

The Mooney Flyer

The Official Online Magazine for the Mooney Community
www.TheMooneyFlyer.com

April 2023



Editors

Phil Corman | Jim Price

Contributors

Jerry Proctor | Tom Rouch | Richard Brown | Parvez Dara |

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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

Paul & Shery Loewen

I have known Paul & Shery Loewen since I purchased my first Mooney, a 1965 M20C, in 2000. I have since progressed into an M20S Eagle. During all that time, Paul & Shery Loewen and their staff, also known as their family, served me and my Mooney and most of the Mooney community. They've sold LASAR and recently announced that they have now sold Loewen Mooney Salvage. To me, this is the passing of what was an AMAZING company.

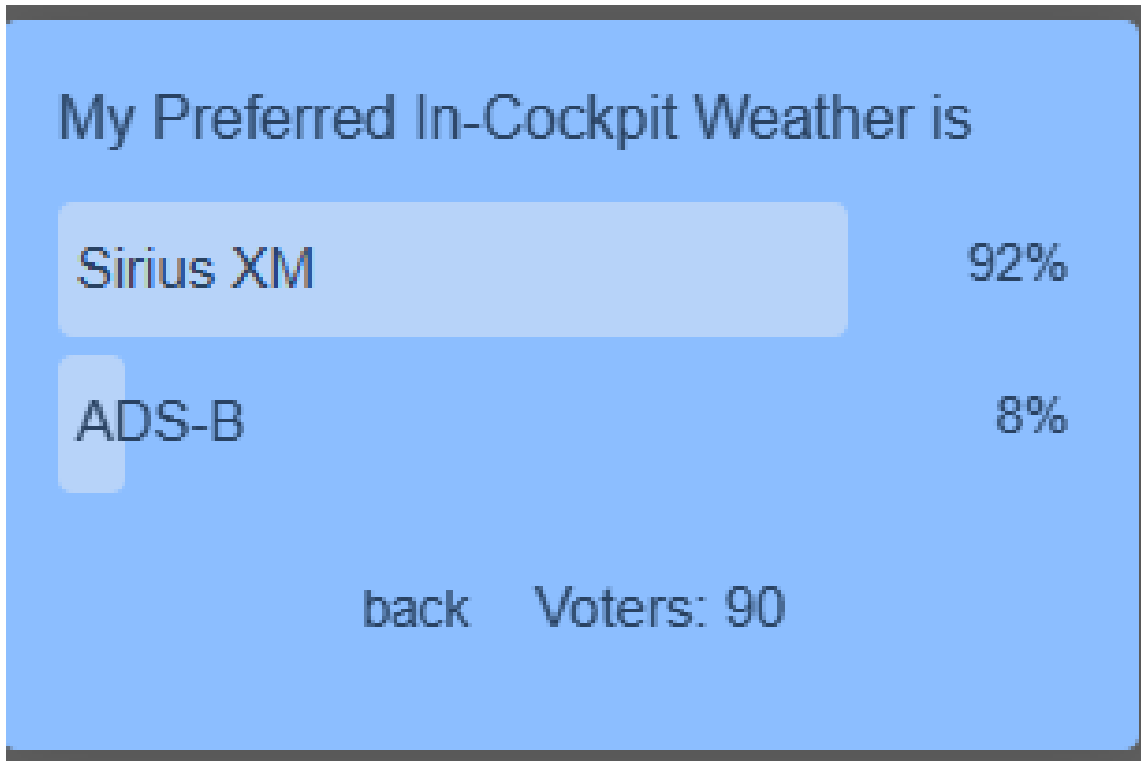
I first met these wonderful people when they ran the West Coast MAPA Flying Group. They would plan and host exciting fly-ins. I received two wonderful benefits from this activity. I had a reason to fly my Mooney to a place I might not have ventured to, and I would meet people who still to this day, are some of my best friends.

I learned that they founded and ran LASAR. I gave LASAR a try and never regretted it. I sponsored a Vintage Mooney Group (VMG) fly-in to South Lake Tahoe. There, Paul Loewen, Tom Rouch and Don Maxwell were sitting together at a table preparing to make a presentation and I realized, there sat the entire "Braintrust" for Mooney knowledge and experience.

But there's more. Paul may have the largest library of Mooney STCs in the world. He has been an innovative engineer and inventor; possibly the best. I personally benefitted from several of those STCs.

This is not an article about their company, but about them. They lived and breathed Mooney and Mooniacs. They created a group of people that were totally committed to the community. I remember the first time I did an owner-assisted annual and Paul wheeled up to my Mooney. He spent time looking and "feeling" my Mooney and then went to the primary mechanic and told him things to look at and check. He could "feel" Mooneys.

We will all miss them but will NEVER forget them. They were a family and made each and every one of us feel like family, too. I personally love these two people and will cherish their contributions to me, my Mooneys and the Mooniac community.



Next month's poll: "I have, or would like to have, the following:" [CLICK HERE](#) to vote

Mooney Instructors

CLICK HERE for the most comprehensive list of Mooney instructors in the United States

Need a Mooney CFI?

to find one

CLICK
HERE



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.



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

Be sure to include your home base and state.





Letters to the

EDITOR

TheMooneyFlyer@gmail.com

Gentlemen.... you need to expand your horizon. The world does not only exist between the Pacific Ocean and the Rocky Mountains.

We have Mooney's. Go East Youngman go east. What about Door County Wisconsin? Washington Island, Mackinac Island MI, Put-In-Bay, OH, any number of locations along the Great Smokey Mts or Appalachian Mts... time to spread those wings. There are Mooney drivers all over these great states... when will you write about places further east?

N201UZ

Editor Note: *We suggested that this reader submit an article on one of his AMAZING destinations.*

"I'm dealing with an unexpected surprise from Lycoming, and although it's not yet fully resolved, I think it may be important to other recent buyers of Lycoming Factory IO360 engines.

I've had my plane for 43 years, and the engine I just installed is my fourth in that time. The performance and fuel burn numbers for the first three engines were all identical, until I installed a Surefly "SIM" electronic ignition. The Surefly was installed about three years ago, and the improvement in fuel burn was significant.

After finishing the break-in process, at low altitude and high power settings, I made a 25+ hour trip from Nevada to Texas and return. I was surprised to observe fuel consumption well above previous experiences. Specifically, the lowest flow rate I could achieve, up to 14,500, was 9.7 GPH. Before the SIM I would expect 8.3 – 8.6 at altitudes above 11,500'. With the SIM, I would get 7.4 – 7.6 at the same altitudes, plus the ability to go significantly lean of peak, if I didn't mind giving up some power.

A BUNCH of research has found that Lycoming is now using injection Servos from "Avstar" rather than the long-familiar Precision. Queries to both Lycoming and Avstar got the reply "The Avstar unit exactly matches the specifications for the servo."

We had original Precision and Avstar servos flow-benched, and discovered that the Avstar is, simply put, a larger servo. It flows roughly 16% more air and 20% more fuel (before being leaned), than the more widely known Precision (aka Bendix).

In my plane, the Avstar refuses to be leaned below 9.7 GPH at full throttle but demonstrates a willingness to be leaned when below full throttle.

We will soon have a Precision servo installed, and I will test fly it to see if the previous economy can be achieved.

My reason for writing before the final verdict is in, is a concern that if a person has a fresh "Rebuilt" or "New" factory motor recently installed, and launches off on a long cross country, you may find that

previously experienced consumption may not be achieved, resulting in the need for an earlier than intended fuel stop.”

Alternatively: A simple poll asking, “have you had a Lycoming Factory IO360 CI engine installed recently? What fuel flows are you achieving? Do they match previous flows? What brand or color is the Fuel Injection Servo on your fresh engine?”

Don P

**PRESS
RELEASE**

**PRESS RELEASE,
The Mooney Flyer
By Shery Loewen, Lakeport CA**

Paul and I are excited to announce the sale of our business, Loewen’s Mooney Salvage, to [BAS Parts Sales](#) LLC of Greeley, Colorado. We are happy Paul’s beloved 50-year Mooney Parts collection is going to such a respected company. I recently asked BAS what they’d like to have me say in a Press Release; it was fun to just copy and paste!

BAS offers a unique buying experience in the aircraft salvage business with an online store carrying nearly 50,000 items – from fuselages and wings to nuts and bolts. [Baspartsales.com](#) is easily searchable and loaded with part numbers, images, specifications, and all the other info you need to find your parts and get them on the way fast. The online checkout is safe and secure too.

If you have questions or need help putting together an order (no matter how large or small), our team of parts experts is on standby to get you the right parts the first time in one phone call...and at incredible prices. You will experience exceptional service from the BAS team every time you call!

We offer a 90-day money back guarantee on most parts in our inventory; as well as free 2-day shipping on thousands of items. And we ship worldwide.

We are also quite proud of the love we get from customers in our Google reviews - <https://goo.gl/maps/G84zAWbPqby9oFtE7>

BAS was founded in 2012 and we have grown to a company of 25 professionals covering every aspect of the salvage business in a 48,000 sq ft hangar in Greeley, CO. While we sell a significant number of aviation parts every year, we also buy a significant number of piston engine and turbo prop aircraft. Our company lives and breathes our core values – Community, Integrity, Generosity, Growth, and Excellence – day in and day out.

BAS plans to move the Salvage to their location in Greeley, Colorado the week of March 27.

Please visit their web site at www.baspartsales.com or contact them at 970 313-4823



Things NOT to do while Taxiing



Most of the time we don't think much about taxiing our Mooneys. Mentally, we don't think flight begins until we are on the runway and about to rotate. However, that is simply not correct. We should be as focused on taxiing as we are in flight. What follows are some things you should probably keep in mind as you prepare to taxi.

Don't Taxi with a Rich Mixture

Once you have fired up your engine and the oil has warmed, the next thing you should do is lean your engine until it almost stalls. This will keep your sparkplugs from fouling due to a rich mixture at low RPM. It's simple to do and will prevent issues with the ignition down the road. An "Old Wives Tale" is that you could have a serious problem if you forget to enrich your mixture while departing. This is simply not true. If your mixture is leaned this much, as you add full power, your engine will stall. It will also stall as you perform your runup, so nothing serious will happen except a little damage to your ego.

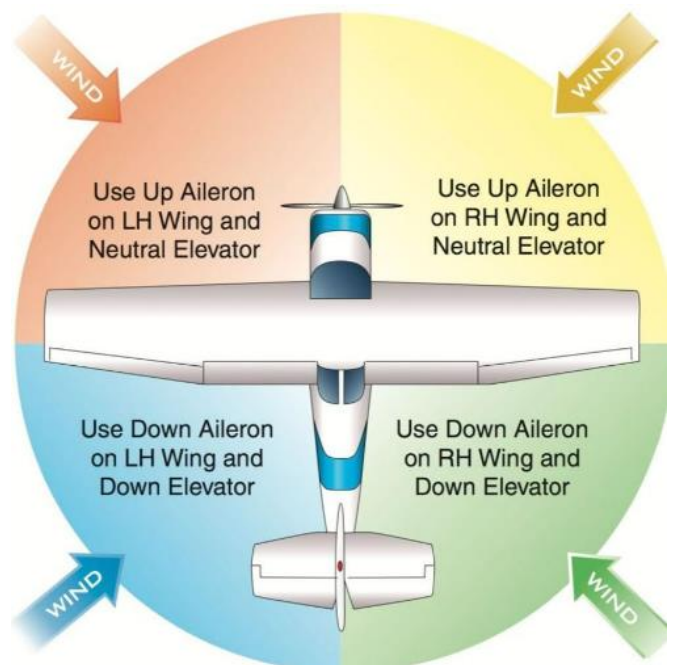
Don't Forget to "Dive Away from the Wind" with your Ailerons

In a wind while taxiing, always deflect your ailerons as if you are diving away from the wind and also with your elevator. The last thing you need is for a gust of wind to lift a wing or your tail. That is definitely not good.

Don't forget to clear all intersections

You already know that you should not enter a runway until cleared by the tower. However, you also need to ensure that you are not blocking any taxiways.

While you're at it, if you are at an airport that you are not familiar with, ensure that you have the taxi diagrams on your panel or portable device, so you don't have to guess where to taxi.





