

The Mooney Flyer

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

February 2023



Editors

Phil Corman | Jim Price

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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



Random Thoughts

This month my mind is all over the place with random thoughts that might be valuable.

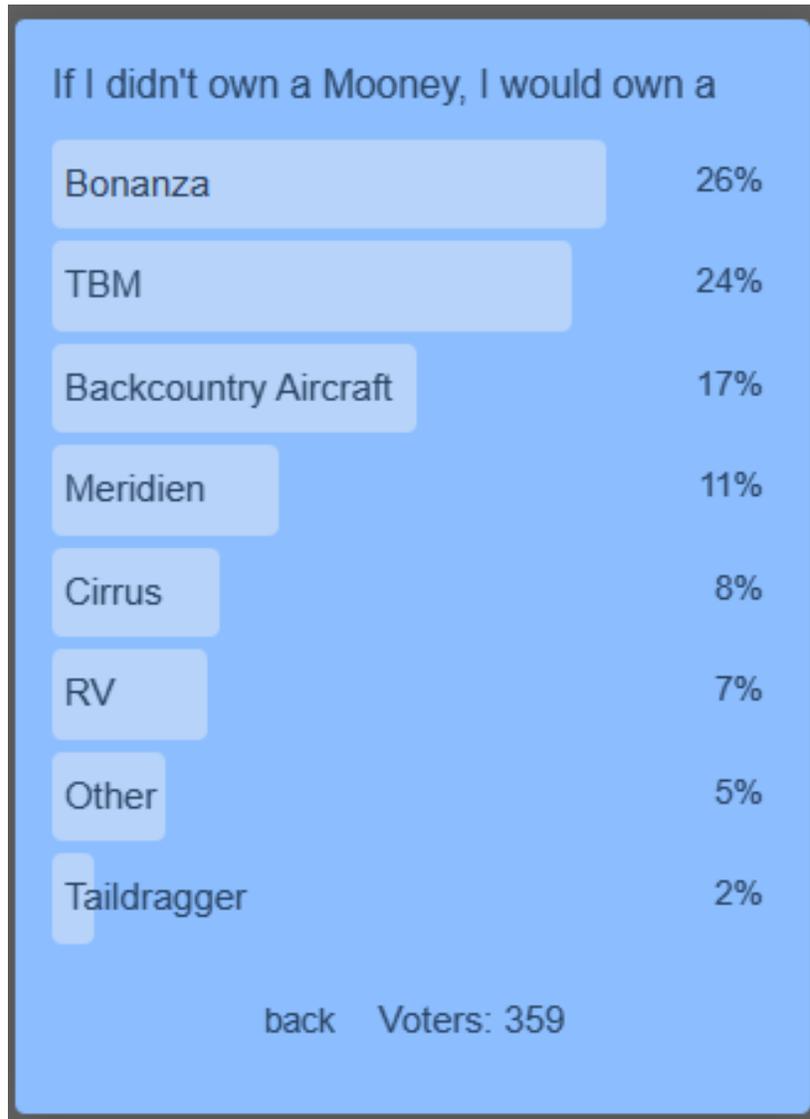
Line Up and Wait

I never liked it when ATC went from “Position and Hold” to “Line Up and Wait”. It sounds rude to me. But that is not my random thought. I have heard pilots holding short of the runway at “uncontrolled” airports call on the radio and say, “Lining Up and Wait on Runway X.” I guess they are waiting for previously landed aircraft to clear the runway, but I think they are wrong to do so. I don’t think that is wise to do that at an uncontrolled field. I was taught a hundred years ago not to take a runway at an uncontrolled field until I could depart immediately. To me, it is not safe!

And while I’m on this short rant, there is no “active runway” at an uncontrolled field. There are only runways in use. OK there, now I feel much better.

Random Engine Thoughts

- A closed throttle and low, idle rpm increase spark plug deposits. Deposits that form on the insulator core nose are two basic types: carbon and lead. These deposits are conductive, and if formed in sufficient quantity, provide a leakage path from the center electrode conductor back over the core nose to the ground.
- To avoid spark plug fouling, the most desirable temperature range is 900°F – 1300°F at the spark plug electrode tip.
- When you cycle the prop to do the governor check, there is no need to let the engine speed drop more than 50 rpm. Cycling the prop loads the engine.
- Don’t reduce climb power after levelling off until you reach cruise speed. Cruise speed will be obtained more quickly this will help keep the engine cool. Fly for five minutes or so at the end of the climb before you do your final cruise leaning. This allows the airspeed to build and engine temperature to stabilize.
- We all know we should keep our CHTs below 380°F – 400°F. You should also remember to keep your CHTs warmer than 150°F.
- Avoid long let-downs with the prop driving the engine. This causes ring flutter and broken piston rings. High RPMs increase the up and down inertia load on the rings in the piston ring grooves. A long descent at high rpm and low manifold pressure is hard on the piston rings.
- Detonation is caused by the spontaneous combustion of fuel in the combustion chamber instead of the desired even burn that normally occurs. Detonation creates high CHTs and low EGTs.
- Pre-ignition is the ignition of the fuel while the compression stroke is occurring, but much earlier than intended (premature ignition). Incorrect spark plugs can cause pre-ignition.



Next month's poll: "Ownership Demographics" [**CLICK HERE**](#) to vote

Mooney Instructors

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



Your review of the iFly GPS app fails to mention that charts are only available for the US. Not much good for flying in Canada. Every one of the flight planning apps that you mention are expensive, or expensive and subscription based. As a long time Mooney owner and charter member of the Cheap Ba***** club, I'm sure that free is good. Therefore, I recommend FltPlan.com, and its companion app, FltPlan.go. Full featured, easy to use, free to own and to update...what's not to like?

Happy New Year, Chris S

Phil, that is a well thought out percentage of piloting. I've often thought it was a fraction of a percentage. Piloting and knowing airplanes may be one of the rarest hobbies. Makes me like it even more knowing about aircraft and the hours I've put in. Like an honorable thing....

Steve H

“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





AD 2023-02-04, effective February 13, 2023.

Airworthiness Directives; Mooney International Corporation Airplanes

Models:

- [Small Airplane | Mooney International Corporation | M20C](#)
- [Small Airplane | Mooney International Corporation | M20D](#)
- [Small Airplane | Mooney International Corporation | M20E](#)
- [Small Airplane | Mooney International Corporation | M20F](#)
- [Small Airplane | Mooney International Corporation | M20G](#)

Final rule; request for comments.

The FAA is adopting a new airworthiness directive (AD) for certain Mooney International Corporation Model M20C, M20D, M20E, M20F, and M20G airplanes. This AD was prompted by reports of the hybrid material elevator balance weight cracking. This AD requires inspecting to determine whether a certain elevator balance weight is installed. If installed, this AD requires inspecting each affected elevator balance weight for corrosion and cracking, and depending on the findings, either replacing each affected elevator balance weight with a non-hybrid (lead) elevator balance weight or repetitively inspecting each affected elevator balance weight. This AD also prohibits the installation of an affected elevator balance weight on any airplane. The FAA is issuing this AD to address the unsafe condition on these products.

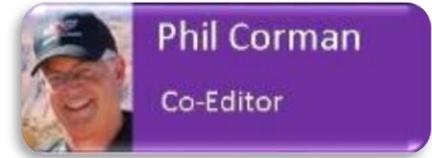
The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of February 13, 2023.

The FAA must receive comments on this AD by March 13, 2023.

CLICK HERE → <https://drs.faa.gov/browse/excelExternalWindow/FR-ADFRAWD-2023-01730-0000000000.0001?modalOpened=true> for more details and instructions on how to comment.

