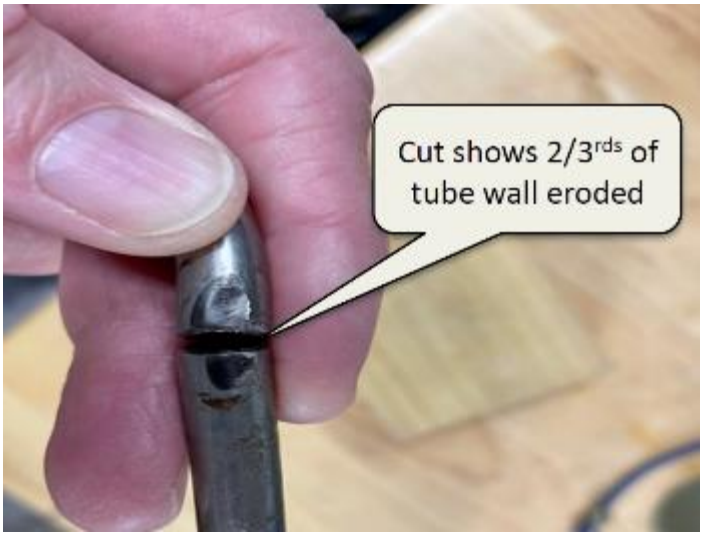
Mistakes have a way of repeating themselves. And no, I'm not talking about my occasional pilot shortcomings while at the controls of our M20J. If you read my earlier piece in December's Mooney Flyer, you know that a few days following an off-airport landing and prop strike with our M20J, we won the airplane parts supply-chain lottery and snagged a replacement Lycoming Factory Overhaul IO-360-A3B6 as it was sitting on the factory dock, ready for shipment.

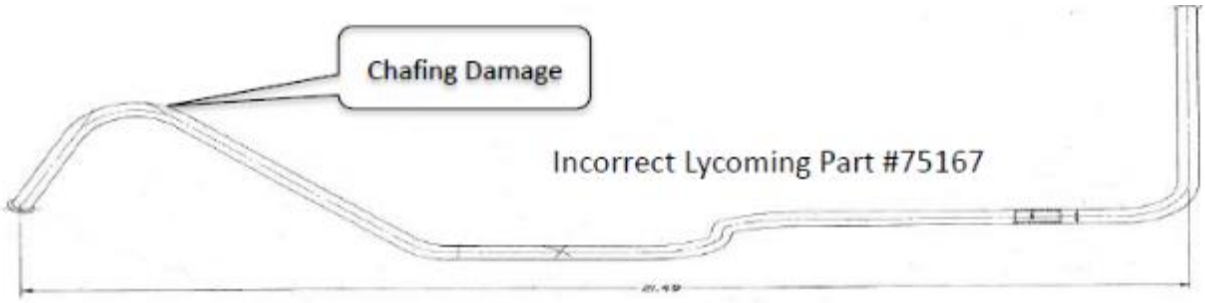
But I'm getting ahead of myself, so first a bit of history. In 2005, prior to our partnership purchasing our 1982 Mooney, the M20J's IO-360-A3B6D was swapped out by a Mooney Service Center for a zero-time Lycoming Factory Rebuilt IO-360-A3B6 that was designated "for installation on a Mooney 201". When we purchased this plane in 2012, we were pleased to see the notorious "D" suffix gone, knowing that the engine now had two independent magnetos.

Fast-forward to 2015. That 2005 vintage A3B6 was removed from our Mooney and secured in the back of a borrowed pickup truck. My wife and I were soon off on a road trip from Georgetown, Texas to Mena Aircraft Engines in Arkansas. Upon arrival at Mena, we spent a couple of hours discussing the planned overhaul and toured Mena's engine shop. I'm sure my wife learned way more that she wanted to regarding the ins and outs of aircraft engine overhaul. We departed for home the next morning, confident our engine was in good hands.

A couple of days later, Mena called. They had discovered serious chafing damage to the stainless steel prop governor oil line. Nearly two-thirds of the thickness of the line was worn away.

We had unknowingly been at risk for a catastrophic engine failure. Subsequent inspection of our Mooney's airframe found corresponding damage to the engine mount. The engine mount was sent off for overhaul and the engine shop ordered a new prop governor oil line.





