

# *The Mooney Flyer*

The Official Online Magazine for the Mooney Community  
[www.TheMooneyFlyer.com](http://www.TheMooneyFlyer.com)

May 2024



## Editors

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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.



## Mooney Flyer Fly-in to KPRB, June 28-29

We are hoping to make this the largest Mooney event of the year. [CLICK HERE](#) for more information.

[CLICK HERE](#) to Register (It's FREE). Here's some new information:

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Many others are finding their own hotels in Paso Robles or elsewhere and/or using Airbnb or VRBO.

**Special Offer:** The first 50 signups will get a FREE dinner at Cool Hand Luke.

**Special Offer:** The person who has referred the most signups will get 2 FREE passes to Sensorio.

Due to a personal matter, there is a chance we will have to cancel or postpone this fly-in. We will keep you informed.

# The Mooney Roundup Fly-In Event in Paso Robles, KPRB, on **June 28-29**



Our last Paso Robles fly-in had 54 Mooneys, more than 125 attendees and included a FREE Tri-Tip BBQ.



This year we plan to blow out this event with the following activities:

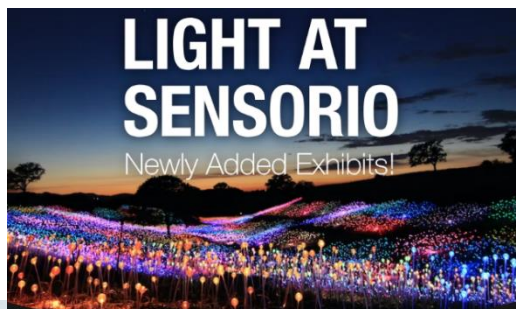
**Friday Evening:** A Wine & Beer event in our hangar for everyone to meet & greet old and new friends. Plus, a short but entertaining presentation by The Mooney Flyer team. In addition, this event is FREE

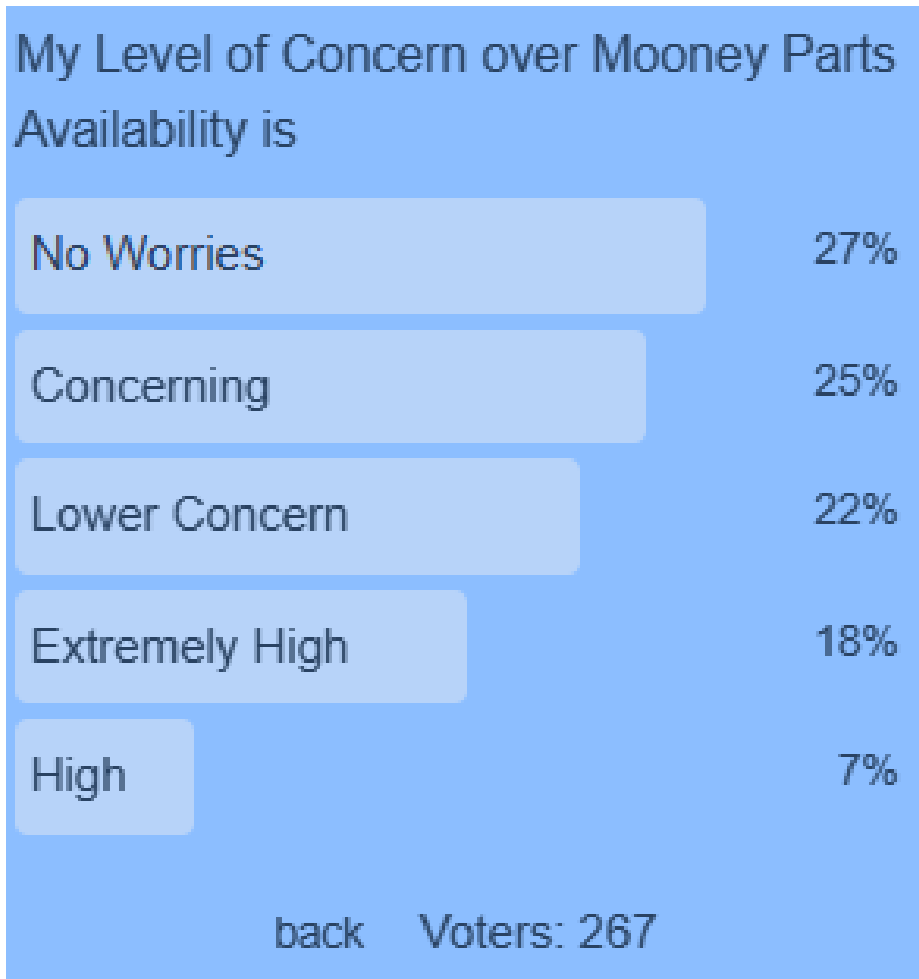
**Saturday Morning:** Hang out on the ramp and greet the Saturday morning arrivals while you admire each other's Mooneys.

**Saturday Mid-Day:** Lunch and a few more presentations including our very popular Mooney Destinations presentation, given from the perspective of both the pilot and passenger. The pilot talks about the airport, the FBO, etc. and the Passenger talks about hotels, restaurants, shopping and things to do. There is something for everyone. The other presentation will be a special guest and you don't want to miss it.

**Saturday Afternoon:** Free time. You can visit the [Estrella Warbird Museum](#) (on the airfield) and/or we will arrange for Wine Tasting at 3 wineries.

**Saturday Evening:** Dinner at [Cool Hand Luke's](#), Followed by an AMAZING visit to [Sensorio](#), a one of a kind place.





Next month's poll: "The Most Efficient Mooney is"  
**[CLICK HERE](#)** to vote

**Mooney Instructors**

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

# Need a Mooney CFI?

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You can also go to <https://themooneyflyer.com/> and click on CFIs – (located in the top menu).

You can also click on the CFIs icon, found in the website's right column menu.



CFIs can list their name and contact information on our website. To modify your current CFI listing, send an email to [TheMooneyFlyer@gmail.com](mailto:TheMooneyFlyer@gmail.com)

Be sure to include your home base and state.





mail

# Letters to the

# EDITOR

**TheMooneyFlyer@gmail.com**



## 5 STEPS TO FINANCIAL SUCCESS

1. Don't fly airplanes
2. Don't buy airplanes
3. Don't look at airplanes
4. Don't associate with people who own airplanes
5. Never mind, it's hopeless. You're stuck and you will never have money, but at least you have an airplane

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# Is Your Airport at Risk?

Airports are significant engines of economic development and catalysts for growth in the modern era. They are more than mere points of departure and arrival or facilities for aircraft to land and take off. They are pivotal nodes in the global transportation network, connecting cities and countries, facilitating international trade, and enabling cultural exchange. They function as hubs of economic activity, generating employment, stimulating local businesses, and attracting investment. They have become integral components of the urban landscape, often shaping the economic fortunes of the cities and regions they serve. The development of an airport, especially a major one, can lead to the transformation of what might have been a sleepy town or a rural area into a bustling economic center. This metamorphosis is evident in numerous examples worldwide, where airports have functioned as magnets for economic activity, drawing businesses, tourists, and residents alike.

The economic impact of airports creates substantial indirect contributions through what is known as the multiplier effect. For example, the wages paid to airport employees are spent in the local community, benefiting other businesses and contributing to the overall economic health of the region. Moreover, the presence of an airport boosts businesses and industries in its vicinity. Airports provide critical connectivity and accessibility, making nearby areas attractive locations for businesses.

Airports provide support for Medical supplies, Medical evacuation, and firefighting. If your city has ever hosted a bowl game or other event, you know that every airport in the area becomes a safe haven, providing landing, refueling and parking, etc. This enhances the economic atmosphere of not only the FBOs, but the local economy.

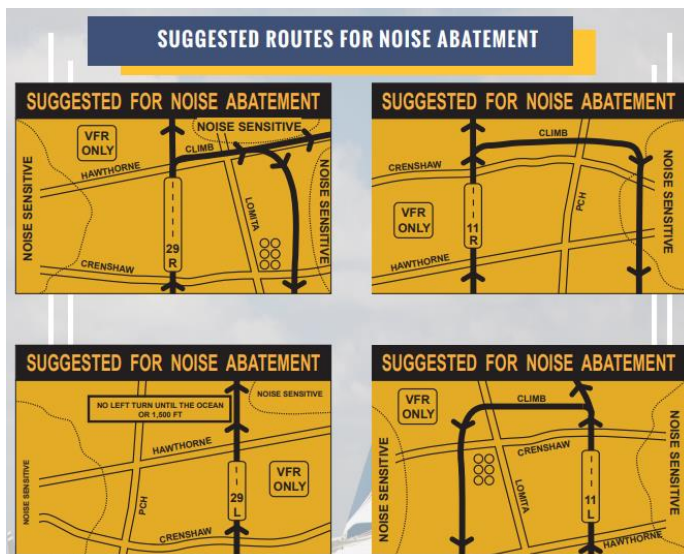
## The Problem with Aviation and Politics

On April 4<sup>th</sup>, I received an email from AOPA concerning California legislation SB 1193, sponsored by Sen. Menjivar. This bill would prohibit a California airport or aviation retail establishment from selling or distributing leaded aviation gasoline to consumers beginning in January 2026. AOPA encouraged California pilots to send an email or call the following State Senators urging them to **Oppose SB 1193 by Tuesday, April 9<sup>th</sup>! This would be just five days before the legislation was to be voted upon.**



When voting for legislators, Mayors, City Councilpersons, or County Supervisors, voters usually consider whether they share the same values. Pilots should ask, “Are the candidates running for office pro or anti aviation?”

Once they are enshrined in office and have the power of the vote, it’s too late to change their thought process, if they have been drinking the anti-aviation Kool aid. Sure, you can write them and try to change their minds, but most likely, they have been listening to the wrong sources of information and your pro-aviation thoughts are, in their mind, just childish and misguided ideas.

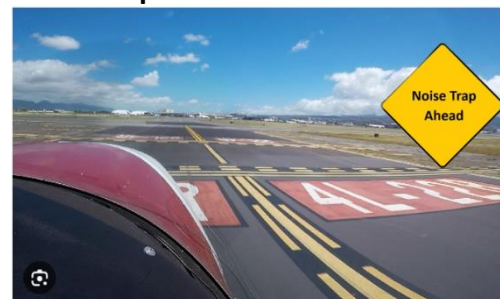


## Enough with the Noise, Already

In order to appease disgruntled neighbors and minimize noise pollution, the City of Torrance, California, has implemented strict noise abatement [procedures](#) for aircraft operators at Torrance Municipal Airport, Zamperini Field (KTOA).

### Noise Limits and Noise Traps

Noise Abatement will be fully



enforced, according to the maximum decibel limits allowed, and any violation not considered an emergency or directed by the ATCT will result in the issuance of a Notice to Appear before the Administrative Hearing Board by the City’s Community Development Department, Code Enforcement Unit. Torrance’s Noise Ordinance makes no distinction between IFR and VFR. You are advised that if your aircraft is likely to violate the City’s noise standards while departing IFR, you will have to await better weather conditions and depart VFR.

The city says operations are being monitored by the Noise Abatement Office with the goal of voluntary compliance by issuing Notice of Violation letters, conducting noise tests performed by pilots and staff and engaging in outreach efforts. However, if voluntary compliance is not achieved, enforcement such as denying a pilot airport usage may be considered.

The system shows that 54 individuals filed 27,000 airport complaints in 2023. The most complaints came from a vocal coalition of residents called the Coalition for Torrance Airport Reform (COTAR).

The group argued that flight activity at the airport has increased some 55% in the last two years compared with the annual average from 2010-2020. COTAR claims it has no intention to shut down the airport but rather calls for initiatives such as ending flight training over residential areas, reducing airport operations, enforcing noise violations and eliminating lead from the airport.

## Also Under Attack:

### Colorado's Rocky Mountain Municipal Airport

Brad Walker, a longtime pilot at Jefferson County, Colorado's Rocky Mountain Municipal Airport (KBJC; also known as "Jeffco"), has actively challenged [efforts by homeowners to sue the county](#) over noise and lead pollution associated with the airport. Most recently, he filed a request under the Colorado Open Records Act (CORA) statute (similar to the federal Freedom of Information Act) to acquire a noise study commissioned by his hometown of Superior, Colorado, which abuts the airport property. His request [had been denied](#), based on attorney-client privilege, but Walker recently acquired a copy of the report, which measures aircraft noise levels from a site directly under the turn from crosswind-to-downwind of the left traffic pattern. The study, conducted through the month of February 2024, used ADS-B data to differentiate between noise levels of aircraft taking off, landing, performing touch-and-go operations or overflying the airport. Noise levels were further classified by decibel levels above ambient noise—5 dBA "clearly noticeable," 10 dBA "significant increase" and 20 dBA "much louder."

### Is Your Airport Safer than Chicago's Meigs Field?

In the 1980s, Mayor Jane Byrne suggested closing Chicago's Meigs airport and turning the property into a park. Local pilots, aviation advocacy groups, and businesses that appreciated the convenience of an airport so close to downtown objected to the idea.

The FAA noted that the airport had received agency grants, and each grant carried an assurance that it would remain open a set amount of time—usually 25 years—so that the grants can be amortized. At the time, the airport had most recently accepted a grant in 1976. Therefore, in theory, the earliest the airport could be closed was 2001.