Losing Concentration or Focus

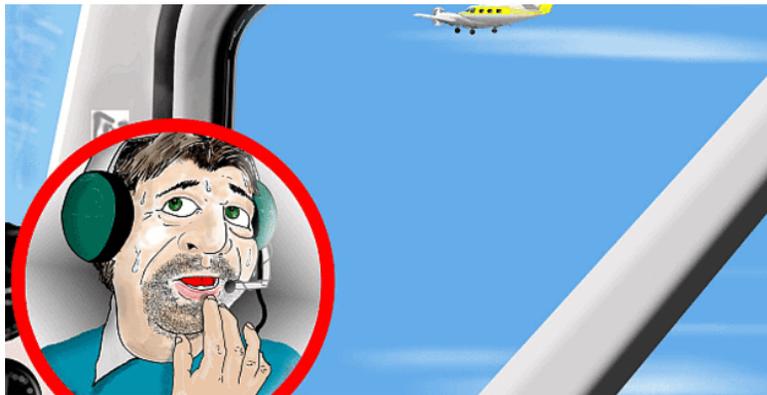
The other day, I was listening to a Mike Busch Podcast. It involved a student pilot flying with his instructor flying near Santa Cruz. Both were late to recognize that the engine was losing power. When they finally realized their situation, they missed the primary indicator which was Oil Pressure, now reading "0". Then, they tried all sorts of stuff to fix the problem. The propeller had stopped. To me, that seemed like a seized engine, (i.e., No oil pressure and a stopped propeller). However, the CFI attempted several times to restart the engine. Had he turned immediately and/or recognized the situation earlier, he might have been able to land at nearby Watsonville airport. Instead, he put it down on a beach.



Phil Corman

Co-Editor

To me, this incident shows a lack of concentration and focus on what was happening. When we are about to fly, or are flying, we should give it 100% of our attention. I'll break the analysis down into the usual phases of a flight and highlight good concentration and focus. We fly so often and the vast majority of the time, the flight is amazing and uneventful. My wife is a retired Deputy Sheriff, and she often compares the similarities of concentration and focus with a Sheriff Deputy and a pilot. The vast majority of the time, a deputy goes out on patrol, and it is uneventful. After hundreds of patrols, you can become



lackadaisical regarding the upcoming patrol. It's similar in flying. She says the difference between life and death is to be prepared for a challenging event that may occur at any time. It's a mindset to be ready for a significant problem that has not occurred before. The event that can really bring this home to each of us is the rare occurrence of an engine failure on takeoff.

Pre-Flight Planning

The FAR is clear. The PIC needs to know everything about the intended flight. Wow! In general, that's difficult to gauge. Are you vigilant about doing a thorough pre-flight brief? It's become significantly easier with the current Electronic Flight Bags like ForeFlight and Garmin Pilot, etc.

Do you do your pre-flight briefing with focus and intent? Do you have a systematic method for reviewing all the key data points, relevant to the flight? Weather, AIRMETS/SIGMETs, PIREPs, enroute conditions, Destination conditions, Alternates? It's noteworthy to observe that we have Checklists for almost everything in aviation, but I don't usually see a Checklist for doing a comprehensive pre-flight briefing. Are you focused on this or are you multi-tasking with distractions? This almost sounds pedantic, but you can easily lose focus on this since you have performed countless pre-flight briefings.

Pre-Flight Check & Runup

Distractions are the main culprit here. Bad weather might be pushing you to do an abbreviated or quick check. Additionally, your passengers might be talking or distracting you. In all cases, it's almost like you should have a sterile environment as you perform your walk-around. Another concern is that you have

done the walk-around so many times, it's almost a subconscious event. Do not let that happen. Maintain your concentration and focus.

If your Mooney hasn't been flown for a while, do you check for additional items, such as bird nests under the cowling or mice in the tail cone? Do you sump all three fuel points, looking for water or debris? Please treat each check as new and fresh, rather than something you have done hundreds or thousands of times.

After any type of maintenance, how do you perform a pre-flight walkaround? I think it's worth a slower more comprehensive check. After takeoff, it might be wise to circle your home field once or twice, confirming that all systems check out perfectly.

Takeoff & Departure

Nearly every takeoff and departure is uneventful, and this can lull us into complacency. Like a deputy sheriff on patrol, where the vast majority of the time, everything goes hunky dory, vigilance and focus are the main thing.

On every takeoff and departure, I mentally prepare myself for the possibility of an engine failure. If it fails, it will NOT be a surprise to me because I'm READY! And this is critical, requiring a "Controlled Response". A controlled response is one that eliminates thinking about the situation and responding without delay. In a nose up attitude flying at V_x or V_y speeds, you don't have time to think, but you have to aggressively push the nose down to avoid a stall/spin, which at lower altitudes may not be survivable. This phase of flight requires the utmost concentration and focus.

Cruise

Most of your enroute time involves enjoying the flight, talking with your passengers, etc. But this phase can also lull you into complacency. After all, how many flights have you made without incident or emergency?

Here, multitasking is fine, but your 100% priority is the flight. Constant scanning for traffic is a chief priority. If VFR, rely on seeing & avoiding will keep you safer than your TIS-B traffic from your very cool ADS-B IN unit. ADS-B does not show all traffic. For instance, traffic that does not have a transponder will not display. Also, if you are not receiving a TIS-B broadcast, then you will only see aircraft with ADS-B OUT. It's easy to become a little complacent with ADS-B traffic. Resist.



Another priority area requiring your attention is all the indications inside your cockpit. Regularly scan your Manifold Pressure, Propeller RPM, Engine Monitor outputs, especially CHTs and EGTs. Your senses are a valuable set of indicators. You might smell a fuel leak, electrical burn, etc. Listen to changes in the smooth operation of your engine. You might feel a slight variation in your engine or propeller.

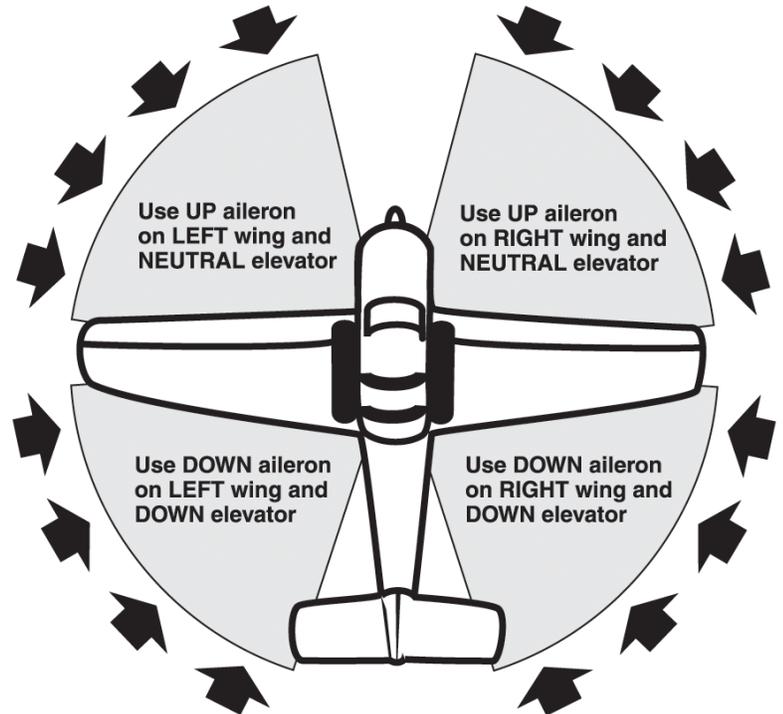
Focus and concentration during this phase of flight might be the difference between landing at an airport rather than a beach. Enjoy the views and enjoy your passengers, but first, maintain vigilance.

Landing

Entering the pattern with a Mooney, you need to be aware that you in an airplane that is very quick, and you need to think a little more about a smooth pattern entry among the slower aircraft.

Distractions in the pattern are also the #1 cause of gear-up landings for Mooney pilots. Checklists are significant here, but distractions ruin your execution of that checklist.

Especially in the pattern, do NOT rely on traffic displays. Focus on your eyes, seeing and avoiding. Do you check in all directions, expecting aircraft in an unexpected location? Do you plan for an aircraft that is NORDO? And do you check for an unannounced aircraft on a straight-in final? This was not the case at Watsonville several months ago when a Cessna 150 turned base, then final, in front of a high-speed twin on a straight in final. Exercise vigilance and concentration.



Taxiing Back to the Hangar

It's often said that you need to continue flying while you exit the runway and taxi to your hangar or tiedown. One reason is that the wind has not suddenly stopped, and it can still move your Mooney in unintended directions. Did you lean your mixture to almost cutoff so you can prevent loading up your sparkplugs? There are still lots of unexpected events that could ruin the final phase of your amazing flight.

