The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

March 2023

Editors

Phil Corman | Jim Price

Contributors

Jerry Proctor | Tom Rouch | Ron Blum | Richard Brown | Linda Corman

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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

Mooney Service Centers

Just because a shop is designated as a Mooney Service Center (MSC) does NOT automatically make it a shop worthy of your business. You say, “That’s sacrilege”. Well, let me explain.

We go to MSCs for two reasons:

- We expect them to be very good at Mooney maintenance.
- We expect them to have extensive Mooney experience, because we know how critical it is; knowing what to look for and how to properly maintain and/or repair our beautiful airplanes.

Mooney does not “Certify” Mooney Service Centers. Historically, they’ve simply been designated. But we are unaware of any ongoing evaluations performed by Mooney allowing an MSC to continue with that designation.

Here are a few reasons why an MSC might not be an automatic selection for you:

- Maybe over the years, the mechanics with extensive Mooney experience have retired or have moved on.
- Maybe there has been a change of ownership or key management change.

What can you do before you blindly call an MSC and trust your Mooney to them?

- Call the owner and the Director of Maintenance and ask them about their years of experience with Mooneys. What repairs and modifications have they performed on Mooneys?
- Search social media and ask, “Does anybody have actual experience with this MSC?”

I think it’s worthwhile to perform both tasks and get good feedback. If you don’t receive good feedback, let the shop continue to learn about Mooney maintenance – just not on your Mooney.

Oil Consumption

I received several questions from my “Random Engine Thoughts”, (January 2023 issue). Thank you for your readership and your feedback, especially when you disagree or think I wrote something in error.

Regarding oil consumption, too much oil consumption AND too little oil consumption are both not so good for your engine. There are oil control rings that help to coat the cylinder walls with a thin layer of oil. This is a must for the health of your cylinder walls. Too much oil consumption and you might run dry on a long flight. Too little oil consumption means you are NOT taking good care of your cylinder walls.

The chief thing to watch is when the oil consumption begins to change. This is usually an indication of an issue that you want to take care of. Perform a compression check, borescope, and pull your lower plugs to see if they are soiled with oil. Hope this helps.

The instructors and staff of the Mooney Safety Foundation have accumulated decades of Mooney experience. Each year, they produce amazing Pilot Proficiency Programs to enhance the skills and thought processes of Mooney pilots.

We are pleased to announce that recently, the Mooney Safety Foundation partnered with The Mooney Flyer. The Mooney Flyer will be publishing regular Safety Foundation articles and detailing information on all of their events. These articles will be a useful addition for our readers and this partnership will greatly enhance and benefit both organizations.

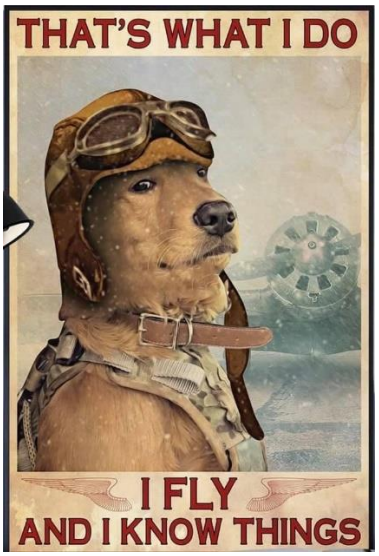
The winners in this partnership are the pilots in the Mooniac community. Through articles by experts and programs that enhance our flying skills, Mooney safety will be increased.

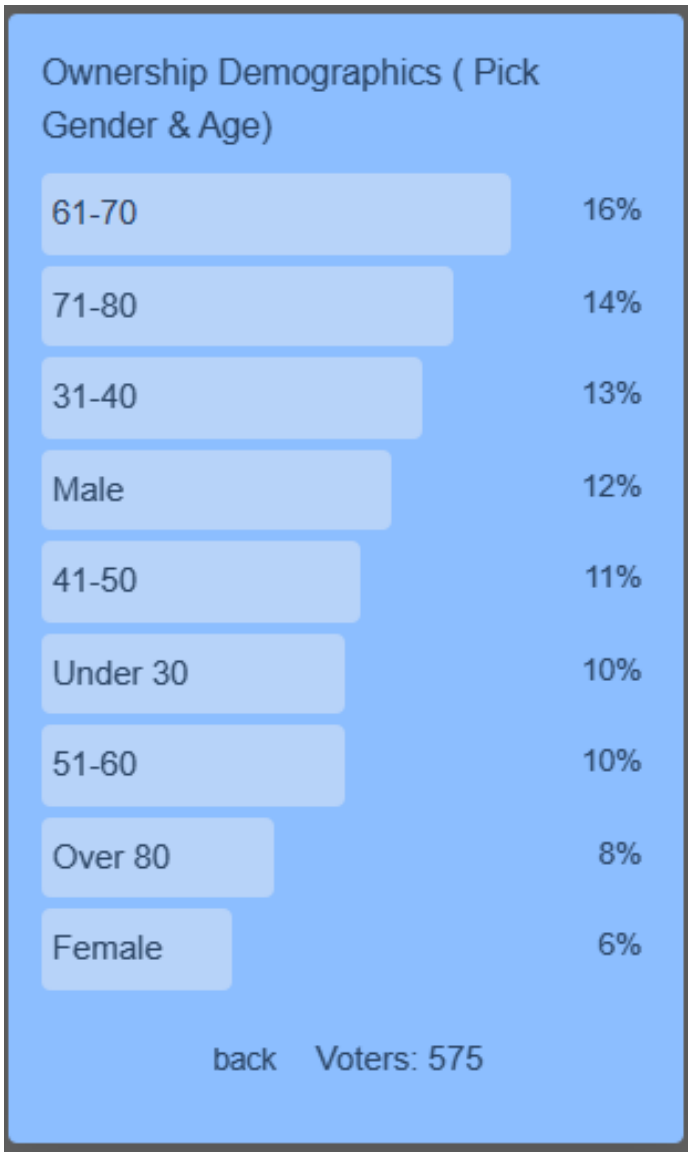
Parvez Dara, President of the Mooney Safety Foundation said, “We are thrilled to partner with The Mooney Flyer, a world class magazine for Mooney Owners and Pilots.”

Jim Price, co-Editor of The Mooney Flyer opined, “For Mooney pilots worldwide, the synergy and outreach of this partnership will significantly improve safety for all Mooney pilots.”

CLICK HERE to learn more about The Mooney Safety Foundation, and while you are there, please consider attending one of their Pilot Proficiency Program events.

The Mooney Safety Foundation and The Mooney Flyer – Striving to increase Pilot Proficiency and Safety in the Mooney Community.





Next month's poll: "My Preferred In-Cockpit Weather is" **CLICK HERE** to vote

In your Random Thoughts of the Feb 23 issue, you mentioned not to let your engine speed drop more than 50 rpm.

Interesting. My prop had not had a reseal or overhaul for 17 years. Before you yell at me for not being more up on my maintenance, at the Prebuy I was not told I needed one. At the next two annuals I was not told I needed one. I started to see grease specs on my '77 M20Js cowling. I called my local IA and he then asked when the prop had been overhauled or had new seals. After digging in the prior prop logbook, I discovered it had been 17 years, but only 1,100 hours. Well, my J had only flown 300 hours with the previous owner. I had 175 the first year and 145 in 10 months of my second year. This was August 2022. He told me we can pull the prop now or try a little trick that could get me through to March's Annual. (February and March in Wisconsin are pretty lean months for flying a plane with no Deicing capabilities.) The trick was, once the engine was warm, before run-up, Mag & Idle check, once rpm was at 1900-2000, I would pull the prop lever out all the way and let the engine slow down to almost idle. Then I pushed it back in. Getting up to speed again, I would pull it out, letting it go to near idle. He said to do this process 7 or 8 times and it would reset the seals. This would get me to the good months of summer and fall flying.

I was shocked. I made him repeat the instructions to make sure I heard correctly. His shop is on the field where I'm based so... I did exactly what he instruct me to do. It was a bit disconcerting at first. I was always told not to get more than a 500 rpm drop. My lack of knowledge on the specific deals of the inner working provided a nice medium to high pucker factor, but it worked. I flew the rest of the season without a single hitch. As of this date the prop has been pulled, along with the Governor to be inspected and hopefully overhauled.

Phil, can you explain why you feel that the rpm should not drop more than 50 rpm?
Thanks, **Dean**

Editor's Note: *Thanks for your email to the editor. It's not a critical consideration. Fifty RPM drop is sufficient to ensure that your governor is working and has sufficient oil. More than that puts an unnecessary load on your engine.*

Phil Corman wrote an article in the October 2022 Mooney Flyer titled "Methods for Fuel Efficient Flying" (attached). It talks about L/D Max and Carson Speed. We have a 1984 M20J and the only place in the POH we can find a number that looks like L/D Max is in Section III, Emergency Procedures, in a table titled Maximum Glide Distance. That table shows 88 KIAS at 2500 lbs. Is that L/D Max?

An earlier article in The Mooney Flyer talks about the most efficient cruise speed Vcc with the following formula: Vcc = (Vy - Vx) + Vy. That number works out to about 10 knots slower than the Carson Speed.

What is the most efficient cruise speed?
Mark L

Editor's Note: Best Glide or LD Max will get you and your Mooney the farthest with the least altitude loss. Carson Speed is the indicated airspeed that delivers the most speed for the least practical fuel consumption. Carson Speed is approximately 32 percent greater than best L/D.

On page 3, you say, "there is no need to let the engine speed drop more than 50 rpm." This contradicts what Ed Kollin and John Deakin have said.

Here's what John Deakin wrote, from AvWeb's Pelican's Perch:

Runup
Most Continental direct-drive engines are run up at 1,700 RPM, and most Lycomings specify runup at 2,000 RPM. There is no magic about 1,700 or 2,000 – it's more tradition than anything else – but such mid-range RPM settings do provide a little room to exercise the prop, and also provide a modicum of power to check out the ignition system. The tests and checks will be just as good at 1,500, 1,800 or 2,100, so there is no real need to be precise in setting exactly 1,700 or 2,000 for the runup.

At runup RPM, the prop lever is still fully forward, the prop governor is still calling for redline (2,400 to 2,700 in most cases), and the prop blades will still be on their low-pitch mechanical stops. Now, we pull the prop lever back. It doesn't really matter how quickly or how slowly you do that, but for our purposes here, let's say you do it very slowly, perhaps an inch at a time, stopping along the way to see the results. The first inch will reduce the speeder spring pressure, and perhaps it will call for 2,300 RPM. Since runup RPM is lower than this, the flyweights are still fully "in", and the system is still trying to increase the RPM by driving the prop blades "flat." The blades are still on the low-pitch mechanical stops, and the governor still sees an "underspeed" condition.

Pull the lever back some more, to the point that might call for exactly runup RPM (1,700 or 2,000). Now, at last, "something happens." Moving the prop lever that far will reduce the speeder spring pressure enough that the centrifugal force on the flyweights is "enough" to move them "out" to the "balance point," where the centrifugal force on the flyweights is exactly balanced by the speeder spring pressure. Still, nothing happens at the prop, because the governor is calling for 1,700 (or 2,000), and we've got 1,700 (or 2,000). The blades will still be on the mechanical low-pitch stops, but barely so.