Don't Program your GPS Flight Plan or fiddle with your avionics while taxiing

Programming your electronics/avionics while taxiing is akin to "texting while driving". You should faithfully avoid this. It distracts you from the primary operation which is taxiing safely. If you need to program or set your devices, just pull your Mooney off the taxiway, stop, and get it done.

Ancillary to this, while flying VFR, your eyes should be primarily set outside of the cockpit. Don't forget that the same holds true for taxiing. Don't taxi with your head down or looking at your passengers or searching for something in your flight bag.

Don't Forget to readback all runway crossings and hold short Instructions

With all the runway incursions we are reading about, be extra vigilant about understanding and reading back all runway crossings and hold short instructions. YOU are the ground controller at uncontrolled fields, so be doubly vigilant.

Don't Taxi too Quickly

The FAA recommends that we taxi at a "brisk walk" pace. Most airplanes I see taxiing are a bit more than brisk. Nonetheless, slower is better especially at 1) Unfamiliar airports, 2) Busy ramps/taxiways and 3) At night when visibility is lower.



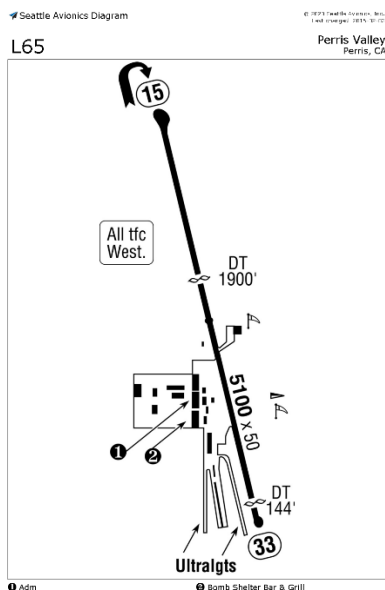
Killer Redwood Trees

On July 15, 2021, at 1154 Pacific daylight time, a Mooney M20J airplane was destroyed when it was involved in an accident near Dinsmore, California. All four occupants of the Mooney were killed:

- The pilot, Henry Punt, age 69, of Los Angeles County
- Passenger, Steve Sanz, age 63, of Orange County (pilot rated)
- Passenger Jacquie Ann Figg, age 56, of San Bernardino County
- Passenger Kenneth John Malinowski, age 62, of Sacramento County



Review of radar data revealed that the flight originated from Fullerton Municipal Airport (FUL), Fullerton, California at 0700. According to a family member, Henry Punt and Steve Sanz departed for Perris Valley Airport (L65), Perris, California



Ann Figg and Kenneth Malinowski boarded the aircraft at Perris Valley. They were interested in purchasing a land parcel in Humboldt County, California.

About 0730, the flight departed L65 northwest bound and climbed to a cruise altitude between 6,500 and 7,000 ft above ground level. This would be a four-hour flight to Dinsmore (D63) California.

A witness, located 0.25 miles east from the departure end of runway 09 at D63, observed the accident airplane circling the area around the airport twice before it landed on runway 27 (witness reported winds from the west). He then observed the airplane taxi down runway 09 before it had made a complete stop mid-runway and three individuals disembarked. When all three individuals boarded the airplane again, the pilot taxied towards the arrival end of runway 09. The airplane

accelerated down the runway 09; the pilot rotated just short of the displaced threshold and according to the witness, barely cleared the fence. The rotation was not smooth, and it appeared that the pilot suddenly pulled the nose up (“jerked it”).

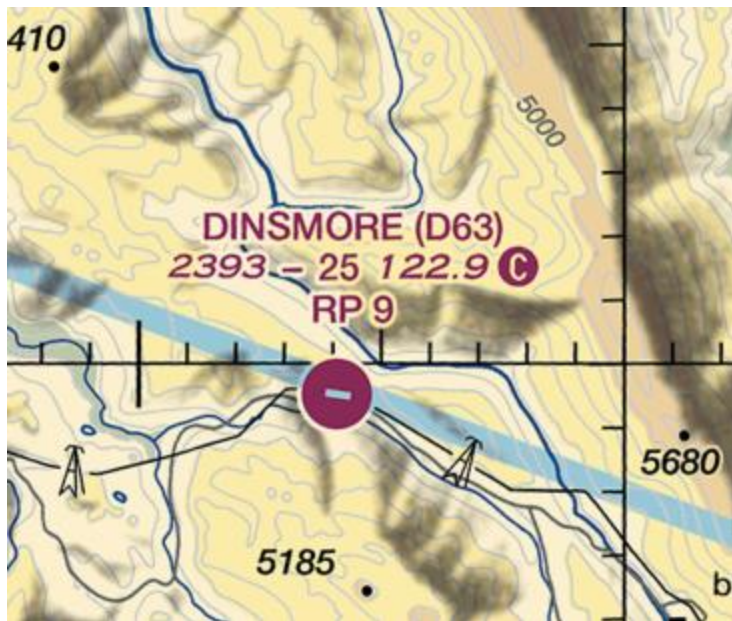
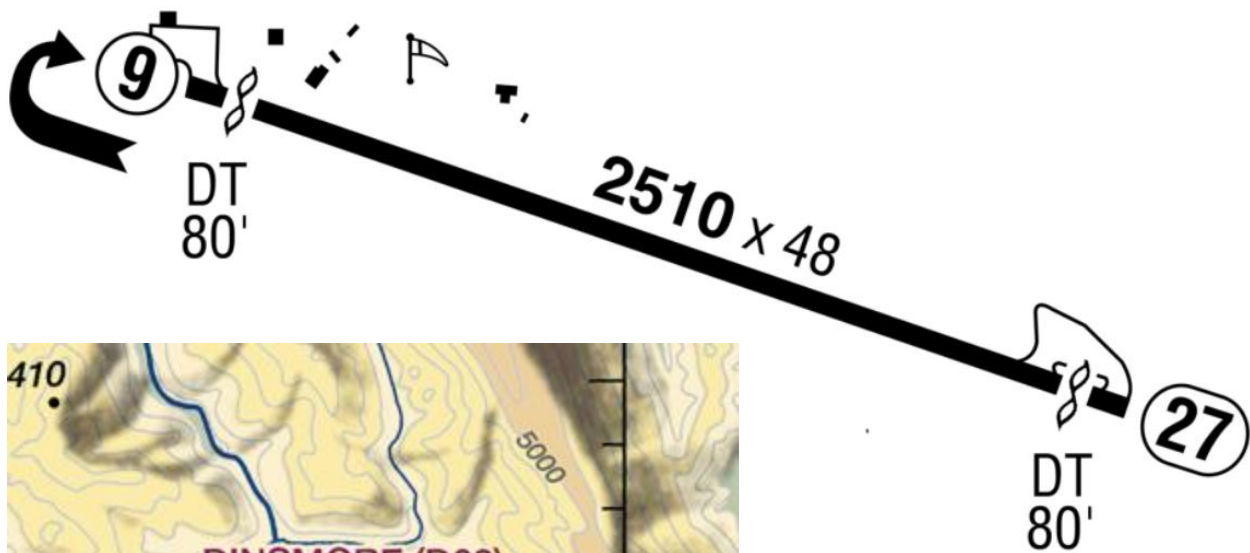
A video from a security camera located 300 ft east of the departure end of runway 09 revealed that the airplane took off towards the east. The wreckage was located about 1,600 ft beyond the departure end of runway 09 on a heading of 126°. Examination of the accident site revealed that the airplane's right wing impacted a tall redwood tree. Upon impact, the right wing separated and fell onto the ground underneath the tree. The airplane came to rest inverted about 120 ft from the first point of impact on a heading of 170°.



The NTSB report concluded:

“ON-SITE AND POST-RECOVERY EXAMINATIONS OF THE AIRCRAFT FOUND ALL PRIMARY FLIGHT CONTROL SURFACES WERE PRESENT AT THE TIME OF THE ACCIDENT. CONTINUITY OF THE CONTROLS RODS TO THE CONTROL SURFACES WAS ESTABLISHED.”

Dinsmore (D63) Data



From AirNav.com:

Runway 9 Obstructions: 150 ft trees, 525 ft. from runway, 2:1 slope to clear.

Runway 27 Obstructions: None noted. D63 has no airport services or fuel.

Could the pilot abort the takeoff?

Takeoff Rules to Help Keep You Safe

Calculate a Go/No-Go Point using the 50/70 Rule for all takeoffs without obstacles and the 30/70 Rule for Obstacles.

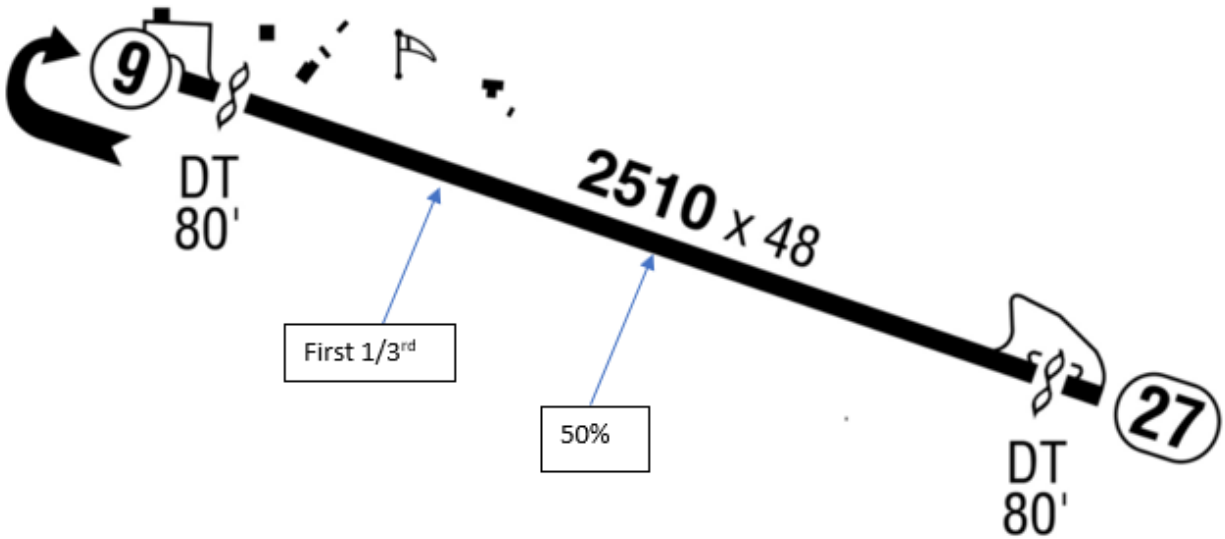
- (50/70 Rule) When planning takeoff from short unobstructed runways, establish a landmark at 50% of your calculated takeoff distance. When reaching that landmark, you should be at 70% of your rotation speed.



Dinsmore Airport and Trees, 525 ft. from runway

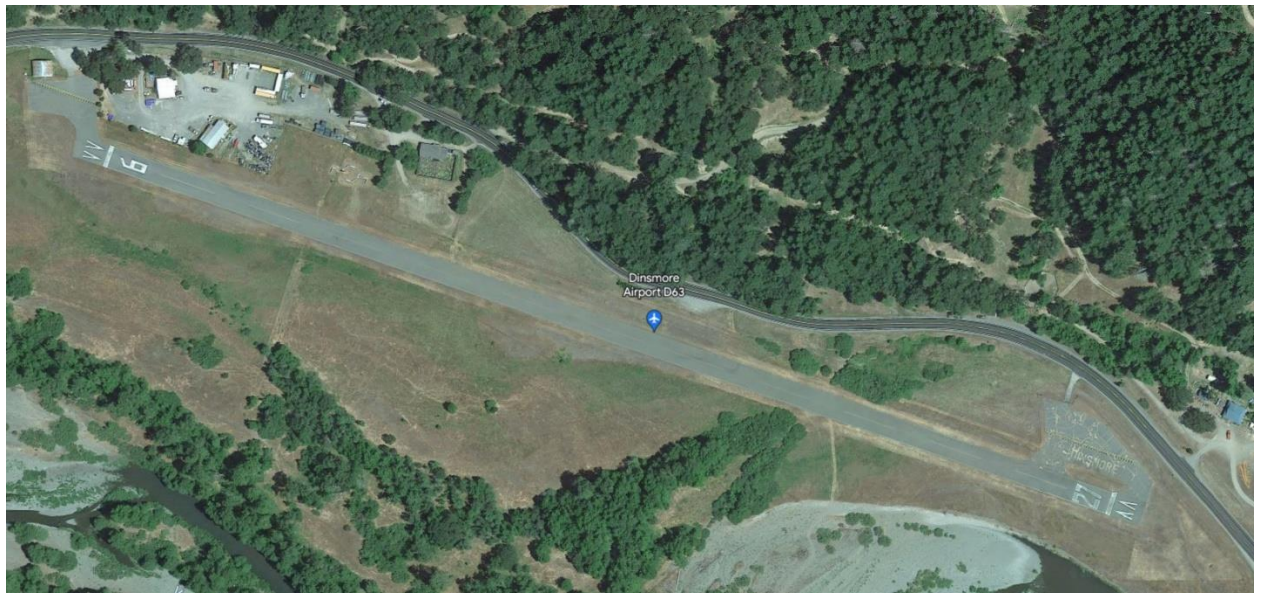
If not, abort the takeoff and reduce weight or wait for more favorable wind and temperature conditions.