I still remember where I was on March 31, 2003, when I heard the news that Merrill C. Meigs Field in Chicago had been destroyed. Oh, the audacity!!

The closure was also indelibly engraved on the mind of a pilot who had planned to land at Meigs but had to divert to another location. He reported the damage to a surprised air traffic controller who, like himself, was not aware that Meigs had been destroyed.

The abrupt closure took airport employees by surprise as well. One of the Meigs tower controllers told a local news outlet that he learned he was out of a job while driving to work and heard about the damage on the radio.



The heavy equipment operators came to the airport under the cloak of darkness and dug those massive ditches into the runway. They were acting on orders from then-Chicago Mayor Richard M. Daley.

## Meigs Field History

The airport was built shortly after World War II on Northerly Island, a human-made peninsula minutes from downtown Chicago. The airport had a single runway measuring 3,900 feet by 150 feet. In 1952, the airport was named after Merrill C. Meigs, publisher of the *Chicago Herald-Examiner* newspaper and an aviation enthusiast.

The land, which is owned by the [Chicago Park District](#), was leased for the airport. The location being so close to downtown Chicago made it popular for businesses, medical flights, and for a short time, commercial aviation. It was so busy that a control tower and two instrument approaches were added. By the late 1990s, commercial aviation had given way to general aviation and medevac flights. Meigs was also popular in the virtual aviation world, as it was the default airport for *Microsoft Flight Simulator*.

In 1994, Daley revived the idea of closing the airport and redeveloping its 75 acres into a park. The FAA reminded the city that it had accepted FAA funding for improvements and by doing so agreed to grant assurances that stipulated the airport remain open.

Daley continued to push for closure, and in 1996, the Chicago Park District refused to renew the lease for the airport. Large Xs were painted on the runway identifying the airport as closed.

In response, the Illinois Legislature and the FAA strongly opposed the action, and the combined

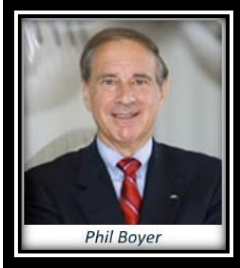
pressure resulted in the reopening of the airport. The painted Xs were removed, and the airport resumed operations. The understanding was that the facility would remain open until at least 2026.

Aviation organizations loudly defended the airport and its convenience for downtown businesses, yet the threat of closure remained. The pilots attending the Meet the Administrator public forums at EAA AirVenture held up large red-and-white signs that read "SAVE MEIGS FIELD" to get their point across.

Aviation groups such as the Experimental Aircraft Association (EAA) and the Aircraft Owners and

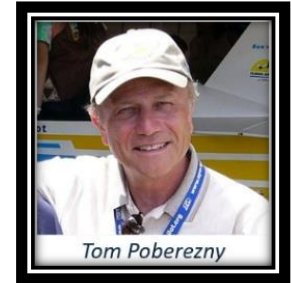
Pilots Association (AOPA) continued to support the airport. The FAA repeatedly noted that it is in the business of protecting airports, not closing them, reminding the city of Chicago that the grant assurances stipulated the facility stay open. Meigs had two instrument approaches and FAA regulations state that closure of an airport that includes an instrument approach requires a 30-day notice prior to shut down. This notice was never given.





Aviation advocacy groups were quick to respond to the airport's destruction. Phil Boyer, AOPA's president at the time, called out Daley for what Boyer called a lack of honor: "The sneaky way he did this shows that he knows it was wrong."

EAA president Tom Poberezny was attending Sun 'n Fun when he heard about Meigs Field. Within two weeks, the organization became part of a GA coalition that lobbied the U.S. Senate to support the National Aviation Capacity Expansion Act, which called for the codifying of the historical political agreement between then-Illinois Governor George Ryan and Daley to preserve Meigs Field for another 25 years.



## First Defense

Meanwhile, Daley defended his actions, claiming the destruction was done "due to safety concerns," citing a potential terrorist attack similar to 9/11 when terrorists used aircraft to attack the World Trade Center in New York City and the Pentagon in Arlington County, Virginia. This story was quickly discounted when the Department of Homeland Security stated that the airport's proximity to downtown Chicago was not a risk and that no threats had been made against the city.

## Ok, Let's Try This Excuse



Daley then told multiple media outlets that the abrupt closure was done as a means to prevent lengthy and costly litigation as various entities fought to keep the airport open.

For several months, pilot organizations and aviation groups lobbied for the repair of the runway and the reopening of Meigs Field, but it was not to be.

Several weeks after the forced closure, which became known as "Daley's Midnight Raid" in aviation circles, the FAA gave permission for the 16 aircraft left stranded to depart using the taxiway as a runway.

That was not the last time aircraft used the facility, however.

In July 2003, a pilot on the way to EAA AirVenture in Oshkosh, Wisconsin, experienced mechanical trouble and made an emergency landing in the grass next to the remains of the Meigs runway. Daley accused the pilot of intentionally landing there as a publicity stunt to "embarrass him." The pilot maintained that he had engine trouble, and the grass infield was the most suitable place for an emergency landing. The FAA sided with the pilot's interpretation.

In August 2003, the demolition of the remaining infrastructure of Meigs Field began. Today, it is a park.

## A Cautionary Tale

In 2005, the FAA fined Chicago \$33,000 for closing an airport with a charted instrument approach without giving the required 30-day notice. At the time, the maximum fine the agency could levy by law was \$1,100 per day. The city of Chicago appealed the fine, and aviation advocacy groups and elected representatives were quick to note its amount. Some \$33,000 was "pocket change" to many municipalities that wanted to close the local airport.

In response, the Meigs Legacy Provision was passed as part of an FAA reauthorization bill. The provision increased the maximum fine per day from \$1,100 to \$10,000 per day for illegal airport closures.

In September 2006, the city dropped all legal appeals and agreed to pay the \$33,000 fine, as well as to repay the FAA for the \$1 million of Airport Improvement Program (AIP\_ funds that were used to demolish the airport and build [Northerly Island Park](#).

Meigs Field's saga serves as a warning whenever other airports are threatened. The message is clear: It could happen here.

"Remember Meigs Field!" has become the battle cry of endangered airports.

[Santa Monica Airport](#) (KSMO) and [Reid-Hillview Airport](#) (KRHV)—both in California—come to mind. Both airports date to the early days of aviation. When they were built, they were in farm fields away from the city. Today, they are surrounded by industrial and residential development. And both are facing threats of closure from their elected city and county officials.

## City Council Votes To Close Santa Monica Airport

The City Council of Santa Monica has voted to begin the process of closing Santa Monica Municipal Airport (KSMO).



The vote, which occurred January 24, was greenlit by an agreement made in 2017 between the FAA and city officials allowing the closure to happen.

According to the FAA, the 2017 agreement "requires the city to maintain continuous and stable operation of the airport for 12 years, until December 31, 2028, and after that the city has the right to close the airport." The agreement also stipulated that the runway at KSMO be shortened from 4,973 feet to the current 3,500 feet.

Aviation groups, including the California Pilots Association and the Aircraft Owners and Pilots Association (AOPA), voiced strong opposition to the reduction in runway length, noting that it would make KSMO unusable for jets that require at least 4,000 feet to operate.

At the time, tensions were high between airport businesses such as flight schools and the city, because the city offered only month-to-month leases. Several flight schools and the airport restaurant closed as such lease terms are not tenable in a business environment.

As part of the city's 2017 agreement with the FAA, the city agreed to allow leases of no less than three years in duration.

The announcement that the city was pursuing closure proceedings in 2028 did not come as a surprise to the aviation community, many of whom took to social media to share the news.

## About the Property

Santa Monica Municipal Airport covers approximately 227 acres. It was opened in 1922, making it one of the oldest continually operating airports in the U.S. KSMO has one runway, 03/21, measuring 3,500 feet by 150 feet. At one time, the airport was the home of the Douglas Aircraft Company, the manufacturer of the iconic DC-3.

As early as 1958 there were signs the airport was becoming a bone of contention in the southern California community, as that year Donald Douglas asked the city for permission to extend the runway so that the factory could produce the DC-8, one of the first jet-powered transport category aircraft poised for commercial passenger operations. City officials refused, and Douglas relocated its primary factory to Long Beach, California.

Santa Monica became a general aviation airport and reliever field for Los Angeles International Airport (KLAX), located approximately six miles away.

Over the years several neighborhood groups sprang up in opposition to the airport, arguing that the airport, which had been built when it was surrounded by ranches and orchards, was too close to residential neighborhoods—though many homes had been built nearby to house Douglas employees. The anti-airport groups highlighted aircraft accidents, noise, and pollution as reasons to close the field. The pilot community tried to work with the city and neighborhood groups, and Santa Monica became one of the first airports to be known for voluntary noise abatement procedures.

## Long, Slow Death

In the 1970s, city officials argued with the FAA that the municipality should have the right to close the airport and redevelop the land, as most of the residents in the city did not want it in their neighborhood. The FAA argued that the airport was part of the nation's transportation infrastructure and required to remain open to satisfy grant assurances.

In 2016 the airport tenants and aviation advocacy groups such as AOPA and the National Business Aviation Association (NBAA) filed complaints against the city for violating leasing policies, implementing an unjust landing fee structure, and diverting airport revenues.

The claims were investigated, and in 2019 Kevin Willis, director of the Office of Airport Compliance and Management Analysis of the FAA, concluded that the city was in non-compliance with federal grant assurances with respect to loans that the city claims it made to the airport, and rates for the airport's landing fees might not be in compliance with grant assurance rules.

**FLYING** made several attempts to reach representatives from local aviation groups, including the California Pilots Association, but our inquiries were not answered by press time.

The airport is home to the [Museum of Flying](#) at Santa Monica, founded by Donald Douglas Jr., the second president of Douglas Aircraft.

According to [Airnav.com](#), there are 74 aircraft based at the airport. The page also includes information about the airport's noise curfew and noise abatement procedures. It includes a link to a page with a list of aircraft banned from the airport because they exceed the maximum noise level of 95.0 decibels.

## The City's Plans

According to a statement from the city, the airport site will likely be redeveloped for open space, as Measure LC, passed by Santa Monica voters in 2014, allows the city council to approve the development of parks, public open spaces, and public recreational facilities. Real estate development is prohibited on airport land unless approved by voters.

The airport accounts for 4.3 percent of the city's land.

"We know this is an asset Santa Monicans care about," said Mayor Gleam Davis, "and we want to work together to set goals and priorities to meet diverse community needs for the next several generations."

City officials have outlined a timeline for the airport closure project:

- Consultant Selection: Summer 2023
- Project Initiation: Winter 2023
- Existing Conditions: Spring 2024
- Scenario Planning (Preferred Scenario Approved): Spring/Summer 2026
- Specific Plan Initiation: Fall/Winter 2026
- Consent Decree Airport Closure Authorization: Winter 2028
- Specific Plan Adoption: Fall 2028-2033 or beyond

City officials will soon begin looking for qualified firms to help develop the land and will seek input from the community. This will be followed by a request for proposals that will allow community members and stakeholders to have input on the project.

## Reid-Hillview Airport, 2021

At the regular Santa Clara County Board of Supervisor virtual meeting, officials from Santa Clara County discussed the [findings published in an airborne lead study report](#) recently released regarding the environmental impact of the airport on the surrounding community.

The culprit this time? Leaded fuel, purportedly driving higher blood lead levels (BLLs) in local children.

This forms the latest chapter in an ongoing quest by various factions to close the airport—a locus for flight training and an important reliever field to Norman Y. Mineta San Jose International Airport for decades.

The pilots and business operators at Reid-Hillview are willing to responding to community pressure, and last year produced an action plan to mitigate any results of the survey by answering its main concern—the presence of lead in avgas, and by extrapolation, in the emissions of piston-powered aircraft based at the field.

The study left out the other sources of lead in the airport environs, including "lead-emitting industrial facilities [that] are more common in the vicinity of airports," and "exposure to lead-based paint [that] is primarily a problem in older homes." Both sources are prevalent around Reid-Hillview and have been tracked for decades.



Upon further inspection, the report also indicates that the BLLs found in the surrounding community [were no higher](#) than those found in other areas within the region. From the San Jose Spotlight: “The report, released last week, found that out of 17,000 blood samples from children ages 0-18 within 1.5 miles of the airport, only 1.7 percent have elevated lead levels which call for further testing and observation, according to the Centers for Disease Control and Prevention’s threshold.

The statewide average of children who meet the same criteria is between 1.5 percent and 2.6 percent depending on age.”

In anticipation of the report, however, local airport operators had already come up with a solution: To replace the 100LL available at KRHV with unleaded [Swift 94UL avgas](#).

The fuel is a drop-in replacement for 100LL, requiring no supplemental type certification for about 60 percent of aircraft engine/airframe combinations—[unless specifically required](#)—such as the Lycoming O-320s and O-360s that power a broad range of training aircraft on the field.

Though the outcome report itself shows those levels are no more elevated than other neighborhoods in the greater San Jose area, community groups are using the report to inflame tensions between local residents and the airport—and operators such as Trade Winds Aviation are moving forward with plans to utilize the Swift fuel.

Walt Gyger, owner of [Trade Winds Aviation](#), employs 40 people locally and the company’s fleet has grown to 12 airplanes—doubling the fleet and employees in last 10 years. Gyger has another location at the San Martin Airport (E16) to support Trade Wind’s expanded training, aircraft rental, and shared ownership operations.