Finally, pull the lever all the way back. This further loosens the pressure on the speeder spring and runup RPM is now more than enough to make the flyweights open out. We call this an "overspeed condition," as the prop is (momentarily) turning faster than the governor wants it to. The flyweights open up, porting high-pressure oil into the prop dome (or for twins, letting oil flow out of the dome), and at last, the prop blades come off the low-pitch mechanical stops and move towards the "coarse" position. Since we have changed nothing but the prop control, this will reduce the RPM, proving the system works as advertised. Many POHs will specify what the lowest RPM should be on runup, and this is important, as it shows "full range." If your POH doesn't list this figure, check it out for yourself, and note it for future runups. The prop does not necessarily go all the way to the high pitch stops, it only goes far enough to satisfy the governor.

For many twins, moving the prop lever fully aft not only reduces the "desired" RPM, but will cause the prop to move towards feather. This should also be checked (very briefly), in accordance with the POH. In most cases, you should avoid allowing the RPM to decrease below 1,200 or so to prevent the anti-feather latch pins from wearing out.

(Note that pulling the prop lever back in "steps" is only for the purpose of this discussion. In practice, it's one smooth motion.)

How many times should you cycle the prop? If the RPM drops smoothly and properly, once is enough. The fresh oil will probably cause the piston to move a good deal and when it comes back to the low pitch stops, most of the "old" oil will be pushed out. If you really want to feel good, do it twice, to get even more of that "old" oil out of there. Three times is gross overkill, in my opinion, but a lot of people do three times, or more. In reality, there are tiny bleed holes that allow a constant flow of warm oil to both sides of the prop piston, so even if you take off with cold oil in there, it will quickly be replaced with nice slippery warm stuff. On some of the big old props on the radials, in extreme Arctic conditions, the oil would congeal faster than the bleed ports could replace it, but I doubt you'll find any modern props with this problem. I should note for completeness that many of the props on the big radials might require many more cycles to achieve a smooth RPM drop when cold. In freezing temperatures, it may take up to ten cycles. There's a lot more to the mechanism, and a lot more oil involved.
Daniel J

You recommend CHT as low as 150 degrees.

Ed Kollin states that this will promote lead bromide deposits on valve stems.

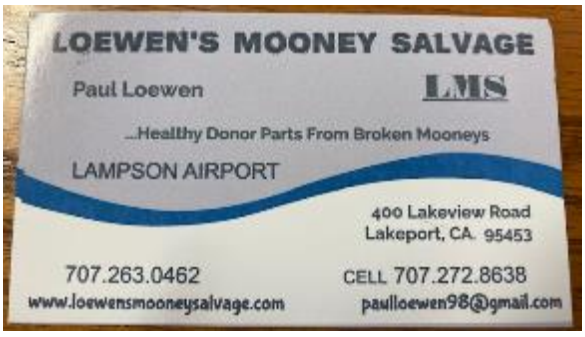
Valve stem deposits are related to lead bromide deposits, that occur when valve stems are cooler than the condensation temperature of lead bromide. CHT is a proxy for valve temperature, and Ed recommends CHT more than 330 degrees to maintain warm valve stems. His personal upper limit for CHT is 400 degrees.

A full essay is at https://aslcamguard.com/sticking-exhaust-valves/ **Daniel J**
Editor's Note: We actually indicate that you should never let your CHTs go below 150°. It is probably safer to keep them warmer than that as you indicate.

"PRE-PRESS RELEASE"

Paul and Shery, owner of Loewen's Mooney Salvage, are happy to share some exciting news. Paul's beloved 50-year Mooney Salvage collection is going to a good home! He has accepted an offer from Jared Boles of BAS Part Sales LLC in Greeley, Colo. (Check out his website at www.baspartsales.com) Due to weather issues, we are not exactly sure when the salvage will be moved. I will publish a "formal" Press Release when I know more.

UNTIL THEN, FOR A LITTLE LONGER: CALL LOEWEN'S MOONEY SALVAGE AT 707 263-0462 OR EMAIL PAUL AT PAULL@SONIC.NET



Nine Bad Habits Other Pilots Have

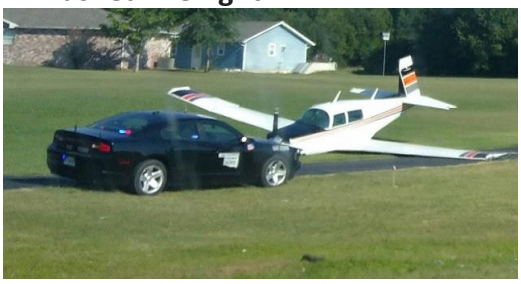
Sometimes pilots do not realize they have fostered a bad habit until they find themselves in an accident or incident. Then, they reflect on what caused the accident/incident. Was it neglecting the pre-flight checklist? Unlike lesser, ungifted pilots, I don't need to use the written checklist like a crutch. Then, one day, you hear the tow bar scraping along the taxiway as you taxi for takeoff.

Some Bad Habits

#1 Not Using the Checklist or Intermittent Use

Sure, you have a great deal of time in your Mooney, and you know your checklist quite well. However, the Mooney is a complex aircraft and with that comes the need to know many intricacies. A distraction can break your flow and stress can make it hard to remember every step of a process. The next thing you know, it becomes a bad air day as you hear the belly scrape the runway.

#2 Rushed Preflight



Many pilots rush through the steps they know because so far, there have been no surprises in their pre-flight. The more familiar you are with a plane, the more you know what to expect, and slowly, you begin to anticipate a perfect preflight every time. Then, one day, you rush through checking the fuel quantity. You were sure that there was sufficient fuel for your flight.

#3 Multitasking While You Taxi

As you taxi, it is very tempting to program the GPS or check the weather while you're rolling along a straight line. However, you may not realize that humans cannot truly multitask. So-called multitasking divides our attention, making it harder for us to give our full attention to one thing. You're just switching your attention back and forth and if you continue "multitasking", one day you might hear broken glass as your tire runs over a taxiway light, or the awful screeching sound of bending metal.

#4 Taxiing like a Speed Demon

I know, you want to get in the air as soon as possible, so you can fly fast. After all, taxiing slow is for student pilots. If that's you, please change your attitude. Take the time to use your checklist and concentrate as you taxi to the runway.

#5 Not Looking Outside

Whether you are taxiing or flying, please take note of your surroundings. Most modern aircraft have a lot going on in the instrument panel. In some cockpits, flying can feel a little too much like a video game, so make sure you pay attention to what is outside.

#6 Lackadaisical Use of Rudders

So much of flying comes down to keeping the ball centered. Coordinated turns are essential to good airmanship. If you have developed a bad habit of not using your rudders as much as you should, please resolve to do better. Good rudder skills can make crosswind landings a piece of cake and coordinated turns will prevent stalls.

#7 Failure to Think About What You are Going to Say Before You Key the Mike

You've all heard pilots mix their words with "uhhhhh," as confusion reigns during their radio transmission. Resolve to NOT be a pilot who is unable to coherently express his or her thoughts.

#8 Not Including All the Instruments in Your Scan

Regardless of whether you're flying with legacy round steam gauge instruments or the latest glass, the basics of instrument flying are still the same, starting with developing a thorough scan vs. a partial one. Once again, the more stuff happening on the instrument panel, the more things there are to keep an eye on.

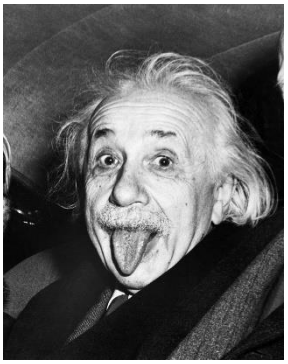
#9 Complacency

The most dangerous time for a pilot isn't when they first get their certificate. It's about 1,000 hours down the road when things have gone smoothly and nothing major has gone wrong for all those hours. That's when many pilots start to relax and feel they've got this flying thing down pat. Weight and balance? No problem! Hey, I got this!

Resolve Today to Unlearn those Bad Habit(s)

Avoid the Things that Cause the Bad Habit(s)

Make it easier on yourself to break bad habits by avoiding the things that cause them. The earlier the bad habit is identified, the easier it is to avoid and/or replace.



Expect a New Result

When you change your behavior/habit, expect a different outcome. Embrace the famous quote attributed to Albert Einstein—that insanity is doing the same thing over and over again and expecting different results.

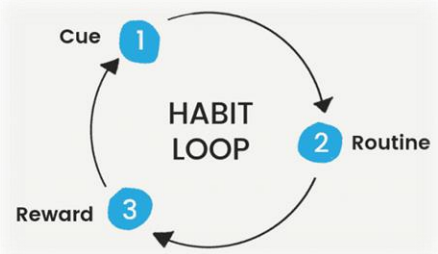
Cognitively Repeat Until a New Routine Becomes Habit

There are some habits that lead to a lot of good changes. Keystone habits are the small and simple things by which great things are brought to pass. Identify a goal that will help you repeat a necessary behavior every time you fly. It could be an immediate goal, or it could be a goal that is accomplished over time. If you repeat this pattern long enough, it will become a habit.

Since habits are permanently stored in memory, when you change a habit, what you are really doing is rewiring your brain to use the same triggers and rewards from the old habit to cue a new routine.

By understanding the Habit Loop, it's clear that a habit is not just an action you take repetitively until it becomes automatic. Instead, a habit is the routine you take when a cue is presented.

The routine is the habit itself. The cue is a trigger or signal that gets you into the routine. For instance, when you are mid-field downwind, that's your cue to lower the gear. Then, when on base and again on final, you recheck that the gear is down. The reward is what tells your brain to do it again in the future because it's a pleasure when you are flying perfectly and avoiding the nightly news.



Keep working at it and soon, you'll be a wonderful pilot that others will admire. Remember, you can be a wonderful example and inspiration . . .

or a terrible warning.

Fly Safe, Jim

If You Could Only Flycation in 1 Place

If you are wondering where to FlyCation with your Mooney this year, you could not do better than **Sunriver, Oregon**. If you are west of the Rockies, it's usually a non-stop flight.

Here's why!

It's a resort with its own airport!

The Sunriver airport, S21, is private, but completely open to the public. The runway, taxiways, and ramp are all practically new. The Sunriver Airport FBO treats Mooney owners like family. The elevation is 4,361'MSL which makes it worthy of Density Altitude preparation and execution. The runway is 5,400' with easy approaches from both north and south. There is an RNAV GPS approach to RWY 18. The weather from mid-May to mid-October is mostly VFR.

The resort is huge and very affordable. It has horses, canoes/kayaks/rafts, Tennis Courts, a Water Park, shopping village, lots of eateries and drinking places, forty miles of bike trails, and an observatory. Here's the best part: There is a FREE shuttle that will pick you up anywhere on the resort and drop you off anywhere else on the resort. Did I say it's FREE? So, you don't have to rent a car unless you want to.

For more details on Sunriver Airport, CLICK HERE or S21

Things to Do

There is **golfing**. On the resort you can grab a bike at the airport for free or call the shuttle, or just go **bike riding** on their more than 40 miles of trails through the high desert forest of the resort. You can bike on the trails to all of the locations on the resort.
Additionally, if you like, you can ride out of the resort to Benham Falls for a picnic.
If you would rather not pedal, you can rent **horses** and see the resort and the river area by horseback.

How many places have an **Observatory**, where you can view the planets and the sun. We were able to view the rings of Saturn, Jupiter and more, as well as Sun Spots and Sun Flares from the Observatory. It's fun for adults and kids.

Also, you can take your kids to the **Water Park**. If you rent a condo or cabin, it's free.

There are countless shops and restaurants at the Village and also shops and food at the Lodge.

You can **rent kayaks and rafts** on the Deschutes River. It's about a 6 mile float and the resort will retrieve you and your floating device and bring you back to the beginning.