Summary

Overwhelmingly we conduct most flights without any abnormal incidents. So, here is the challenge: Even though you probably will have a great experience from pre-flight planning to the taxi back to the hangar, please mentally prepare yourself to maintain focus on flying and readiness for the unexpected.

A Summary of 10 Mooney Accidents that were Reported in the 1st Quarter of 2021



Jim Price
Co-Editor

In 2021, there were 54 Mooney accidents reported to the NTSB. For this report, we will look at ten accidents that occurred in the first quarter of 2021. We will look at the remaining 2021 reported accidents in future issues of The Mooney Flyer. The purpose of this report is not to tread on tender feelings. It is meant to help us learn and become better Mooney pilots. Many accidents happen because of mechanical failures, and some

happen because of pilot error(s). We can mitigate those errors by embracing a Code of Conduct that emphasizes the importance of situational awareness, risk management, and prudent operating practices such as individually tailored, written personal minimums.

Sometimes, accidents just happen. However, in retrospect, many accidents could have been prevented. As you read about each accident, ask yourself, “What could the pilot have done to prevent the accident? What will I do in the future to prevent an accident?”

January 26, M20C, Clearwater (CLW) Florida – Aircraft sustained a hard landing causing propeller damage

LANDED HARD ON RUNWAY 16, RESULTING IN A PROP STRIKE. POB: 1, INJURIES: NONE

February 4, M20R, North Kingston (OQU) Rhode Island – Landing with a Deflated Nose Tire – Prop Strike

THE PILOT STATED FINAL APPROACH TO LANDING ON RUNWAY 34 AT KOQU WAS NORMAL. THE TOUCHDOWN ON THE MAIN GEAR WAS SMOOTH. UPON LOWERING THE NOSE GEAR, IT SUDDENLY FELT LIKE THE AIRCRAFT WAS ON A GRAVEL RUNWAY. AS THE WEIGHT OF THE PLANE SETTLED FORWARD. ATTEMPTS TO HOLD THE PLANE STRAIGHT WITH RIGHT RUDDER FAILED AND THE AIRCRAFT VEERED TO THE LEFT. APPLYING BACK PRESSURE TO KEEP WEIGHT OFF THE FRONT GEAR DIDN'T HELP ALIGNMENT. THE AIRCRAFT STRUCK A RUNWAY LIGHT WITH THE PROPELLER. AFTER BRINGING THE AIRCRAFT TO A STOP ON THE RUNWAY, THE PILOT REQUESTED A TOW TO THE RAMP. POST-FLIGHT INSPECTION REVEALED THE NOSE WHEEL SKEWED TO THE SIDE WITH A DEFLATED/COLLAPSED NOSE TIRE AND ONE BLADE OF THE THREE-BLADED PROPELLER DAMAGED.

February 13, M20, Socorro (ONM) New Mexico – Hard Landing, Right Landing Gear Collapsed and Prop Strike

THE PILOT EXPERIENCED A HARD LANDING IN GUSTY CROSSWINDS, CAUSING THE RIGHT MAIN LANDING GEAR TO COLLAPSE, RESULTING IN A PROP STRIKE AND SUPERFICIAL DAMAGE TO THE BELLY OF THE AIRCRAFT. VISUAL METEOROLOGICAL CONDITIONS PREVAILED AT THE TIME, AND A VFR FLIGHT PLAN WAS NOT FILED. THE FAA CERTIFICATED COMMERCIAL PILOT WAS NOT INJURED. THE FLIGHT ORIGINATED AT THE SANTA TERESA, NM, AIRPORT, KDNA.

February 23, M20E, Livermore (LVK) California – Loss of Power after Takeoff – Landed on Freeway



THE AIRCRAFT, WITH TWO SOULS ONBOARD, DEPARTED LIVERMORE MUNICIPAL AIRPORT, (LVK), CALIFORNIA, RUNWAY 7L ON A PERSONAL FLIGHT. UPON REACHING APPROXIMATELY 200 FEET AGL THE PILOT REPORTED TOTAL LOSS OF ENGINE POWER. THE PILOT MADE AN EMERGENCY LANDING ON A FREEWAY OVERPASS STRIKING A SINGLE VEHICLE AFTER LANDING. THE PILOT AND PASSENGER WERE UNINJURED. THE DRIVER OF THE AUTOMOBILE SUFFERED MINOR INJURIES. THE AIRCRAFT WAS SUBSTANTIALLY DAMAGED AND RELOCATED TO THE LVK AIRPORT. THE AIRCRAFT LANDING GEAR, RIGHT WING, AND PROPELLER WERE DAMAGED.

Engine Examination: Rust and a black material was found on the fuel injection servo filter plug. The fuel flow servo diaphragm contained a hard grey sludge. When the fuel injection servo was functionally tested, no fuel flow was observed. The servo was disassembled, and corrosion and debris were identified in the regulator center body and diaphragm assembly. It is likely that corrosion and debris restricted the flow of fuel to the engine, resulting in fuel starvation and the total loss of engine power.

Probable Cause: A total loss of engine power due to fuel starvation as a result of corrosion and rust in the fuel injection servo. <https://aviation-safety.net>

February 26, M20C, West Point (FYJ) Virginia – Gear up Landing – Prop Strike

WHILE CONDUCTING A SIMULATED POWER OFF LANDING, AIRCRAFT LANDED WITH GEAR RETRACTED FOR UNKNOWN REASONS. POB: 2, INJURIES: NONE

March 4, M20K Jonesboro (JBR) Arkansas N231BL – Loss of Power Prior to Lift Off

THE PILOT DEPARTED JBR FOR A LOCAL FLIGHT. THE AIRCRAFT WENT OFF THE END OF THE RUNWAY INTO A COTTON FIELD. THE AIRCRAFT SUSTAINED MINOR DAMAGE INCLUDING A PROP STRIKE. NO ONE WAS INJURED.

March 9, M20J Concord-Padgett Regional (JQF) North Carolina N4211H – Gear up Landing – Pilot Distracted by High/Low Voltage



AT APPROXIMATELY 1130 LOCAL TIME, A 1978 MOONEY M20J, EXPERIENCED A GEAR-UP LANDING ON RUNWAY 2 AND THE RUNWAY CONDITIONS WERE DRY. **DURING AN INTERVIEW OF PILOT**, HE STATED THAT ON APPROACH TO JQF, HE OBSERVED A HIGH/LOW VOLTAGE LIGHT AND LANDED THE AIRCRAFT WITHOUT FOLLOWING THE LANDING CHECKLIST.

March 21, M20C N73DX Lawrence Municipal Airport (LWM) Massachusetts – Landing Gear Collapsed after Touchdown – Extension Lever not Locked.

POST ACCIDENT FINDINGS: THE LANDING GEAR WAS EXTENDED BUT THE LANDING GEAR EXTENSION LEVER WAS NOT ENGAGED IN THE DOWN AND LOCKED POSITION.

March 24, M20B Lordsburg, New Mexico – Encountered Icing/Loss of Power

AT 0021 MDT, THE MOONEY WAS ON A CROSS COUNTRY FLIGHT FROM FORT STOCKTON, TX (FST) TO TUCSON, AZ (TUS) UNDER INSTRUMENT FLIGHT RULES. AFTER ENCOUNTERING INSTRUMENT METEOROLOGICAL WEATHER AND RIME ICE SOUTH OF LORDSBURG, NM (LSB), THE PRIVATE INSTRUMENT RATED PILOT INFORMED ABQ AIR ROUTE TRAFFIC CONTROL (ZAB) THAT HE WAS ICING AND LOSING ENGINE POWER. THE LAST CLEARANCE PROVIDED BY ZAB WAS VECTORS TO LSB. A FEW MINUTES AFTER MAKING A TURN TO THE NORTHEAST, THE AIRCRAFT DISAPPEARED FROM THE ZAB RADAR SCOPES. THE MOONEY IMPACTED THE GROUND AT A LOW SPEED AND LOW RATE OF DESCENT. WHEN ALBUQUERQUE CENTER LOST COMMUNICATION WITH THE PILOT AND THE MOONEY DROPPED OFF THE RADAR, THE MOONEY BECAME THE SUBJECT OF AN ALERT NOTICE (ALNOT).