He’s the founder of [CAAPSO, the Community and Airport Partnership for Safe Operation](#) that seeks to bring together community and airport operators and pilots around Reid-Hillview.

Gyger relates that this latest movement caps a 30-year quest driven by developers that want the land. “It was noise before, it was safety before, now they’ve picked lead,” Gyger told Flying.

In 2011, the county, which governs the airport, refused any further FAA monies so that the associated 20-year grant assurances requiring the county to continue to operate the airport would expire in 2031.

“We made efforts to bring unleaded fuel to the airport, so we know that’s not really the issue,” said Gyger. The first load of Swift fuel UL94 arrived on Friday. “It strikes a chord with families, so it’s hard to dismiss it. We don’t like lead either, so we pursued it.”

“I’m looking forward to seeing the impact on the engines, how much cleaner the engines will be. Sticking valves may be a thing of the past.”

However, Gyger foresees a serious precedent that would be set if the county succeeds in closing the airport based on a report on leaded fuel.

“What Santa Clara County is doing will have an effect on every airport in the nation,” Gyger said. “Every airport has opponents, and they will make this claim.”

There is hope, however, and a path for other airports to consider. Gyger relates a conversation he had with the primary researcher on the study: “The researcher agreed that removing the lead from the avgas would have the same effect on reducing overall lead impact as closing the airport.”



## Reid-Hillview Airport, 2023

The Community Festival at Reid-Hillview Airport in east San Jose drew thousands of people eager to get a close-up view of a variety of flying machines.

At a park across the street from the runway, a group of neighborhood activists gathered to renew their demand that the airport be closed. They said a county-commissioned study shows elevated levels of lead in children living within a half-mile of the airport. Even though leaded fuel has been banned at Reid-Hillview for three years, they say airplanes are still burning it.

## People Over Planes



"The lead has been banned but the pilots will fly to Mineta, they'll fly to Palo Alto and they bring the leaded fuel back to our community," said Maria Reyes, a homeowner who is leading the effort to close the airport. "This is not fair. Our children need to be protected."

Back at the airport, pilot Diane Gaskill acknowledged that owners of some aircraft are, in fact, filling up with leaded fuel elsewhere.

"They have to! They don't have a choice. [Unleaded fuel] would destroy the engine," she said. "[Lead] protects the

engine against misfiring, firing too soon and burning a hole in the top of the piston. That's what could happen -- very serious damage."

The irony is that Reid-Hillview is already scheduled to be closed in 2031 when an agreement between Santa Clara County and the FAA expires.



*Peter Ortiz*

San Jose city councilmember Peter Ortiz said it's important to keep the pressure on, so they don't backtrack on that plan.

But if unleaded fuel is hazardous at Reid Hillview, what about those who live near San Jose's Mineta International?

Ortiz said he would not advocate closing that airport.

"There are neighborhoods, but they have distance," he said. "They don't have individuals right here in the middle. They don't have small planes flying over the families over there."

For the county, the health issue may not be the real reason to close the airport. While neighbors would like to see a park with swimming pools and open space, the pilots suspect the county is eyeing the land as a prime location for high-density housing developments.

"That's all San Jose is interested in having built at the moment so that's what the residents are going to get here," said a member of an organization called CAAPSO, for Community and Airport Partnership for Safe Operations. "And they actually don't want that. They want this turned into some big park and open space and the thing they don't realize is, airports are open space."

Reid-Hillview has been here for more than 80 years but, since the 1980s, there have been efforts by opponents -- including Santa Clara County -- to shut it down. The neighbors want the airport to close immediately. The pilots hope it will stay open forever.

The county may have its own reasons for wanting the facility to fly off into the sunset eight years from now.

## How can You Save Your Airport?

At the very least, get involved. Study your candidates and don't elect or re-elect anti-Airport politicians. They are not your friends. Only you can protect your airport.

Don't think this cannot happen to your local airport! Society is changing and objectives have changed with it. Be vocal in getting true information out to the public. Get involved or risk being grounded by outside interference. Once the anti-aviation politicians are elected, you will be in their power.



# Juicy Mooney Owner Tidbits

This article is intended to be a potpourri of items that you may find useful as a Mooney owner/pilot. At least, that is my intent. I'll cover cleaning your Mooney, waxing your Mooney, an Oil additive that is amazing, a Battery life extender and more.



## Washing/Waxing Your Mooney

Many owners taxi their Mooney over to the wash rack where they hose it down with water, then soap it up and wipe the grime off the fuselage.

Over 25 years, I have owned two Mooneys and have never washed them with water or lathered them with soap. Rather, I use Wash Wax All. I simply grab a rag, spray an area and wipe it off. Sometimes I use a plastic scrub brush for

those petrified bug splats. But for the most part, it's Karate Kid "Spray On, Wipe Off." At the same time, it puts a nice wax shine everywhere so that when I'm done, the reflection from the sun hurts my eyes.



The best thing about Wash Wax is that I am not spraying my plane with water and letting it seep inside my Mooney, which increases the chances of future rust or unwanted moisture, especially in the engine compartment.

If my Mooney is especially dirty, we will dust it off first with a gentle dust brush, then apply Wash Wax.

My wife and I clean our Mooney after every flight. If it did not get too soiled, we clean it every two to three flights. The message here is you gotta keep up with it to use this technique.

Ditto for the Belly. You can clean your belly with Wash Wax Belly Cleaner, (another spray). I use shop paper towels because the oil/grime on the belly is pretty messy.



## Clear Coating

You can spend a lot of money for a Clear Coating, and it may very well be worth it. However, I am a cheaper Mooney owner and a few years ago, I gave Plane Perfect's *Clear Coat* a try.



Clear Coat uses Si14 technology which produces a harder shine that lasts. Most ceramic sprays on the market are formulated with SiO2 and look great after you use them, but long term protection is not as durable as Si14. Clear Coat is sold in concentrate so the chemicals never get old! Simply mix with water, (distilled or reverse osmosis for longer shelf life). When ready, you have a fresh product that applies maximum Aviation Grade protection to your favorite vehicle. There is NO SILICONE in Clear Coat. This is a ceramic you can use on all your sensitive surfaces, even fabric airplanes! Clear Coat will layer on any other product. No special prep is needed, other than a clean surface.

I applied Clear Coat a few years ago and was truly amazed at how our Mooney looked. It took 1-2 hours to apply. My wife and I simply sprayed it on and wiped it dry – No rubbing required. It is projected to last a year, but I am living on more than twice that now. [CLICK HERE](#) to read more about it and/or to purchase. It costs a whopping \$26.75

### Oil and Protecting your Engine

OK, you already know that you should fly your Mooney regularly to maintain the health of your engine. You already know that you should change your oil somewhere between 25-50 hours, or every three elapsed months. However, did you know that [Camguard](#) can significantly help in maintaining a healthy, low friction environment and significantly reduce rust/corrosion?

Camguard is an advanced oil supplement designed to help protect and lubricate any engine. Camguard is a synergistic blend of advanced oil additives from all over the world, designed to reduce wear, curb deposit formation and most importantly, protect engines from rust and corrosion. It contains multiple corrosion inhibitors for both ferrous and non-ferrous metals. It's a combination of ashless anti-wear compounds, anti-oxidants designed to reduce carbon deposits and special seal conditioners to prevent oil weeping. Camguard is FAA accepted and approved for use in piston engine aircraft oils meeting SAE-1899 standards. It is compatible with piston aircraft oils, passenger car motor oils, most marine oils, and heavy-duty diesel oils. Camguard protects your engine in at least two ways. First, without Camguard, your engine will lose the protection in your upper engine after 36 hours of non-use. Camguard extends that time to approximately 512 hours. It does this by creating, in my words, a polymer-like hair that extends from the surfaces inside your engine. Any moisture present accumulates at the end of these "hairs" keeping it separated from your engine's metal parts.



Secondly, Camguard increases the lubricity of your oil, i.e., it reduces friction, especially in your cylinders and cam. Therefore, it is a win-win.

I've been using this product in my Eagle since I purchased it. An engine shop indicated they had never seen an IOI550 as clean as mine at 1,550 hours. With the exception of some unforeseen circumstance, I could probably run my engine past TBO.



## Your Battery (Don't "Minder" Me)

Nobody wants to have a battery fail to give you enough power to start, especially away from your home airport. Here are a few thoughts for your consideration.

The first and most important decision you need to make is to buy the best battery for your Mooney. My experience has been that Concorde batteries last significantly longer than Gill batteries.

The second decision is choosing a lead acid or sealed battery. I recommend sealed for a couple of reasons. First, they seem to last longer, although I can't prove that. Secondly, they don't require constantly checking for the acid level. Granted, they are a little more difficult to test for their health than a lead acid.

If you want to significantly increase the life of your battery, acquire a BatteryMinder for your specific battery. BatteryMinder or Aircraft Spruce can tell you which one to buy for your battery. Do NOT use an automotive battery minder as that could cause damage.

## Protecting Your Mooney (and you) from the Sun & Heat

In the summer, it's sunny and hot here in the western USA and you should protect your Mooney and the avionics from that sun and heat.

You have a few of options.

First, you can purchase a cover for your cockpit area from a place like [Bruce's Covers](#).

Another choice is to have reflective window covers that adhere to the inside of your cockpit windows and windscreen. My wife made a set for our Eagle. These

screens can also be purchased. Screens have two advantages. First they reflect most of the heat away from the inside of your cockpit. Second, they are out of the reach of prying eyes since they are inside your Mooney. Perhaps a small, but worthwhile thing.

## Summary

I hope that this article gives you some food for thought on caring for your Mooney. The best thing about this article is that none of the ideas cost much.

*Fly Fast. Fly Safe*



# Plan Now to Become a Safer Pilot in 2024

Attend a Mooney Pilot Proficiency Program. Visit [MooneySafety.com](https://www.mooneysafety.com) to learn more.

You can register at <https://www.mooneysafety.com/ppp-registration/>

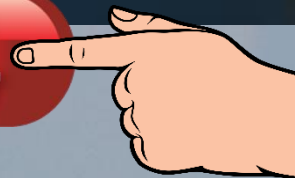
You can also email Lela Hughes, [lelahughes49@gmail.com](mailto:lelahughes49@gmail.com) or call [830-315-8008](tel:830-315-8008).

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# Get Your Exhaust Checked

By Richard Brown



I was in my hangar, eating some leftovers for lunch, when my cell phone rang. It was one of our vendors, who is also a friend. He had stopped by the store the day before and they had told him I wasn't in that day.

"I hope you were out flying somewhere yesterday," he said.

I replied, "I wish, but I was getting a colonoscopy to make sure I keep flying for many years to come."



This won't be a regular article from me and might seem like it doesn't fit in a flying magazine, but I hope you will stick with me for this Public Service Announcement. I'll include a short story of flying, and by the end, I hope that if you haven't had this preventative measure taken, that you will get it done. Perhaps I can make you laugh a little bit along the way.

A little over two years ago we were on a flight from California to our place in Pagosa Springs, Colorado to do some skiing at Wolf Creek. I like to land with 10 gallons in one tank and with a 52-gallon capacity in our M20D, the four-hour (no wind) flight time is right on the edge of my range. Headwinds seem to be more often the norm and this flight was no exception, so we planned for a fuel stop in Lake Havasu, Arizona (KHII).

My wife has flown hundreds of hours with me and knows that once we're approaching the airport we will maintain a "sterile" cockpit; no talking or distractions unless it is to point out a plane that looks like it might be a conflict. The combination of leaving Fullerton, California (KFUL) early in the morning and it being a weekday, resulted in no other traffic at KHII.

I entered an extended left base for runway 32 and we were just a few minutes from landing when out of the corner of my eye I saw my wife looking at her phone.

"Oh no," she said with sorrow in her voice, "he's gone."

"Don't tell me something like that when we're about to land," I responded. Then I focused even more intently on the task at hand. I knew exactly who she was talking about and what she meant, but the distraction was easily identified, and we landed uneventfully.

I had last seen him at a church Christmas party, and we were catching up. He had talked about some of the back pains that he had been having and attributed it to some softball injuries along with his work. Soon thereafter, he went to the doctor and was diagnosed with colon cancer, but it was too late. The cancer had spread throughout his body and just over four weeks after his diagnosis, he passed away.

It was very sad and never should have happened. He should be enjoying his retirement right now. [Research has shown](#) that getting a colonoscopy is associated with as much as a 69% decrease in new cases of colorectal cancer and an 88% decrease in the risk of death from it. My friend, despite being 64 years old and his father having passed away from colon cancer, had never been in for a screening.



A few months later, I went in for a physical and with my 50<sup>th</sup> birthday on the horizon I was expecting to be told that I needed a colonoscopy. When I mentioned it to my doctor, I was surprised to learn that they have now lowered the age that patients need their first Colonoscopy from 50 down to 45 years old. I left his office with orders for bloodwork and a Colonoscopy. I have been blessed with good health and would love to report that I'm a good patient, but I don't like going to the doctor. Sadly, I must report that a year later, I hadn't completed either of the procedures. Still, constantly on my mind was one question: What if there was something going on inside of me? What if it were something that if not caught early enough, that it would cut my life short?