- (30/70 Rule) If you must clear obstructions on takeoff, you'll need to have 70% of your rotation speed by the time you've traveled 30% of your available takeoff distance. If not, abort the takeoff and reduce weight or wait for more favorable wind and temperature conditions.



2510' runway: 50% = 1,255'. 33% = 828'

M20J rotation speed is 63 knots. 70% = 44 knots



Added Safety Measure

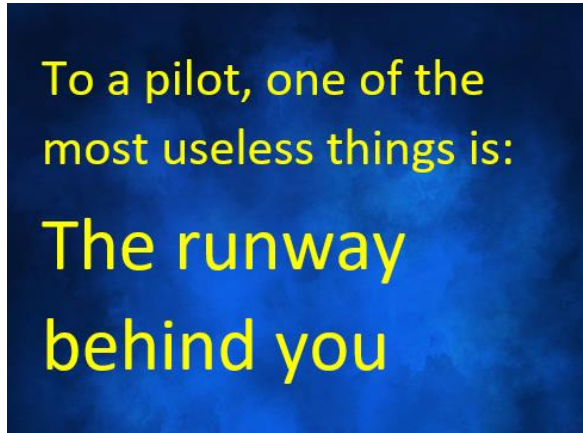
AOPA Air Safety Institute (ASI) and The Mooney Flyer, recommend that you add 50 percent to the charted takeoff and landing distances. Please remember that the manufacturer numbers were derived

when professional test pilots flew a factory-new airplane under carefully controlled conditions. Most general aviation pilots should not expect to match the test pilot numbers. Therefore, give yourself a healthy margin to compensate for the age of the aircraft and your less-than-perfect technique. Also, as an added buffer, experienced Pilots Recommend that you should always use the takeoff distance required to clear a 50-foot obstacle.

Consider a Static Takeoff

When faced with a takeoff on a short runway, do not do a normal, rolling takeoff. It is a good idea to perform a Static Takeoff. That is, taxi to the very end of the runway. Holding the brakes, apply full takeoff power. Release the brakes and off you go.

I have measured the distance lost during a rolling takeoff as opposed to a static takeoff. It is about 450 feet.



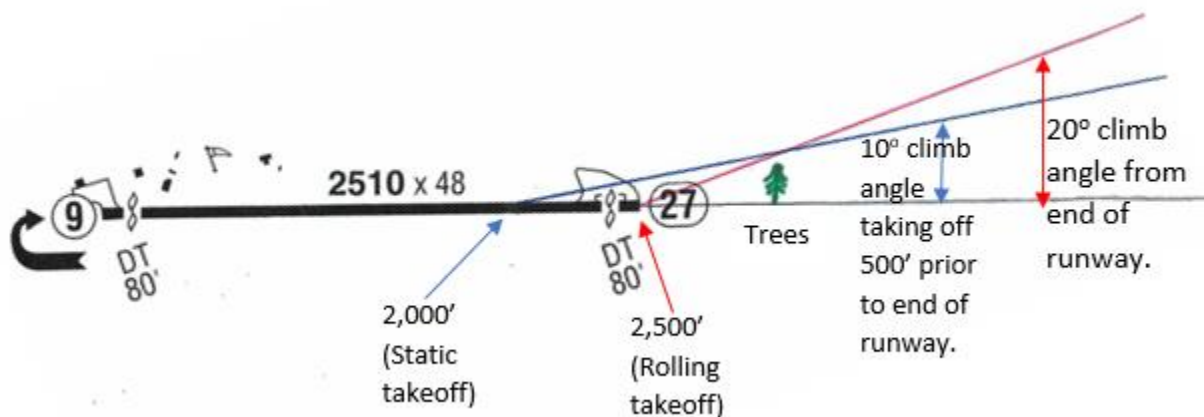
So, What Happened?

The NTSB no longer publishes a “Probable Cause,” so you are stuck with my conjecture. After flying over 4 hours, there would have been 20 to 25 gallons of 100LL in the aircraft. We do not know the weight of each person, but assuming each passenger weighed 190 pounds, below is a quick Weight and Ballance:

	Empty Weight	1850 lbs.
Fuel (64 max)	25	150 lbs.
People (4 max)	4 @ 190	760 lbs.
	Takeoff Weight	2760 lbs.

To clear a 50’ obstacle on a 20°C day (the temperature on the day of the accident), the takeoff distance required would be 2,000 feet. HOWEVER, these obstacles were 150 feet high and only 525’ from the end of the runway. We do not know if the pilot accomplished a static or rolling takeoff.

Difference in Climb Angle to Clear the Trees by 50’



Weight and Balance

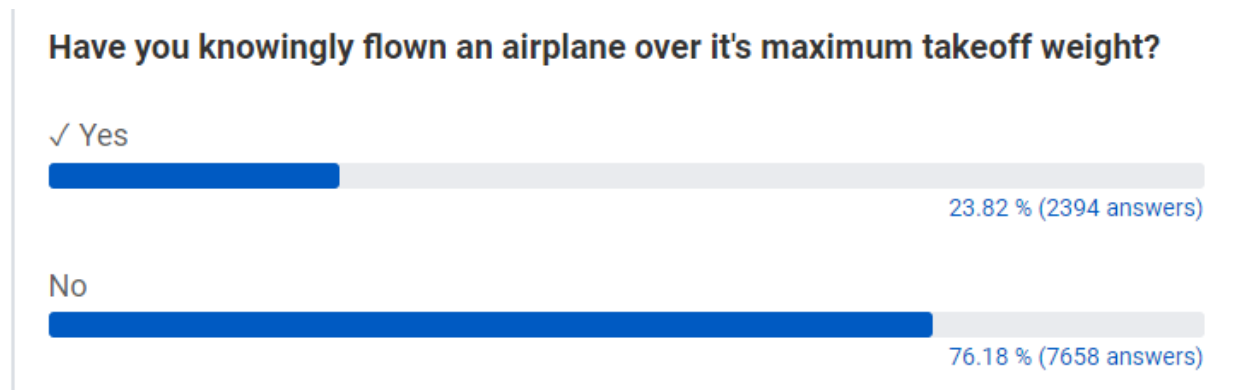
The manufacturer has established a maximum gross weight for your airplane. This weight constitutes a limitation, which **must not** be exceeded. This maximum weight was established during testing by the manufacturer.

A pilot who exceeds this takeoff weight has no knowledge or assurance that the flight characteristics of the airplane will be acceptable. Additionally, FAR 91.9 specifically prohibits a person from operating an aircraft without complying with the operating limitations specified.

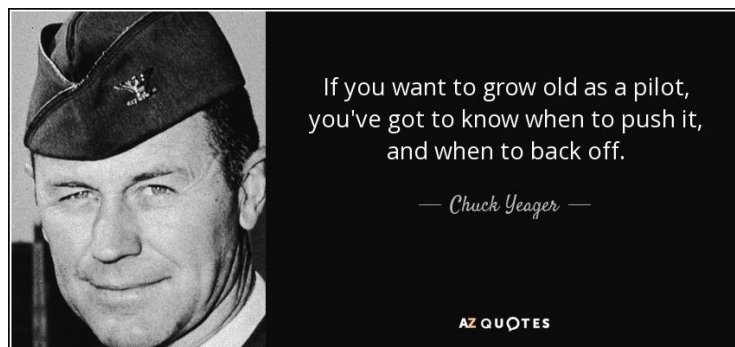
Information regarding the weight and balance for a particular airplane is located in the POH (Pilot’s Operating Handbook). The POH must be onboard the airplane where it can be used as a reference before a flight, and to determine whether the proposed loading of the airplane meets the limitations described in the weight and balance section of the POH.

It is sometimes necessary to operate your Mooney with less than a full fuel load to meet the weight limitations specified for the airplane.

Pilot Workshop recently conducted an online poll:



23.82% had knowingly flown an airplane over its maximum takeoff weight and were still alive to participate in the study. They were not able to ask the pilots who exceeded max takeoff weight and perished.



Professionalism and Trust

When your passengers fly with you, they know nothing about weight and balance, takeoff distance charts, obstacles at the end of the runway. They assume that you take flying seriously, constantly learning and improving. They might think that every year you attend a Proficiency Program. They assume you are professional, skilled, careful, and have done

everything in your power to ensure that the flight will be safe.

Martha's Vineyard & Nantucket



Phil Corman
Co-Editor

I wrote about Sunriver Oregon last month. I got an email that asked why we never write about destinations east of the Rockies, so here goes.

Martha's Vineyard and Nantucket have been favorite destinations since I received my Pilot Certificate. My first flight to Martha's Vineyard was actually for my long cross-country flight requirement for my PPSEL. As a student pilot, it was a little eventful for me. At that point in my flying, I was still reticent to fly over water. So, as I was leaving the comfort of mainland Cape Cod, I flew over the Atlantic Ocean. About one minute over the water, my engine started running rough and quickly became worse. I called the tower at Martha's Vineyard and explained my concern. Then I added Carb Heart, and of course, it got worse before getting better. I thought about circling back to Hyannis but braved it to the Vineyard. All was good.

Shortly after getting my PPSEL, I took my dad on a flight to the Vineyard and Nantucket. The engine ran fine. But over Cape Cod Bay, my dad saw an old barge that looked like one that the National Guard used for target practice. My Dad thought he was on the intercom and said, "Boston, N3958L has spotted an enemy destroyer. Permission to attack." However, my dad had actually hit the PTT and transmitted that message. I thought I was going to hear, "N3958L, please call the tower supervisor." I thought this was funny until Boston came back with, "Permission granted. Please let us know when you are back on frequency." We did our best wingover and dove for the destroyer. When I regained altitude, my dad called again with, "Boston, N3958L reporting back on frequency. Destroyer disabled." Fun times flying with my dad.

Martha's Vineyard

Katama Airfield ([1B2](#))

Many people go to Martha's Vineyard ([KMOVY](#))

because it's towered and has rental cars. But we prefer because:

It is in the dunes with great sod runways. You can taxi to the little terminal, or you can head for the



ocean. There, you can

tiedown next to a sandy beach and enjoy the Atlantic Ocean for the day.

Or, you can taxi to the terminal building and grab some food at the Katama Kitchen, where you can eat out on the deck and take in the clean clear ocean air.



Pilot Information Katama Airfield ([1B2](#))

1 B2.20°.2S.41°21.5'N

70°31.5'W

Day VFR only airport.

508.627.0421 fuel 100LL No

ngt. oprtns.

Unattended 10/15 – 5/15

GLDR activity Att Days

CFTA

U-122.8

TPA
MSL 1000

FEES

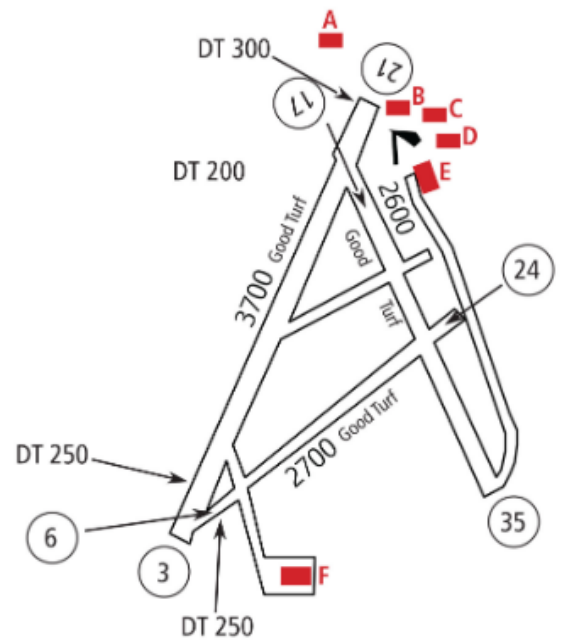
- All Day: \$10
- Overnight: \$10
- Beach Parking: \$20
- Fuel: \$5.75
- Seasonal Day Pass: \$100
- Seasonal All Access (Airplane and Car): \$800

FSS: Bridgeport 122.2

Phone: (800) 992-7433

Area Hotels & Restaurants

No night Operations



Want to stay overnight, it's only a short 2 ½ miles to Edgartown, which is the main city/town attraction on the island. You can walk or grab an Uber and voila, you are downtown.