Things to Do Beyond the Resort

If you want to venture outside the Resort, here is a list of ideas:

- The High Desert Museum – A great indoor/outdoor museum, it includes a complete early mining village, Otter exhibit, Native American exhibits and more.
- LavaLands – Pathways through lava fields and a cinder cone that you can climb and walk around for stunning views.
- Lava Cast Forest – This is an extensive lava field with hollowed out circular cylinders that were, at one time, trees.
- Newberry National Volcanic Monument – There are two crater lakes with lots of trails, including an impressive obsidian black glass lava trail. There are also hot springs where you can soak on the lake shore.
- Old Mill Shopping District – A great outdoor place to shop and eat. There is also a hiking loop that goes down one side of the Deschute River and back on the other bank.

- Wall Street – Shopping and Restaurants in Bend
- Smith Rock State Park – A great loop trail that brings you through stunning rock formations and along a river.

Where to Stay

We usually rent a cabin or condo through Vacasa.com or via Sunset Lodging (sunriverlodging.com). If you are staying for more than 3-4 days, this can be better and less costly per night than the Lodge. The lodge is an option, where you can stay in a room equipped with a gas fireplace.

Our Favorite Eateries

- El Caporal for the best Mexican food in Central Oregon.
- Sintra for a great breakfast in the Sunriver Village.
- Brewed Awakenings for great local coffee and pastries.
- The Brickhouse for amazing steaks (It is in Bend, about fifteen miles north).
- McKay's Cottage for an amazing breakfast (In Bend).
- Marcello's for Italian dinner in the Village.
- Sunriver Brewery and/or the Village Bar & Grill for lunches.

How to Get to Sunriver

Coming from the South – It's very straightforward. Fly north keeping Mt Shasta to your west (left). Cross Klamath Falls and then head direct to S21. Do not forget to detour to the west and fly over/near Crater Lake along the way.
From the North – Fly to Portland then turn east and fly the Columbia River Gorge (which is beautiful). This allows you to avoid crossing the Cascades. Continue to The Dalles and then turn direct to S21.

From the East – Fly direct to S21 or follow highways slightly north and turn direct to S21 as you approach Bend (KBDN).

Summary

The resort is a paradise for Mooney pilots.

CLICK HERE for more details on the resort.

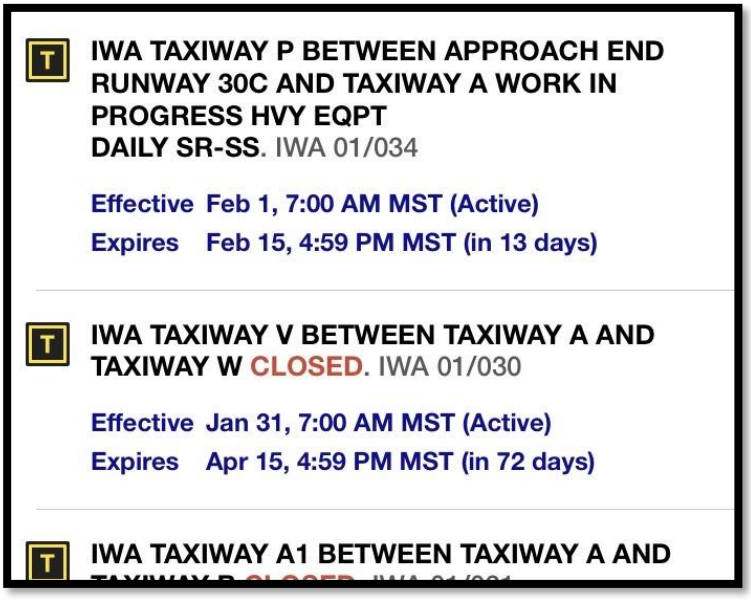
Grounding of Flights Reminds us of the Importance of NOTAMs

The Notice to Air Missions (NOTAM) system crashed on the evening of Jan. 10, 2023 and on January 11, 2023, the FAA grounded all domestic flights noting: "THE UNITED STATES NOTAM SYSTEM FAILED *AT 2028Z. SINCE THEN, NO NEW NOTAMS OR AMENDMENTS HAVE BEEN PROCESSED. TECHNICIANS ARE CURRENTLY WORKING TO RESTORE THE SYSTEM AND THERE IS NO ESTIMATE FOR RESTORATION OF SERVICE AT THIS TIME."*

Why would the crash of the NOTAM system ground flights?

Not only is consulting NOTAMs before a flight necessary and prudent, but it is also a requirement of § 91.103 (Preflight action) for each PIC to "become familiar with all available information concerning that flight." Thankfully, shortly before 9am eastern the same day, the FAA issued a statement indicating that normal operations were resuming gradually, they would investigate the cause. They found that contractors had accidentally deleted files in the system, as they worked to synchronize NOTAM's primary live database with its backup system.

Even with the NOTAM system restored, on Wednesday, January 11th, providers were still processing a backlog of NOTAMs and advising users to check the FAA NOTAM site for the most up-to-date information. While the stoppage was relatively short, the effects lingered for days. This failure reminds us of how important (and delicate) the NOTAM system is to pilots and our entire aviation system.



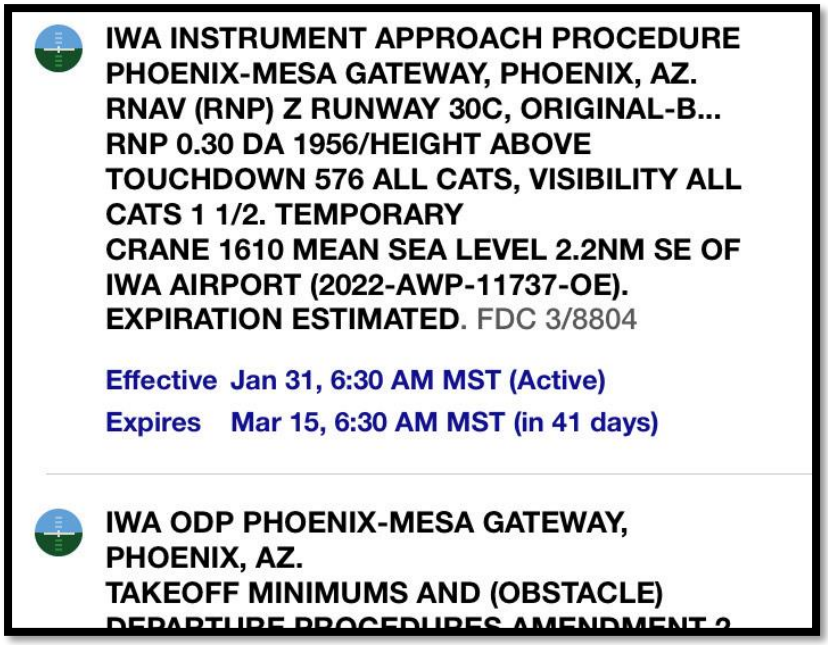
NOTAM (D) information is disseminated for all navigational facilities that are part of the National Aviation Services (NAS), all public use aerodromes, seaplane bases, and heliports listed in the Chart Supplement U.S. NOTAM (D) information includes taxiway closures, personnel, and equipment near or crossing runways, and airport lighting aids that do not affect instrument approach criteria, such as a VASI or PAPI.

NOTAM D examples:

- Airport activity and conditions, to include field conditions.

- Airspace, including special use airspace and general airspace activity like UAS or pyrotechnics.
- Visual and radio navigational aids.
- Communication and services.
- Pointer NOTAMs. These point to additional aeronautical information. When pointing to another NOTAM, the keyword in the pointer NOTAM must match the keyword in the original NOTAM. Pointer NOTAMs should be issued for TFRs, Airshows, Temporary SUAs, major NAS system interruptions, etc.

Pointer NOTAMs



FDC NOTAMs

On those occasions when it becomes necessary to disseminate information that is regulatory in nature, an FDC NOTAM is issued. FDC NOTAMs include NOTAMs such as:

- Amendments to published IAPs and other current aeronautical charts, such as an increase in the Decision Altitude (DA) or Minimum Descent Altitude (MDA).
- Temporary Flight Restrictions (TFR). Read NOTAMs in their entirety because some TFRs may allow pilots to fly through the flight restriction if they request and receive permission. If you use online preflight resources, these provide graphics and plain language interpretations for TFRs.
- High barometric pressure warning.
- Laser light activity.
- ADS-B's TIS-B, and FIS-B service availability.
- Satellite-based systems such as WAAS or GPS.
- Special Notices.

It is important for all pilots to have access to the latest information via the NOTAM system. This is why the recent outage had such immediate and drastic ramifications for air traffic. NOTAMs can be retrieved by using your favorite flight planning app or searching online at https://pilotweb.nas.faa.gov/PilotWeb/. NOTAM information is also available enroute via ADS-B or from Flight Service.

Logbook Closed

By Jerry Proctor

Second to Last Flight

This month's article was supposed to be Goldilocks Part II. Look for it next month. I have been writing articles for both MAPA Log and The Mooney Flyer for more than several years. When someone writes that long, personal thoughts and feelings naturally flow into the pages. This article will be full of such emotions.

I started this article on 9 February 2023. I went for a flight with my Co-Pilot Wife Jana. It was her last flight in a Mooney. The picture below is before we got in the plane. She is not a pilot, but she is a good plane spotter and checklist assurer.

I'd like you to help me do a little catharsis as I write. First, a little more about my Co-pilot. She is from Thailand. Her Mother was a Royal Princess and daughter of one of the Thai Kings. Jana had an amazing childhood with her mom, often visiting the Royal Palaces. However, this ended with a separation of her mom and Dad. Jana then had a rough childhood when about age 8 she got a Stepmother; a stepmother that made Disney evil stepmothers look like Girl Scout den mothers. She was evil and mean. The other four siblings took the abuse, but not my Copilot. Even though she was the second youngest, she fought back, the best that an 8–10-year girl could. At times she ran away, as far as 60 miles to Bangkok. Her Dad, being a high government official, was good at finding her. Finally, by age 11, Jana was put on an international Airliner, by herself, and flew to San Francisco to live with a Thai diplomat. There were a number of back-and-forth trips, but she mostly grew herself up.

Fast forward to Jana being a University of Hawaii student and a friend of my roommate. I got to know her, and we were both runners. Our first date was a half marathon. After the race, I took her to Jack in the Box and somehow, she still thought I had promise. We married and she became a military spouse

and a dang good one. For those who had a military career, you know this is tough duty, being both Mom and Dad during long absences.

After 26 years in uniform, I switched to being an Army Civilian Senior Executive for another 14 years, and she managed to keep her job as a Military spouse. One of her bigger efforts was sending Misty Mate personal cooling devices, (a bit bigger than a soda can, with a mist nozzle), to deploying and deployed soldiers. Over an 8-year period, she sent 7,000.

With Army flying, the fun stops when you reach Lieutenant Colonel, because you then get to fly a desk. One evening in 2009, she said to me, "You miss flying, don't you?"

"Yes," said I.

"Why don't you buy a plane?"

There are some phrases in life you do not ask for clarification, and this is one of them. Thus, began my research, which led to my first Mooney.

Shortly after I brought Mooney #1 home, I took her for her first GA flight. I purposely picked a smooth day and only flew 6/10th of an hour. I knew I did well because when we were on final approach to homebase she said, "Is that all?"