Finally, my desire to extend my life overcame my dislike of doctors. I had to reach out to my doctor for new orders as the others had expired. I completed my bloodwork and contacted the Gastroenterologist. During a video call, the doctor asked, "So why do you want to meet with a Gastroenterologist?"

"I'm old," I said. "I was supposed to have a colonoscopy when I was 50, and now I'm 51."

The procedure was scheduled, and my wife stopped by the pharmacy to pick up the prescription which is appropriately named "Super-Prep." I can only imagine "Super-Poop" had already been trademarked and they went with "Prep" instead.



My reluctance to have the procedure was driven by two factors. First, I have never been under anesthesia except for dental work and when a doctor was cutting a cactus spine out of my finger. Blood and needles don't bother me. I always watch when they stick me to give blood and I was fascinated when I watched them operate on my finger. However, the thought of being given medication that puts me to sleep is scary to me.

The second factor is the prep the night before the procedure. I have read and heard horror stories and had no desire to experience it. Then again, I would like to live a long time and, as I said earlier, that desire won day.

A friend asked, "Do you have a Bidet?" My negative response was followed by him saying, "You're going to wish you did."

"Don't be more than a step away from the toilet," another friend said, "unless you are going to wear a Depends," he finished with a laugh.

With all this rattling around in my head I drove home from work with my stomach stuck to my spine. I should mention that before you get to the evening "prep," you have been on a liquid diet all day. I drank a bunch of Sprite and ate a bunch of Jello, but I was hungry. My wife fixed me some chicken broth because the thought of more Jello was not appealing. I sipped some of that before changing into more "convenient clothing."

I was wearing sweatpants, (not tied), and a T-shirt. The last thing I wanted was to wear jeans and worry about a belt, button, and zipper when everything decided to break loose. I had been warned that the time it takes for your bowels to go from 0-60 is a fraction of a second.

The prep process involves drinking what must be an industrial strength laxative mixed with 16 oz of water, followed by another 32 oz of water in the next hour.



This is completed twice the night before and the morning of the procedure. The idea is to completely clean out your large intestine, and I mean completely!

It comes with a convenient cup marked at 16 oz. I poured the first bottle of Super Prep into the cup and filled it with water from the fridge. I mixed it well, and then hoping it wouldn't taste too terrible, I put it to my lips and started drinking it down. I wasn't sure I would want to drink 48 oz of water in under an hour, but after tasting the Super Prep it wasn't going to be a problem. The taste isn't terrible, but I think they make it just bad enough so that you want to drink more water to get the flavor out of your mouth.

I quickly filled the cup again with another 16 oz and chugged it down. This had the benefit of getting rid of the flavor in my mouth but also presented a different challenge. I now had 32 oz of water in my belly, and it was stretched to its painful limits. The only thought in my mind was that my stomach wouldn't hurt for too long. Surely it would quickly "move on through."

I sat down at the kitchen table, just a few steps from the restroom and became more focused on the feelings in my gut than probably ever before. How long does this take I thought? Am I going to have much warning? I know what it feels like when my stomach starts rumbling and Montezuma's Revenge strikes, but would this be like that or different?

I didn't have to wonder for very long. Fifteen minutes from the time I chugged the Super Prep, I felt my stomach gurgle. It wasn't a rumble, or a cramp; it sounded and felt like a mud pot bubbling up. Go ahead and Google "[bubbling mud pot](#)" and it gives you a good idea of the gymnastics my stomach was getting ready to unleash.



Without delay and just in time, I went the 3 to 4 steps into the bathroom. I started to wonder if I should have had handles attached to the toilet seat to hold onto, so I wouldn't lift off. Thankfully, I had filled the 16 oz cup and left it on the sink, because I still had to down it and there was no way I would have the time to get to the kitchen and fill it up before I had to be back on the porcelain throne.

I drank the final 16 oz of water and ran up the water bill with the number of times the toilet was flushed. An hour later, as quickly as everything started, it stopped. I stayed in place, afraid that it was a false flag, but that was all. Whatever had been in my insides was not there anymore.

I sat down on the couch and my wife suggested I should drink something so I wouldn't get dehydrated. I asked her what the point of that would be? It would just go right through me. I went to bed early and slept well until my alarm went off at 2:50 am. I got out of bed and stepped on the scales to see what my "empty hull weight" is. I am confident that there was no "useable fuel" or anything else left inside me.

My appointment was at 7:00 am, which meant I had to down the second round of Super-Prep with 16 oz of water at 3:00 am, followed by another 32 oz of water before 4:00 am. Again, I drank it as fast as I could, followed immediately by an additional 16 oz of water to get the taste out of my mouth. I expected things to "start happening" again in 15 minutes, but alas, it was not to be. I can now say it takes almost exactly an hour for water to go from my mouth, down to my stomach, through the approximately 20' of small intestine and 5' of large intestine and out the exhaust pipe.

Thankfully, everything was done well before we had to leave, allaying my fears of being trapped in a car without a restroom. I checked in and soon they took me back. The place is a machine, with a hallway and these little cubbies off to the sides. They are just big enough for a hospital bed and a chair with a curtain separating it from the hall.

After going through a battery of questions, the nurse handed me a hospital gown and said, "Put this on, opening to the back and don't tie it. Your clothes will go in this bag."

I did as I was instructed and sat on the bed. The nurse came back to insert an IV and stick sensor pads on me, then attaching them to a monitor. She then returned to the foot of the bed and started making notes of my vitals. After a minute she looked up and asked, "Are you an athlete?"

That was not the question I was expecting, and it caught me off guard. "Umm... I guess I'm athletic. I work out five times a week."

She questioned me, not because I was a fine example of athletic prowess laying there in nothing but a hospital gown. Nope. She explained, "Your heart rate is very low."

I glanced back at the monitor and saw it was ticking along at 50 beats per minute. "Oh, my resting heart rate is usually around 46-47," I replied.

She responded, "It's ok. That's good. It's just lower than what we usually see."

She told me that the worst, meaning the prep, was over, and the rest would be easy. I told her that maybe I had built it up to be so bad in my mind that it wasn't as bad as I thought it would be. Maybe I was just lucky. She mentioned that it is easier for some people than others.

They wheeled me back to the room where the procedure would be completed. The doctor came in and talked to me for a few minutes, then said, "We're going to give you something that will make you a little groggy."

The rest of the morning consists of bits and pieces of memories with whole chunks missing.

The "something" was 75 micrograms of Fentanyl and 5 milligrams of Midazolam via IV. The next thing I remember was standing next to the bed with my clothes in front of me and the nurse telling me to get dressed and then have a seat in the chair. I have no recollection of the process of getting dressed or



sitting down. That is missing from my mind, but I do remember sitting in the chair and the doctor going over the results.

I was handed a packet of papers with post procedure instructions, pictures of my insides, and he told me they found one 5mm polyp that was removed. They would call a few days later to tell me that it came back as benign.

I remember them bringing a wheelchair and getting in it, as well as watching my wife pull up to the curb to pick me up. However, the process of getting wheeled down the hall, the elevator ride down, and getting pushed out to the curb is gone from my memory, as if it never happened. I magically went from a chair on the second floor to the curb in the blink of an eye.

I chatted with my wife on the way home, and I remember her asking if I thought I was able to drive. Silly me, I said, "I think so, it feels like when we leave on a long drive at 4:00 am and I'm getting tired just before the sun comes up." Well... it was nothing like that. Looking back, I remember leaving the parking garage, and walking into our house along with what we talked about on the way home, but everything on the drive is missing. I have no idea even what on-ramp we took to get on the freeway.

I have always had a good memory, and this was a very weird experience to be unable to recall whole portions of the day.

When all was said and done, none of it was as bad as I imagined. I was given a clean bill of health and told to have my next colonoscopy in five years. Now that I know what to expect, I won't be worried about it and will be sure to schedule it on time.

As I said earlier, this may seem like an odd article for a flying magazine, but after I had my procedure, I learned of a couple friends, one who is north of 55 and the other one who has passed at 60, who have never had a colonoscopy. I thought of them, and my good friend who is no longer with us. I decided that maybe I should advocate for those who are in the same position, to get checked out.

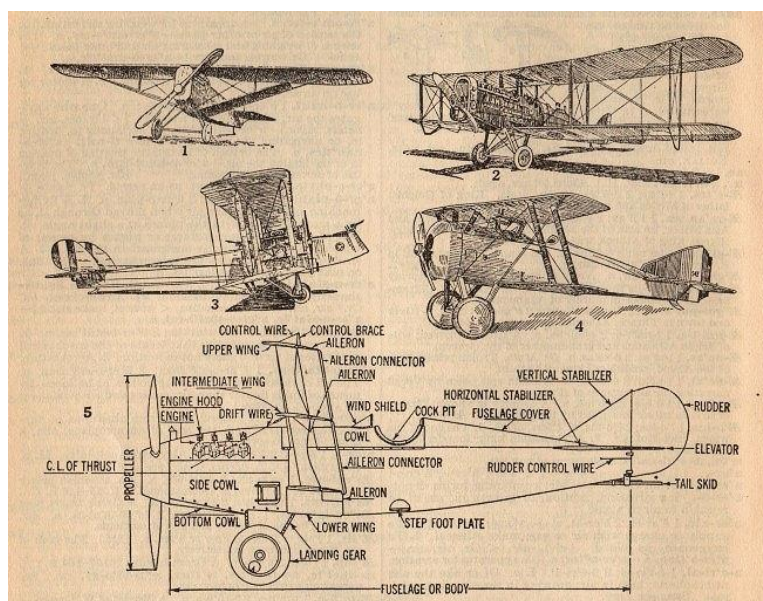
I think the average age of us Mooniacs is past the recommended age of 45 for our first colonoscopy, and I hope we will all be flying our Mooney's for many years to come. So, if you haven't been, see your doctor and get it scheduled. It just might save your life.

Watch "The Colorectal Surgeon" [HERE](#)

Watch Tim Hawkins "Colonoscopy" [HERE](#)



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](mailto:richard@intothesky.com). If you're ever in Southern California and want to meet up let me know.



# The Importance of Proper Judgement

By Winslow Bud Johnson, CFII, Director, MAPA Safety Foundation, Inc.

In the beginning, knowing the rules and basic piloting skills are what a beginning pilot is judged by. He or she must be able to fly the aircraft proficiently and should be able to stay out of trouble by following the rules. As the pilot gains experience, however, it is proper judgement that makes the pilot successful. There are constant decisions that a pilot must make all the time. Sometimes these decisions can make the difference between a successful flight and a disaster.



In this article, I am going to discuss one example of the importance of making the right decision during a typical cross-country flight. It is the type of decision that many pilots are faced with when they do long distance traveling. It should be an easy decision, but sometimes social pressure from others can make the decision difficult. In this case, social pressure could have led to a really bad situation.

One beautiful sunny day, I was preparing for a trip from Connecticut to Halifax Canada. One of my passengers was especially excited about this trip. His best friend lived in Halifax, and he had arranged to have lunch with him when we arrived. They had not seen each other in 20 years and considered this



to be a big deal. We planned an early morning departure so that there would be no problem arriving in time for my passenger's lunch date.

Because I was concerned about the weight and balance for this heavily loaded flight, I had everyone give me their weight, (this was difficult for one of the wives). I then had everyone weigh their baggage. We estimated the flight time would be four hours and because we had four people on board, we only had the minimum fuel reserve. It was a beautiful day with light wind, and everything seemed wonderful. I anticipated a perfect flight.

About an hour after crossing the Canadian border we noticed that the headwind had picked up considerably. I calculated the increased flight time required due to the strong headwind and

concluded that if the headwind continued, at our current settings, we would have less than enough fuel to complete the trip with the legal amount of fuel reserve.

Cruise settings are extremely important. After all, these are the settings you use for most of your flying. Sometimes cruise settings can make the difference between completing a flight or having to abort. We were flying at 75% power with a true airspeed of 175 knots and were burning 13 gallons of fuel per hour. I quickly calculated that if we reduced to 65% power, we would reduce our fuel burn to 11 gallons per hour. That meant that we would be using a total of 45 gallons of fuel, versus 52 gallons of fuel. This gave us a better chance of making Halifax, but it would still be tight.



We would likely have made it to Halifax with the reduced power settings. However, if the wind picked up anymore, we would have risked running out of fuel before we reached our destination. In that part of Canada, there are very few alternate airports, so that could have put us in danger. I announced to the passengers that we would be making a precautionary fuel stop to be absolutely sure we would have enough fuel to complete the trip.

To further complicate the situation, we had already passed the only possible alternative fuel stop in the area. To add fuel, we would have to

turn around and backtrack for about 20 minutes. Between the increased headwinds, the 20 minute backtrack and the time required for the fuel stop, we would miss our scheduled arrival by approximately two hours. That meant we would not arrive in Halifax by lunchtime. I carefully explained this to the passengers.



The passenger with the friend in Halifax strongly objected to my suggestion we make a fuel stop. He felt he urgently had a need to arrive in Halifax on time and our extra fuel stop would cause him to miss his lunch appointment. He felt there was only a slight risk of the wind getting stronger, therefore we should proceed as planned. His temper tantrum in the back seat created a lot of pressure for making what should have been a simple go, no-go decision.