Following repair of the engine mount, we had it drop-shipped to Mena for a trial fit with the newly overhauled engine, which was sporting a new oil line from the Lycoming factory. However, once again the new oil line could not be made to fit and was positioned to chafe against the engine mount. After further reviews with Lycoming, the correct replacement was identified, shipped and installed. So, you may have assumed there would be no more prop governor oil line problems.

"And now, The Rest of the Story"

The Lycoming Factory Overhaul IO-360-A3B6 that we purchased this summer designated, "For installation on a Mooney 201", once again (did I say "once again" too many times) shipped from the factory with the same wrong part number as was installed on the factory rebuilt engine in 2005, as well as the replacement oil line that was initially sent to Mena in 2015.

Looking at the Lycoming IO-360 parts manual, the *IO-360-A3B6 Supplement to PC-406-1* at the front of the manual only lists a single prop governor oil line, part #75167. On the other hand, the much larger table for all other IO-360 variants found in the main section of the manual includes a footnote referencing the correct M20J compatible part #75730 for some other IO-360 variants. To be clear, the correct prop governor oil line for our M20J's A3B6 is Lycoming part #75730. And on three separate occasions, Lycoming has instead shipped part #75167.

Lycoming **IO-360-A3B6 Supplement to PC-406-1**

SECTION 2 ... ACCESSORY HOUSING AND RELATED PARTS
Figure 9 - PROPELLER GOVERNOR OIL LINES, Pages 2-5 & 2-6

Wrong Part# for M20I;
Correct Part # is **75730**

			QTY. PER ASSEMBLY
1	75167	TUBE ASSY., Propeller governor oil line	1
2	STD-1930	HOSE, 3/8 I.D. x 1.00 long	1
3	75165	CLIP, Propeller governor oil line support	1
4	STD-35	WASHER, 5/16 plain	3
5	STD-475	WASHER, 5/16 lock, internal teeth	1
6	LW-31-0.94	BOLT, 5/16-18 x 15/16 long, hex. hd.	1
7	LW-16266-25-38	CLAMP, 3/8 I.D. x 1/4 dia. screw	1
8	MS20822-6	ELBOW, 3/8 flared tube & 1/4 NPT, 90°	1
9	74070	ELBOW, 3/8 flared tube & 9/16-18 str. thd., 45° adj.	1
10		Not Applicable	
11		Not Applicable	
12		Not Applicable	
13		Not Applicable	

Given the somewhat hidden location of the oil line/engine mount point of interference, once the engine is mounted in the aircraft it may not be very obvious whether the correct oil line is installed on your Mooney, but it might be worth taking a close look the next time your engine cowlings are off. I hesitate to believe we were the only ones to receive the wrong parts on three separate occasions.

Giving credit to Lycoming, they made good on their most recent error, and after much searching, they send the correct part in exchange for the one originally installed on our engine. The factory parts expert said he would alert Lycoming engineers to this ongoing problem.

As Paul Harvey used to say, "Now you know … the rest of the story. Good day."

Mooney Cockpit Resource Management

You're probably asking, "Phil, what the heck are you going to write about in this article?" Cockpit Resource Management (CRM) is the purview of airline and commercial crew pilots. But I hope that, after reading this article, you will feel differently.

The vast majority of Mooney incidents and accidents are not caused by the aircraft, but rather they are caused by the Pilot In Command (PIC). So, if we can improve problem detection and decision making in the cockpit, we have leverage to improve the safety of flight. None of the topics covered in this article are earth shaking or radical. However, they can have a tangible, positive impact on your safety of flight.

The secret sauce here is to "utilize" the passenger in the right seat, even if they are not a pilot. This has a few positives. It gets your passenger involved, which can improve the enjoyment of their flight experience – especially if they are a little edgy about the flying adventure. They can also act as a "backup" or add a little redundancy for you, the PIC.

Avoid a Gear Up Landing

Contrary to popular belief, the vast majority of gear up landings have nothing to do with mechanical issues, although certainly some gear ups are mechanical. In fact, most gear up landings result from the PIC being taken out of his/her routine, usually by distractions. Maybe the weather is challenging, the pattern is busy, or you are unfamiliar with the airport. Perhaps a passenger causes a distraction.