Since then, she has flown 305.1 hours. She has experienced a significant mountain wave, flown in rain, clouds, 20 minutes of holding, turbulence of course, and she had a dependable 3.5-hour bladder. On one approach to a rainy Mooney Homecoming, the weather was significant. In clouds, 70 miles out of Kerrville, I was instructed to hold before the approach. On the approach, we broke out in heavy rain, 150' above decision height (DH). I touched down nicely and while still in the rollout, as I mentally patted myself on the back, Jana said, "Nice Landing, I'm taking Greyhound home!" Well, she didn't.

Fast forward to today and her support for two subsequent Mooneys. In the last year and a half, it became more evident that my co-pilot had a problem. She became forgetful, less dependable, and things were harder to do. Yes, the diagnosis was Dementia. I had to resign my position as a Director of MAPA SF, quit a host of other community/state support organizations and finally, I went from 12 such activities, to none. Her last long cross-country flight, which I knew I was pushing the envelope, was to South Dakota. This was the Goldilocks flight. As we were being vectored around Denver Class B airspace, she became frustrated. She threw down the headset, pulled the canula out and sat there with her fingers in her ears. It was more than a little challenging getting that under control.

Lately the flights have been very short, less frequent, and never far from homebase. Her condition has now worsened to the point that this sole caregiver can no longer keep up. By the time you read this, my Copilot will be in Memory Assisted Living – a gut wrenching decision and thing to live with. So, the below flight was her last Mooney flight. It is hard to write that fact and by far, it was not my best flight. My Copilot now has a draft flight plan for her very final flight. It will be to the West, and I am absolutely certain the destination will be where we all want to go. We all have one last flight on earth and then one more flight, to one of two places. May you join her in the very distant future in that very special place in the Sky.

Good night my future Angel. I know you will get your wings sooner than Clarence did.

It's a Wonderful Life

We're Picking Up Some Trace Icing

by Richard Brown

Ice is where you find it. Stay out of the clouds, and you will stay away from the ice. In 2021, a few weeks after passing my IFR Check Ride, we flew from our home base in Southern California to Salt Lake, but despite the new rating it was limited to a VFR flight. The forecast showed that we would be solidly in the clouds the last half of the flight, and the temperature was forecast between -2°C and -6°C. Instead, we worked our way comfortably beneath a high overcast and around the scattered snow showers.

Last month we took a trip to our place in Pagosa Springs, CO for some skiing. I always start watching the 10-day forecast ahead of those trips to see the trends, and if we would be able to fly. In the winter, going into an airport that sits at 7,663'MSL is not an option if it is going to require an IFR approach or departure. There would be clear skies for our arrival on a Wednesday, and it looked like clear skies for a Sunday departure, so the flight was a go. If the storm forecast for Monday came early, we would just leave a day early.

Saturday after a great day on the slopes and a soak in the hot springs, I sat down at the computer to plan the return flight. Other than the winds aloft headwinds which were forecast to be 30+mph, it looked like a great flight back. There would be clear skies all the way home, with a descent through layered clouds back into SoCal.

As I looked further into the forecast, there was one possible problem. The freezing level in the LA Basin started out at 10,000' in the morning, but by about 9am it was going to drop down to 5,000', and there was no way we were going to get there before 9am. Just because the temps are below 0°C is not a guarantee that there will be ice in the clouds, but that is a gamble and you better have a backup plan(s).

What to do? The cloud forecast on aviationweather.gov showed that the bases would be at 3,500' with tops at 9,000'. We wouldn't be in clouds until the descent after passing Palm Springs and the tall rocks, which meant warmer air and breaking out well before MEF (Maximum Elevation Figure). (In those quadrangles it is 1,500-1,700').

(This is where I should add a disclaimer that none of this is meant as instruction or advice). I take the threat of icing very seriously, and in the back of my mind during all winter flying is the Air Safety Institute Case Study of N1254Z. I wouldn't plan a climb up through those clouds, but a descent to warm air and clear skies seemed to be a safe option. I looked at additional forecasting sites and decided that in the morning if, the weather briefing looked good, we would make the flight. If not, we could to stop in Palm

Springs before encountering the overcast layer. Waiting an extra day in Colorado wasn't an option because Monday's storm was going to last a few days.

The weather briefing in the morning did not have any AIRMETs for icing, with the freezing level about 5,000'MSL. (I always take these forecasts with a giant grain of salt). The clouds would be layered with the Los Alamitos Army Airfield, (6 miles to the southwest), TAF (Terminal Area Forecast) at the time of our arrival showing few clouds at 2,300' and overcast at 3,500'.

We would need a fuel stop, so I had filed a VFR flight plan from Pagosa Springs (KPSO) to Holbrook, AZ (P14), a VFR flight plan from P14 to Fullerton (KFUL), and an IFR plan from the Parker VOR (PKE) to KFUL with the plan to pick up my clearance enroute. With no oxygen on board, and the winds worse at higher altitudes, I didn't want to be at 12,000' after leaving Holbrook, and if I picked up my IFR at PKE I would only needed to be at 10,000'

We arrived at Pagosa Springs airport when the FBO opened at 8:00 am so I could pay my tie down fees and then pre-flight the plane. It had frost on it so I grabbed my little broom out of the plane and brushed what I could off. During the next hour while I loaded up the plane, did our pre-flight, and dropped off our car back at the house, I was confident the sun would get rid of the rest of the frost. If it didn't, we would just wait until it did.

Sure enough, although it was -2°C, by the time I was ready to start up, the airframe was clean. The engine heater and cowl plugs had done their job and the cylinders were all between 65-70°F with the oil at 60°F. The engine started right up, but when I flipped the avionics master, nothing happened; no radios, no transponder – nothing.

My wife headed inside the FBO while I contorted my way under the dash to make sure the wires to the switch hadn't somehow come loose. Next, I removed the four screws holding the breaker panel in, to make sure the wire from the switch to the bus hadn't come loose. All the wires were perfect. About that time, my wife told me that the lady at the FBO said that happens sometimes when it's cold, but they could put us in their heated hangar for a bit and that should solve the problem.

With the master off, I cycled the avionics switch a few more times and then tried it with the master on. Everything powered up. A good friend with a Mooney based out of a **very cold** airport, told me they keep a small heater in the cabin of their plane because sometimes, you can get frost on the contacts inside the switch. Whether it had warmed up just enough, or cycling it cleared frost off the contacts, I don't know. However, we had power and were good to go.

Whenever a density altitude discussion comes up, it is usually centered around summer mountain flying. Taxiing to depart, I looked at the G5, and it was showing -2°C and a DA of 7,400'.

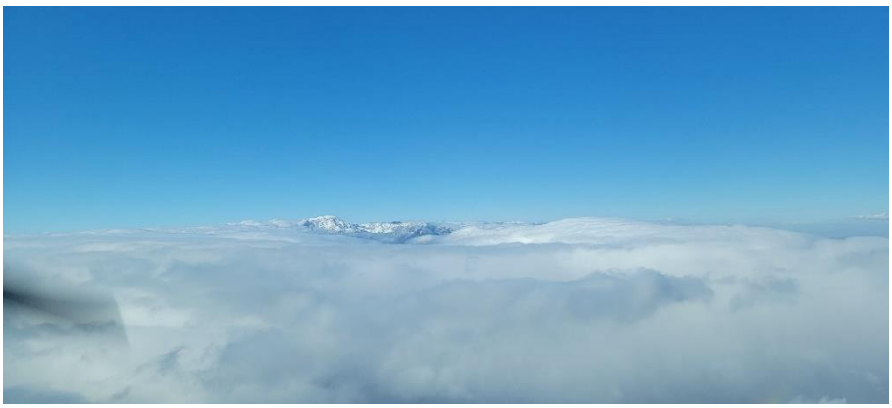
It is all "downhill" departing to the southwest and we had a quick climb from Pagosa Springs's elevation of 7,663'to our cruising altitude of 8,500'. Although the winds were "supposed" to be better than at 10,500,' we still had 50 mph headwinds for a good portion of the flight to Holbrook. The winds reported on the ground were from 180 at 17, gusting 21 mph. On final for runway 21, we were parallel to the interstate, less than a half mile off our left wing. Stabilized at 80 mph indicated airspeed, our ground speed fluctuated between 52-62 mph. Watching the runway slowly coming closer and the vehicles on the intestate zipping past us, I wasn't sure we were ever going to get there.

There was little improvement in the winds on the next leg of the trip, but it was thankfully fairly smooth flying. Before reaching the Parker VOR, I called Center to pick up our IFR clearance.

Center replied, "I have a complete re-route for you. Advise when ready to copy."
Me: "I'm ready to copy."
Center: "Cleared to Fullerton via Parker, Palm Springs, Victor 388, ACINS, that's Alpha Charlie India November Sierra, Victor 283, Seal Beach, Direct. For now, maintain VFR." *(She had previously given me a squawk on my initial call up.)*
Me: "Cleared Fullerton via direct Palm Springs, Victor 388, ACINS, Victor 283, Seal Beach, Direct, we'll maintain VFR, 878."

It seemed odd to give the clearance of a route only and leave us VFR. I'm not sure why she was keeping us VFR, but my guess it was for conflicting traffic somewhere ahead. We were at 8,500' and looked like clear skies a long way ahead, so it wasn't a current concern. A few minutes later, there had been a controller change and the new controller revised our clearance to cut the corner and go direct Palm Springs, along with "climb and maintain one zero thousand, ten thousand." I read it back and started the climb. We were now IFR in the system.

Approaching Palm Springs, we were handed off to SoCal Approach. Below us the cloud layer was developing and ahead of us, we could see the 11,503' top of San Gorgonio, north of the Banning Pass, poking above the tops of the clouds. The 10,834' peak of San Jacinto, which makes up the south side of the pass, had clouds flowing over the top like a wave breaking over a jetty at the beach. Still the air in the middle of the pass was smooth.



ATC advised us of a Southwest 737 that was descending and would be passing overhead. They were on the same airway, and it was a cool view as they went over the top of us about 3,500' higher than we were.

SoCal: "November 78878, be advised of an area of moderate precipitation, about 10 miles ahead and about 5 miles in diameter."
Me: "Thanks, we are still above the clouds, 878."
SoCal: "Roger"

A little bit later there was a transmission that was partially blocked, but it sounded like an "878" at the end of it.

Me: "Say again, was that for 878?"
SoCal: "Affirmative, did you pick up any icing through there?"
Me: "Negative, we've been above the clouds. Tops are about 9,500."
SoCal: "Thanks."

The views were incredible with the blanket of clouds below, with the tops of the mountains rising above them. To our left, the tops of the clouds looked like waves as the wind licked them up. Still, the ride was smooth. About three minutes later, there was another call for us.

SoCal: "November 78878, did you want to start down now or stay up there a little longer?"
Me: "We can stay up here for now, 878."
SoCal: "Roger."

Since we were above the clouds, I didn't see any reason to descend and sit in them. The current temperature outside was -4°C and there was a very real possibility that we might pick up a little ice once we started going down. Approach had been receiving reports of trace icing in the area and was extremely accommodating. A couple minutes later he gave me an option to descend when I was ready.

SoCal: "November 878, when you're ready descend and maintain 8,000. Let me know when you start down."
Me: "Roger, descend maintain 8,000, we'll go down now, 878."

We were about to fly into a bank of clouds at 10,000', so it was as good a time as any to start down. As we entered the clouds, I watched the water rivulets running up the windscreen and across the tops of the wings. It wasn't long before some of them started freezing up on the leading edge. When I had the plane painted, I specifically wanted a dark color on the leading edge so I could more easily see ice forming. Flying along, level at 8,000', four and a half minutes after entering the clouds, I called ATC.

Me: “Approach, Mooney 878, we are picking up a little trace icing. Requesting lower when possible.”
SoCal: “Mooney 878, left turn heading 210.”
Me: “210, 878.”