These are the kinds of decisions pilots must make all the time. There may be an urgent need to make it to a destination. However, there might also be a risk due to weather or some mechanical issue. When pilots are flying for business and there is a lot of money at stake or a risk of missing a meeting. That increases the pressure in making go, no-go decisions. The pilot must decide what to do. It is proper judgement that makes the pilot successful.

My decision was to take the risk and proceed to Halifax, or make the fuel stop and cause my passenger to miss his lunch appointment. The more pleasant decision would have been to keep going and stop the screaming in the back seat. This was clearly a judgement call. In looking at the chart, it appeared if we did not make it to Halifax, we would be landing in a farmer's field somewhere in Canada. I could not see any airports between us and the destination. The pressure was clearly on. What would you have done?

In this case, I chose the safest alternative and made the fuel stop. I was unwilling to risk running out of fuel just so that my passenger could make it to his lunch appointment. It turned out fine because my passenger was able to call his friend from the fuel stop and plan for dinner instead of lunch. My passenger eventually calmed down and the remainder of the flight was pleasant and uneventful. I felt this was a good example of the importance of proper judgement.



# Dehumidifying Your Engine the Easy Way

By Kevin Knight

Here's a really expensive aviation chemistry formula: Iron + oxygen + water = rust. When rust develops in our airplane engines, it's a costly cancer. However, just like cancer, if it's stopped before it can get started, the odds of extending an engine's life rise dramatically.

Most of my flying and homes have been in coastal areas where rust is more prevalent. However, drier places like Colorado aren't immune from that metallic rot. Since rust is everywhere, I recently decided



to go beyond adding CamGuard to my oil every change and purchased an engine dehumidifier called DryBot.

Engine dehumidifiers gently push dehydrated air through the engine so rust developing conditions are greatly reduced. Lycoming has reported that in high humidity regions, corrosion can start appearing on relatively new cylinders within two days of

inactivity. Since most of us don't fly our planes nearly enough, we're all at risk for reduced cylinder life and failed components.

## In the beginning ...

I began my career working at Alcoa Aluminum's Davenport Works in Iowa. We made wing skins for Boeing jets, so I spent many hours in the plant's testing lab. As a result, I have a strong bias for engineers whose work is grounded in hard data and solid science.

Since I had read about various engine dehumidifiers online and seen them advertised by Aircraft Spruce, I wanted to determine if DryBot, the latest market entrant, was worth nearly \$1,200.

In years past, if my M20F's engine wasn't being run during the winter, I used "desiccant spark plugs" with water-absorbing silica beads. The problem was, once the desiccant changed color from pink to light blue, they were saturated and were no longer doing any good. I wanted something that was continually operational and self-maintaining so my engine would stay healthy while I was enjoying sunnier weather elsewhere.

Being research driven, I contacted Matthew Dock, DryBot's co-creator and president of RPX Technologies in Oklahoma. The company's DynaVibe is the market leader in prop balancing technology.

Matt told me he's 53 years old and earned undergraduate and master's degrees in mechanical engineering from Oklahoma State University. His focus was metallurgy, with an emphasis on surface



finishes, cracks and other imperfections. He thus did lots of work with electron microscopes, x-ray diffraction and grain microstructure.

Since earning his private license 27 years ago, Matt has acquired five planes, and is an A&P and IA. He got interested in engine corrosion when a cylinder on one of his planes had low compression. On the camshaft, there was also a spalled cam lobe and bad lifter faces. They subsequently split the engine case and discovered the interior was “like a swamp.” Condensation and acidic oil residue pitted accessory gears through bolts and other components. The engine shop supervisor figured someone kept the oil pan heater on all winter and the oil cooked over time, which released lots of moisture into the engine.

### **Sweating product details to reduce engine moisture**

To prevent that from happening in the rebuilt engine, Matt built a do-it-yourself dehydrator that used silica desiccant, but it regularly maxed out on moisture. That required Matt to dry out and replace the silica regularly.

Doing that got old pretty fast, so he bought a well-known commercial dehydrator. One day, he noticed a water droplet going from the device into a clear, plastic tube into his engine. That was the opposite of what he expected. Ever the engineer, he bought some humidity sensors from Amazon to track what was going on inside the engine. He discovered that the internal humidity in the engine went down the first few days of dehydrator use, then started rising. He concluded it was because the device used a cooling plate that couldn't keep up with the high humidity of Oklahoma. To confirm his conclusions, he did the same experiment using a second identical dehydrator and got the same result.

That led Matt and his partner Mike Fox to design DryBot. Mike is also a trained engineer. Their product innovations included inflow and outflow monitoring of air, inclusion of a liquid silica desiccant to extract moisture from the air before it entered the engine, and automated drying of the desiccant.

Their calculations indicated the desiccant could have the moisture removed from it daily for ten years and still retain 80% of its capacity. If that material ever had to be replaced, DryBot will alert pilots by generating a red, LED error code. The factory will replace the material for \$199.

The outbound air pressure is a steady .1 PSI. Tests with a bank of internal sensors have shown it takes around 15 minutes to purge excess moisture from the engine.

The dry air it pushes into the airplane engine is not recycled back into the DryBot, since that would contaminate the silica.

Matt and Mike showed that if humidity in the hangar is 80 percent, the DryBot's air humidity is less than 20 percent. That's noteworthy since the “critical humidity” required for rust to start forming is 40 percent. If humidity is below that level, ferrous alloys, such as steel, will not rust, and aluminum will not corrode.







Since my cylinders cost more than \$1,500 each and DryBot is super simple to operate, I viewed it as cheap, long-term insurance. I also appreciate that DryBot is built in the USA, providing jobs to 25 hard working Oklahomans.

For some visuals, this experimental homebuilder produced a pair of YouTube videos worth watching.

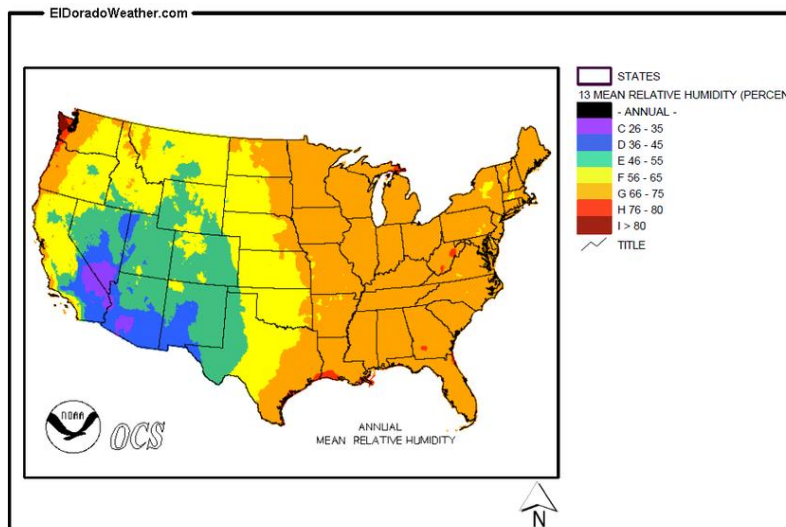
[https://www.youtube.com/watch?v=5uGJ\\_ERzqe0](https://www.youtube.com/watch?v=5uGJ_ERzqe0)

<https://www.youtube.com/watch?v=Sh2ZEOab918>

It is still important to run your engine regularly and fly. Engine manufacturers recommend getting the oil to at least 180 degrees Fahrenheit for an hour so it drives moisture out of the oil. If you just run the plane up on the ramp for five minutes, then put it back in the hangar, all you've done is sucked in a lot of moisture.

DryBot could help remove a lot of that moisture, but that's not optimal. Just tell your spouse you *have* to fly regularly so the engine will stay in shape. That's not just a good excuse to go flying, it is also good advice for maintaining a healthy engine.

For more information, visit <https://www.rpxtech.com/drybot.html>



# FRAT – Flight Risk Assessment Tool

by Terry Carraway

To expand on the recent article by Jerry Proctor, I want to talk about FRATs. Back in the day, we learned to evaluate the risks of a flight from our instructor, hanging out at the airport, and learning from the “old guys.” Many times, the story started with, “Let me tell you about the time ....” We also learned by doing and sometimes scaring ourselves, vowing, “I’ll never do that again.” FRAT and other tools are just a systematic way to score all the factors and make an impartial decision to go or not go. If I am really trying to tell myself it is good to go, it is probably not good to go. These tools can give validation to your decision. BUT, if you misuse these tools, like many other tools, you can put yourself and others in grave danger.

Jerry mentioned the IMSAFE from Civil Air Patrol. They also have a FRAT that is called ORM, Operation Risk Matrix. It is filled out by the PIC for EVERY CAP flight. You put in values for various parameters or check a box to indicate what range you fit into for that parameter. For one input, you put in Temperature and Dew Point. For a range, there are things like total PIC time (Under 300, Between 300 and 500, and Over 500). Also, there are conditions of flight; VFR, MVFR, IFR, and LIFR. ORM returns a risk ranking of Low, Moderate, or High. It considers the rating of the complexity of the mission, how current the crew is for that mission, and their experience at the airports involved. Now every CAP flight is reviewed before the flight and approved by a Flight Release Officer. If the ORM ranking is not Low, you need a Senior Flight Release Officer to approve the flight.

There are some cell phone apps you can download and use in a similar manner. Unfortunately, I am a pure iOS guy, so I only know about iOS apps. I have installed and use the FRAT and MMOPA FRAT. Both work like the CAP ORM by having you input information about your flight and give you a risk ranking. There are several types of things to input.

The Pilot section includes things like hours in the past 90 days, hours in Make/Model, recent instruction, duty day (both length and how much sleep the night before). It doesn’t take an expert to see how these could affect the performance of the pilot.

Next is the Operating Environment, which includes day or night, and wind speed at destination, (total and cross wind). It also includes weather at the destination and types of approaches available, local terrain near the airport, and density altitude for departure. FRAT includes a check box for Flight Must Be Made On Schedule and for Stress, including family, work or health. MMOPA FRAT adds a factor for non-pilot passengers on board the aircraft.

MMOPA FRAT has an equipment section that includes factors such as first flight after maintenance. They also ask if it is the first flight after extended outside storage.

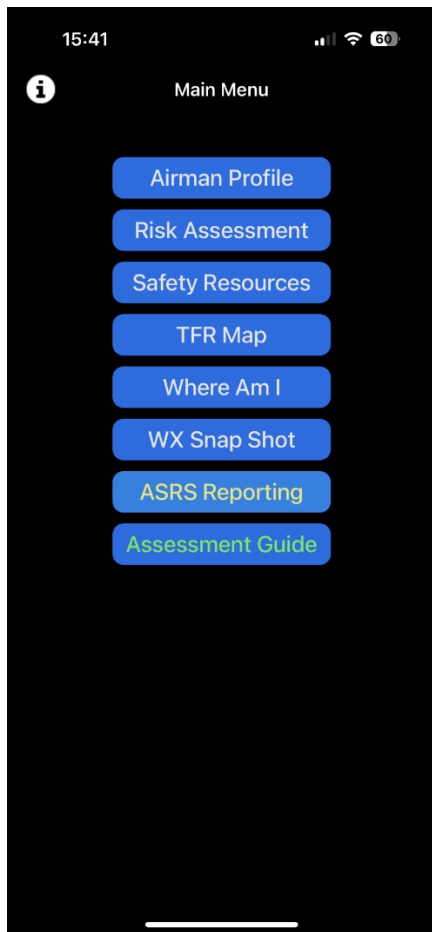
Both tools then give you a rating of risk. FRAT starts with Green and states, “Operational Risk Low.” If you tick off a few more risk factors, it now says, “Increase Risk Awareness.” Tick off a few more factors and the rank turns Yellow and states, “Consider Mitigating Risk.” The next step is “Reduce Risk Exposure.” A few more, and the color changes to Red and it says, “Evaluate Continued Operation.” Go further and you get flashing Red and “Risk Factor Very High.” The top level is “Risk Factor Extreme.”

MMOPA FRAT gives a numerical risk score. A higher number is higher risk. A score of less than 15 is Green and Low for the risk. Over 15, you get a Yellow banner and “Caution!” Over 25 is “\*\*\*No GO\*\*\*” on a Red banner.

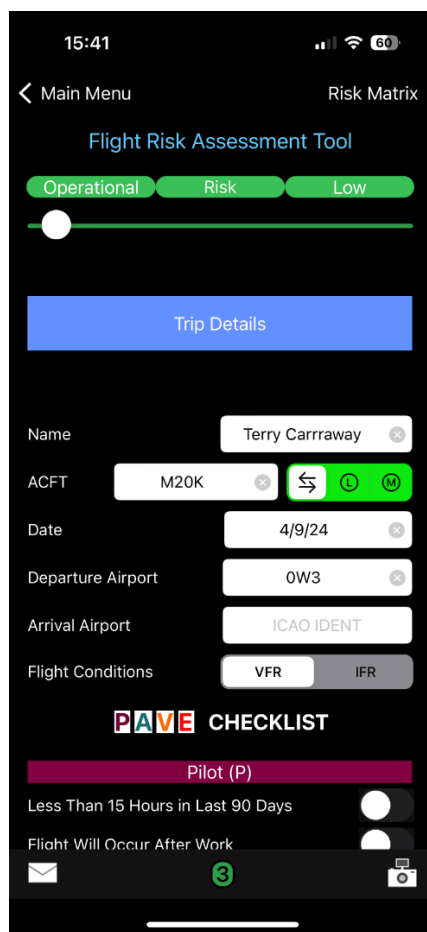
Using these tools shows me that over the years I have developed a very good mental risk assessment process. However, I still find these tools useful as a cross check, ensuring that I haven’t forgotten to take something into account, such as the first flight after extended outside storage.