[CLICK HERE](#) for some of the best things to do in Edgartown.

Nantucket

The main airport is Nantucket Memorial ([KACK](#)). It's a short ride into Nantucket town with its charming cobblestone streets.

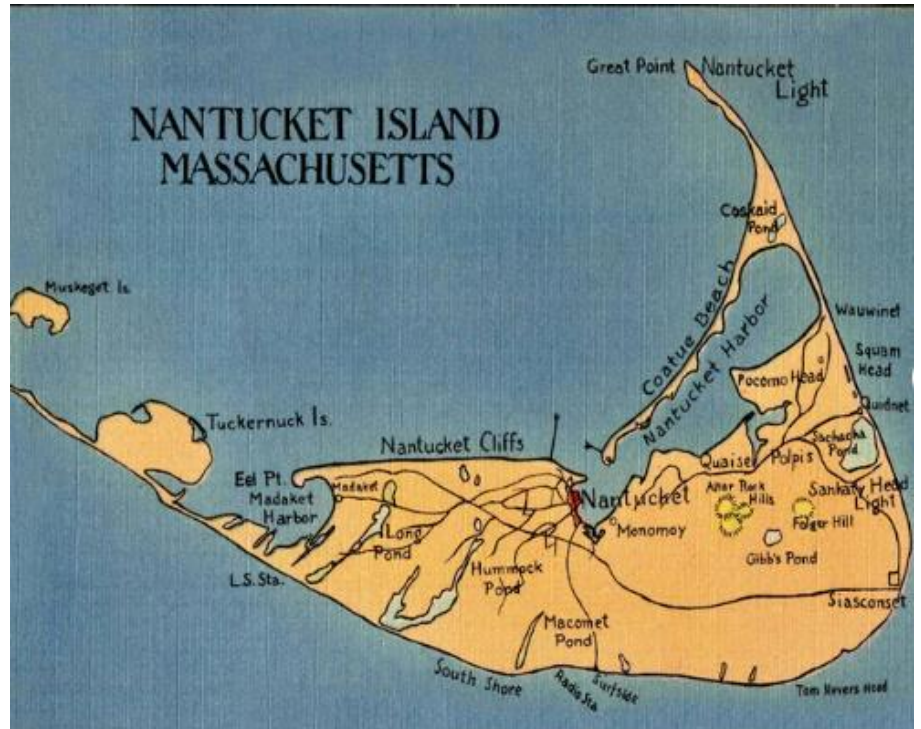


We recommend staying at one of the many old Captain Whaling houses that dot the town.

There's lots of good food, good bars, and good shopping in town.

Grab a bike and head to a remote beach if that's your thing. It is pretty quiet on the island and quite rejuvenating. Spend a day or spend a week.

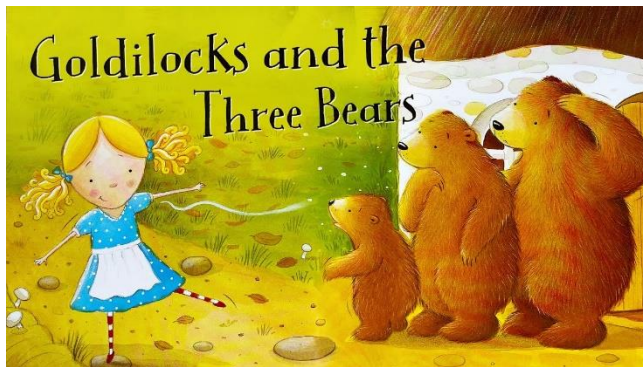
[CLICK HERE](#) for things to do in Nantucket



Where are you Goldilocks?

Part II

By Jerry Proctor



In fairy tales, things always seem to work out just peachy, or should I say, just like perfect porridge? I did a little research on Goldilocks and the Three Bears and I was amazed at the amount of history in this seemingly simple story. The central theme seems to be, the third try of three things is just right. However, that is a fairy tale, and the real world is different.

So, once upon a time, (five months ago), my wife and I were returning from a trip to South Dakota as chronicled in Part One. The weather had been spectacular in the Black Hills, and I likened it to an Indian Summer. However, Old Man Winter would have nothing of it, and he was barreling down on the Dakotas. We decided to leave a day early to avoid snow and ice on Ms. Mooney's wings.

I did a thorough weather check and yes, we would be fine with visibility, but upper winds were something to behold. We took off from Spearfish, SD and flew mostly in a southerly heading. My plane was pointed noticeably not just south, but a lot of west put in there as well. At 10,000', there was a direct crosswind of about 45 knots. Well, here we go with the three choices. You can have a headwind, tailwind, or a crosswind. A crosswind, (listed third for literary purposes), was NOT the *just right* option, but it was better than a headwind and much less mo betta than a tailwind. So, we soldiered on.

Along came Denver and things started to get bumpy. It might have had something to do with those great big rocks to my west, appropriately called the Rockies. With a few more clouds, we made it into Pueblo, CO to a very nice FBO. They offered free hotdogs, and it is funny how a free hotdog tastes better than a purchased one. Sorry, I digressed.

We took off from KPUB and once again started out south with a strrrrong crosswind. Here again this tale has three choices.

- **First just right:** Stay at the FBO and eat them out of hotdogs?
- **Second choice:** Cut through the gap just south of Pueblo and get on the other side of the mountains.
- **Third choice:** Go along the Front Range and circle around Las Vegas, NM, which is slightly different from that other Las Vegas.

Thinking I wouldn't feel very good after the FBO's Nathan Hotdog eating contest, **option one** was out. However, to be honest, I probably would have picked it! **The third option** was not appealing, as I really didn't want to bounce my teeth out going around Las Vegas, NM.



So, I picked **option two**, proving once again this ain't no fairy tale.

I have an Acclaim S, and I was heading due West right into the wind through the gap at 12,000'. At that altitude, true airspeed is normally around 190-195 knots TAS. However, at one point, I saw my ground speed hit 118 knots. OMG! If I was in a Cessna 172, I would have had to put on rear-view mirrors! Once again,

we soldiered on because visibility was fine, and a southern turn was coming up.

We flew on to Santa Fe and Albuquerque. As we neared Santa Fe, the clouds started to build, and I requested a few changes in altitude and direction. As we neared Albuquerque, I had a decision to make. Guess how many choices I had.

Here is the situation, with XM Weather

I knew my home airport (Sierra Vista, AZ) was fine. The tops of the clouds were 12,000' – 13,000', but very windy, as in 65 knots. There was a base of scattered to broken clouds at about 3000' AGL and it was consistent all the way home. Then, there was another scattered layer around 7,000' – 10,000' with good visibility.

What did I do?



Yes, for the third or fourth time, I saw three choices: Go high, go middle or go low. The winds at altitude were way too strong and if you remember from part I, a minor issue was that my wife did not want to wear a cannula. Ok, that is out.

Down low was very turbulent because we would be close to the surface. So, I picked the third option, and unlike the fairy tale, it wasn't just right, but it worked. I canceled IFR as I was going to do zig and zag; a little up here or down there. For the most part, I kept flight following. I always knew where I was because I have flown in this area

many times. I have also driven this area as many as 40 times. However, unlike the fairy tale, this wasn't a "just right". Was my choice the best? No. Was going on top the best? No way! Was down low best? Nope.



So, the moral of this tale is, sometimes in life there isn't a best choice. One choice was a little better than the others, and that is what I picked. It wasn't pretty but we were able to fly home safely.

Fly Safe,
Jerry Proctor

Shifting Departures and Cancelled Flights

by Richard Brown

Even with an Instrument Rating, sometimes flights must be rescheduled and sometimes cancelled altogether. Of my past two trips, one flight had to be made a day early, and the other flight became 30 hours of driving. Why? Well, keep reading and I'll fill you in on my planning process and the thoughts bouncing around inside my brain.



The second weekend in March, my nephew was getting married in Arizona. My sweet spot for trips is right around the three-hour mark. I can do four hours and still land with my personal minimum of one hour of reserve fuel. I will do four hours if that gets me to my destination, but I really like three hours.

SoCal to Arizona is a trip tailor-made for the Mooney. It is 320 miles and in my plane, it takes 2-2 ½ hours, depending on the winds. That comes in under the "sweet spot" which makes it really feel like you haven't been flying for very long. Take off, climb to cruise, look around at the beautiful sights, and then it's time to descend and land. Oh, and it beats the heck out of a 5 ½ to 6-hour drive.

The <https://www.aviationweather.gov/gfa> site has some great tools, and I use it the day before and day of my flights to see the conditions and determine things like whether I need to plan an alternate on an IFR flight plan. For my briefings before flights, I go to <https://www.1800wxbrief.com/>. However, for strategic planning a week or two before a trip, neither of those are helpful, so I turn to a couple of other sites.

Two weeks out I will start looking at <https://weather.com/> to watch for trends. Yes, I know that a forecast two weeks away is about as reliable as a career politician, but play along for a paragraph or two. Let's say I look at the forecast and it is calling for a storm the day I want to fly. I'm not really concerned because it is two weeks away and the odds that it will change are high. So, I will look the next few days and see if/how it has changed. I find it helpful to look at it on my cell phone because it is easy to take a screen shot each day and I can scroll through the pictures and see the changes.

If the forecast storm starts moving sooner or later, that's a great sign. However, if it doesn't shift days and stays the same (or heaven forbid gets stronger) then I know I need to start looking at other options.

Ten days out, I will start looking at the forecasts on <https://www.windy.com>. I think the free version of Windy only gets you five or seven days out, but the premium subscription gets you both hourly forecasts and the ten-day forecast. At \$18.99/year it is a drop in the proverbial bucket and I find the extended forecasting is worth the price of a few gallons of avgas. For long term/strategic planning, I have found Windy is extremely helpful. It isn't going to tell me down to the hour when I should leave, but it does help me know if I need to shift a departure or arrival from morning to afternoon, or a day earlier or later.

I look at the winds, the air temp at my cruising altitude, the visibility, cloud bases, low cloud and medium cloud forecast, and scroll back and forth to see how the pressure systems are moving. Once I am a week out, if there is something giving me some concern, just like with weather.com, I will start taking screen shots to compare the changes day to day.

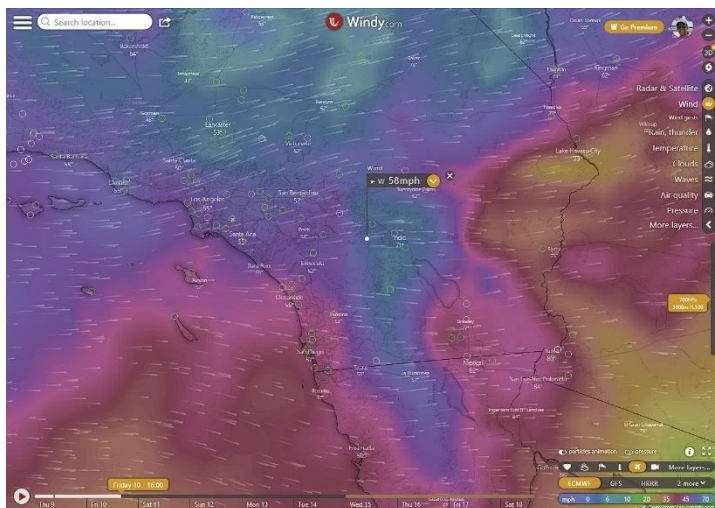
Originally we were going to fly to Arizona Friday after work. We would take off about an hour before sunset and have the lights of Phoenix on the horizon before it was completely dark. I would also make the flight on an IFR flight plan, regardless of the weather, to have an extra set of eyes on me as we would be flying a long trip over some desolate land.