While there was no terrain in front of us, he must have been turning us for traffic. It was only 9 seconds later that he gave us lower.

SoCal: “Mooney 878, descend and maintain 6,000.”
Me: “Descend and maintain 6,000, 878.”

As I mentioned before, SoCal Approach was amazing. We began descending again while keeping an eye on the wing.

SoCal: “Mooney 878, advise if the icing gets worse.”
Me: “We’re in and out of the clouds right now, so we’ll keep you updated.”
SoCal: “If you want to level off anywhere just let me know.”
Me: “Roger”

It wasn’t a solid overcast, just layer upon layer of clouds. We would break out into the open between layers for a moment before popping back into another cloud. As we were passing 7,200’ we came out into a nice open area between layers.

Me: “Approach, we’ll level at 7,000, 878.”
SoCal: “Mooney 878, roger. Advise when continuing your descent.”

The trace amounts of ice on the wings had quickly sublimated, (melted away), in the clear air and the frost on the windscreen was gone too. Some of the most beautiful flying is between layers when they are patchy enough that the sun can occasionally break through. Such was the visual feast we were treated to

for the next bit of the flight. They say that “all good things must come to an end”, and up ahead was another wall of clouds.

Me: “Approach, Mooney 78878, we’re going to continue on down.”
SoCal: “Mooney 878, roger.”

When we went back into the cloud there was just a few of the rivulets of water that began to freeze up but once we reached 6,000’, the temps were above freezing and in moments, the wing was clean again. There was another handoff to the next sector with vectors, putting us on a base leg for the RNAV 24 into KFUL.

Before we were given the final turn to intercept final, we broke out of the clouds at 3,500’ and were treated to another incredible view. Below the clouds, visibility was greater than 10 miles. Far out to the west, the skies were clear, and we could see the sunshine reflecting off ocean. We lined up on final and after almost 5 hours and 15 minutes of flying, we touched down at KFUL. Another time, we had a decent tailwind and we made the trip in under 4 hours. That makes 5:15 seem like a long time. However, it is better than 13 hours of driving, and the views are infinitely better.

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.

Be Better than Current

It is one thing to be current, per the FARs. Most of the FARs which pertain to currency are not harsh. Just perform three takeoffs and landings within 90 days. I like that, since it is not too intrusive or too regulatory, but is it adequate?

I'd like to explore the concept of "Better than Current" or "Super Currency." Why? Because the concepts just might make you a better Mooney pilot. At least that is the hope.

Three Takeoff & Landings in 90 Days

This will keep the FAA and your insurance company happy. But let's go a step further to really tune-up your skills.

First, add an emergency power off landing. When is the last time you did this? As you enter the 45° or turn to downwind, pull the power and land on your desired target on the runway. If you are uncomfortable doing this, grab an instructor. But do this regularly. It'll tune your skills.

Next, when is the last time you did a power-on/departure stall? Again, grab and instructor and climb to a suitable altitude and perform 2-3 power-on stalls. Please have the attitude nose up as in a departure to fully experience the level of downward push required to avoid a stall.

Execute 2-3 power off stalls (or at least recover just before the stall). Try these two ways:

- Straight ahead as if you were on final approach.
- Then, try it in a left turn, as if you were turning from base to final.

These are the two stalls are the ones that kill pilots while landing.

Navigation Skills

No Magenta Line, No Problem

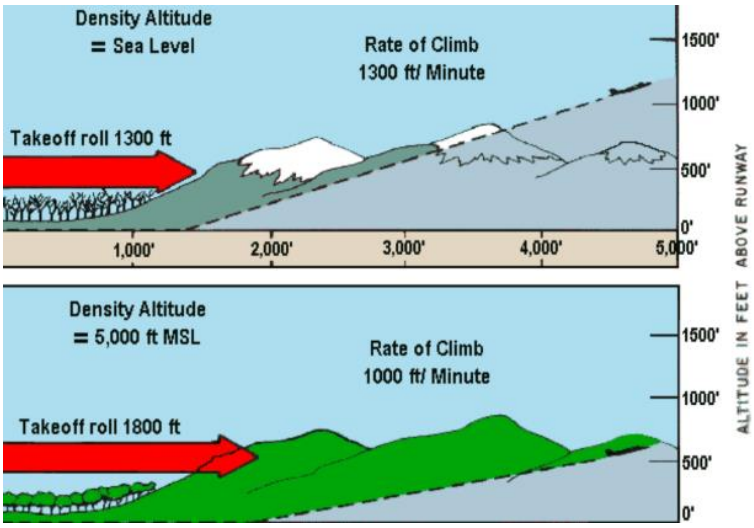
I love our cockpit avionics. It makes navigation so pathetically easy. However, when is the last time you turned off your GPS and flew a long segment? Do it. Navigate with only your backups, such as VORs. Then shut off your VORs and fly by Dead Reckoning. It's only valuable if you do this while on an unfamiliar flight segment. So, NO CHEATING 😊.

No Flap Landings

I tend to do all my landings with partial or full flaps. I'm betting that most Mooney pilots do the same. Regardless, practice no flaps landings so you are "super current" if your flaps fail. You will have a very different sight picture, more airspeed, and a lower stall speed. It's good to be up to speed on doing this so you are prepared.

Crosswind Landings

Most of the time crosswinds aren't too much of an issue, but when they are, it's good to be super current. Find a runway with challenging crosswinds and do as many landings as necessary to feel good about your landing skills. If there is any doubt, bring a CFI with you for safety and backup. While you are at it, fly departures with that challenging crosswind.



Density Altitude Flying

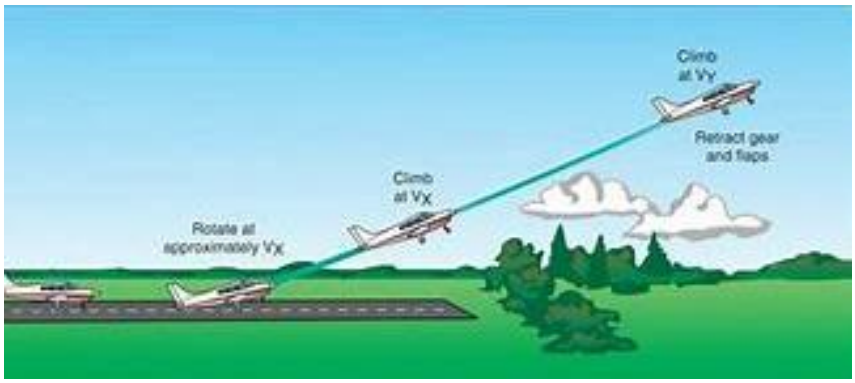
When is the last time you had to perform a challenging, high density altitude (DA) takeoff and/or landing? Go find a high DA airport and do some pattern work. High density altitude bites many pilots who have little or inadequate experience with them. You will need to:

- Consult your POH for takeoff and landing performance base on density altitude.
- Remember that you will use the same "airspeed" in the pattern right down to landing. Your groundspeed will be higher; much higher if the DA is really high.
- On takeoff you will need to refresh yourself on adjusting the mixture for that DA. If you leave the mixture full rich, you will lose a significant amount of power.

Again, if you are inexperienced and doubtful, grab a CFI.

Short Field Takeoffs/Landings

My home airport has a 6,000' runway, which I love, but it can make me lazy about putting my Eagle on my target landing spot.
You can practice short field landings and takeoffs on a long runway if you set goals of wheels up at point x and at least 100' AGL at point y.



It is better to find a short field, because seeing that length can get into your head in ways that a simulation of a short field landing on a long runway cannot.

While you're at it, do both **soft field takeoffs and landings**. When is the last time you pulled that yoke back all the way, added full power, waited for the gear to lift off, and leveled off in ground effect. It is a skill that needs some regular practice to remain good.

Summary

Watch this video for some very excellent techniques in key phases of flight. CLICK HERE

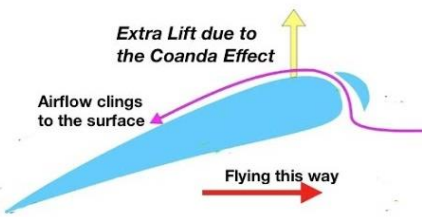
The Mooney Wing

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

The majesty of flight is in the eyes of the beholder, both in the air and on the ground. Flight captivates us and hurls us to places where others may never tread. Our magic carpet is the Mooney Aircraft. It is crafted by Al Mooney's vision of a sleek, drag limiting, lift-generating machine that slices through the skies, the nebulous white puffy clouds and even rain, to transport us to venues, far and wide.

What makes the Mooney unique is that laminar flow wing. It is a NACA 63-215 airfoil. The single spar upon which rests the fuselage, is the magic carpet itself. What makes the wing so unique, is its characteristics. It is thin, hence the knife through butter analogy. It is 36 feet long and can withstand a significant G-force without buckling. To a certain degree, the Mooney wing despises drag, but in the same context, the Mooney wing also limits lift production. Contrast that to a Bonanza or a Piper wing which has more lift generation but also a larger parasitic drag as well. Mooney Aircraft require the deployment of the Approach flaps on takeoff. This increases the wing's camber and improves the pressure distribution across the airfoil to get off the runway quickly. One needs a longer takeoff roll and perhaps a longer runway when doing a flapless takeoff, compared to the performance when approach flaps are deployed. Higher speeds exact a marginal toll, but hey, these are the inviolable aerodynamic principles. The Lift Coefficient (CL), an important such principle, is based on the fluid velocity, reference (wing) area, and the density of the air (rho). A 2.6 max CL is needed for takeoff which is beyond the capability of a very efficient high-speed wing (airfoil), hence the need for flaps on takeoff. However, there are other virtues of this wing to note. There is less noise generated by the wing, lower fuel consumption, faster airspeeds and better glide ratios compared to other equivalence general aircraft. It is a perfect example of an exquisite compromise in aerodynamic design. The wing loading for a M20TN is an impressive 19.2 lbs. per sq ft.

The Mooney wing follows the same aerodynamic principles invoked by Bernoulli and Newton and a bit of the Coanda effect, (has to do with the boundary layer). The higher the laminar airflow, the faster the speeds and that is what Al Mooney had in mind when he envisioned this beautiful flying machine. However, in turbulence, a significant disruption of that laminar flow does impact the shudder to the pilot a bit more that those flying at similar speeds with thicker leading edges. In turbulence, the "fluid" flow of air across the airfoil breaks and the sudden increase in drag requires greater thrust to maintain the airspeed. To the wise, that first shudder prepares the vigilant Mooney pilot to lower the thrust to reduce the airspeed to Va or Maneuvering Speed (128kts) with a slight increase in the angle of attack. ((Va = Sq.rt (normal category 3.8 Gs = 1.95) x Stall Speed)) The lowered



airspeed protects a sudden departure from flight via airframe failure/control surface damage and allows for the potential of a recoverable stall rather than an unrecoverable inflight breakup.
From a technical viewpoint, the Mooney (M20J) wing has a Maximum Lift Coefficient (max-CL) of 1.306 with a zero-lift drag Coefficient of 0.0192. Thus, the maximum-lift drag ratio is 13.8! Quite the achievement in physics. The M20R model has a parasitic drag coefficient of 0.298 and a lift to drag coefficient of 11.1. If one translates that to a glide, for every 6000 feet of AGL the aircraft will glide 11 miles and will remain roughly 12+ minutes in the air, based on the Best Glide speed, Weight, Air density, coarse propeller pitch and the Pilot's proficiency.