Whether you use IMSAFE and a FRAT, or just a well-developed mental risk assessment, you should evaluate the risk factors before each flight and make sure that it makes sense to fly.

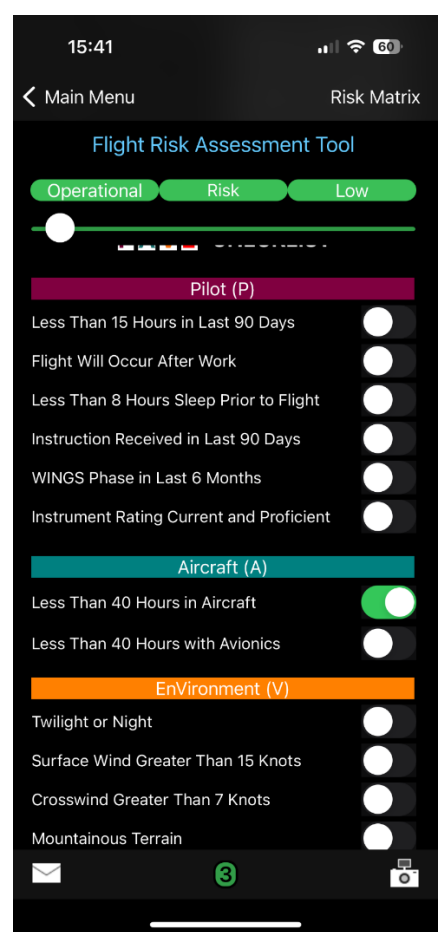
Like the old adage, “It is better to be on the ground wishing you were flying than to be flying and wishing you were on the ground.”



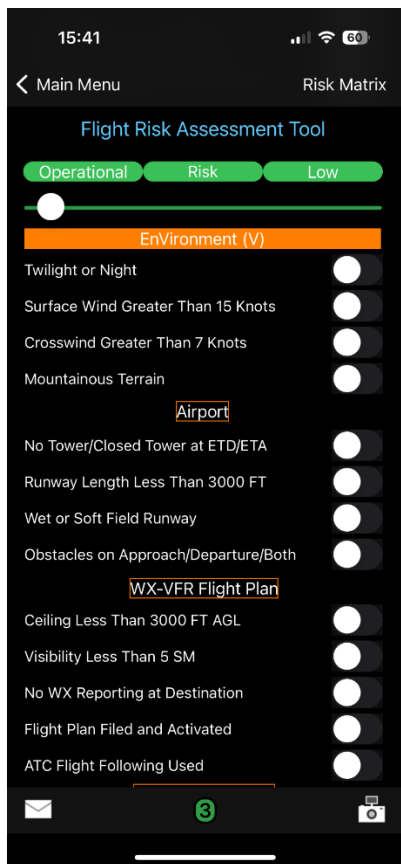
Main Page of FRAT



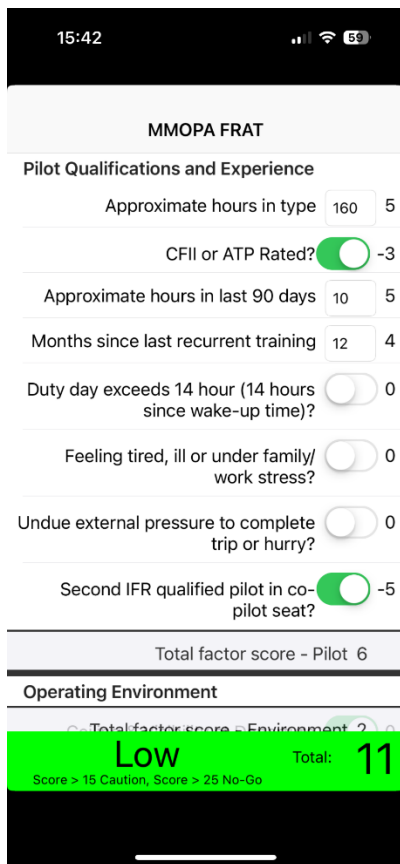
Part of FRAT input screen



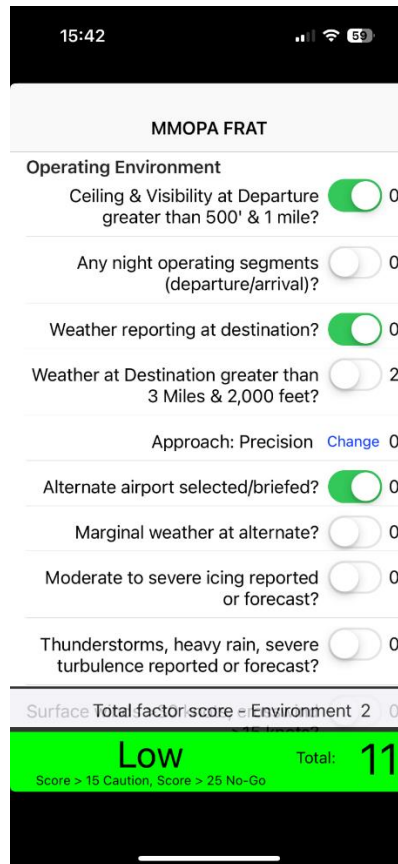
Continuation of input



More input for FRAT



Pilot Factors for MMOPA FRAT



Operating Factors

## Let the Games Begin – Avionics Upgrade Update #3

This will be the last update on the process of my avionics upgrade. The next one will be a completed job.

The upgrade is down to the wire, (pun intended), as all the wiring and harnesses are in the plane. I was at the shop yesterday, and the panel layout is now finalized. There were a few last-minute tweaks, mainly due to the smallish size of a Mooney panel. A test panel has been cut from acrylic sheet to check for any interference, and then the final panel will be cut.

A couple of changes were made. There is no room for the Mid-Continent clock with 2 USB power ports. I will have a Garmin dual USB power module. Also, I had opted to install the ElectroAire individual magneto switches with push button start, but that unit is too big. Instead, there will be two locking switches that you have to pull out to move the switch for the mags, and a spring-loaded toggle for the starter. The shop said they have not had good luck with long term durability of the push buttons.

Except for the issues mentioned, everything fits. The switches are grouped as to type of function. On the far left are the electrical switches for start and shutdown – Master, Alternator 1, Alternator 2, and Avionics Master. Then a space and the Fuel switches, Primer, Low Boost, High Boost. The High Boost switch will have a flip up guard to prevent accidental activation. Just to the right of the yoke are the Ice switches, Prop Heat and Pitot Heat. Between the main display and the radio stack are the lighting switches. The top row has, from left to right, Recognition Lights, Blank Hole (for later use), Taxi Light

and Landing Light. These are all forward facing lights, mainly to see better. The second row are the lights to be seen, such as the Beacon, Pulsar, Nav Lights, and Strobes.

The pulser is a Whelan product, mainly sold to helicopters. It works like a PulseLight, but it is cheaper. When it is ON, the Recognition Lights and Landing Light will pulse, alternating. When you turn either switch for that light to ON, that light comes on steady. Normal operation will be "Pulsar On" at all times. On final at night, the Landing Light switch is turned ON, and it will come on steady, but the Recognition lights will still pulse. Once on the ground, I can either turn off the Pulsar and the Landing light, or just turn the Recognition Light switch ON for them to go steady and add some light out at the tips.

The interior work is progressing also. The headliner is painted and ready. The plastic panels are repaired and primed but need some finish work. The new insulation, the headliner, and side pieces will be installed next week, and the carpet and seats will probably be installed the week after that.

The current overall schedule is for the work to be done in 2.5 weeks, with test flying the beginning of May. The next article should be me raving about my new panel.



Test panel cut out of acrylic sheet.



**Any Landing You Can  
Walk Away From...**



## 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 will consider using us.

Our objective is to always provide a very pleasant transactional experience for both the Seller, and the Buyer. We have two offices. One in Auburn, AL and one in Chandler AZ. Please give us a call or email. We look forward to the possibility of serving you. Thank you.



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[www.thunderbirdaircraft.com](http://www.thunderbirdaircraft.com)

### **DEADLY BAGGAGE DOOR DISTRACTIONS** By Richard A. Simile, Thunderbird Aircraft Sales

There is a motor function protocol that I have used with Mooney Aircraft for more than four decades, and that is to always LOCK the BAGGAGE DOOR! There was a very recent Mooney crash in St. Augustine, FL which killed the two people onboard when they came back around to land the aircraft. [CLICK HERE](#) to show some interesting details of the event. In the video, it appears that the baggage door is still attached to the aircraft which leads me to believe that perhaps they may have been trying to save the door, or prevent it from departing the aircraft? While I do not wish to speculate on the reason for this actual crash, I am going to STRONGLY SUGGEST adopting the baggage door locking protocol that I have used for many, many years. If that protocol were used in this case, it would have prevented the return to the airport altogether and hence the fatal event entirely.

Please note that even though the door is locked on the outside, Mooney made it so that it can still be opened from the inside emergency escape handle.

Please note that there is no aerodynamic change to the aircraft after a baggage door pops open. Don't panic and fly the airplane, fly the airplane, fly the airplane!!! Fly it normally with normal energy in the pattern and on final to the landing. Don't change a thing.

# Do You Talk to Yourself Out Loud?

Jerry Proctor



Let's have a show of hands. Who talks to themselves out loud? Seriously, I admit that I do talk to myself a lot. Many times, I do so out loud. I even yell at myself. Maybe I am calmly reflecting on my lack of intelligence, saying things like, "Proctor, you idiot!" Sometimes, the hammer missed the nail and hit my thumb. Then I use a special vocabulary I acquired during two tours of duty, hanging around Navy Seals. Also, as I am in my seventh decade, I might just plain mumble. But at least so far, I don't drool.

What does this have to do with flying, you ask? Well, I believe plenty. First, do you have a check list in your plane? I hope the answer is a resounding "Yes." If not, talk out loud to yourself and say, "I need to get my plane a checklist!" Second, are you able to find this checklist, three out of four times? If yes, then please read on.

I have the great privilege of flying with many different Mooney pilots at the Mooney Safety Foundation events. I get to ask them questions and observe how they do all aspects of Mooney specific airplane flight. As one pilot did his walk around preflight, I encouraged him to make one more circle at a distance. I call it the front chalk removal walk. This time, he saw his nose gear chalk. Thus, we enter the Mooney as only Mooney pilots do. Then, the pilot is a blur of hands, moving switches and wiggling knobs. Again, I ask the question, "Do you use a check list?" There is a pause and then the answer, "Why yes of course." As the pilot digs a little, there emerges a check list. Whirling hands again. My question now is, "Do you announce the list items out loud?" A positive, silent head shake, and I can now hear where the mind is telling the hand where it should go. Thus, the likelihood is the pilot is performing for the CFII. I hope though, my point is made.



Back to the talk to yourself point. I could list a series of studies, which only I would look at, that state, if one announces out loud, e.g., verbalizing the check list, it is more likely that the task at hand will be better accomplished. In simple terms, the additional sensory output and input improves performance. The mind can think faster than the mouth/hands can move. Thus, automatically, the check list process has slowed down. That is a good thing. Also, hearing your words is a soothing sensory input. The moral of my story is stated

plainly. Please read these next words out loud, "Hey, from now on, I am going to read my Mooney checklist out loud, not just when Proctor is sitting next to me!"

So good news for those of us on the other side of the hill. It is not only OKAY to talk to yourself out loud, but it is also actually better. It improves performance and means you will be less likely to get lost in an FBO finding your way back from the latrine.

**Fly safe and speak up!!**

Jerry Proctor, Mooney Safety Foundation, CFII and Former Director

# Communicating with ATC: Hints for the GA Pilot

By Jerry Hinshaw

This article outlines several guidelines to streamline and improve Air Traffic Control communications for the pilots of small general aviation aircraft, such as our Mooneys. A few rules can simplify the process for the pilot, improving communication, and enhancing safety.

For various reasons many GA pilots don't want to talk to ATC, or they are hesitant to do so. Some fear that the jargon is too complex or arcane. A few are "mike shy" and don't like talking on the radio at all. More commonly, pilots fear that they will make a mistake in their dealings with ATC and perhaps be sanctioned. A few who were trained at small non-towered airports are not accustomed to talking to ATC. The result is a reluctance to deal with ATC, let alone using ATC in the most effective way to expedite flights and enhance safety.



This article suggests a way, from the pilot's point of view, to demystify ATC communications, and to simplify the decision-making process that such radio exchanges demand.

## ATC or ATA?

Although we refer to ATC as 'air traffic controllers,' and they certainly do play a vital role in the coordination of traffic safely in both the IFR and VFR environments, I'd like to suggest that unless the controller can reach the yoke in your Mooney, he or she can't actually control you. In that sense, it helps to view them as "Air Traffic Advisors." I say this, not to diminish their authority, but to stress that the Pilot in Command is truly the final arbiter of the safe control of the airplane. You as PIC are in control and ATC is there to help you navigate and coordinate traffic separation. It is up to you to use their advice to safely fly where you want to go. Thinking of ATC communications as a negotiation rather than a one-way flow of instructions is helpful for the pilot and can enhance the safety of flight. There are too many examples of pilots blindly following inappropriate ATC instructions, with tragic outcomes.