Checklists, especially GUMPS check

GUMPS stands for:

- **G** – Gas (Fuel on the proper tank, fuel pump on as required, positive fuel pressure)
- **U** – Undercarriage (landing gear down)
- **M** – Mixture (fuel mixture set)
- **P** – Propeller (prop set)
- **S** – Seat belts and Switches (lights, pitot heat, etc.)

Whether you use a checklist or not, you can be distracted from your routine checks.

Here's where a passenger can be a valuable Cockpit Resource, and possibly help you avoid a gear up. Teach your passenger how to determine if the gear is down & locked. Ask them to ALWAYS announce a gear check on final, and on base leg as well. Pilots love redundancy and having your passenger involved can be a valuable backup. This Cockpit Resource could actually an inadvertent gear up.

Don't Miss Anything on your Pre-Flight Check

Have your passenger participate in your pre-flight check. You cannot expect them to know all the technical items to check, such as propeller nicks and free play, or tail free play, but there are many items that they can redundantly check. These include:

- Is the tire pressure low?
- Are there loose camlocks?
- Are there airframe issues such as hangar rash, or worse?
- Are there any fuel leaks?

On a recent trip, we saw a Bonanza taxiing to the runway with the towbar still attached. Yikes! In a recent article, we read that a Cessna sheared their front gear off as they rotated with the tow bar attached. Distraction can cause the PIC to forget to detach and stow the tow bar. Your passenger can be resource to help identify forgotten items.

After getting additional fuel, I like to wait for the water, if any, to settle to the bottom of the tank before sumping the tank. On occasion, another person may engage me in conversation on the ramp, and after 10-15 minutes, I might forget to sump the tanks, but a passenger can be asked to give me a reminder.

Traffic

Clearly, a PIC's priorities include seeing and avoiding traffic. But a second set of eyes keeps your passenger engaged and provides twice the "see and avoid" capability. I've seen pilots become too dependent on traffic systems such as ADS-B-TIS, TCAS, etc. On many flights, my passenger catches traffic that I might have

missed. This is a valuable assist/backup, especially at a busy airport when we are number three or four for landing. Passengers can be a valuable piece of redundancy and backup, catching the traffic ahead and then helping to track those targets as you continue in the traffic pattern to land. Having a second set of eyes at the recent Watsonville midair could have avoided that entire situation because clearly, the two PICs did not see each other, (possibly focused on other activities), during their approach to landing.

Seeing Items that may be Askew

My passenger is keenly aware of normal sounds and vibrations and detects abnormal sounds, vibrations and smell. The PIC is also keenly aware of these things, but the backup and redundancy is valuable.

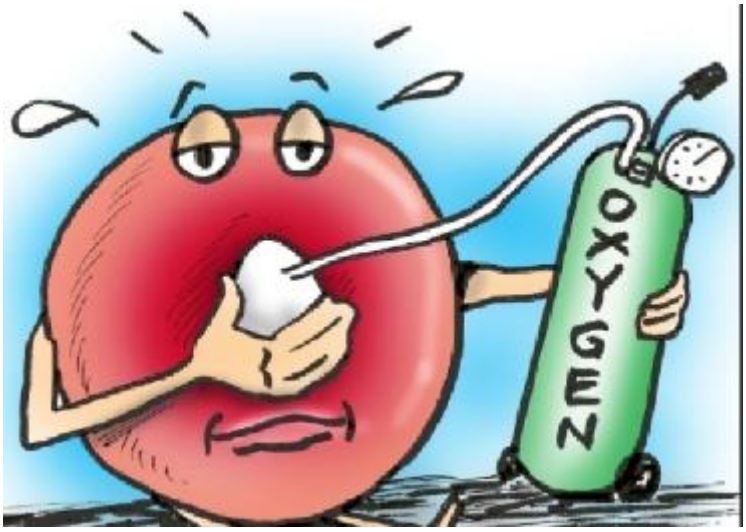
My passenger is also excellent with seeing any instruments or lights that are not normal. She hates it when the "low fuel" light comes on in our Eagle and mentions that she wants me to change tanks.