THE MOONEY WAS FOUND IN MOUNTAINOUS TERRAIN AT 5,010 FT MSL, ABOUT A MILE NORTHWEST OF PINKEY WRIGHT MOUNTAINS.



THE PILOT AND HIS PASSENGER WERE SERIOUSLY INJURED AND THE AIRCRAFT WAS DESTROYED.

<https://aviation-safety.net>

March 27, M20J Alturas Municipal Airport (KAAT) California – Bounced Landing – Go-Around and Loss of Control – Prop Strike

THE STUDENT PILOT REPORTED THAT HE WAS "TOO FAST ON LANDING". THE AIRPLANE TOUCHED DOWN ON THE MAIN LANDING GEAR AND BOUNCED TWICE. A GO-AROUND WAS INITIATED BUT THE MOONEY DID NOT HAVE ENOUGH AIRSPEED. THE PILOT LOST CONTROL OF THE AIRCRAFT. IT DRIFTED TO THE LEFT AND THE LEFT WING CONTACTED THE

GROUND. THE MOONEY SLID OFF THE SIDE OF THE RUNWAY AND COLLIDED WITH THE TERRAIN. BOTH WINGS WERE SUBSTANTIALLY DAMAGED.

<https://aviation-safety.net>

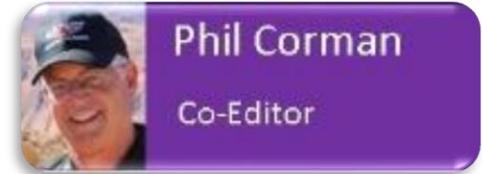
Sources for this article were: Aviation Database <http://aviationdb.net/>, Kathryn's Report <http://www.kathrynsreport.com> and Aviation Safety <https://aviation-safety.net>

Thou Shalt Not Perform a Runway Incursion

Maintain your focus on the airfield to avoid errors that lead to runway incursions.



As you have probably read, there was a scary runway incursion at JFK between a Delta and an American Airlines aircraft. The American jet (Boeing 777) crossed the runway that the Delta jet (Boeing 737) was departing. The tower caught it and twice told the Delta pilot to cancel the clearance for takeoff. The Delta 737 was able to stop without an incident, but Wow!



Apparently, there were approximately 1,400 runway incursions last year, with most of them occurring at Towered airports – which makes sense. At towered airports, there are more aircraft and probably more runways. But it is still a serious problem and seems easily avoidable.

Let's start with the boundary of a runway. It's marked as shown below. If you are on the side of the two solid lines, you are NOT in the runway environment. If you are on the dashed lines side, then you are still on the runway and should exit directly without delay, unless instructed otherwise by ATC. The way to remember this is with the expression "Dash across the lines."

There are two ways you can cause a runway incursion. The first is to enter the runway at the threshold without a clearance from the tower. Clearances have only two forms:

- Cleared for Takeoff
- Line Up and Wait



Both of these clearances require you to acknowledge the clearance, including your call sign, before entering the runway. For instance, "Mooney 77 Victor, line up and wait."

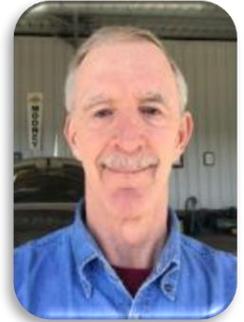
The other runway incursion occurs when you cross a runway (active or not) without ATC clearance. In this instance you will hear "Cleared to cross runway X". Again, you need to acknowledge the clearance with your call sign. This clearance is often given with taxiway directions as well. At JFK, the American 777 called ATC to confirm whether they had clearance to cross the runway.

The items to remember here are simple. Do NOT enter a runway environment without getting a clearance and acknowledge the clearance with your call sign. That way my partner, Jim Price, won't write a summary article of your experience! 😊

Where are You Goldilocks, Part 1

By Jerry Proctor

This is about flying back to home turf, my real home – where I grew up. I wanted to tell the story about a situation where there wasn't a good middle ground. However, in writing, I had to label this article, Part I. Now, I'll add some background data. First, I live in very southeastern Arizona. I can see Mexican mountains from my house and a crow would only have to fly 10 miles before it needs a visa. My HOME is in the Black Hills of South Dakota. A fair piece away, but not so much if you're in a good Mooney.



The flights heading north went relatively well. The first flight is approximately a two-hour flight from Sierra Vista/Ft Huachuca to Santa Fe, NM. I have grown to like Santa Fe as an initial stopping point. It is a nice active airport but not crazy. It provides good service, lovely ladies at the counter and for seniors, it's a good pit stop. There I was, well set up for a straight in approach to runway 33. As my old Army helicopter flight instructor would say, "Piece of cake, can of corn" This was followed by my stick buddy and I saying, "Waaatha???" I never did figure that one out. Since he was our primary instructor, we had to let that one lie.

I was coming in fat, dumb and happy to runway 33, when approach called and said, "Mr. Mooney, I've got two Gulfstreams smoking in, so I am going to have to adjust you a little bit. Turn left 90 degrees."

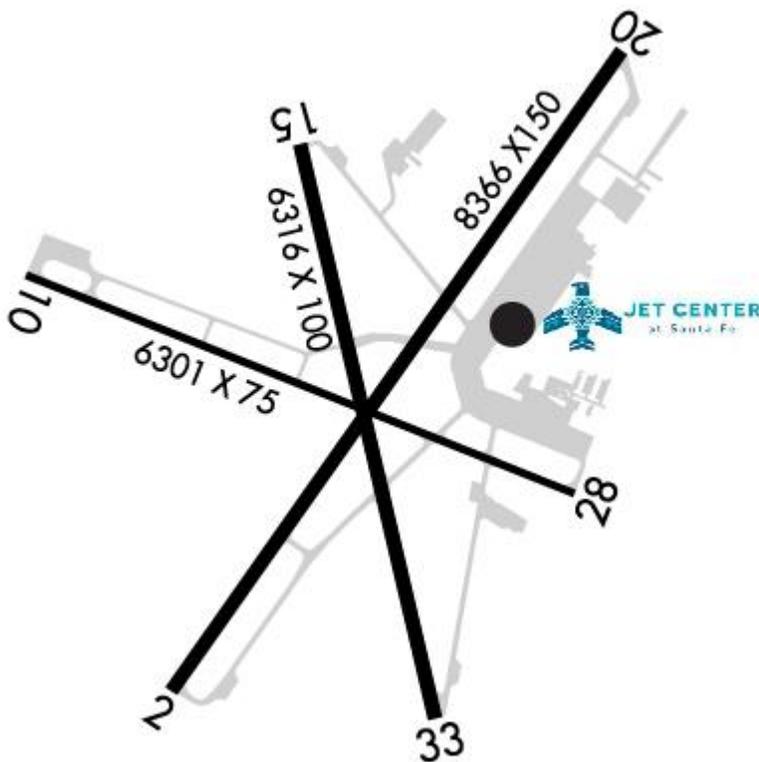
"Roger," said I, but I started to think it is no can of corn. Well, I will quit the dialog details but please take out a piece of paper and pencil to follow me.

Start by drawing runway 33. I pause, because if you are a real Mooney pilot, you will first draw the North arrow at the top of the page. Now draw runway 33. If you put in approach markers and a centerline, you are indeed anal.

Okay, back to the first turn and for those whose memory is as good as mine, the first turn is left 90 degrees. Now I am going at a left 90-degree angle away from my intended runway.

After a bit, ATC says, "Okay now Mr. GA Mooney, another left 90-degree turn. Now I am heading 150 degrees. Umm, isn't this where I just came from? Just where are those two jets anyway?"

Then, I had a real surprise. I was asked to make another 90-degree left turn. I can see my runway out my side window. And yes, out the other window



should be these very special Gulfstreams. Approach then said, "I need to have you cross runway 33 extended centerline."

Really? Where are those Jets? I am also muttering, "Geez, I could have landed and been sucking on coffee by now."

But they were not done with me yet. I am now a quarter mile NE of the RW 33 centerline, and I get one more 90 degree left turn.