## ATC Communications Guidelines

Master CFI Dick Rochfort suggests that there are in fact just THREE generic types of pilot responses to all ATC directives. These three broad categories cover all possible replies a pilot needs to make to ATC. They are:

- **PREFER**
- **ACCEPT**
- **UNABLE**

It may seem simplistic to categorize all ATC communications as fitting into just these three "buckets," but the concept is helpful. Let's explore each of these three categories in a bit more detail.



## PREFER

The pilot knows what he would like to do, where he would like to fly, what routes and altitudes he would like to take to get to his destination. That is the basis of the PREFER category, where the pilot explains to ATC what he would prefer to do.

The request should be clear, correct and as concise as possible. You are telling ATC what it is you prefer, and you are requesting their approval in the form of their clearance. As an example, you're flying from north of Denver and at a lull on the frequency you say, **"Denver approach, Mooney 55U, request clearance into the Bravo and direct to Boulder airport."**

You have asked for what you want, briefly and reasonably as there are no prohibited or high activity areas in the way. You may get your request, but if not, you have opened a line of communication about your routing.

Another example of a PREFER type of communication might be, while enroute, but with numerous intermediate waypoints ahead you ask, **"Chicago center, Mooney 345K, request direct destination."**

This lets ATC know that you can navigate to that point and are ready to take that clearance.

Sometimes you will get immediate approval to that request. Other times they may respond that you should "make that request with the next controller" who is in a position to approve the request.

Most GA pilots are somewhat uncomfortable with asking for what they prefer. I suggest that it is reasonable and normal to make such requests whenever you feel it is useful and has a chance of being approved.

If you have a safety of flight issue, you must make your needs known to ATC. The most obvious example of asking for preference is declaring an emergency. When to declare an emergency is a separate topic of its own, but declaring an emergency is the clearest way to get what you need immediately, and you should use it if necessary for safety concerns.

## ACCEPT

This is the most familiar response by a pilot. ATC has made a request to you and by reading it back you accept the instruction. **"Mooney 124JA, Washington center. After Martinsburg VOR, proceed direct Westminster VOR, maintain 4,000."**

If you are familiar with the route, you will anticipate an instruction to be issued, and even know about where along the route it will be offered. Over the years, I frequently flew into Orange County (KSNA) in Southern California, flying from the north over the central valley. I learned that I could file whatever route I wanted, but nearing Lake Hughes VOR, I knew I would soon hear as my amended clearance into John Wayne airport, **"After Lake Hughes, V459, Seal Beach, direct."** Knowing what ATC is likely to offer next allows you to pre-plan your approval of the request.

It can be helpful to advise ATC ahead of time of a preference. For example, you are flying IFR in clear air but above a lower layer. The weather is freezing, and there are PIREPS of light to moderate ice in the clouds below you. You know you must go through those clouds on your approach but even in your FIKI Mooney, you want to minimize exposure to icing conditions. You might advise ATC, **"Dulles Approach, Mooney 5TJ, we'd like to stay at 8,000 above these clouds until you can clear us direct down to 4,000 or lower due to reported icing conditions."** That is a very reasonable request. ATC knows of the PIREPS, and they treat ice seriously.

If the clearance request from ATC is NOT acceptable to you, then you should do two things: First, do NOT read it back, as readback constitutes acceptance of the instruction. Second, you should consider what alternatives might be acceptable to you and decide what you would prefer.

Let's say I hear this from ATC, **"Mooney 5TJ, Richmond Departure. After TAPPA you are cleared T295 GRACO direct."** At that point I have a quick decision to make. Do I accept this clearance?" If I know this route is acceptable, I will read it back and accept it.

But what if I do not recognize the waypoints or airways? In that case I will say, **"Richmond Departure, Mooney 5TJ, standby."** There is no need to accept or deny an amended clearance instantly. That reply gives me a chance to look up the route in the database and decide if it is ok. If yes, I'll say, **"Richmond Departure, Mooney 5TJ, ready to readback my clearance."** Only after I make that readback have I accepted the re-routing.

## UNABLE

By saying UNABLE, you have declined the ATC instruction. The main message of this article is that you do not have to accept a clearance or instruction if you have a valid reason to reject the request.

### What are examples of clearances that you may want to reject?

ATC might have offered something you just don't want to do for flight safety, such as **"Mooney 124JA, Potomac Approach. Turn left, heading 170."** However, ATC cannot see what you see out the windows, that there are some ugly cumulonimbus clouds over to your left, so you say, **"Potomac Approach. Mooney 4JA, Unable heading 170 due to buildups."**

This is an excellent point at which you might offer your PREFER suggestion along with your rejection, **"Potomac Approach. Mooney 4JA, Unable heading 170 due to buildups, I can accept any heading off to the right."** You have declined the unacceptable instruction and you have proposed a solution to the controller's need to vector you.



As another example, here is one I have received: ATC pops up while I am flying vectors to an instrument approach with the request, **"Mooney 5TJ, Oakland Center. Maintain 250 knots to SUNOL intersection."** As much as I might like to comply, I have no problem with my reply, **"Oakland, Mooney 5TJ, unable 250. We're in a Mooney. I can give you 160 knots to SUNOL."** Obviously, you do not want to readback any request with which you cannot possibly comply.

Amendments to a filed and cleared route are common enough, especially in congested areas. Flying towards home base in Baltimore, in the busy DC to NY corridor, I am never surprised to get a route change. Invariably the phrase, "I have an amendment to your route, advise ready to copy," is the first clue that changes are afoot.



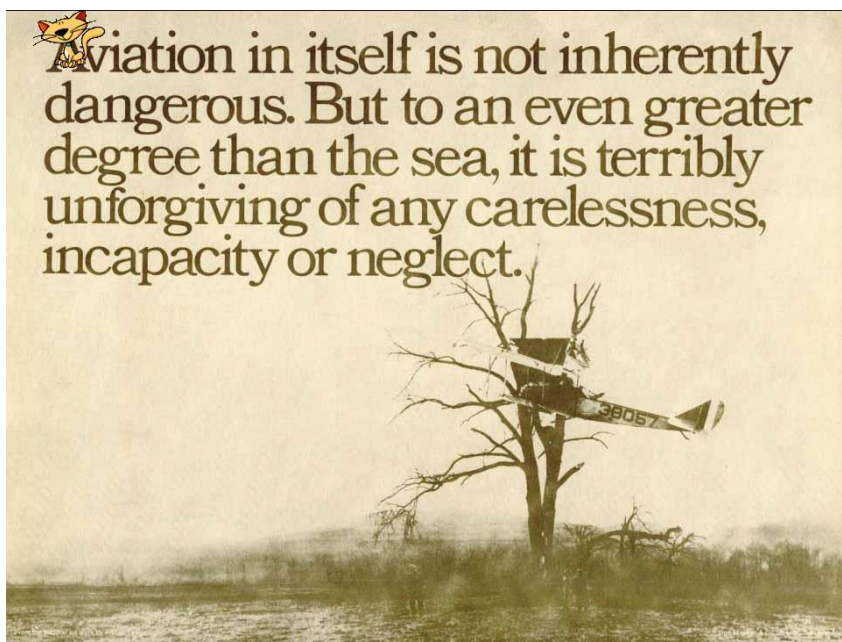
I heard this from ATC, **“Mooney 5TJ, Richmond Departure. After TAPPA you are cleared T295 GRACO direct.”** But what if I do not like the proposal? In this case I had filed a route, further east than the more direct and usual routes, to avoid a line of thunderstorms that were approaching the area from the west. ATC offered me a more direct route to my destination, but I didn’t want their route change because it is too close to the storms for my comfort. Certainly, this was a good time to tell ATC, **“Richmond Departure, Mooney 5TJ, unable the proposed route, request via SBY and ENO to remain further from the weather.”** I’m almost certain to get something like

what I requested; ATC is not going to say no and tell me to fly into the Cumulonimbus.

**SUMMARY**

Treating your ATC communications as a negotiation rather than a directive will improve your ability to deal with the ATC system effectively. Exercise your PIC responsibility to communicate to the controllers your requests and do not let their instructions lead you to compromise flight safety. In short:

**Tell ATC what you PREFER.**  
**Failing that, tell them what you will ACCEPT.**  
**Anything else, tell them UNABLE.**



# SUREFLY in the Andes – More Data

By Don Peterson

The “Mooney Flyer” published my early-adopter review of the [SUREFLY](#) “SIM” in the January 2022 issue. I completed the initial installation in early 2020 (IIRC), not long after the full STC was granted, including variable timing. By the time I drafted the review I had over 100 hours of SUREFLY experience, almost entirely cross-country time. My engine had passed 1,700 hours, but performing to spec, and was continuing to climb. I recommend revisiting that review as a preface to reading this new information.

We might be tempted to think that a SUREFLY adds only one variable – variable spark timing. The predicted improved lifetime with little to no maintenance is not so much a variable as it is an economic incentive. Simple, right? I am finding that the variable spark, and the potential for improved fuel consumption, brings the possibility of several more variables.

In mid-2021 a series of unfortunate events inflicted during an Annual Inspection convinced me to replace my IO360 with a factory “rebuilt” engine. The benefits were roller tappets, a very high percentage of new parts, 2,200-hour TBO, and a Lycoming commitment to accept for full credit, the returned engine core, so long as it had been operational up to its removal. I had a concern that the damage done by the Inspection shop may have led to a cracked engine case, so was happy to pay a little more for a an immensely greater peace of mind. In the 100+ additional hours with the fresh, upgraded engine + SUREFLY, I’ve gained a few new, and sometimes baffling insights.

I am not a credentialed engine designer. However, I hold A&P and IA certificates, and played with Alfa Romeos for several decades, including both race cars and modified street engines. I do not have a Master’s degree, but I have spent a lot of time in grade. The following is based on a couple of hundred hours with a SUREFLY, plus some insight into what makes engines happy – or not.

## **FACTORS AT PLAY**

- Variable timing.
- Variations in intake system designs.
- Temperature behaviors in the cylinders.
- Temperature behaviors in the intake path.
- Compressions in cylinders.

We transferred the SIM to the factory Rebuilt engine, and I took delivery of my re-engined plane in mid-2022. Prior to launching toward South America for extended touring, there followed a series of break-in flights and transcontinental trips to prove all was well. I am writing this review from Villa la Angostura near Bariloche in southern Argentina. Our day yesterday began in Southern Chile, crossing the Andes toward the East.

The initial testing of the engine presented unexpected problems, specifically uncharacteristically high fuel consumption. After much diagnosis we found that Lycoming had shifted their specification to a different fuel injection servo, with a 16%+ higher air flow rate than the original. We eventually replaced this with a



fresh, original-style Bendix/Precision Servo, and consumption returned to near normal. With the larger servo, I could not lean below 9.6 GPH, at full throttle, at any altitude. That was NOT acceptable.

### ***“Near normal”***

My previous semi-high-time engine (with SUREFLY) would reliably deliver 7.9 GPH above 12,500', with full throttle, ram air, and typical RPM. (Above 13,500, 7.5 GPH, or slightly less). There were correspondingly higher consumption rates at lower altitudes. This same engine, before the SUREFLY, would achieve 8.6 GPH at higher altitudes. I could achieve lower flow rates, but at 8.3-8.4 there would be the occasional misfire. I don't enjoy those on night or IMC over-ocean/mountain flights, so I used 8.6 as my target. With the SUREFLY, my previous engine could be leaned well below 7.5 – 7.9 at my typical cruise altitudes, to as little as 6.5 GPH and lower, without missing, but I could detect a loss of power. Thus, mid 7's became my higher altitude fuel consumption standard.

The new Rebuilt engine, after changing the servo to the original Bendix design, burns slightly more than my now-retired engine. At 12,500', I expect 8.1 - 8.3 and at 13,500', it is 7.9 - 8.1 GPH. Efforts to go below these values will result in slight roughness. I describe it as “driving on pebbles.”

### ***NOW, THINGS GET INTERESTING***

I noticed that with the too-large injection servo originally delivered from Lycoming, if I left the Ram Air off and slightly retarded the throttle, I regained the ability to achieve lower fuel consumption rates via leaning. The as-delivered-from-Lycoming servo, at full throttle + Ram air, ***could not be leaned below 9.6 GPH at any altitude.*** I evaluated it to 14,500'. With a small throttle reduction, I could get down in the 8's again. Attempts to lean below 9.6 GPH at full throttle acted like the servo had entered the idle cut-off regime, as the engine power would immediately fall off. Could it be that there was too much airflow from the large servo for an IO360?

Similarly, now flying with the more suitable Bendix/Precision unit, with a slightly retarded throttle and no ram air, much lower consumption rates into the 6's are allowed. Note that the Ram Air adds only about 1/2 inch of manifold pressure at altitude. Similarly, it requires only a small throttle reduction, (around 1"), and remarkably low fuel flow rates become available.

These retarded-throttle, low fuel flow rates do not appear to be a linear response. A tiny reduction in power can allow much more aggressive leaning, reducing consumption by as much as two GPH, and more. This seems to parallel my experience with the larger-bore servo from Lycoming.