As the trip approached and I continued to watch the forecasts, it became clearer and clearer that I needed to change my plans. What did I see developing? Until getting east of Palm Springs, including the San Jacinto Mountain Range, it would be IMC, with low visibility below the clouds, mountain obscuration, and 50+ mph winds at 10,000' blowing perpendicular across peaks that range from 7,200' right on the airway we would be assigned, up to San Jacinto at 10,834', just to the north of the airway.

The IMC and mountain obscuration didn't concern me. I know a lot of pilots that won't fly over the mountains if it is IMC, but around here you can't fly very far before you are over the mountains and that is a calculated risk I take. The temps at 11,000' would be above freezing, there was likely to be no convective activity, and I flew that exact same airway in similar conditions a few months prior. The difference between that flight and this one was the forecast winds. On the previous trip, the winds were very light, but this time they were going to be ripping along.

If it was VMC and I could fly through the pass it would be a different story. I have flown through the pass when the winds were blowing hard from the West, and while there was light turbulence, it wasn't bad because it was flowing between 11,503' San Geronio to the north and the aforementioned 10,834' San Jacinto to the south over low fairly level ground. The peaks are 21 miles apart, and at 9,500', where I would be on an eastbound VFR flight, it ranges between 10-15 miles across. Picture a river that narrows as it flows between a couple large rocks. If the distance between the rocks is big enough, then although the water speeds up as it funnels through, if you stay right in the middle, it does not become very turbulent. However, if the water is going over the rocks, it becomes a much different story.

That takes me back to the previous problem. The routing they were guaranteed to give me would be V-64. Flying in IMC with high winds across the mountain tops, likely resulting in turbulent air is a recipe for disaster in a small plane.



By Tuesday I was beginning to think that a Friday flight wouldn't work. By Wednesday afternoon I was sure it wouldn't work. I emailed my boss and asked if he was okay with me flying out Thursday evening and working from AZ on Friday. The other option was to drive out early Saturday morning. His response back was, "Fly out when you feel it is safe."

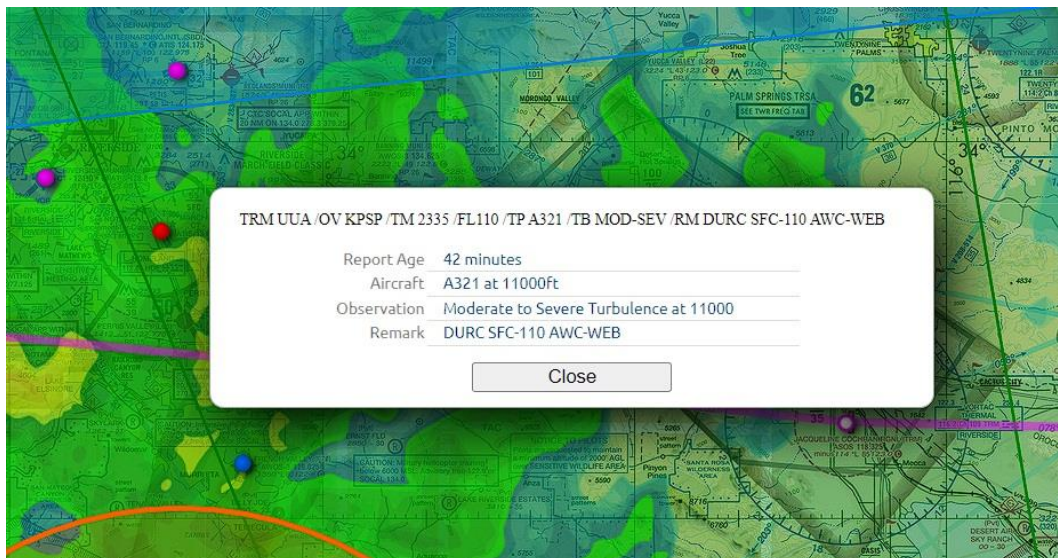
So, that is exactly what we did. I filed IFR, we were routed along V-64 as expected, the winds were light, and it was a wonderful flight. As we flew past the Salton Sea at 11,000', the air was almost like glass. The clouds, lit up by the

setting sun, reflected off the water below, creating a beautiful scene.



Just over two hours later, I was cleared for a visual approach, and we touched down smoothly on 30L at KIWA. The next afternoon, as I was sitting at the kitchen table in my sister's house working, I decided to pull up the current conditions and look for any PIREPs. I knew I had made the right decision by leaving a day earlier, but it's always nice to see it reflected in the current weather.

Over the San Jacinto Mountain Range along V-64, it was overcast at 2,200' with tops at 12,000'. We would have been right in the clouds at 11,000'. Visibility along the route until getting east of Palm Springs was MVFR to IFR. But the real kicker was seeing the PIREP from an Airbus A321 that departed Palm Springs. They reported moderate to severe turbulence through the duration of the climb from the surface to 11,000'.



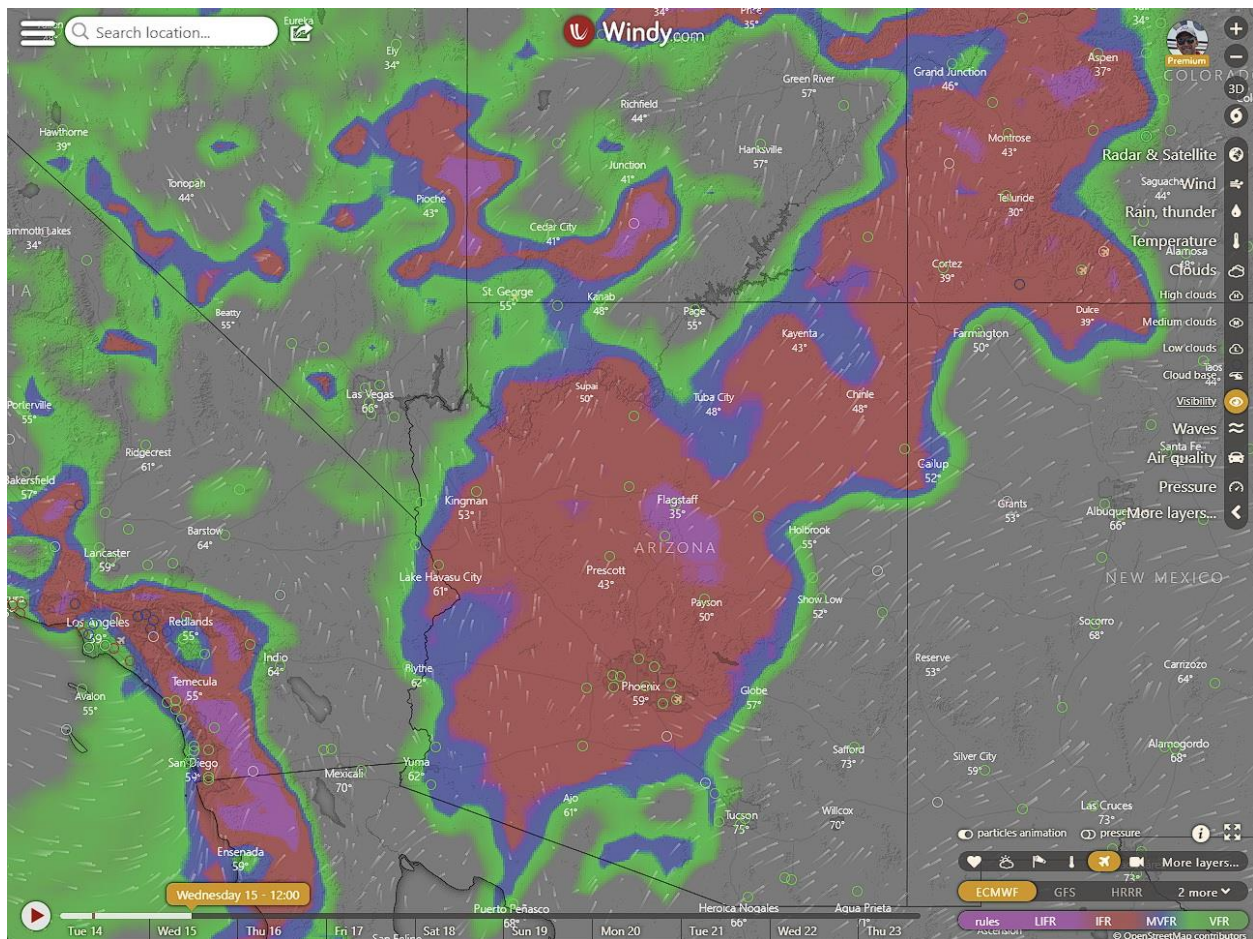
I'm not sure about everyone else, but when I see turbulence reported by a Cessna 172 or a Cherokee, I tend to take it with a grain of salt. Not everyone reports turbulence in the same way. But if an airliner that could weigh over 150,000 pounds, flown by professional pilots, is reporting moderate to severe turbulence I sit up and take notice. There is no way I want my 2,500-pound Mooney flying in that same air.

The flight home on Sunday was excellent with some cloud surfing and a little time in and out of the clouds on approach, but that is for a different story.

The week after the Arizona trip, we were supposed to fly to our place in Pagosa Springs, CO (KPSO) for the last ski trip of the season. On the two previous ski trips we took this winter, when I started looking at the weather a couple weeks out, there was snow forecast. But the reality is just about any time you look two weeks out during the winter, there is a chance of snow forecast in Pagosa Springs. As we neared those trips and the forecast solidified, it was good weather, and we made the flights. This would not be like those trips.

Here was the master plan. My boys would both be on Spring Break from college. My oldest son would fly commercial from Idaho Falls to Durango. I would fly to St George, UT to pick up my younger son and then we would fly to Pagosa Springs, getting there in enough time to get the car and pick up my older son in Durango. It was a perfect plan until Mother Nature threw us a curveball.

The forecast for much of the distance from St George to Pagosa along the route of flight was cloud bases from the surface to 5,000' feet and visibility below 3 miles. Just for fun, add in temperatures aloft between -1°C and -4°C and it was an obvious no-go for flying.



I left Tuesday afternoon to drive to St George and got to my hotel a little after 10:00 pm. We needed to be in Durango by noon to pick up my son, so the alarm went off at 4:30 am the next day. I picked up my younger son at 5:00 am and we were on our way. The storm system we drove through covered a huge

swath of real estate. With the exception of a small break in Page, AZ, we were driving in rain from the time we left St George, UT until the rain turned into snow just west of Durango, CO.

The ceilings along the way alternated between about 500' and 1,500' but we never had more than 5 miles visibility, and most of the time it was only 1-2 miles. I would pick a point up ahead as far as I could see and check the mileage on the odometer. Near Kayenta, AZ we saw a Cessna skimming the bottom of the clouds at about 700' AGL trying to pick his way along the road. He passed us heading west, and then must have thought better, because a little later, he passed us heading east and landed in Kayenta. I was shaking my head and grateful I wasn't the one trying to fly in that crud.

There was an upside to the weather system. On Thursday and Friday, we were skiing knee-deep powder most of the day. And on Saturday, it was blue skies and there was still powder to be found.



A 30 hour round trip drive is not as enjoyable as an 8-10 hour round trip flight in the Mooney. However, with the weather we were given, it was the right choice. It gave my son and I plenty of time to talk and catch up on life and college, and there was no stress of flying in bad weather, wishing I was on the ground.

There are two morals to this story. **First**, know your limitations and stay within them. You can increase your limitations through training but never push past them just to make a flight. **Second**, know the limitations of your plane. Those are set in stone, and you should never push past those. When I told a friend I was driving to Colorado instead of flying, he asked why. I explained the forecast conditions and said, "Those are the things that make small planes fall out of the sky." No matter how good a pilot you are, the laws of physics still apply.



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@intothsky.com. If you're ever in Southern California and want to meet up let me know.