So, now I am back to 330 degrees. For situation awareness, that puts me on an approximate wide left downwind for RW 15. Which runway is active again?

Approach then said, "Turn to heading 150."

I am now just abeam the first 1/3rd of runway 33. So, I started my right turn to give myself extra room for what I hoped would be a downwind to final.

I said to myself, "So you know Mr. Approach, this plane can turn right now and then! When I was abeam the approach end of 33, I saw Gulfstream #2 land. Oh, did I mention I was 2,000' above pattern altitude? Approach switched me over to Tower, and Mr. Tower said, "Expedite, cleared to land."

Ya, sure. Do you think this is a Cessna that can stop forward motion in the blink of an eye and descend like an elevator? Wanting this to end as quickly possible, I chopped the power, extended the speed brake, lowered the landing gear and nosedived while turning 180 degrees. There – did it! I landed.

As I taxied off the active, I saw my parking ramp to my front and slightly left. I commented to ground and asked them to tell approach that it was a very interesting traffic pattern. He laughed and said, "The fun ain't over yet."

Huh?

Well, it seems a commercial B-737 just paused on the small piece of taxiway between me and my parking space.

"Mr. Mooney, I need you to do a 180 and back on the active, (RW 33) and go ALLLLL the way to the northwest end, exit and then taxi back to your parking spot."

My parking spot is a mere 50 yards behind the 737. By now I would have taxied to the interstate just to get somewhere. Good thing the bladder overflow warning light was not on yet.

Well, you know what? This is enough for one article. If you wish you can send me your drawings and I will judge them. Winner will receive a coveted cold beverage coaster from my favorite brewhouse.

Stay tuned for Part II or who knows Part III

Send drawings to jprocmooney@gmail.com. I can't wait to see them.



We can Cancel Flight Following if it Helps

by Richard Brown

You would think with all the rain and clouds we have had in Southern California the past few months, that I wouldn't need to go up with a safety pilot for an IFR currency flight. If I were retired and could fly any day of the week, that would be true. But I am not independently wealthy, a state of life possibly postponed indefinitely by my love of flying, and the weather just hasn't agreed with my free time. The days when I could fly, the ceilings or visibility were either below my personal minimums, or a couple times, when there was a nice overcast at 1,000-1,200' and 5+ miles visibility, I was fighting a cold and grounded myself.



With the end of January approaching and a need to get one more approach to stay current, I found myself at the airport on a Saturday morning. There wasn't a cloud in the sky, and I was doing a pre-flight on my plane so I could shoot some approaches.

As most of you know, to stay IFR current, in the previous six months, you must have flown six approaches and logged holding procedures and course interceptions and tracking through the use of navigational electronic systems. My friend was set to arrive at 8am so we could get the approaches in before the typical Saturday masses were up in the air, overloading the system, resulting in "unable" from ACT when requesting practice approaches.

I had been at the airport for an hour when my friend arrived at the scheduled time of 8am and I had not heard a single plane yet. It looked like we might beat the crowd. In hindsight, we should have been wheels up 30 minutes earlier, but it all worked out.

I went over the plan with her. I only needed one approach, but since we were going up, I wanted to take advantage and get in a few extra approaches. I would pick up flight following from Fullerton (KFUL) Ground and then we would try to get in the RNAV 26R at Chino (CNO), a hold over Paradise VORTAC (PDZ), the GPS-A at Corona (KAJO), followed by the RNAV 24 back into KFUL. I only needed the approaches "under the hood," but for practice, I planned to do the whole flight with the foggles on and no autopilot.

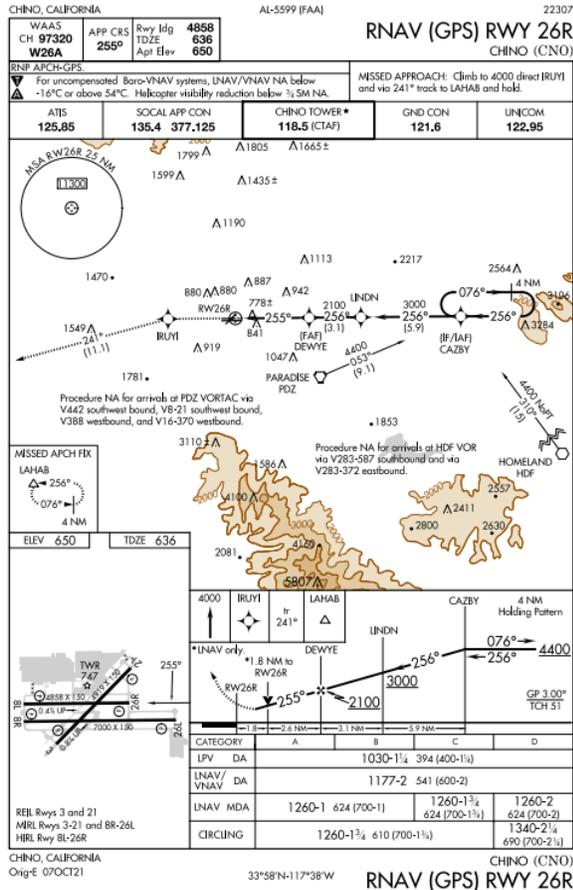


The GFC500 is an amazing autopilot and reduces the workload exponentially while flying single pilot IFR. Since I had another pilot onboard and would be in VFR conditions, I wanted the added workload. One of my favorite quotes is attributed to Ralph Waldo Emerson who said, "That which we persist in doing becomes easier, not that the nature of the task has changed, but that our power to do has increased." IFR flying, or any flying, doesn't change, but the more we do it, the easier it becomes because we increase our abilities.

After a run up and all the checklists were completed, we departed, and the tower turned us loose to SoCal.

Me: "SoCal Departure, Mooney 78878, just departed Fullerton."

SoCal: "November 78878, ident."



After radar identification I was asked my requested altitude and replied “3,000.”

Typically for the RNAV 26R at CNO, Approach Control will have you depart PDZ on a 080 heading and vector you around to intercept final just outside LINDN which you cross at 3,000’.

I turned the plane over to my friend while I put the foggles on, then took the plane back and did my best to level off at 3,000’ and proceed direct to PDZ. It wasn’t perfect, but I didn’t wander too much and soon we were handed off to the next sector.

Me: “SoCal Approach, Mooney 78878, 3,000’.”

SoCal: “Mooney 78878, SoCal Approach, Ontario altimeter 30.14”

Me: “30.14, and we would like to request the RNAV 26R practice approach into Chino.”

SoCal: “I have your request.”

We continued along waiting for instructions from Approach. My friend said, “If there is anything you want me to do, just let me know. I’m happy to help.”

I replied, “For now, just yell at me if I miss something. When I’m flying with my wife Kathy, I’m doing all of it, so I want to push myself.”

Just before reaching PDZ, we heard, “November 78878, depart Paradise heading 080, vectors to final.”

“Depart Paradise heading 080, 878,” I replied.

Perfect, exactly what I was expecting. Here’s another tidbit that you probably all know, but it was a game changer for me. When you are getting vectors to final, ATC is giving you headings to fly a downwind and base leg, followed by a heading that is typically 30° off the final approach course to intercept. Knowing that, it is easier to visualize what is coming next and when to expect it. This helps you to stay ahead of the plane.

SoCal: “November 878, three miles from LINDN, left turn heading 290, cleared RNAV 26R, no separation services provided, contact Chino Tower 118.50. On the go maintain VFR.”

Me: “Left turn 290, cleared RNAV 26R practice approach, switching to tower.”

Me: “Chino Tower, Mooney 78878 on the RNAV 26R practice approach.”

Tower: “Mooney 78878, 26R cleared low approach, I will call your left turn.”

Me: “26R cleared low approach, you’ll call my left turn, 878.”