She also notices our engine monitor and pays attention to CHTs and EGTs on hot summer day climb outs. She knows that I don't like CHTs higher than 380°F and if that happens, she calls out "Cylinder #5 is above 380°". She is a great backup when we are departing a busy airport.

An engaged passenger can simply say, "What does that light mean?" to improve cockpit resource management. And again, don't forget that an engaged passenger can be a happier passenger.

Hypoxia Detection

Hypoxia is dangerous on so many levels but your passenger's ability to detect the onset could be lifesaving. Even if you are trained, hypoxia might be beginning to manifest itself and you may not detect it at first. Perhaps your talking might become a little slurred or your reactions in the plane are slowed. An engaged and active passenger could very well observe symptoms of hypoxia and get you on oxygen and/or at a lower altitude.



Summary

As pilots, we love redundancy and backups. Using all the resources available in your cockpit to assist you in making decisions, judgements, and more is just smart piloting.

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 would consider using ***Thunderbird Aircraft Sales***.
Our objective is to always provide a very pleasant transactional experience for both the Seller, and the Buyer. We have two offices, Auburn AL and Chandler AZ. Please give us a call or email, we would look forward to the possibility of serving you. Thank you.

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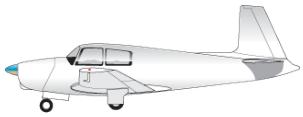
Mooney Maintenance



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

Click here

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

Click here

LASAR

Fanatically Mooney. Exceptionally Fast.

CLICK HERE for the complete Service Bulletin

Ask the Top Gun

Tom Rouch

Founder of Top Gun Aviation, Stockton, California

Send your questions for Tom to TheMooneyFlyer@gmail.com

Dear Tom,

1. I was told I should check the free play in my tail. So, I lift on it, and it clicks. How much free play is ok. What causes that free play?

2. When I preflight my prop, I basically check for nicks. Should I be checking for more things?

These two questions deal with the same scenario and that is, checking for wear or damage to an assembly that is installed on the plane. The jackscrew is the most ignored assembly on the plane. First, I want to point out that this type of part that moves the entire empennage is not very common on aircraft. While there may be others, the only other plane I know that trims the entire tail assembly is the Lockheed Jetstar. The big advantage to this type of movement is that it eliminates the need for trim tabs on the rudder or elevators.

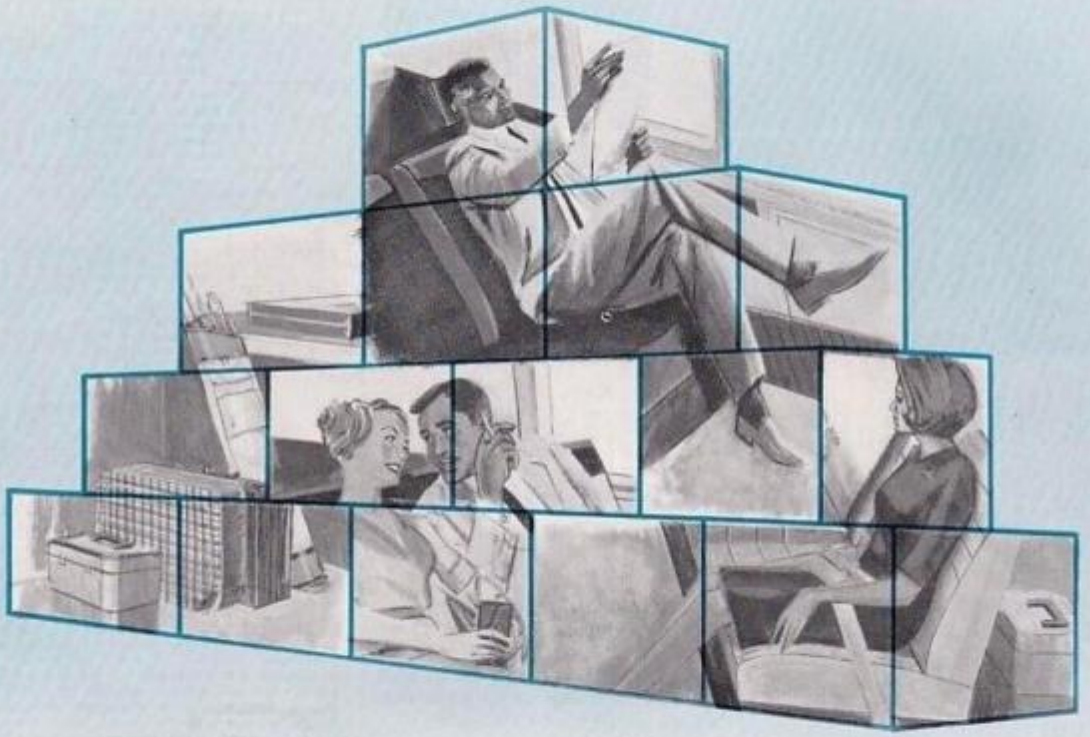
The only real check is to lift the tail at the bottom of the rudder and check for free play or looseness. This is a judgement call because to measure the actual amount of movement would require the airplane to be on jacks. That's because, by pulling up on the bottom of the rudder, you can also move the whole fuselage up or down. In my judgement, about 1/2 inch movement is normal and more than that would require some more investigation. The jackscrew is attached to the tail and aircraft with bolts and bushings. These will wear and can be a cause for excessive play. However, I have found that to be rare, which now brings us to the jackscrew itself. The nut in the jackscrew doesn't move but the screw itself moves back and forth through the nut. Wear can be in the screw or the nut, or both. This is when we remove the assembly from the aircraft and go to the workbench for disassembly and determine what to replace to eliminate the looseness. In many shops the repair would remove the jackscrew assembly and replace it with a new or overhauled part. Overhauled Jack Screws are almost impossible to find so in my shop, we found ways to shim or replace worn parts to make the jackscrew serviceable. The good part about the jackscrew is that they last for many hours or years with little or no care and failure is very rare. I only know of one that broke and amazingly, the airplane was able to land safely.