Risk Assessment & Mitigation

By Parvez Dara, MD, ATP, MCFI, Gold Seal
Mooney Safety Foundation Director/President



There is a nebulous but real event that awaits any adventurer that seeks new vistas. What event, one might ask? So, surely as a novice skier goes down inadvertently or otherwise onto a black double diamond trail, only to be met with sweat and tears. Or, for that matter, a boater with a malfunctioning depth finder who happens to find a shoal. Risk is the known; known and unknown, one might say. It exists. It is out there. It is real. Even an instructor skier who happened to be teaching me the art of mogul skiing on a 45-degree mogul ridden slope, led the path for me to follow. After two turns, his ski caught an edge, and he tumbled the rest of the way down. Minutes later, when I tentatively reached him, he got up and said, "Sh*t happens!" No one is immune!

To a good pilot, who is always trying to balance his odds between what is and what can be, there is a path to circumvention. To one who remains ignorant, either willfully, (and believe me there are plenty of us out there), or through lack of knowledge and or experience, risk is a hazard ready to devour. The mind, a human repository of future fortunes and adventures, is at times poisoned by mediocracy. This limiting, ill-fitted shirt constraint of this poison can write volumes of disastrous outcomes.

On turning the page of this book of flight, the first glorious chapters reveal the awe and majesty of flight. These chapters are like magnets that pull us into flight training and eventually into the left seat of a cockpit. But there are other chapters and a glossary at the end of this book which detail the many hazards to avoid. Some never venture into those chapters, eager only to take flight and enjoy the freedom!

On a somewhat murky atmospheric inversion evening, a friend asked me to give him a ride back from an airport, where he had to leave his aircraft for service. He was VFR only with just under 300 hours of flight. During our ground pre-flights, we could see the sky and the trees in the distance. The Weather brief called for VFR conditions. We took off in separate aircraft and he took off first. I was flying in my Mooney Bravo, and he was in a Cessna172, so I gave him plenty of time latitude. On reaching 3,000 feet, I could see I was in the haze layer, so I called ATC for a climb to 4,500 feet. MY friend was monitoring my communication on the second frequency. He too called for a climb to 4,500 feet. We were five miles outside the Class Bravo outer ring. At 4,500 feet, the ground contact was excellent but forward visibility was less than spectacular. The visible buildings in the distant at 3,000 feet were now hazy and indistinct. Knowing my friend's limitation, I called ATC for a turn back and asked that they notify the accompanying aircraft on the same frequency to return to base. I landed several minutes later, uneventfully. Ten minutes passed, then 15 minutes and then 20 minutes. There was no sign of my friend. I called on my handheld on the local CTAF without result. A full 30 minutes later I heard his raspy voice on the CTAF declaring he was on downwind to land. After landing, I met a very shaken and somewhat distraught friend. He said he became spatially disoriented and even though he was talking to ATC for several minutes, he was unable to regain control of where he was. He said ATC was very helpful, but stern when he could not hold his heading or altitude, (because of a malfunctioning autopilot), and the gimbaling

error of the unstable and time-weathered rotor in the gyro. An older model six-pack Cessna 172 was to blame.

Weather is one of the biggest risks for a VFR-only and a non-proficient IFR rated pilot. It can spatially disorient a pilot, enough to lose control of the aircraft. It takes only 178 seconds for the aircraft to go into an unrecoverable graveyard spiral. The loss of control can happen to the best of us. Hence the need for a constant vigil against the slap from this bedeviled risk. It therefore behooves all VFR pilots to seek IFR Training and Proficiency currency to stay safe. Periodically, IFR rated pilots should fly with a CFI in real Instrument conditions to get their sea-legs in the moisture laden clouds.

On a flight out of Muskegon, MI on a MAPASF Pilot Proficiency Program, the weather was 700 overcast and light winds. I was right seat with a pilot seeking an IPC. As I watched him preflight, I was impressed by his thoroughness in the process. 15 minutes later, we both got in the cockpit of his Mooney M20R and received our clearance. I could see the slight nervous fidgeting of his fingers as he flipped the pages of the IFR charts, neatly stacked on his leg-mount. I asked if he was okay. He nodded in the affirmative. We took off and I could see him focusing on the clouds that seem to get closer and closer. He seemed to forget about raising the approach flaps and the gear. I gently pointed to both levers. He complied with a nervous smile. We were asked to turn 30 degrees right to intercept the radial for a victor airway. Once we got into the clouds, that turn became a 45-degree bank angle. Now, with my adrenaline coursing the arteries, galloping my heart, I gently pushed against the yoke and pointed to the Attitude, Airspeed and Altimeter Indicators. He corrected and then said in exasperation, "Why don't you take over." I leveled the aircraft at 5,000 feet, still in the clouds and gave the controls back to him. Slowly and surely his confidence came back, and we were able to finish the almost three hour "Instrument Proficiency" flight, followed by another one-hour back in the clouds. After we were on the ground, during debrief, I asked if that was the first time he was in the clouds. He answered, "Yes, it was."

I queried, "But in your logs, you have over 250 hours in Instrument meteorological conditions?"

He replied, "All 250 hours were under the hood in VFR conditions."

Real world exacts a different proficiency than practicing hundreds of hours in VFR conditions.

A more sinister and oft utilized maneuver by a pilot who boasts the "macho" attitude, is low-level flight. After seeing the movie, "Top Gun Maverick", many want to enact a similar low-level flight over uncongested terrain. Some, in fact about 20%, never realize the thrill, but only the agony of such a deed.

Low level flights have an inherent danger, The low altitude does not give a pilot enough time to recover from a system malfunction or a brain freeze. What can go wrong, will go wrong. A low and slow flight with an engine malfunction gives the pilot very little time for recovery. It takes a few seconds to go from 90 knots to stall, when thrust gives up the ghost and drag reigns supremacy over aerodynamics. Even a fast flight, low over terrain, is a "sneeze" away from a disaster. Maneuvering flights as "Show-off" for those in our aircraft or for people on the ground, can be formidably distracting. With eyes away from the dials or glass screen, even a momentary lapse can lead to a bad outcome. The low and slow flights can have consequences even when one is monitoring the dials. A gusty wind and a windshear can take the lift away, leading to what I call the



“pothole” effect. The sudden loss of lift and the blaring stall warning commands attention. A complacent or a non-proficient unsuspecting pilot, will fall to the vagaries of the turbulence monster and become an NTSB statistic.

Speaking of maneuvers, although 18% of accidents occur in the base to final maneuver, more than 25% occur during go-arounds and in take-off conditions. We must be alert to such potentials and constantly on the lookout for such adversities. The sudden plunge of the throttle to the wall, the P-force, the G-force, slipstream and the high attitude and slow speed can be and should be a warning to us all. It takes seconds to unravel ability. For the best outcome, simultaneously monitor the inside (dials) and outside (for hazards).

“There are old pilots and bold pilots, but there are no old and bold pilots...” This is an adage which has its roots in aviation risks and mitigation.

What exactly is Risk? It is a known or unknown hazard that exists. The known hazard, such as weather, low and slow flight that I have pointed out, are well known. Other known hazards are the tall towers encountered on a scud run, a flight into icing conditions, or an inadvertent excursion into a thunderstorm. All such incursions should be easily avoided by delaying or canceling the flight. Another major risk is the lack of preflight prior to launch. (More on this in an upcoming article soon). Distraction in the cockpit can have adverse consequences as well. Limit those by briefing yourself and the passengers prior to flight, especially during the critical phases of take-off and landing.

It is wise to remember that the FAA Rules and Regulations are based on past spilled blood and bent metal. Accident investigations lead to additional rules for Accident Prevention and hence mitigation strategies. It is wise to learn from the errors of others so as not to commit them ourselves.

Flying is the microcosm of the enduring thrill of the knowledge that however much we uncover nature’s secrets, the surprise and wonder and risk will never cease. Only safe flying, with known mitigation strategies, is one such adventure that unlocks and unfolds more of nature’s secrets consistently.

A very wise friend and colleague, Theodore Corsones, (Past President of MAPA Safety Foundation), used the term “Safety is no Accident” for more than two decades. Since then, we have consistently used this as our “constant reminder” at MAPA Safety Foundation Pilot Proficiency Programs. Upon cursory research, it appears that another gentleman used the same phrase in 2016 for workplace accident prevention:

“Let me begin by saying that the title is trite, and sounds like a slogan, I have to say I thought of rephrasing it but ultimately decided that however much it made me seem like I was trying to be clever or cute, that was not my intent. It pains me to know that in countless workplaces there are probably signs with this slogan.” - Phil La Duke

<https://philladuke.wordpress.com/2016/06/17/safety-is-no-accident/>



First Six Months

by Terry Carraway

I previously wrote about becoming a Mooniac and I thought I would provide an update.

Today, as I write this, it has been exactly six months since I first saw my Mooney in person.

During that six month period, I have managed to fly my plane 58 hours. This was despite work travel, a cruise, and some time in maintenance. I survived the first annual without any major surprises. Most of the maintenance was due to upgrades. In my first article, I alluded to liking fast vehicles, at least fast for their class, but I also believe that any vehicle can be improved for me and my tastes. So, I started before I even touched the plane to gather some things. It also helped that it was around the time of Oshkosh, so I was getting sale prices. I got a pair of Whelan G3 landing/taxi lights.

These put out an amazing amount of light. I also got a set of inertial reel harnesses for



the front seats from [Alpha Aviation](#), (advertisers here on The Mooney Flyer). I checked the ones in the plane and the tags said they were the original, installed in 1986. So, they needed changing. The inertial reels make reaching down to the fuel selector easier, and as a bonus, they pull the seat belt off the seat, so you don't sit on it when you get into the plane.



Another addition was the [MicroKit Solutions Landing Height System](#). This device is a laser-based height finder. It gives you a call out at 200 feet, 100, 70, 50, 20, 10, 5, 2, and 1, making flaring and landing much easier. But the main reason I put it in, was the new LHS-200-C version, which hooks to your gear switch. If it sees 200 feet or less and the gear switch is not down, it says, "200 feet, Check Gear." So, a good safety tool.



Another larger upgrade, and the cause of a longer than expected stay in the shop was switching out the JPI EDM-700 for an EDM-830. I wanted more information and the ability to log the data, either for my own perusal or to input to Savvy Analysis. Supposedly, the probes are the same, so it is just adding the probes/sensors for the new functions. However, it seems that at some point, the plane had a GEM, as some of the probes were not JPI. The 700 can use GEM probes with an adapter connector, but not the 830. So, some probes had to be ordered and installed and wires run. Also, I have a hot prop, which means the oil temperature sender can't be installed without pulling the prop.

I thought I had a perfect setup, as I had a two-week work trip, so the plane could be worked on while I was away. But, due to the various issues, it was in the shop an extra week.

Then came the first trip to use my Mooney for what it does best, to go places. I have a longtime friend who lives about five minutes from KCAE in Columbia, SC. Another friend and I flew down, had dinner, spent the night, and then flew home. Even with fall winds, it was about three hours each way. SWEET! Got to love 175 KTAS in the mid-teens.

Next up was a smallish avionics upgrade. The airplane came with a Garmin GTN-650, which is very nice. I learned that the 650 has been superseded by the GTN-650Xi. Normally, I would not have bothered, but the timing was such that a used 650 is worth a good bit. Sarasota Avionics offered to swap for the

difference in price only. I did not have to float the cost of the Xi. It was a nice six-hour flight from NE Maryland to Sarasota and I now have a GTN-650Xi. But I have ONE question. The GTN-650 scrolls the menu up and down. For some reason the 650Xi scrolls the menu left and right. WHY???

While I was there, I asked about a couple of issues with the KAP-150/KAS-297B boxes. The KC-191 autopilot computer had a burned-out light for NAV, and the KAX-297B was always in the Dim setting. Sarasota Avionics was able to fix both with an extra 2 hours in the shop, for a very reasonable price. I then did a two-leg flight back home, with a stop at Atlanta, GA's Dekalb-Peachtree (KPDK) to have dinner with a friend.

Next up, (other than some local flying), came the annual. I have heard and read of many horror stories about first annuals. These include very expensive annuals with months long delays to accomplish major repairs. I have heard of aircraft being scrapped due to corrosion that was missed in the pre-buy. However, the annual went well. There were a few squawks that I had postponed for the annual. The only things found were the need to install the aileron rattle kit, reseal the windshield, replace one sump drain valve, and two valve cover gaskets. They also replaced the fuel cap gaskets with the blue ones.