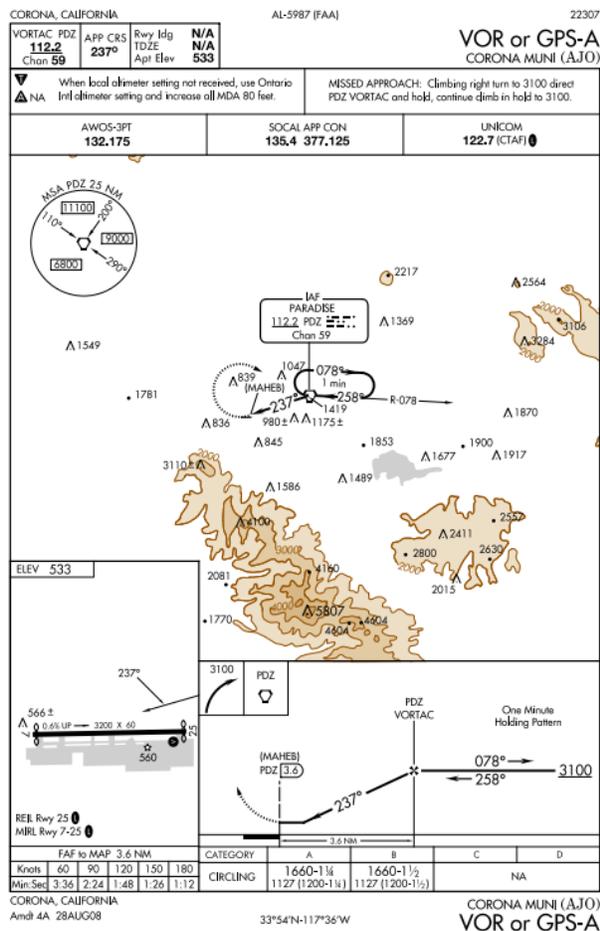
With traffic landing on 26L I was extra careful to make sure I didn't drift left and for the most part, kept everything centered. I was chasing the needles a little, but never ended up more than about ¼ ball off. At 1,030' I tilted my head back to look under the foggles and there was the runway in front of us, right where it was supposed to be.

I advanced the throttle a little to stop the descent, pulled the gear up, eased the throttle the rest of the way in, and held the runway heading until the tower called my left turn and told me to contact SoCal Approach.

Me: "SoCal Approach, Mooney 78878 missed off Chino, we'd like the hold at Paradise then the GPS-A into Corona."

SoCal: "November 78878, climb maintain 3,000, direct Paradise."

Me: "Climb maintain 3,000, direct Paradise, 878."



I felt a little overloaded as I tried to maintain the heading and climb while removing KCNO from the flight plan, adding KAJO and loading the approach. With the GNC355, I've found that on the round robin flights with approaches at multiple airports, putting all the airports into the flight plan doesn't work well. It would always try to load the approach at the last airport in the flight plan. If someone knows a better way, I would love to hear it.

SoCal called back asking how long I wanted in the hold. "I'd like one full turn," I replied.

SoCal said, "Climb and maintain 3,500', there is additional traffic, let me know when you are inbound."

However, just before we reached PDZ approaching from the northwest, as I was about to turn to 078 for a parallel entry we heard, "November 78878, right turn heading 150 for traffic." I acknowledged the call, began my right turn, and my friend said, "There's some real-world practice."

A few minutes later, we were given a left turn back to Paradise to enter the hold and told to let her know when we were inbound. We entered the hold, then flew outbound leg, but as we began the turn to the inbound leg there was a controller change, and that changed everything. What had been quiet when we started the flight had morphed into everyone finally getting to the various airports and up in the sky to enjoy a beautiful VFR Saturday morning.

The new voice on the radio had already twice said, "Unable flight following" to VFR call-ups. The previous controller had instructed me to just inform her when I was inbound, but that was before it got busy. The new controller was not going to be able to accommodate our request.

SoCal: "November 78878, cleared practice approach, no separation services provided, full stop."

Me: "We wanted to go missed followed by the RNAV 24 at Fullerton if possible."

SoCal: "Negative, this will be full stop." (*Translation, I don't have time to help you anymore.*)

Me: "We can cancel flight following and switch to advisory if it helps." (*Translation, I know you don't have time and I don't want a full stop, so just kick me loose and I'll proceed VFR on my own and do what I want.*)

SoCal: "November 78878, radar services terminated, squawk VFR, frequency change approved, good day." (*Translation, thank you and goodbye!*)

Me: "Squawk VFR, frequency change, thanks, 878."

I pushed the VFR button on the transponder to auto populate 1200, switched over to the CTAF for AJO, and started making position calls with our intention to go missed and remain north of the airport. My heading was good, but I had the same issue I have had many times with that approach. You cross PDZ at 3,100' and only have 3.6 miles to descend 1,440' down to 1,660' AGL.

My normal settings inside the FAF are gear down, prop full forward, and 13-14" MP. This results in 105 mph IAS (about 90 knots) and about a 450-fpm rate of descent. At 105mph IAS with only 3.6 nm to lose 1,440', I need about a 600-fpm rate of descent depending on the winds. So, I was a couple hundred feet high at the Missed Approach Point, which is better than arriving low. However, if you're trying to break out of an overcast, it isn't helpful.

I didn't want a full stop at Corona, and ATC didn't really care. I was on a practice approach in VFR conditions and ATC just didn't have time to continue providing services to me. Hence, calling the audible, enabling us to go missed and continue our flight.

When arriving at KFUL from the east, the typical reporting point is the water treatment plant, which is charted, and then 99% of the time tower gives pilots a straight in. The water treatment plant is also conveniently a couple miles west of LEYMI which is the fix that SoCal will vector you to when flying the approach.

After we canceled flight following, I told my friend that we would go missed at AJO and I would proceed to LEYMI and call KFUL tower. If they gave us a straight in as expected, I would fly the RNAV 24 and get that third approach in. There were a number of times during my IFR training that my CFII would play ATC and give me vectors to put me on the approach to KFUL. On my IFR check ride, we had a similar experience on the first approach, where ATC was too busy, so the DPE coordinated transiting RAL's airspace while giving me vectors to put me on the ILS at CNO. This would be similar.

As we approached LEYMI, I called up KFUL tower and reported "Just east of the water treatment plant."

I received the expected, "Make straight in runway 24."

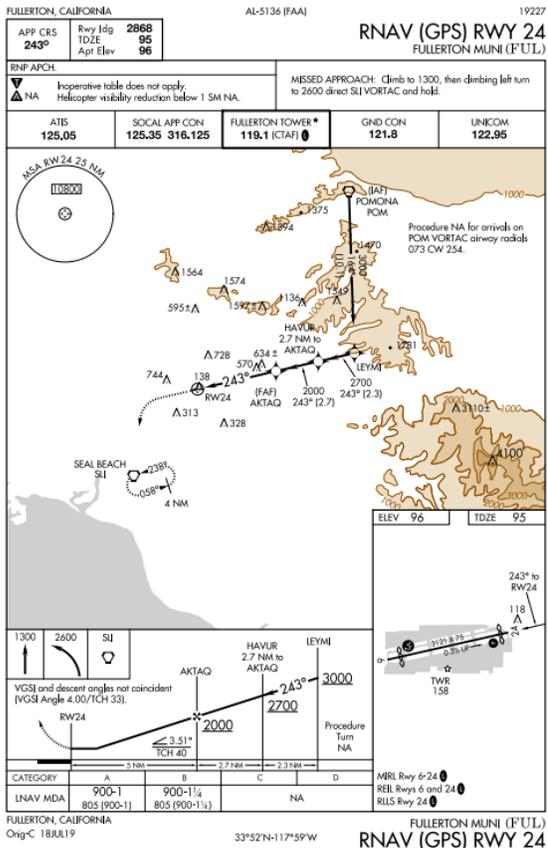
Perfect! I was going to get that third approach. We crossed LEYMI at 3,000' and then began the descent down to 2,700', getting there 0.2 miles before HAVUR. I leveled off, crossed HAVUR at 2,700' and then began the descent down to 2,000' to cross AKTAQ. I got to 2,000' 0.3 miles before AKTAQ which was perfect. It gave me a chance to level off and bleed speed and throw out the gear. We were given our landing clearance and I continued descent until pulling off the foggles at 900'.

After 48 minutes of flying, I had three more approaches with a holding pattern, and I am still IFR current. The best part was flying the whole thing by hand and polishing up those skills. I love the GFC500, it is a fantastic autopilot, which makes flying so much easier. However, we all need to keep those hand flying skills sharp, and this was a great opportunity.