Your usual check on the prop is to look for nicks or blade damage. However, another check is to grab the blade tip and check for excessive movement. Big nicks should be inspected since missing metal can affect the balance and cause vibration. I have seen props with the tips ground down by a prop strike and the operator didn't even know it. We routinely file nicks from the blades and it is just a judgement call on how much you should file off the blade to affect the balance.

In both the scenarios, I am describing assemblies that are installed on the aircraft and have individual service manuals that describe maintenance of that assembly. It is very common for most shops to just replace assemblies rather than try to repair them.

Case in point, no shop repairs propellers, other than filing nicks. We wouldn't think of trying to replace a blade. That would require the shop to have every propeller manual for every prop that we maintain.

13 More Cubic Feet



# of Space and Comfort in Mooney's Big-New Executive 21

13 cubic feet of extra space and comfort have been added inside the cabin of Mooney's new EXECUTIVE 21. There is stretch-out leg room even for the tall set and all seats, front and back, individually recline for relaxing or a quick nap enroute.

There is extra space in the baggage area too! Ample room for 4 passenger's luggage. How about golf clubs? Take 'em along — they'll fit in the EXECUTIVE 21.

A convenient recessed shelf area is ideal for brief cases, cameras, hats and other light articles.

The all new EXECUTIVE 21 is long on performance too! It carries up to 7 hours of fuel . . . a lot of range for long cross country hops. You can cruise at 180 mph; faster, farther, and at less cost than in any other business aircraft.

The EXECUTIVE 21 offers comfort, speed, and the safety of PC at a practical price. If you haven't seen it — Do it! — today! Dollar for dollar, pound for pound you get more for your money in a Mooney. For free full color brochure write:

MOONEY

fly modern — fly Mooney with PC

Mooney Aircraft, Inc. • Kerrville, Texas

Mooney's 1967 Fly & Win Prize-O-Rama! See Your Dealer

CIRCLE NO. 55 ON READER SERVICE PAGE

Flight Outfitters new Centerline Kneeboard

New from **Flight Outfitters** is the **Centerline Kneeboard**. The kneeboard includes a new silicone attachment mechanism that allows you to see more of the screen. The flexible holder provides rotational capabilities.

The kneeboard also includes a fold-down platform to the side of your leg designed to hold an iPhone or notepad. The platform is rigid enough to write on, yet soft enough to tuck away when not in use. A stylus/pen pocket is in the sidecar pocket.