One issue that they were not able to address was the angle of the brake pedals. When I picked up the airplane, I noticed that there was no way to use the rudders without applying the brakes, unless I moved my feet down below the brakes. The tops of the pedals were too far aft. I am not sure when this happened as it seems I have the 3" pedal extensions, plus I have the Encore update with new master cylinders. Someone installed the wrong, fixed length, links. I did find one proper adjustable link at LASAR, but for a second one, Maxwell Aviation had to order it from Mooney. They took about four weeks to fabricate it, and it was twice the price of the one from LASAR. Overall, the annual was more expensive than I would have preferred, but not bad. However, it did take a bit longer than expected. I am very happy with [RPM Aviation Service](#) at Gaithersburg, MD (KGAI). Byron and Jack really know Mooneys.

When we picked up the plane from annual, we made a short trip down to Luray, VA (KLUA) to visit the caverns. It is a nice airport with inexpensive fuel and free transport to the caverns. After touring the caverns, we flew to Lancaster, PA (KLNS) for dinner. *Fiorentino's* is in the terminal building. It has good food, and, on weekends, it has live music. To legally get us home, I had to do three turns around the pattern and three full stop landings to satisfy night currency requirements. A quick flight home capped the day.

We had planned a trip over the Christmas and New Years week, but some appointments cut the time short. However, we planned on flying to Titusville, FL (KTIX) on Christmas Eve to visit a friend and play tourist. But, the winds were horrendous, so we canceled the trip. Waking up on Christmas Day, the winds were much better, so we decided to go. We ended up flying non-stop, as we did not want to get stuck somewhere when most FBOs were closed. It was a nice 5.5-hour flight from Northeast MD to KTIX, even with some headwinds. We had a great time visiting my friends. It started with them having us to their house for Christmas Dinner. I got to fly my friend's J-3 Cub, we visited the Space Center and even went to Gatorland. I did say we were going to play tourist, but we actually had a good time at Gatorland. The highlight of the trip was when we got up early on Wednesday morning to watch a SpaceX Falcon 9 launch. That was amazing. We had perfectly clear weather and could watch it through the main engine cut off and could see it after the second stage ignition. We went back to bed and later that day, headed home. I have to mention Space Coast Jet at KTIX. They have very nice and helpful people, and they got us a great rate on a rental car. They had it waiting for Saturday, then we canceled it, then rebooked on

Monday morning. Fuel was fairly cheap, and no ramp/parking fee with fuel purchase. We two hopped back home with a stop at Elizabeth Town, NC (KEYF) for cheap (\$4.85 a gallon) fuel, and they even pumped it.


The plane had to go back to the shop, but only for a day to install and adjust the brake pedal links. At the same time, they fixed a fuel leak on the top in the wing walk area and tweaked the waste gate adjustment.

One crazy thing I have been doing is checking the aircraft for sale ads to see if another Mooney came up for sale that I would rather have bought. And the good news is, so far, I have not seen one I would have preferred.

One final note, my plane is now a movie star – well, sort of. The FBO was contacted by a local large non-denominational church about filming in a hangar and airplane. I happened to be standing there, so they asked if I would do this. I met with the coordinator and agreed. They are doing some video sermons, with the theme of various movies. This one was for a Top Gun tie in. They also did Rocky. They ended up doing most of the filming in the maintenance hangar, but I moved my plane over and they did some shots of the pastor getting into the plane, then flipping switches, and some corny dialogue. I offered to do a take-off, which they accepted. They filmed me taxiing out and taking off. The finished video should be available in April, and as long as the takeoff looks good, I will share the link.

Is Your Landing Gear Properly Inspected and Adjusted Every Year?



 FAA Aviation Safety	SPECIAL AIRWORTHINESS INFORMATION BULLETIN
	SAIB: 2023-02 Date: March 3, 2023
SUBJ: Landing Gear System <i>This is information only. Recommendations aren't mandatory.</i>	

Thanks to the FAA's Special Airworthiness Information Bulletin (SAIB), 2023-02, we learned that the Mooney community continues to have collapsed gear accidents because of improper inspection or no inspection.

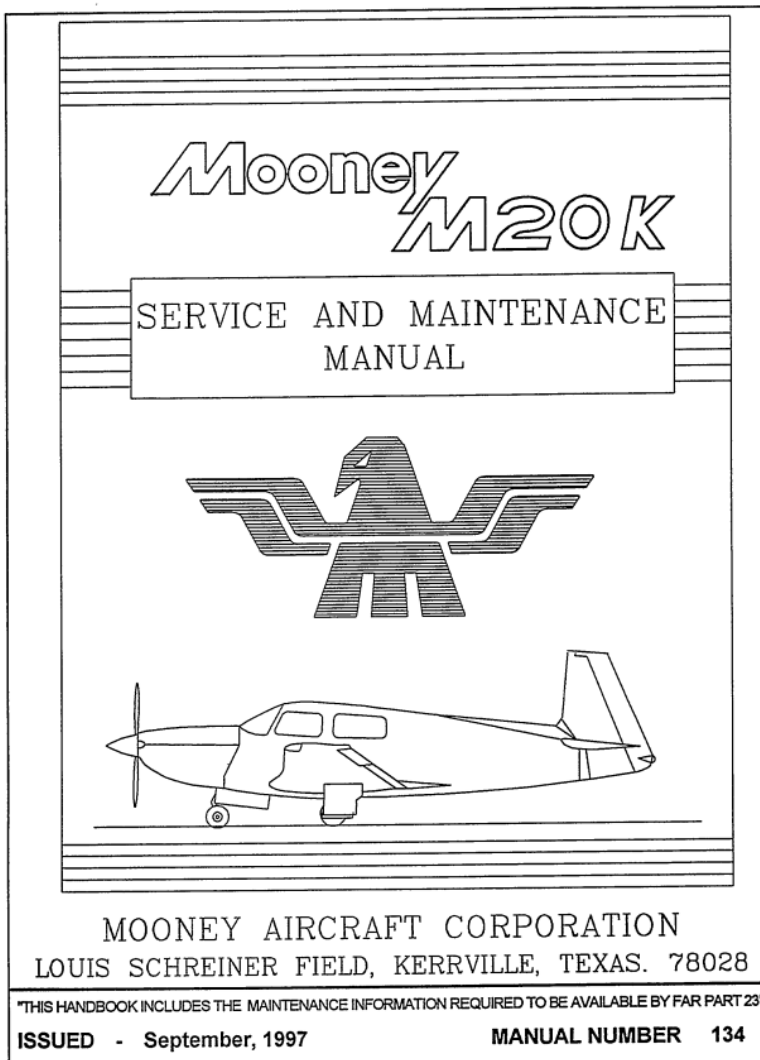
It is disappointing that the FAA needs to ask owners to ensure the [Mooney's 100 Hour Annual Maintenance Inspection guide](#) and Maintenance Manual instructions at each annual (100 -hour) inspection is followed during every Annual Inspection.

After receiving reports of landing gear failures on Mooney M20 series airplanes related to improper maintenance, age, operational deterioration, and/or failure to perform established inspection and rigging requirements and procedures in applicable maintenance instructions, the Federal Aviation Administration (FAA) issued SAIB CE-14-12, dated March 14, 2014, recommending that owners and operators of Mooney M20, M20A, M20B, M20C, M20D, M20E, M20F, M20G, M20J, M20K, M20L, M20M, M20R, M20S, and M20TN airplanes comply with Mooney Service Instruction M20-122, dated December 12, 2013 (SI M20 - 122), by following the applicable Mooney 100 - Hour Inspection Guide and Service and Maintenance Manual instructions at each annual (100 -hour) inspection.

MANUAL GEAR RETRACTION SYSTEM:
1. Raise aircraft on jacks.
2. Check operation and rigging (preload).
3. Check warning system light and horn.
4. Check gear down lock preload (mains and nose).
5. Check landing gear doors for proper closing/rigging.
6. Check retract lever welds for cracks.
ELECTRIC GEAR RETRACTION SYSTEM:
1. Raise aircraft on jacks.
2. Check operation and rigging.
3. Check warning system lights, horn and visual indicator.
4. Check air pressure safety switch or squat safety switch.
5. Check main & nose gear down lock preload.
6. Lubricate actuator gear box (Dukes and ITT actuators only)
7. Check landing gear doors for proper closing/rigging.
8. Check emergency landing gear extension system; extend gear using emergency gear extension system. Do not attempt gear retraction using emergency system. (Refer to Mooney S & M manual.)

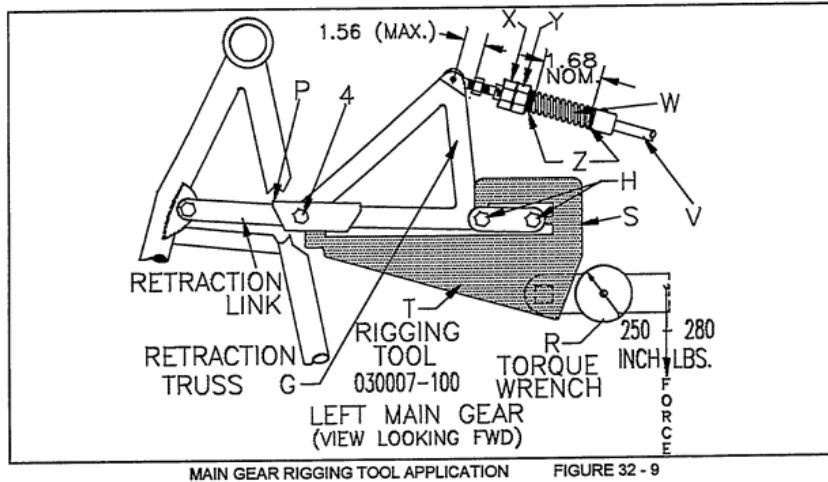
The 100 Hour Inspection Guide and the Proper M20 Maintenance Manual

The 100-hour checklist includes all kinds of things to check on an Electric or Manual Gear System. Some items are vague and if you don't have the Maintenance Manual, there is no way that a mechanic can determine if the rigging, pressure, or preload is correct.

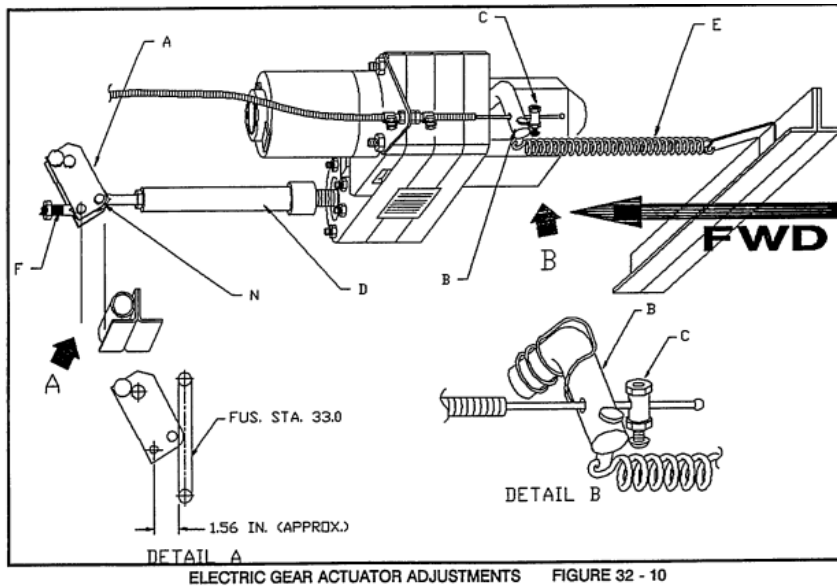


CHAPTER 32 LANDING GEAR

Without the Maintenance Manual and the correct tools, a mechanic cannot accomplish a valid inspection.



Without the Maintenance manual, a mechanic cannot make the proper adjustments.



Please ensure your gear is properly rigged and adjusted. Yes, it might cost a bit more, but if you can avoid a gear collapse, it's worth every penny!