There is some disquieting information that needs to be addressed as well. The abstraction of efficiency and beauty captures our hearts, yet in that stilled moment, the unalloyed certitude ruptures to reveal the small fissures within. A thin wing captures more droplets of freezing moisture on the wing. The Mooney wing is a sharper, thinner leading edge, hence an efficient ice accumulator. The higher lift generating wings, hence thicker frontal profiles, create a sort of a buffer to the air, (also known as parasitic drag), and that prevents faster accumulation of ice. The other penalty for a thinner leading edged airfoil is demonstrated in higher density altitudes. Taking off at high density altitude airports requires a much longer takeoff roll, as it does with most other propulsion aircraft. The same thin air affects the engine with lowered thrust, (air-fuel ratio), and the propeller efficiency, (also a lift device), which spins through thinner air with lesser lift generation.

The Mooney Aircraft remains an iconic symbol of efficiency, speed, and grace. It boasts an elegant profile that has been the envy of pilots and those looking up to the skies and seeing its sleek profile recede. It ties the bond between man and machine, and earth and air, for those of us fortunate enough to fly it.
The Mooney Aircraft exacts an unquestioned proficiency in safety, from the pilot.

Reference: https://bpb-usw2.wpmucdn.com/u.osu.edu/dist/5/46763/files/2018/02/JonathanRichmond_FinalProject-1lll589.pdf

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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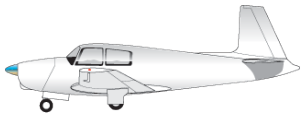

Search Mooney's new website for Service Bulletins (SBs) and Service Instructions applicable to your Mooney

Click here

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

Click here

LASAR

Fanatically Mooney. Exceptionally Fast.

For Immediate Release
Notice Number: NOTC2875

For Immediate Release - AIRWORTHINESS DIRECTIVE (AD) AFFECTING CONTINENTAL ENGINES

Docket No. FAA-2023-0172; Project Identifier AD-2023-00265-E; Amendment 39-22355; AD 2023-04-08], RIN 2120-AA64

This AD and final rule is effective February 23, 2023 and affects *any* crankshaft assembly on a Continental Engine. Due to improper installation of the counterweight retaining rings during manufacture loosening of a counterweight retaining ring may result in the loss of retention of the counterweight. If not addressed, the condition could result in catastrophic engine damage and possible engine seizure.

An inspection of the crankshaft is required prior to further flight or a ferry permit must be obtain to fly the aircraft to a place where the inspection can be performed.

For further information see https://www.federalregister.gov/documents/2023/02/23/2023-03796/airworthiness-directives-continental-aerospace-technologies-inc-reciprocating-engines

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Ask the Top Gun

Tom Rouch

Founder of Top Gun Aviation, Stockton, California

Send your questions for Tom to TheMooneyFlyer@gmail.com

In your experience, what Mooney Mods have the most positive affect?

Tom's Answer

That is a big question. What are the best Mooney Mods? I'll bet I will get a lot of arguments on my answer, but here goes.

I have installed almost all the mods available on our 69 F model. I really made it a J model with a few other mods.

I think what is important is why do mods? It is mainly to increase speed and efficiency at the least cost.

I think replacing the windshield gives the most bang for the buck. Next, is replacing the cowling with the J model cowl. It is expensive, but greatly increases the cruise speed. I went for a three-blade composite prop. I am not sure about speed gain, but it seems smoother.

We then get into many smaller mods that do add up to speed increase. For instance, the dorsal fin change, wing tips added, improved gear doors, and wing to fuselage fairings. These are mods to take you from the older pre-J models to the biggest change Mooney made – developing the J model – followed closely by the K model.

Notice that these were all airframe mods. That is because the most expensive speed mods involve upgrading the engines for more power. That is a different ball game altogether, and once Mooney came out with the 252, there were few if any mods that could improve its performance.

I do want to say that I never worked out the cost of the mods we did on the F model, nor do I have any idea of how much speed we gained for each mod. However, I will say that after several years of adding mods, our F/J model is faster than a stock J model. I started with a bellied in F model that was almost a total. It still has the original Kerrville factory stock engine.

I was securing the top cowl to the bottom cowl and the Camloc receptacle in the bottom cowl dropped to the floor. Inspecting the cowl afterwards, I noticed that the metal around each of the Camlocs was powdery and many of the other cowling Camlocs were loose.

Attached is a picture of the area with the Camloc out. You can see the corroded metal in the area forward of the Camloc.

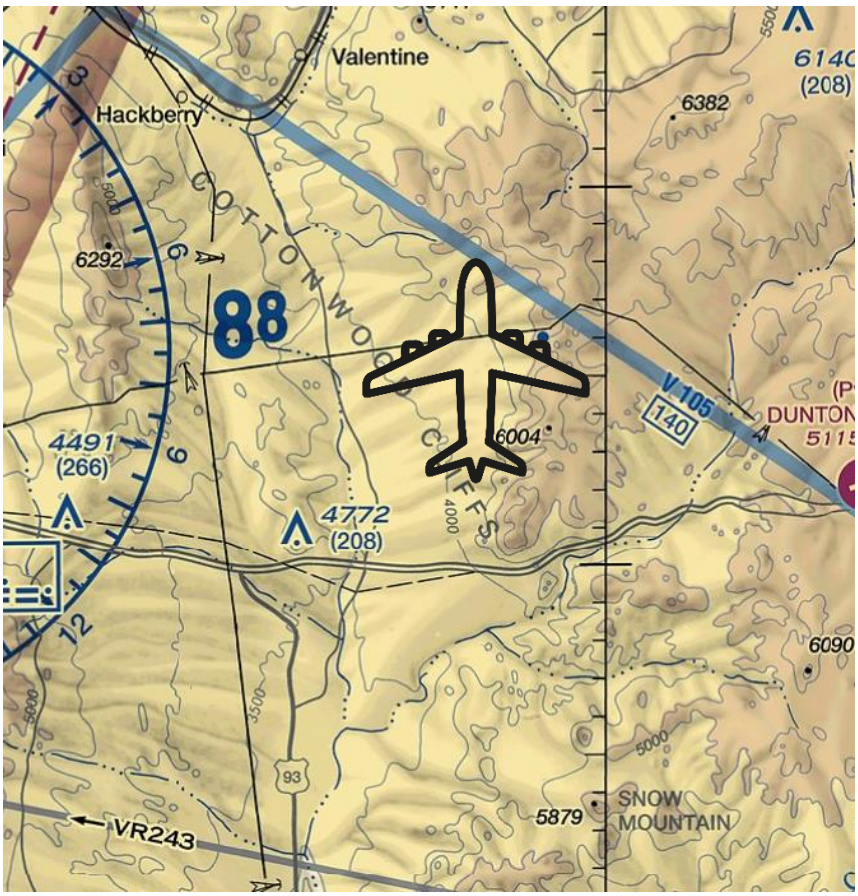
My Mooney lived in Florida for 19 years and now, "we" are in New Mexico. Tom, is this something you've seen before? I've never heard of this. Once, many years ago, a friend was flying his Mooney and the cowl came off in flight. Thinking back, maybe this was the cause.

I present this problem so other pilots will check their cowls and Camlocs and, to learn from you if this is a common occurrence. Thank you for your always great advice, Tom, and thanks to The Mooney Flyer for your great publication.

The cowl is made of fiberglass, and this is the type of wear we see with years of use. While longtime Florida planes do have problems with corrosion, it is mostly caused by the salty air. We replaced a corroded rear spar in a J model that lived in Florida.

Back to your fiberglass problem. The most wear will occur where the top and bottom join. The Camlocs that attach the cowl to the airframe are really important because when they get loose, the entire cowling will vibrate. You can check this with the cowling fully installed. Simply reach from just behind the prop and see if you can move the entire cowl. It should be very tight. Wear is normal with time, and usually, it is because rub strips become worn at the airframe section where the cowl attaches. Sometimes, some fiberglass repair should be done where there is obvious deterioration.

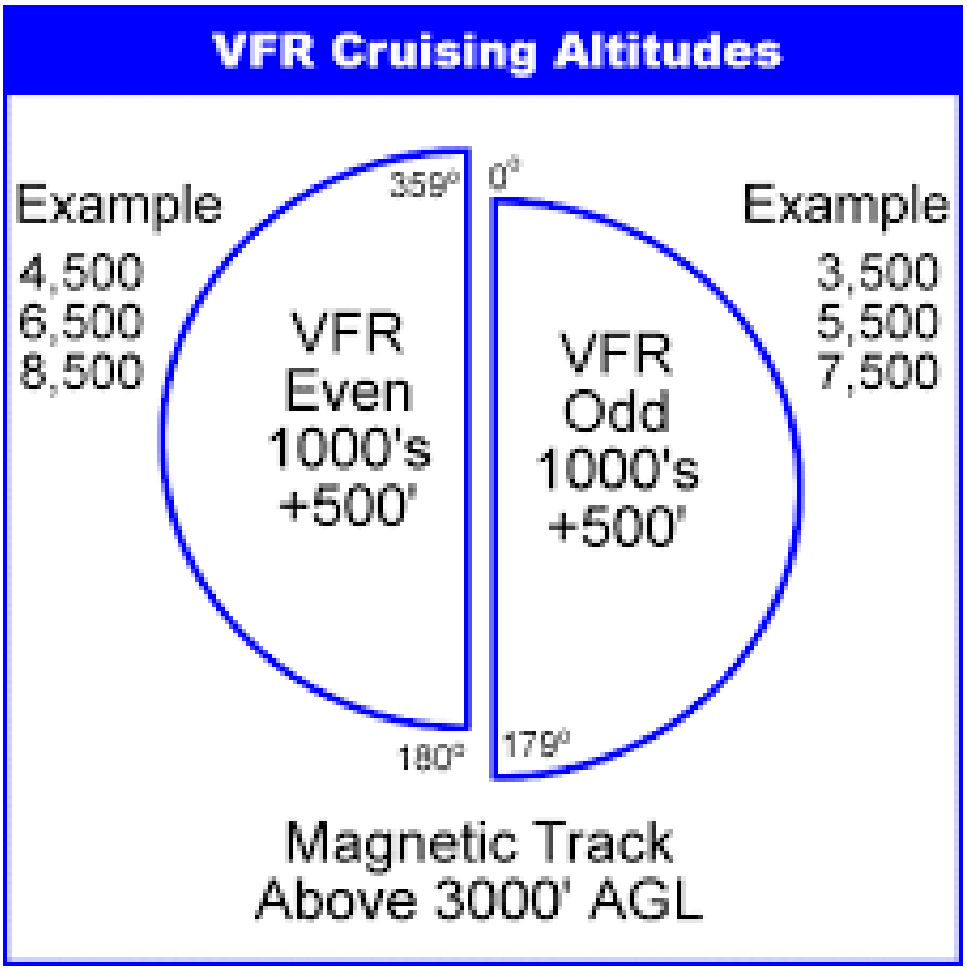
1. You're flying above 3,000 feet AGL and a magnetic course of 359 degrees. What altitude should you fly?