The back side of the kneeboard uses high-friction fabric to keep it from sliding around your leg. Two padded strips help contour the flat board to your leg, while an elastic strap holds it in place.

The Centerline Kneeboard includes a drawstring bag for storage and is offered in two sizes: Small for all versions of the iPad Mini ($69.95) and Large, which accommodates iPad 5-9, iPad Air 1-4 and iPad Pro 9.7 inches-10.5 inches ($74.95).

Tickets are now available online for the 70th edition of AirVenture 2023. The big show will be held July 24-30 at Wittman Regional Airport (**KOSH**) in Oshkosh, Wisconsin. To buy tickets, go to https://www.eaa.org/airventure

FAA Approves Johnson & Johnson COVID-19 Vaccine

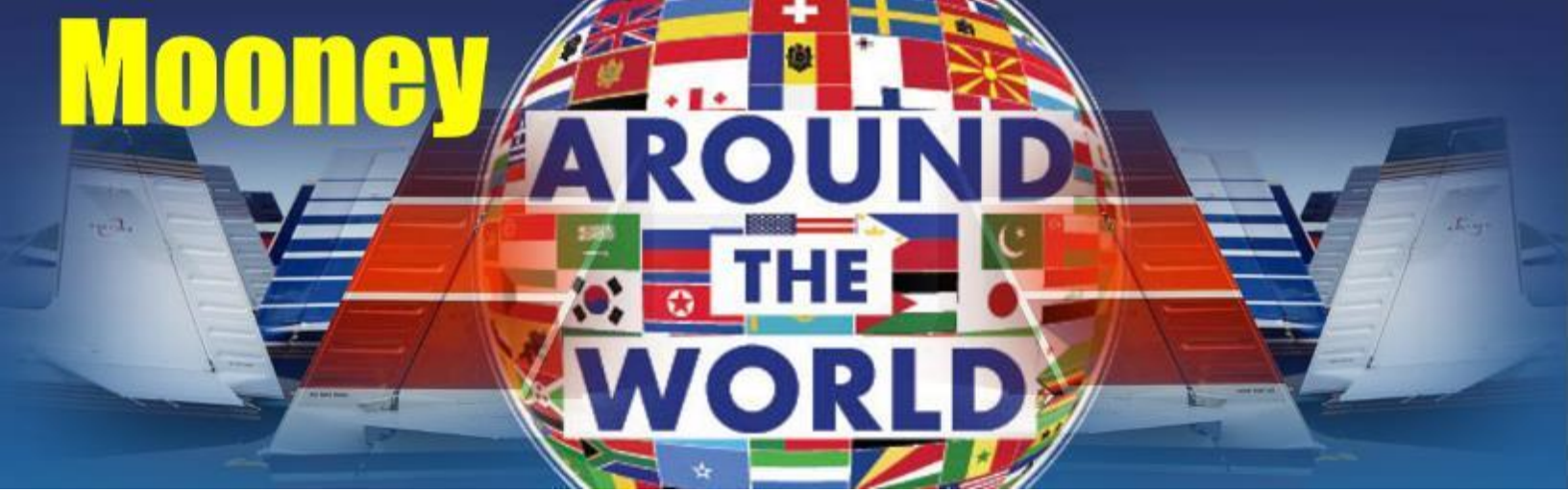
The FAA has determined that pilots and others who perform safety sensitive duties may receive Johnson & Johnson's Janssen COVID-19 vaccine.

FAA and contract air traffic controllers, who are subject to FAA medical clearance, may also receive the vaccine.

The FAA requires pilots who receive the single-dose vaccine to wait 48 hours before conducting safety sensitive aviation duties, such as flying or controlling air traffic. The waiting period, which accounts for potential side effects, applies to those holding an Airman Medical Certificate issued under 14 CFR Part 67 or a Medical Clearance issued under FAA Order 3930.3C.

The agency previously cleared the FDA-approved Moderna and Pfizer vaccines for aviation use, subject to the same 48-hour waiting period.

For more information, visit **FAA's Medical Certification page** on its website.