**MOONEY INTERNATIONAL
CORPORATION****SERVICE BULLETIN**165 Al Mooney Road North
Kerrville, Texas 78028**SERVICE BULLETIN M20-345**
Date: October 6, 2022**THIS BULLETIN DOES NOT CHANGE AIRCRAFT TYPE DESIGN**

SUBJECT: Mooney Aircraft With Smooth Skin Elevators and Balance Weight Inspection
[Chapter 27 - FLIGHT CONTROLS]

**MODELS/ SN
AFFECTED:** All Mooney Models with smooth skin (non-beaded) elevators

**TIME OF
COMPLIANCE:** **Before Next Flight and in accordance with NOTE 1 and NOTE 2 below.**

INTRODUCTION: There are specific aircraft with smooth skin elevators, that utilized a hybrid material elevator balance weight. These weights (P/N 430018-1) are identified by the center plug running through the full width of the balance weight. During routine maintenance at an Authorized Mooney Service Center, the elevator balance weights were found to have developed galvanic corrosion, visible signs of the weight is cracked and displaced severely. There have been 6 separate instances of this anomaly in only the M20F model aircraft using this hybrid balance weight. Mooney has heard many occasions where used flight controls (from salvage yards) are used on other Mooney models: (ie: M20B, M20C, M20D, M20E, M20G). Engineering has determined that this will require an inspection and corrective action taken. **The attached compliance card needs to be filled out and returned to Mooney International Corporation upon completion of this Service Bulletin M20-345..**

INSTRUCTIONS: **Read entire procedures before beginning work.**

- 1.1. If cracks occur, they will most likely be the outer material surrounding center plug, refer to **Figure SBM20-345-1 and SBM20-345-2.**
- 1.2. Inspect all areas of the elevator balance weight for any abnormalities, refer to **Figure SBM20-345-2.** If required, remove paint from the area to be inspected.

NOTE 1:

If during visual inspection it is determined that both elevator balance weights are not the Hybrid 430018-1 balance weight, no further inspections are required.

- 1.3. If the balance weight is found to be "abnormal" - DO NOT FLY - Please contact Mooney Technical Support at email technicalsupport@mooney.com for further instructions.

NOTE 2:

If elevator balance weights are the original 430018-1 style, DO NOT FLY, the balance weights will need to be replaced with new weights developed by Mooney in a later revision of this Service Bulletin.

WARRANTY: Labor and/or replacement parts (if required) will not be covered under Mooney International Corporation warranty policy for affected aircraft that are beyond warranty agreement.

**REFERENCE
DATA:** 1. Applicable Mooney Illustrated Parts Catalog and Service and Maintenance Manual

[CLICK HERE](#) to read the entire Service Bulletin



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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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Eliminates the risk of damage to the piston rod.



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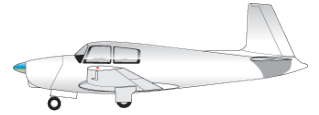
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[CLICK HERE](#) for Airworthiness Directives for all Mooneys



Ask the Top Gun

TG

Tom Rouch

Founder of Top Gun Aviation, Stockton, California



Send your questions for Tom to TheMooneyFlyer@gmail.com



Dear Mr. Rouch,

I know that all Mooneys eventually suffer fuel leaks. I have a few questions for you. What are the main reasons for the leaks? Is it failing sealant? Hard landings? Something else? Also, is it best to hangar my Mooney with full tanks to preserve the sealant? But then I hear that it's not good for the landing gear donuts with all that extra weight. Could you give your thoughts and experience on all of this?



For many years, the subject of fuel leaks on Mooneys is an ongoing question and one that I have dealt with for over forty years.

The first thing to mention is the fact that all Mooney aircraft have what we call a "wet wing". So does the B-52. The advantage of the wet wing on the B-52 is that you can take a panel off and climb inside to reseal. That's not going to happen with a Mooney.

The Mooney has no tanks per se, but the tanks are formed by sealing the wing skins to the spar and ribs with a flexible sealant that hopefully remains semi-hard through its life span. We used the same sealant on B-52s that we use in the Mooney. Even the best sealant deteriorates after years in service, especially on planes that have been outside most of their life. Another major factor is that the chemical compound of fuel has changed through the years, so in effect, the fuel of today may be more deteriorating on the sealant than the fuel that was used fifty years ago.

How the plane is used also has a big effect. Events like hard landings eventually loosen the skin attached to the main spar where most of the leaks occur. The sealant eventually gets hard and makes it difficult to remove which makes it time consuming to replace.

There are a few shops that have developed equipment to run a solvent through the wing tanks to remove the sealant and this is the only method I find to be cost effective. The other solution is to install bladders. Both methods are expensive. The cost of labor today makes resealing tanks to be very expensive and many shops won't even try.

So, what can you do to help?

- **Keeping fuel in the tanks** is number one. It keeps the sealant from "drying out" and lowers the temperature in the tank.
- **Eliminate hard landings.** When you drop down hard, the shock is directly transmitted from the landing gear to the main spar.
- **Replace the shock discs when they get old and hard.** This lessens the landing shock to the spar. Note: When parked, the extra weight of full fuel has a negligible effect on the discs.
- **Hanging the plane is also a big plus,** as it reduces the wing temperature and reduces the need to keep the tanks full. Although a hangar can be costly, it also extends the time before resealing is needed, so hangaring might be a good way to spread your cost. While bladders significantly reduce leaks, their extra weight and the reduced fuel capacity is really a negative to the design of the Mooney – **flying fast and efficient.**

Top Gun Aviation



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(209) 983-8082

For Service and Maintenance, ask for Mark or Tom

FAX: (209) 983-8084

6100 S. Lindbergh St., Stockton, CA 95206

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Avionics Repair and Installation Services now available on site thru J&R Electronics

Efficiency



The Mooney 231 glides so well with the engine stopped, we put a feathering prop on a test airplane, and flew it against this high performance sailplane.

Well, the sailplane won. Not surprisingly. But the Mooney kept up very well, which just proves our point. The Mooney's high lift-to-drag ratio—the best in the business—produces a shallow glide angle. So you need less power to move the Mooney

through the sky. And that means you need less fuel. And that means you need less money to fly Mooney. That's why it's the most efficient four-place airplane you can buy.

For the name of your nearest Mooney dealer and a brochure write us or call 1-800-228-2028, ext. 201. In Nebraska 1-800-642-8300, ext. 201.

Mooney

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Have you
HEARD?



AeroBrigham Buys MyGoFlight Head-up Display Division



Now named the AeroDisplay HUD, AeroBrigham plans to expand the applications for the low-cost head-up display developed by MyGoFlight. (Photo: AeroBrigham)

Decatur, Texas-based aircraft MRO, completion, and support provider AeroBrigham has purchased the SkyDisplay head-up display (HUD) division from MyGoFlight. The HUD was developed by the late founder of MyGoFlight, Charlie Schneider, who spent years bringing the SkyDisplay HUD to market at a cost far lower than any other HUD product.

SkyDisplay holds [approvals for installation](#) in numerous aircraft under an approved model list supplemental type certificate. They include Cirrus SR piston singles and SF50 Vision Jet; Beechcraft Bonanzas, Barons, and King Air 300s; Cessna turboprops and light jets; Embraer Phenom 100; Mooney M20; Pilatus PC-12; Piper Twin Comanche, Cheyenne, and Malibu Matrix; and Daher TBM 700 and 850.

Under the new company name AeroDisplay, AeroBrigham plans to continue the development of the HUD, including configurations for additional Part 23 airplanes, as well as Part 27 helicopters. For rotorcraft, the HUD will add engine, external load values, and other critical information to its display, according to AeroBrigham. AeroDisplay also offers integration with thermal imaging systems, including the Astronics Max-Viz enhanced flight vision system.

AeroDisplay operations will remain in the Denver area. “Our goal is to continue the development of this game-changing safety enhancement and continue the legacy of our friend Charlie Schneider,” said David Brigham, co-owner of AeroBrigham and AeroDisplay with his brother Danny Brigham.

Is your Mooney owned by an LLC? FinCEN’s Beneficial Ownership Information Rule Applies to You



On September 30, 2022, it was made official that tens of millions of corporations, limited liability companies (LLCs), and other entities and legal arrangements established in the U.S. or conducting business here will be required to report certain information, called Beneficial Ownership Information (BOI), to the Financial Crimes Enforcement Network (FinCEN), part of the U.S. Department of the Treasury. Along with millions of other entities, many LLCs and corporations which currently own aircraft or that conduct general aviation business could be impacted by the new reporting requirements.

The [Final Rule](#), which establishes this requirement, is not for the faint of heart—clocking in at 99 pages—and requires navigating a series of confusing definitions and exceptions to understand its scope and determine applicability.

There are four important steps every entity or legal arrangement must take to determine whether and what to report to FinCEN. First, it must determine whether it is a “reporting company.” Second, it must identify when the reporting company was created or registered. Third, it must identify and report all “beneficial owners.” Fourth, it must identify and report all “company applicants,” but only if the reporting company was created or registered on or after January 1, 2024.

All reporting companies created before January 1, 2024, must provide specific information for all beneficial owners to FinCEN no later than January 1, 2025. For reporting companies created or registered to do business in the U.S. on or after January 1, 2024, information for beneficial owners and company applicants must be reported within 30 days.

The reporting requirement is broadly applicable to any “reporting company.” “Reporting company” is, in turn, broadly defined as any corporation, limited liability company, or entity “created by the filing of a document with a secretary of state or any similar office under the law of a State or Indian tribe.” The definition also includes any foreign entity registered to do business in any State or tribal jurisdiction. However, there are 23 types of entities which are exempt from the reporting requirement, but many exempt entities are already required to make reports to the government. As you might expect, many corporations and LLCs which own an aircraft or conduct general aviation business will be considered reporting companies and will be required to report BOI to FinCEN.





“Beneficial owner” is also expansively defined as “any individual who, directly or indirectly, either exercises substantial control over such reporting company or owns or controls at least 25 percent of the ownership interests of such reporting company.” “Substantial control” and “ownership interest” are defined as well, with specific contours and standards necessary to determine every individual who is a beneficial owner. So, if you own an aircraft through an entity, or are a member of an LLC or other closely held business, there is a good chance that you will be a beneficial owner.

A “company applicant” is an individual who files the documents that create a domestic reporting company or registers a foreign reporting company. Additionally, any individual who is primarily responsible for directing or controlling the filing also is considered a “company applicant.” This means you might be required to keep track of the individuals responsible for creating your entity as well all beneficial owners.

While the goal of this rule is laudable—to reduce or eliminate the use of corporate structures for illicit purposes—it raises important questions concerning privacy and places a burden on millions of legitimate, law-abiding businesses. Failure to timely comply with the rule’s reporting requirements could result in both civil and criminal penalties. Additionally, although the rule itself does not automatically invalidate an entity’s legal status for failing to timely report BOI to FinCEN, it leaves open the door for state and tribal jurisdictions to levy such rules. For aircraft owners, it is important to recall that if an aircraft is owned by an entity, the aircraft’s registration could be jeopardized if the entity loses its legal standing.

The BOI rule seems to raise more questions than answers; however, compliance is mandatory, and it is vital that entities be mindful of the looming deadlines. FinCEN has announced that it will engage in additional rulemaking and publish guidance in the not-too-distant future. In fact, a [Notice of Proposed Rulemaking](#) regarding access and safeguards to BOI was recently published on December 15, 2022.



	<p>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 April 8: Flagler (FIN) May 13: St. Augustine (SGJ)</p>
	<p>April 13-14: Henderson, NV (KHND) CLICK HERE for details 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/</p>
	<p>Learn more at https://www.mooneysummit.com/</p>
	<p>Learn more at https://www.empoa.eu/index.php/en/</p>
<p>Other Mooney Events</p>	<p>June 22 – 25: MooneyMax Aviation Conference, Longview, TX Details & Registration at http://www.mooneymax.com/ August 11-13: Wings to Walla Walla is back for 2023. We were hampered by the weather gods last year, so we’re trying for summer. Hotel rooms at the Whitman are already available at 866-826-9422 or 855-516-1083 under Wings to Walla Walla. CLICK HERE to sign up! This year the main organizer is Cascade Flying Club (I’m a member), so we’ll be sharing the ramp with Cessnas and others.</p>



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)



<p>Item for Sale</p> <p><i>Call Tom 303-332-9822</i></p>
<p>New Hartzell Propeller Hub HC-C2Y (K, R)-1 Serial CH41782B</p> <p>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.</p> <p>Price \$3,500 REDUCED</p>



1965 Mooney M20C, N5533Q s/n 2955, TTAF 6212, Engine 1680 SMOH, Prop 1680 TSN, 10/1/22 Annual
All cylinders \geq 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,
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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 O₂ +++

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