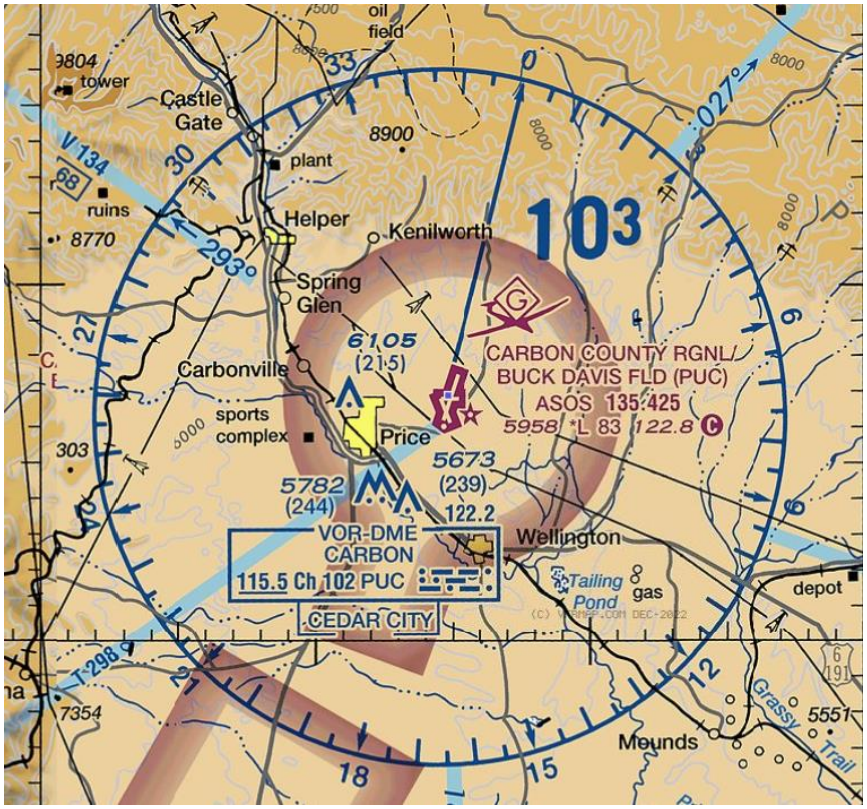
a. 10,500
b. 9,500
c. 10,000
d. 9,000

Answer is a, 10,500.

A Magnetic course of 180-359 should be flown at even + 500-foot altitudes when more than 3,000 feet AGL.



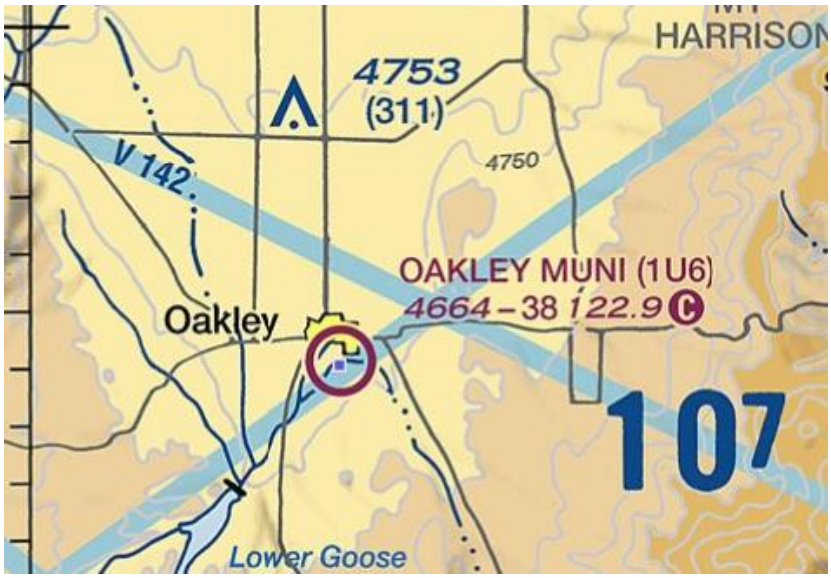
2). What frequency could you reach flight service in this area?



a. 122.2 & 115.5
b. 122.2
c. 111.5

Answer is b, 122.2. However, the underlined 115.5 indicates that the VOR frequency is Morse Code only – no voice.

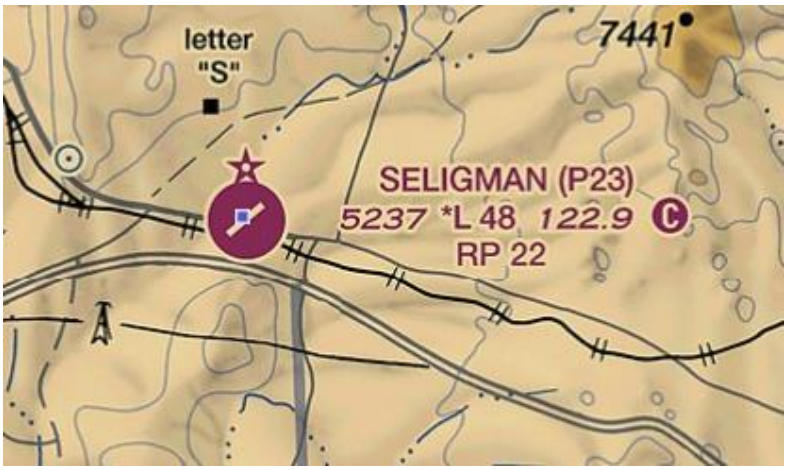
3). Oakley Muni (1U6) has what type of runway?



a. Grass
b. Gravel
c. Dirt
d. Could be gravel, dirt or grass

Answer is d, it could be gravel, dirt, or grass.
The hollow circle indicates Oakley has something other than a hard-surfaced runway. It could be gravel, dirt, or grass. You are not taking any chances, so you check using airnav.com and learn that 1U6 is a dirt/gravel runway.

5) You're landing at the Seligman airport (P23). If landing runway 22, what direction would you fly the traffic pattern?

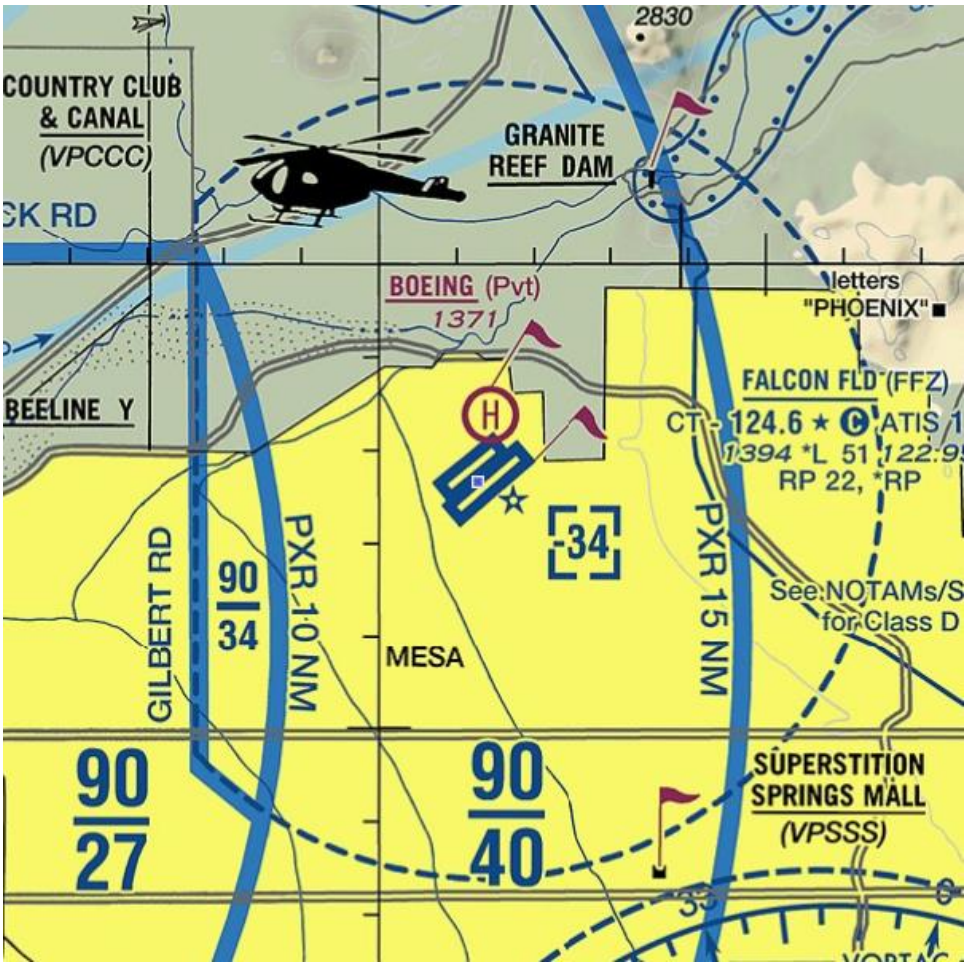


a. Left
b. Right
c. The heck with it, I'm flying a straight-in

Answer is Right.

Pilots landing 22 at Seligman should observe a right-traffic pattern.

6) You intend to overfly Falcon Field (KFFZ) as you fly north at 2,500 feet. What altitude would you fly to avoid Falcon Field's Class Delta airspace and remain clear of the Phoenix Class Bravo?



a. Above 3,500

b. 4,500

c. 3,400 and above and below 4,000

Answer is c.

Since Falcon Fields Class D extends up to but not including 3,400 feet, you could fly any altitude that is above 3,400 feet and below 4,000 feet. To have sufficient buffer altitude, you could fly at 3,700 feet.

MOONEY'S NEWEST **EXECUTIVE 21**

★ SLEEK ★ SPACIOUS ★ SPEEDY

The Executive 21 is the newest member in the Mooney line of high performance aircraft. Extra fuselage length makes room for spacious, plush comfort and extra baggage space too! Three big picture windows, down each side, afford excellent passenger visibility. The Executive 21 not only looks sleek . . . . . and spacious . . . . . and speedy . . . It is!

Top speed is 197 mph . . . . . Range over 1400 miles. This one lets you travel "first class" at economy fare with more speed on less fuel with extra built in safety advantages you won't find in other competitive aircraft. Features like Positive Control flight stability, new Brittain Turn Coordinator, tubular steel cabin protection, rugged transport "Z" type wing spar, drag free retractable step, gap sealed control surfaces, full length rudder and flush riveted wrap around wing skins . . . . . these are just a few of the extra advantages you'll enjoy in the Executive 21.

Seeing is believing . . . . . see it for sure . . . . . at your Mooney dealers now.