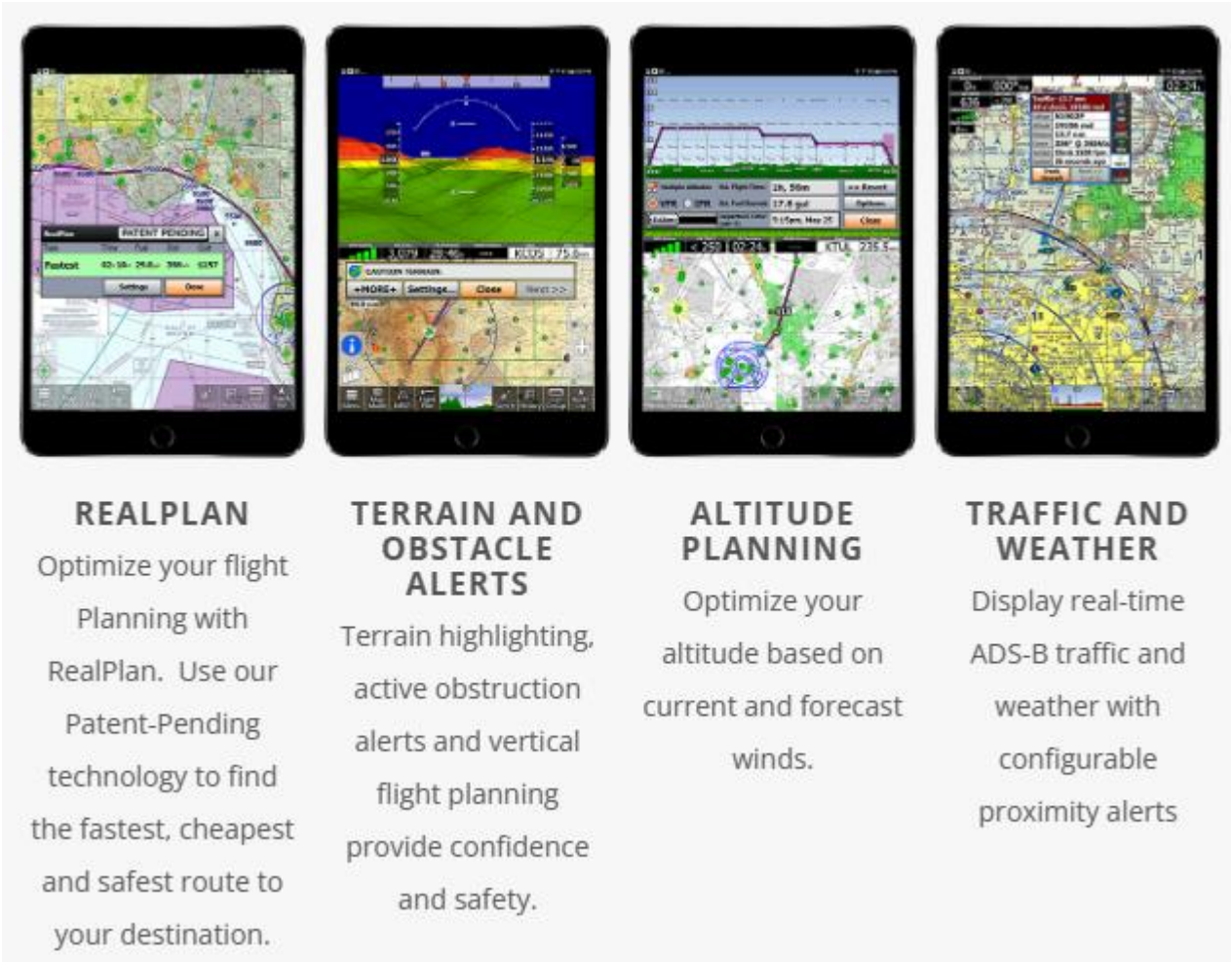
Florida Mooney Lunch Group	*Contact Dave at daveanruth@aol.com or (352) 343-3196, before coming to the restaurant, to have an accurate count. Events begin at 11:30* Jan 14: Leesburg (KLEE) will carpool to our house Feb 11: Fort Pierce (FPR)
MOONEY SAFETY.COM	January 26 & 27 Lakeland, FL (KLAL) April 13-14 Henderson, NV (KHND) June 9-10 Lexington, KY (KLEX) September 8-9 Westfield, MA (KBAF) October 13-14 Tupelo, MS (KTUP) Sign Up at https://www.mooneysafety.com/ppp-registration/
MOONEYSUMMIT	**Learn more at** https://www.mooneysummit.com/
Australian Mooney Pilots Association	
EMPOA	**Learn more at** https://www.empoa.eu/index.php/en/
Other Mooney Events	