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.



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Engine Failure on Takeoff – A Critical Gap in Training and Testing

by Mary Margaret McEachern

I was a “young” pilot, with barely 200 hours, practicing solo closed patterns in our 1980 Mooney M20J. After a solid landing on the first, I powered off the runway for the second, and *then it happened*. At 300 feet, climbing V_x, my engine faltered with no warning; I had lost all power at the worst time and had just experienced one of the worst nightmares that can befall a pilot.

A sudden, low-altitude, power loss at critical attitude precipitates an instantaneous loss of airspeed to below stall speed. With heavy right rudder and additional drag from the windmilling propeller, landing gear, and flaps, my airplane was instantaneously subjected to an aerodynamic maelstrom. Any attempt by a pilot to continue climbing or hold altitude causes an immediate stall-spin, which, at such low altitude, is unrecoverable and likely fatal. There’s no time to startle, no time to think, no time to run a checklist. One must instinctively allow the nose to come down, unload the rudder, and let the wings fly.



Before my fateful flight, I self-briefed abort scenarios as my instructor had taught me to do before every flight. I was particularly careful that day, as I was still a bit nervous about soloing. I had a nagging feeling that something was amiss, but pressed on, reasoning it had to be only my nerves. Besides, my instructor and I had just completed an hour-long IFR training flight without so much as a hiccup. However, that nagging feeling persisted, and in my self-brief that day, I used “when” language, rather than “if” language. I am convinced that difference saved my life.

A response to a failed engine at such a critical attitude at critical altitude must be instinctive, regardless of conditions or surroundings. I now brief myself to say, “*When* something happens at low altitude shortly before takeoff...” If I *expect* a problem, I’m less likely to freeze.

I was lucky that day. Our 8,000-foot runway allowed me to land and slow without incident. Reflecting, I asked myself, “How did *I* manage *this* at such a tender ‘pilot’ age? If it happens again, will I do so well? What if the airport has a short runway and tall trees at the departure end? What if there’s water? What if...?” That day, it was as though I had been blessed with clairvoyance. As the event unfolded, time seemed to slow. I took a deep breath; I was relaxed all the way to the ground. While allowing the airplane to recover, I even managed to call Tower to let them know my engine had quit and to please abort the C172 they had just cleared because I was landing.

Discipline in flight training *and* ground training, is crucial to having a true understanding of how to handle this situation. We must develop a complete understanding of the aerodynamics involved in each flight phase, and then we must train realistically for emergencies in all flight phases. This is where our syllabi, operating handbooks, and even the ACS, fall painfully short. We train and test on engine-out emergencies at altitude in cruise flight. Altitude, however, allows ample time to startle, work through sometimes lengthy checklists, diagnose, try to fix, and otherwise actually plan for the safest possible landing in the given circumstances. Cruise configuration in level flight involves minimal torque and minimal drag. Airspeed dissipates gently and pitching for best glide is a non-event compared with the abrupt transition from Vx pitch to nose-down at critical altitude, which is required to survive an engine-out immediately after takeoff.

Practicing power-off stalls, while useful, is of no help in this situation, as the maneuver is rehearsed, practiced by checklist, and involves no surprise whatsoever. Additionally, the “power-off” practiced in the landing configuration in level flight, bears no resemblance to a sudden complete loss of power at Vx pitch. Similarly, practicing power-on stalls involves no element of surprise, and fails to mimic a sudden, total loss of power at a high pitch attitude.

My husband Rob learned to fly in the 1980s. His instructor drilled this scenario; how it should be taught, practiced, and *tested*. He would instruct Rob to climb at Vx to 5,000 feet for maneuvers. Once the airplane had reached at least 4,000 feet, and without warning, he would pull the throttle to idle. Anything other than an immediate and instinctive reaction would result in a stall-spin. Rob is a natural and reacted correctly the very first time. The second time, Rob was instructed to hold altitude. The result? An immediate stall with incipient spin.

This training can save lives, yet it is not practiced or tested. Engine-out on climb-out scenarios are addressed in the ACS only at the multi-engine level. Why is this the case? The ACS should be amended to include this specific scenario at every level of pilot certification. In the meantime, pilots and flight students should insist on training for it, at a safe altitude. We must all study, brief, and practice it often. This, and only this, will engender the correct, instinctive reaction that can save lives.

Editor’s Additional Comments

This article can save lives.

But you must enable yourself to perform a “Conditioned Response.” By this we mean that you are mentally and physically pre-set to immediately and aggressively lower the nose of your Mooney in the event of an engine failure on departure. You do NOT have time to think about this. Even a few seconds of thought or denial could lead to a stall/spin at low altitude, which is not recoverable.

On every departure, remind yourself as you begin your takeoff roll to be ready to do this.

Thanks to Mary Margaret McEachern for bringing this to our attention.



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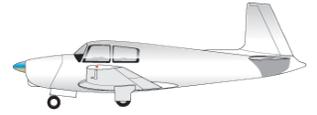
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Ask the Top Gun

TG

Tom Rouch

Founder of Top Gun Aviation, Stockton, California



Send your questions for Tom to TheMooneyFlyer@gmail.com



I recently moved up to an Ovation. I previously owned an M20C. I loved the Johnson bar for its simplicity and reliability. With electric gear, how is the reliability? What things fail more often? What preventative maintenance do you recommend? Thanks for sharing your wealth of knowledge and expertise with us.



The differences between the M20C and M20R landing gear are considerable. There are a couple of ways to compare these differences, but the most obvious is cost. The manual gear system and design is ingenious. Using bell cranks, push pull tubes, and one handle, it can't get much simpler. It is almost fool proof, except there can be extensive parts wear, which can cause failures, but only after many years of use. The wear that causes the worst problem is excessive wear of the uplock on the instrument panel. It can become worn and fail to keep the gear handle locked in the gear down position. Then, upon touchdown, the handle will come loose, and the gear will retract. When this happens, do NOT have your arm in the way, because that handle really slams down hard. On rare occasion, a rod end will rust and break, causing a partial gear collapse. Outside of these problems, the system is trouble free. With minimum maintenance, the system will never fail.

The electric system, which is wonderful, has many points of possible failure and of course, it costs a lot more to build. During the mid-sixties, Mooney decided their customers wanted an electric gear. What most people don't realize is, that with an electric system, if it fails, you also need an emergency system. Therefore, as a backup, you still end up with a manual system.

The electric system, with proper maintenance, is almost trouble free. I will tell you that the most common failure on the Mooney is caused by the pilot forgetting to put the gear down. If you take time to research the FAA records, you will find the most common Mooney accident is a gear up landing. I could always tell if the pilot forgot to lower the landing gear or if it was a gear collapse, by examining the gear door damage. If the damage was inline on the doors, then it was a gear up. If the doors were damaged laterally, then it was a gear collapse. There is an occasional motor or switch failure, but if everything fails electrically, then the emergency extension system will prevent a gear up landing. I had one customer who took two inches off his propeller when he realized his gear was up, managing to save the airplane from a gear up landing.

Just a few months ago, I was reading FAA accident reports. In a 30-day period, there were four Mooney gear up landings.

My list of problems with Mooney's manual versus electric gear systems begins with pilots. They are the number one cause of landing gear "failure."

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Garmin Wins FAA OK For GFC 500 Autopilot Trim-Issue Fix



Garmin has received FAA approval for its software update and service bulletin to correct a previously reported [possible runaway trim issue](#) with its popular GFC 500 autopilot. In December, the FAA alerted GFC 500 operators who have the optional GSA 28 pitch trim installed of the possible problem, which could lead to loss of control. Software updates to accommodate installations involving Garmin GI 275 instruments are expected within weeks, according to Garmin.

In December, Garmin issued Service Alert 22109 Revision A for pitch-trim-equipped GFC 500 digital autopilots installed in accordance with Garmin's Supplemental Type Certificate (STC) SA01866W. That configuration is approved for certified, experimental, and light-sport aircraft.

Under the terms of the service alert, operators of certified aircraft with the STC were required "to pull and collar the autopilot circuit breaker and placard the autopilot as 'inoperative' prior to further flight." To comply with this month's approved software update requirements, owners must complete the software update in the next six months or at the next scheduled service interval, whichever comes first. The warranty reimbursable period closes out at the end of June 2023.