FLY MOONEY

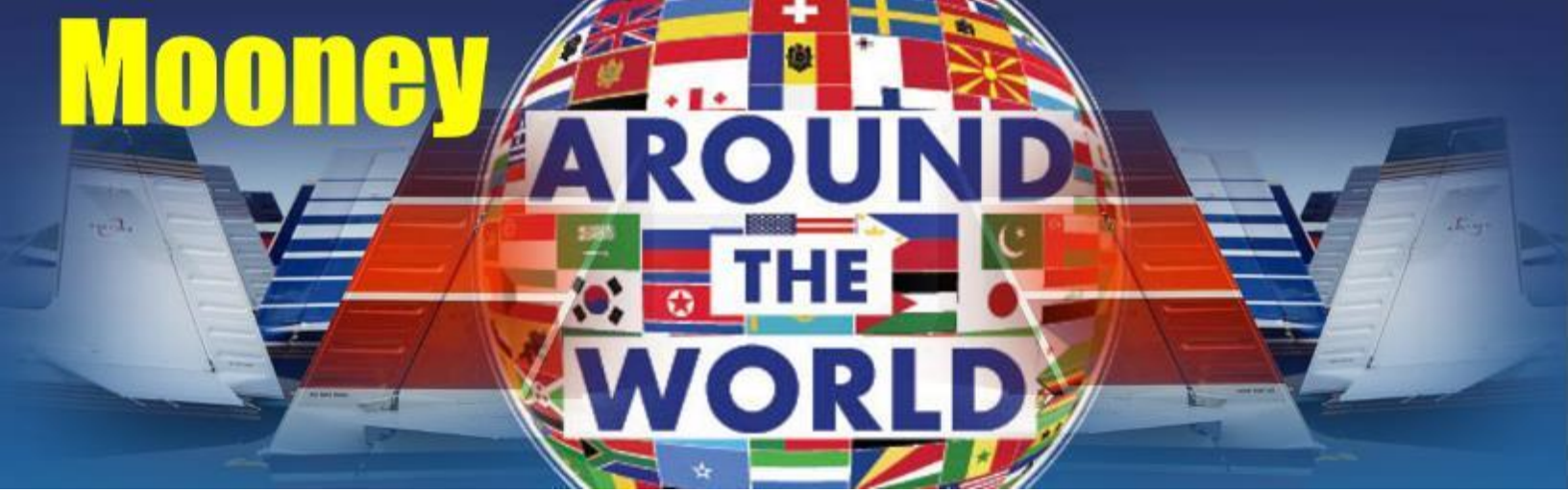
AeroLEDs Introduces New Landing Light Series

Idaho-based aerospace lighting company AeroLEDs announced February 20th, that it has added a new landing light series to its lineup. A 75-watt version of the company's SunSpot line. The SunSpot 36-4000 lights were designed as drop-in replacements for legacy 4509 and 4591 bulbs. The SunSpot 36-4509 and 36-4591 offer more than 200,000 candela and a 15-degree by 15-degree beam angle intended to improve visibility "both on the ground and in the air from up to 30 miles away."

"Already available in a 45W and 100W option, the new SunSpot 36-4000 series 75W LEDs offer the same trusted reliability but top the charts with the highest candela in the industry for a **PAR36** LED landing light," AeroLEDs said. "SunSpot 36-4509 and SunSpot 36-4591 are a safety upgrade that is FAA-PMA/STC approved for use in virtually any aircraft that requires a PAR36 lighting configuration."

The SunSpot 36-4000 series also includes the 36-4509-H and 36-4591-H models, which come with a built-in pulse mode. Weighing 11.2 ounces, unit price for the SunSpot 36-4509 and 36-4591 is $349 for the standard version and $400 for the -H models.

Designed and manufactured in Boise, Idaho, AeroLEDs lights are rated for more than 30,000 hours of continuous use and come with a five-year warranty.



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* **Mar 11:** Vero Beach (VRB) **April 8:** Flagler (FIN)
MOONEY SAFETY.com	**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/
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	**June 24 – 25**: MooneyMax Aviation Conference, Longview, TX Registration opens March 1 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.

The Mooney Safety Foundation Pilot Proficiency Program Goes West to Henderson, NV 14-16 April 2023

The old cry of, "Go West young man/and woman," applies now to the much-acclaimed Mooney Safety Foundation's Pilot Proficiency Program (PPP). Come over to the desert Southwest and engage in special, type specific Mooney training.

Henderson, NV traces its roots back to early World War II when Magnesium was discovered in abundance and WWII provided a huge demand. Magnesium is essential for munitions and strengthening aluminum and engine parts. In the early 1940s, Henderson boomed into a town with thousands of workers living in company housing, all focused on the production of magnesium. So much processing was going on, that for the electrolysis process, the mine used 25% of the still young Hoover Dam's electricity production. All in all, Henderson produced 25% of all magnesium for the war. Fast forward a few years to 1947 and the word "bust" is appropriate. However, good for us, Henderson didn't dry up and blow away. Today it is a thriving satellite city to Las Vegas and is the second largest city in Nevada. While the flying will be great at the PPP, also consider arriving early or staying longer to visit one of America's biggest entertainment Meccas.

We will be based at Henderson Executive airport, KHND, a short 7.5 miles south of KLAS. Be careful coming in, because when the tower asks you to not fly too far north on the Runway 17 downwind, they really mean it! Our host FBO is Henderson Executive (702) 261-4800. The airport has two parallel 17-35 runways. There are some interesting approaches, and I will let you research those. This area provides plenty of satellite airports and lots of open blue sky. April is a great month to come to the Southwest.

Our lodging will be at Best Western Plus, Las Vegas South Henderson, 3041 Rose Parkway, Henderson, NV 89052. Call them at (702) 568-0027, referencing the Mooney Safety Foundation for the special room rate of $159 plus tax. Please make your reservation early because the special room rate can go fast. Please do all you can to make the trip.

Through significant belt tightening, the Mooney Safety Foundation still offers the PPP for $925. This rate has not gone up in many years. It is a bargain, and the reviews confirm this. You will be trained by very experienced Mooney instructors who have your proficiency as their one and only goal. Has it been a while since you turned your Mooney into a simulated glider, all the way to the surface? This is the event to do that and more!

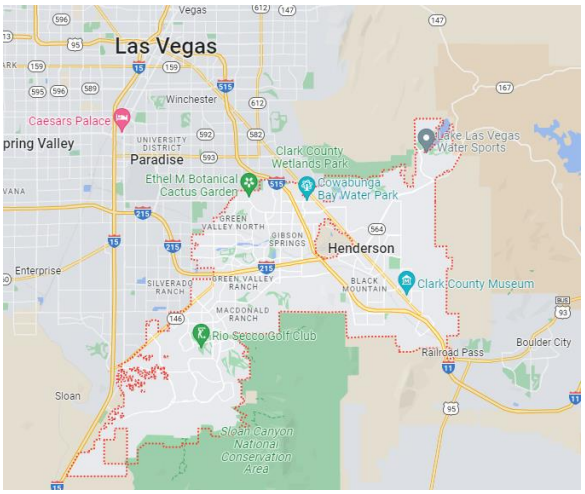
Friday's lunch is free and there is an evening banquet on Saturday night where we gather, have comradery and swap airplane stories. The banquet is not included, but it is always well attended. Spouses are encouraged to come to the event and enjoy the sights and sounds of this special area. For those who have not been to a PPP, Thursday is the arrival date. We start early on Friday with most of the classroom instruction and possibly some evening flights. You will experience some interesting and well laid out classroom instruction. Then, much of Saturday is spent flying. Each instructor has two students, and you will receive approximately four hours of outstanding Mooney training. Most can expect to accomplish a Flight Review and an Instrument Proficiency Check. Additionally, the Mooney PPP is approved for FAA Wings credits.

Come one, come all to the next Mooney SF PPP. Make your reservation soon. The number is (210) M289 6939, or email her at lelahughes49@gmail.com

Safety Is No Accident.

Mooney Safety Foundation 2023 Schedule

Henderson, NV – April 14 – 16	Lexington, KY – June 9 – 11
Westfield, MA – Sep 8 – 10	Tupelo, MS – Oct 13 – 15



To learn more about flying at Henderson and the Las Vegas area, watch From the Flight Deck – Henderson Executive Airport (HND),

HERE

Learn more about Henderson's FBO, Henderson Aero, HERE

TMF PRODUCT REVIEW

GlobalFix V5 EPIRB

The new ACR GlobalFix V5 AIS Emergency Position-Indicating Radio Beacon is an innovative EPIRB with a unique feature set. The addition of an AIS alert provides the easiest and quickest path to rescue while the included Return Link Service (RLS) functionality provides a welcome sense of security by providing direct to beacon confirmation that your distress message has been received. Adding Near Field Communication (NFC) to the mix allows for smartphone connectivity and access to data and product interaction that has never before been available. This advanced feature set makes the GlobalFix V5 perfect for mariners whether coastal cruising, working offshore or crossing oceans.

This is the most advanced EPIRB (Emergency Position Indicating Radio Beacon) available. The new ACR GlobalFix V5 EPIRB combines 406 MHz satellite connectivity with Automatic Identification System (AIS) functionality. This means that when the EPIRB is activated not only does it transmit your emergency signal to the global Cospas Sarsat satellite rescue system, but it broadcasts an AIS safety message on VHF frequencies that can be seen immediately by any AIS equipped vessel nearby. Other great features include Return Link Service (RLS) technology that provides visual confirmation to the user that their distress message has been received, a 121.5 MHz homing signal, and visible and infrared strobe lights for easy target identification at night or in poor visibility. Another new feature is Near Field Communication (NFC) which allows users to monitor their EPIRB using a smartphone App. ACR is the global leader in marine safety and rescue technology and the new GlobalFix V5 GPS EPIRB with AIS combines the durability and reliability they are known for with advanced technology designed to speed rescue response time.

Faster Rescues through the Pairing of Global and Local Rescue

The ACR GlobalFix V5 EPIRB accurately derives its position anywhere in the world using GNSS (GPS, Galileo, Glonass) positioning networks. Upon activation 406 MHz distress transmissions relay the GPS EPIRB (GPIRB) position, accurate to within 100 meters, to the worldwide Cospas Sarsat search and rescue satellite network. EPIRB identifiers and position information is relayed to ground stations through the satellite system initiating rescue operations. With advanced AIS technology now incorporated into the

EPIRB, once activated an AIS signal is transmitted so that nearby vessels outfitted with an AIS transponder are instantly notified of the EPIRB location. AIS equipped vessels within VHF range of the EPIRB will see a safety message on their screens including MMSI vessel identification. Vessels in the area where the EPIRB has been activated can then start rescue and recovery operations immediately without having to wait for emergency response from the applicable SAR authority. AIS also allows local responders to easily pinpoint the EPIRB's location which is presented as an AIS target on their onboard display. Nearby vessels with onboard AIS can navigate directly to the EPIRB by selecting the AIS target. This incredible technological advancement will speed recovery times which is sure to save lives.

Smartphone Connectivity utilizing Near Field Communication (NFC)

NFC (Near Field Communication) technology allows users to access EPIRB diagnostics using their smartphones. When a smartphone is placed adjacent to the GlobalFix V5 EPIRB the ACR Product App automatically opens providing access to EPIRB data. Beacon status information in the app includes current battery life, number of self-tests completed, number of GNSS tests completed, and the amount of time the EPIRB has been activated. Detailed information on each self-test and GNSS test performed by the device is also available. GNSS tests show a map view pinpointing where the previous test was performed, the date and time of the test, how long it took the EPIRB to get a fix on the GNSS coordinates, the number of satellites used to obtain that fix, and the accuracy of the fix. Easy App connectivity with NFC allows users to easily check the status of all EPIRB functions to ensure it is working properly.

Return Link Service (RLS)

Return Link Service tells whoever triggers the EPIRB that the distress message has been delivered. An RLS signal sent back through the Galileo satellite network confirms that the distress message along with the precise beacon location and identifiers have been detected. An easy to see flashing blue light indicates the EPIRB's successful reception of the Return Link message from the Galileo satellite network. The comfort of knowing rescuers are aware that an EPIRB has been activated and that they have its location, helps reduce the stress associated with mayday situations.

ACR specializes in electronic rescue devices and other life-saving products designed for both professional and recreational mariners. With the addition of AIS, the innovative new ACR GlobalFix V5 EPIRB provides the easiest and quickest path to rescue. Return Link Service provides a welcomed sense of security knowing that your distress message has been received and Near Field Communication provides access to data and product functionality that has never before been available to any EPIRB customer. The new and advanced feature set of the GlobalFix V5 EPIRB makes it perfect for mariners whether coastal cruising, working offshore or crossing oceans.

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 $3,500 REDUCED

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


Rusty Pilot or Old Pro
INSTRUMENT PROFICIENCY CHECK
Study Guide
J D Price, CFII, MEI, ATP
FLIGHT REVIEW
Study Guide
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