iFly GPS

Every year, pilots have more and more EFBs to choose from. We have been huge fans of ForeFlight and Garmin Pilot for years, but recently, we took some time to review iFly GPS. We were quite impressed because it has all the features that are most highly valued, such as Flight Planning, Altitude Planning, Traffic and Weather, Synthetic Vision, Taxi maps, Moving Map while enroute, and more.

ForeFlight has become more and more expensive over the years, but iFly GPS remains quite affordable.

One feature that makes it unique is the “RealPlan” capability. This automatically picks the ideal flight path based on your preferences. In addition to the usual altitude optimization, it will also fly around any areas or airspaces that you select. It will avoid over water flights or automatically minimize them. You should consider this feature because it can save a lot of time.



Flight Planning

Set your destination with a touch of your finger and easily pan along your magenta line. Reroute around airspace or obstructions with our easy-to-use rubberbanding feature.

Use our exclusive Vertical Planning feature to get a optimal winds and get a relative terrain view along with a vertical profile of your flight plan. Your plan can be planned and optimized for multiple altitudes to give you confidence when traversing complex terrain.

Geo-referenced Charts and Plates

iFly GPS is feature packed with high resolution geo-referenced VFR Sectionals, IFR High/Low Enroute charts, Approach Plates, Highlighted Special Use Airspace and more. Plates can be transparently overlaid with both day and night mode.

Parts for Sale

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

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

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

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

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

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

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

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

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

Item for Sale

Call Tom 303-332-9822

New Hartzell Propeller Hub HC-C2Y (K, R)-1 Serial CH41782B
This hub will comply with AD2006-18-15 and superseded by AD2009-22-03
This AD affects many IO-360 aircraft.
Current Hartzell price is $4,275.

Price $3,999

1965 Mooney M20C, N5533Q s/n 2955, TTAF 6212, Engine 1680 SMOH, Prop 1680 TSN, 10/1/22 Annua
All cylinders ≥ mid 70's. Fine Wire Plugs. Great IFR panel: Garmin GTN650 Nav/Com 1,
GTX327/GDL-88 UAT ADS-B In/Out, FS210 links to Foreflight. Garmin G5,
King AI & slaved HSI, King KX155 Nav/Com 2 with Glideslope and DVOR, KN64 DME.
EI MVP-50 engine analyzer (11+ primary instruments), one SureFly eMag, one Slick (<125 hrs. both).
Manual Johnson Bar gear, Manual/Hydraulic flaps, PC & Brittain 1-axis AP and more!
Original paint but she'll get you there @ 141 kt on 10 gph going GPS direct.
Useful load 981 lbs, 669 lbs with full (52 gal) fuel. 30+ STCs, email for more info.
Partners bought 2 other Mooneys, we don't need 3 sadly ☹
$76k Larry@LarryShapnek.com 505-366-4586 Sandia Park, New Mexico

For Sale, shares(s) of my 1984 Mooney M20K 262 N57785 11/2022

Ditch the Airlines !
Looking for one, two or three partners to share this slick, modified 231.

Based at Sandia Airpark (1N1) in Edgewood, New Mexico now,
I could consider a move to other nearby fields for the right reasons.

~$170k invested, a partnership or LLC would allow an easy path to the best maintenance and upgrades - enabling fast, private transport all around North America.

s/n 25-0845, TTAF ~4384, Continental TSIO 360-MB4B ~85 since IRAN rebuild, Heated Prop ~85 since new, King KFC150 Flight Director/HSI/AP, Avidyne IFD540, KX-165 w/GS, Avidyne AXP340 ADS-B, Built-in O_2, +++

Larry Shapnek 505-366-4586 Larry@LarryShapnek.com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