G100UL Avgas Replacement Set to Hit Pumps



GAMI President Tim Roehl with co-founder George Braly, and their dog, Moses. [Courtesy: GAMI]

On September 1, 2022, General Aviation Modifications, Inc. ([GAMI](#)) received the approved expansion of the July 2021 STC. Some helicopter airframes still lack full approval; however, the engines are good to go.

Great! We have mass approval. Now, what comes next? When will they start pumping [G100UL](#)?

GAMI president Tim Roehl said that GAMI has set up a [website](#) to try and quell the storm and answer questions owners, operators, and maintainers may have. The Q and A is in PDF format, so you can download it, share it, or post

it on the wall in your hangar.

GAMI named [Avfuel](#) as their distribution partner. Together they are currently ramping up manufacturing. When they start pumping, it is critical to the industry that Avfuel maintains a continuous supply. Roehl mentioned, "One of the biggest challenges we face is forecasting volumes."

The plan is to start in California, a fairly big state and the number one state in volume. The decision by some California airports [to ban 100LL](#) is also a prominent factor in rolling out in California first. As this may occur at other airports in the Golden State, something must be ready to fill the void. [READ MORE HERE](#)

5G and its Impact on Aviation



FAA officials recently reported during an industry briefing that "significant progress" has been made to ensure an aircraft's radar altimeter can function properly as [5G C-Band deployment](#) continues throughout the National Airspace System (NAS).

In the last year, the FAA has demonstrated aviation and 5G C-Band services can coexist safely, according to a report from the [National Business Aviation Association](#) (NBAA).

It notes that the agency has worked closely with cell phone providers Verizon and AT&T to iron

out concerns related to possible altimeter interference, including a retrofit plan to enhance the performance of some radio altimeters.

FAA officials noted that the work is “far from over,” as they continue to work with Verizon, AT&T, and other cell phone providers. FAA officials report that an operating framework exists now that wasn’t available a year ago, paving the way for 19 additional licensees expected to begin implementing their 5G networks.

The FAA said there are tens of thousands of cell phone towers now in use within the NAS, impacting about 3,000 airports.

Officials also noted that the agency continues to receive reports of possible 5G disruptions to aviation operations, but the volume of those reports has been greatly reduced. They also reported that of the 586 reports filed since January 2022, 90% have been closed after being investigated and found not to be associated with 5G interference.

The agency also said it continues to issue **alternative methods of compliance (AMOCs)** for the commercial fleet, with updated airport lists detailing information related to 5G considerations.

The FAA’s AMOCs also are being issued for general aviation aircraft, and NBAA officials strongly suggest pilots and aircraft owners connect with their OEMs to find out the status of their radar altimeter upgrade if their operations are impacted.

“As part of an industry coalition, NBAA has been involved since the beginning in mitigating this issue to ensure the FAA has not ignored the impact on general aviation,” said NBAA Senior Director, Air Traffic Services and Infrastructure Heidi Williams. “Operators who have invested resources to utilize RNP AR and other operational technologies are eager to take advantage of those capabilities and we need the same emphasis placed on ensuring there are radar altimeter upgrades available for the general aviation community.”



Mooney

AROUND THE WORLD



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

Feb 11: Fort Pierce ([FPR](#))
Mar 11: Vero Beach ([VRB](#))



April 13-14 Henderson, NV (KHND)
June 9-10 Lexington, KY (KLEX)
September 8-9 Westfield, MA (KBAF)
October 13-14 Tupelo, MS (KTUP)
Sign Up at <https://www.mooneysafety.com/ppp-registration/>



Learn more at <https://www.mooneysummit.com/>



Learn more at <https://www.empoa.eu/index.php/en/>

Other Mooney Events

Wings to Walla Walla is back for 2023. We were hampered by the weather gods last year, so we're trying for summer. It's August 11-13, 2023. 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.



Aerox Boomula Headset Mounted Conserving Cannula



Aerox has introduced the Boomula, a universal conserving cannula that can be mounted to a headset.

This is a cannula pilots have been asking for. According to company officials, the Boomula is compatible with most portable and installed oxygen systems. Pilots just have to mount the cannula to their headset and connect the Boomula directly to their existing flowmeter.

Each Boomula comes with the integrated cannula and boom, a stick-on cup mount and a hard mount for the Bose A-20 headset, and an Aerox Oxy-Saver Pendant.

Expect the Boomula to be available in February 2023, with an introductory price of \$149.

[CLICK HERE](#) for product details.





Parts for Sale

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

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

P/N 310309-501

P/N 310309-502

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

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

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

Bushing P/N 914007-005

1-Bushing in the original package @ \$59.00

1-Bushing loose @ \$50.00

Priced elsewhere @ \$69.00 each

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

Access Covers P/N 3000-901 (2-available) - 1-without nuts attached.

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



Item for Sale

Call Tom 303-332-9822

New Hartzell Propeller Hub HC-C2Y (K, R)-1 Serial CH41782B

This hub will comply with AD2006-18-15 and superseded by AD2009-22-03

This AD affects many IO-360 aircraft.

Current Hartzell price is \$4,275.

Price \$3,999



1965 Mooney M20C, N5533Q s/n 2955, TTAF 6212, Engine 1680 SMOH, Prop 1680 TSN, 10/1/22 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,
 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.

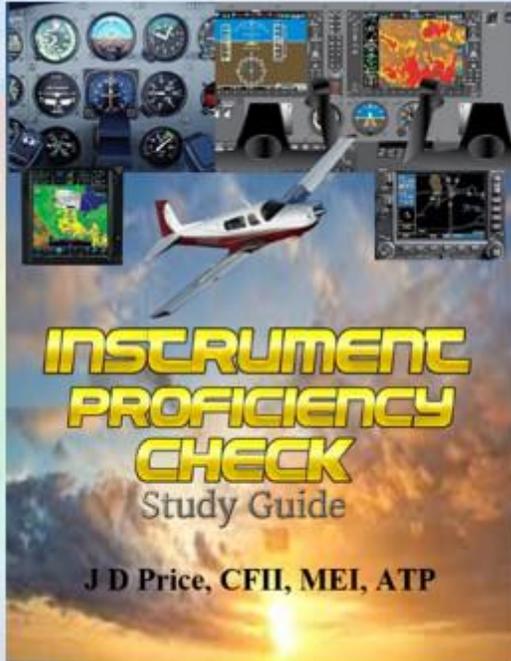
s/n 25-0845, TTAF ~4384, Continental TSIO 360-MB4B ~85 since IRAN rebuild, Heated Prop ~85 since new,
King KFC150 Flight Director/HSI/AP, Avidyne IFD540, KX-165 w/GS, Avidyne AXP340 ADS-B, Built-in O₂, +++

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



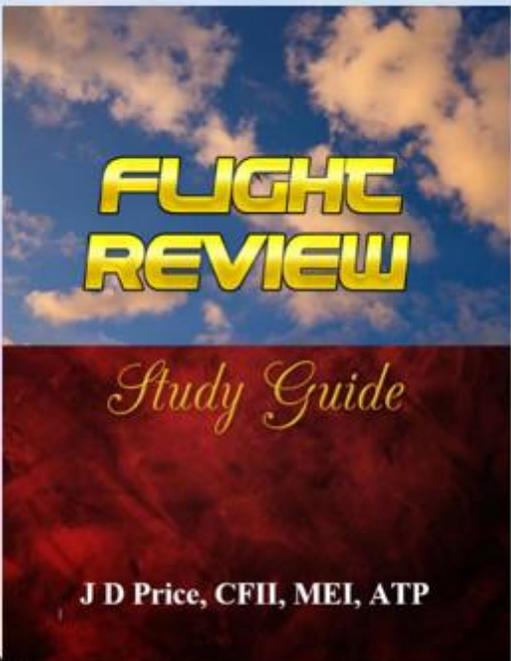


Rusty Pilot or *Old Pro*



INSTRUMENT PROFICIENCY CHECK Study Guide

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FLIGHT REVIEW

Study Guide

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online**



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