### ***WHAT IS GOING ON?***

The SUREFLY makes reduced fuel burn a rewarding reality. Plus, it allows excellent starting, and a smooth running engine.

The Rebuilt engine has been described as having a revised camshaft, supposedly because the reduced rotating friction from the roller-tappets was allowing the engine to produce more than 200 HP, (not allowed by the Type Certificate Data Sheet (TCDS)). This was supposedly addressed with a camshaft modification.

Why does a slightly reduced throttle, both on a big-servo, and the original Bendix/Precision servo, result in a non-linear reduction in fuel flow?

### ***AIRFLOW:***

My suspicion is that the amount of airflow achieved by the Ram Air system, the revised cam shaft profile, and by the too-large newer servo, exceeds the smooth-air flow limits somewhere in the engine induction system. This can result in turbulence in the intake tract airflow as the volume of air is necked down along the intake path, and expanded again after it passes through the servo. It could also happen during other

discontinuous air paths in the intake system. When air speeds up or slows down, in addition to temperature and pressure changes, flow can become non-laminar, and turbulent. Turbulence = drag = uneven, with possible non-balanced cylinder filling. The Lycoming IO360 has long been regarded as having a clean, balanced, and efficient intake. But, at the ragged end of the fuel-air mixture, plus advanced spark timing, even small differences between cylinders can lead to one cylinder beginning to grumble ahead of the others.

### **HOW IS THIS RELATED TO SUREFLY?**

I have read numerous complaints about SUREFLY. My take on this is that SUREFLY does exactly what it is designed to do. If something is awry, we need to look at the engine, and not blame the SUREFLY.

Note: I am not related to, or in any way compensated by SUREFLY. I have benefited from their excellent service, making me a happy customer.

### **COOLING:**

I've read a handful of comments about the SUREFLY "causing" elevated CHTs when using variable ignition timing.

During our current tour of South America, we faced the need for extended climbs to get over mountains, as well as five+ hour flights without altitude changes. I have found that trying to lean during a climb tends to get the #2 and #3 heads moving towards toasty. I try to lean the engine, only to find that it's not happy, so I go rich again. This is not particularly different than without a SUREFLY.

I climb with full throttle, (2,700 RPM), and Ram Air Boost on. Once I've reached altitude, my technique has changed in comparison to pre- SUREFLY.

After level off, I wait a moment, then retard the RPM. I use 2,400 - 2,600 depending upon my mood swings. I now Leave cowl flaps open, (I previously closed them when leveling off). I begin leaning with significant twists of mixture control. At most altitudes, my quick goal is a flow of 10 GPH.



I then allow a few moments for things to settle in. I then carefully trim for level flight. After a minute or two, I close the cowl flaps, and slowly continue leaning to LOP or ROP, depending on my mood and how the pebbles are behaving that day.

Note that my 64E has the fully enclosed inner "doghouse" engine-cooling cowling. There is anecdotal evidence that this system is more efficient at achieving lower, and more balanced, CHTs. Your mileage may vary.

### **THE BOTTOM LINE:**

Once you allow the CHT to enter an elevated range, it's challenging to get it back down. I have found that, by slowly approaching the ROP/LOP, the CHT will never go beyond 400°. I can achieve a #3 CHT of no more than 385° using this technique. If I get distracted and lean too soon, or close the cowl flaps too early, I'll see 405° on #3, and slightly less on #2. It can require significant fiddling to get it back down.

**I occasionally reset my leaning state while on a long flight, just to see what's what. I've found that once the engine has completely equilibrated its temperatures, I'll get dead even EGT's, and less than 25 - 30-degree variation in CHTs. A complete equilibration can require 15-30 minutes. This lengthy equilibration is critical to reaching a stable balance of EGT and CHT temps.**

**ENGINE TEMPS VS COMBUSTION:**

Modern car engines control the engine temperatures to a fine degree. These are liquid cooled, and the design skills now allow super precise temperature control throughout the engine. This is needed to meet both economy and emission limits.

The point at which the combustion event goes wonky is a combination of fuel-to air ratio, fuel octane, spark timing, spark plug design and placement, intake air temperatures, hot spots on the cylinder head inner surface, hot spots on the piston heads, and even temperatures along the cylinder walls.

The transfer of heat from and to the gas-air mixture is impacted by the cylinder and head temperatures. "Heat rejection" is the result of imperfect combustion. Theoretically, (i.e., not really possible), the burned gas/air mixture would turn into CO<sub>2</sub> and water, with 100% of heat turned into pressure, and the remaining crud going out the exhaust. When things are imperfect, more heat is rejected to the cylinder head, cylinder, and piston. This retained heat raises the temperature of the combustion chamber, which can aggravate an on-the-edge mixture ratio causing it to turn grumpy.

***Thus, going slow with the leaning and cowl flaps can reduce the tendency toward a feedback loop of leanness, creating higher CHT, which can trigger imperfect combustion, which can feed higher CHT.***

Liquid cooling can avoid this feedback loop. With air cooling, we must manually manage it.

**A NOTE ON ENGINE CONFIGURATION**

I chose to arrange the high-tension spark plug wires so SUREFLY would fire the bottom plugs. My rationale is that, once I'm at altitude, the SUREFLY is significantly more spark-advanced than the traditional mag on the other side of the engine, which is now firing the upper plugs. This results in the engine essentially running only SUREFLY's more advanced timing. I have done in-flight mag tests, and the mag is contributing nothing perceptible above the altitudes at which the SUREFLY has become timing advanced. If we're running on only four plugs, it is better to have them all in the same place, with respect to the combustion chambers and intake airflow.

Also, I have mounted the new-ish 37-BY plugs in the bottom position. When I did my final configuration, these were recommended for high-energy ignition systems, which includes the SUREFLY SIM. At some point I'll revert to the REM38E spark plugs to see what I gain or lose. My original configuration was all REM38Es, and I got slightly better leaning results than now. HOWEVER, there may be several differences between an 1,800-hour flat tappet engine and a zero-time Roller tappet model. Stand by.

**A Final Note**

I have a hunch that not all 100 Octane is born the same. After my last two refueling stops, (both in Chile), the "pebbles" appeared at slightly higher flow rates. It is too soon to be sure. With the advanced timing, any discrepancies in spark plugs, fuel quality, intake air distribution, variations between cylinder and EGT temps, or injection nozzles, will likely be felt. And that is the point of this update. The variable timing Surefly shows several new potential variables. Some are more apparent than others, but maximizing the fuel flow and CHT seems to require attention to the finer details.

We will be returning from Uruguay to the US in August-September. I plan to run a set of documented tests on various behaviors, with hopes of creating a flow-RPM-MP-CHT-EGT chart.



Y'all stand by now, OK?

# Spraying the River for Mosquitoes

by Buddy Vines



Before I came into this world, our government embarked on a program to fight malaria. The plan was to spray the river with an airplane flying very low with a mixture of diesel fuel and DDT to kill the mosquitoes which spread the deadly disease. Pursuant to this, the US Army Corps of Engineers leased a portion of our property here in the Camp to construct an air strip.

The completed runway was appropriately 1,200 feet long and 100 feet wide. At the closest point, it was just 60 yards behind our house. At the far end, it

crossed the road leading around the Camp, then terminated into Glaze Creek. There were two large signs on either side of the road warning of “LOW FLYING AIRCRAFT.”

At the runway’s upper end, was a large tank containing diesel fuel, a small metal storage building containing the cardboard barrels of DDT, a mixing drum, a five-horsepower mixing engine, and a large hose used to fill the tank on the airplane. It was my dad’s job to mix the poison and fill the plane upon his arrival. He despised the job as it served as an interruption of his normal activities. One day Dad and his friend Red Hastings were sitting on the porch of the Camphouse. While Dad was inside, Red heard the plane land. When Dad came out, Red exclaimed, “Charlie, he’s lit.” Apparently Red saw the plane as nothing more than a rather large housefly. Dad mumbled an expletive and began his walk over to the airfield.

Most every year we had a different “Spray Pilot” and I always tried to get to know them personally. For years, they flew Stearman biplanes, but in the early 60s they switched to Piper Super Cubs. The work was dangerous to say the least. They flew under bridges, under power lines and up dead-end sloughs. I remember several times the planes would return with small tree limbs hanging from the undercarriage. Despite the perils involved, we never lost a pilot.

My favorite pilot was a young man from Dalton Georgia named George Carpenter. He was tall, thin, aloof and carried a Buck knife in his belt which I thought, as a 15-year-old, was super cool. Much later in life, when I could afford one, I bought a knife identical to the one George carried and I still have it in my gun case. George and I became good friends, partly because he thought my sister was a knockout.

On a steamy day in July, Dad had completed loading the 90-gallon belly tank on the Super Cub. I hung around to watch George take off. I watched intently as he went through his checklist, put on his helmet, then yelled “Clear Prop!” The Lycoming engine sprang to life leaving a cloud of dust behind the tail of the plane. George looked at me and gave me a “thumbs up” as the plane began moving forward. After only moving a few feet, it stopped, and the engine died.

“What’s wrong?” I asked. “Come on,” he said as he motioned for me to get in the plane. I thought my heart would leap out of my chest as I ran under the wing and climbed in behind my idol. There was no seat, just a small sheet of plywood to sit on. And the plane had no door. It was presumably ripped off years before during some mishap. I sat on the plywood and held on to the metal tubes above for support. I knew my parents



would be upset at me for flying with George, but there was no time to ask permission. Plus, I figured the whipping to come would be more than offset with the exhilaration of my first flight. "Clear Prop," he once again exclaimed, and the engine started immediately. As we began moving down the strip, I observed the wheel below me gain RPMs as it rolled through the grass.

As George moved the stick forward, we were suddenly on two wheels, then I saw the wheel I was watching leave the earth. I had never felt such exhilaration! We were FLYING! We sailed over the road at the end of the runway, then over the cattails, then out over Glaze Creek gaining altitude the entire time. The plane banked around the bend in the river, then dropped down low, no more than twenty feet off the water, and began spraying the poison, leaving a cloud behind us that gently settled into the water. As we turned upstream, the wings were near vertical as we banked around the bends, then flew under Maxine bridge, leaving a trail of the deadly mixture behind us.

We flew over islands with the treetops passing only a few feet below us. Birds roosting in the trees would scatter as we approached. On one occasion, we flew under a power line at the mouth of a dead-end slough, then up the slough with large pines at the upper end. George then turned the plane near vertical to avoid the trees. Our wheels missed the pine tops by a good three feet!

When we ran out of poison and the tank was empty, we dipped down close to the water on the open river, then I saw the tire hit the water, spinning violently, then the other one. He was water skiing with the airplane! As he dipped down even further, river water was coming over the wings. George then let out a laugh and turned the plane on its tail, shooting skyward as river water flew off the undercarriage.

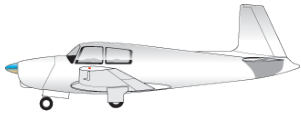
We returned to the Camp and the plane softly touched down, I did not want it to end. It was, without a doubt, the most fun I had ever had. Nothing, and I mean NOTHING, compared to this! I was hooked. I knew that somehow, someday, I would learn to fly. It became the most important thing in my life.

I flew with George many, many more times. On one occasion, he had to take the plane to Tuscaloosa for repairs and I came along. On the way home, he yelled over his shoulder, "Put the extension on and fly us home. I'm going to sleep." The extension was an 18" piece of pipe that fit over the short pipe on the fuselage between my legs, which allowed the back seat occupant to fly the plane. I asked, "How do I get there."

"Just follow the river," he said, "and wake me up when we get to the Camp." I took control and began to make small turns getting used to the feel of the plane. I felt as though I had the plane to myself since George was indeed asleep in the front seat suffering from a hangover. The wings felt as if they were extensions of my arms as I rose, then fell, then banked left and right. This was a freedom I had never experienced before.

On another flight, we were too heavy, and the plane would not lift off. We bounced across the camp road, ran through the cattails, and settled into five-foot-deep water in Glaze Creek. We both swam out and I got the Jeep and pulled the plane out of the creek by the tail wheel.

I received my private pilot license when I was 19 and many years later, I bought my first plane. I have now been flying for more than fifty years. I own a Mooney 252 that resides in my hangar at the Bessemer airport. Maria and I make regular trips to Destin as well as some to Colorado, Boston, Chicago, Charleston and many other interesting destinations. It all began in my backyard in the back of a Super Cub with no door, seat, or seatbelt; sailing out over the river I love.



# Mooney Maintenance

Visit our Website for all kinds of maintenance resources



[Click here](#)

*The Mooney Flyer*  
Magazine for the Mooney Community

The image shows a red box with white text on the left. To its right is a cover of 'The Mooney Flyer' magazine, which features two Mooney aircraft flying over a red sun. A blue button with a hand cursor and the text 'Click here' is positioned over the magazine cover.

[Click here](#)

Download Mooney's 100 Hour Inspection Guide

A cartoon mechanic in blue overalls and a cap, holding a large wrench over his shoulder. To his right is a blue button with a hand cursor and the text 'Click here'. Below the button is the text 'Download Mooney's 100 Hour Inspection Guide'. At the bottom right is the Mooney logo, a stylized red and black wing.

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



[CLICK HERE](#) for the FAA's Airworthiness Directives (ADs) for all Mooneys.




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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](mailto:TheMooneyFlyer@gmail.com)



**Dear Tom,**

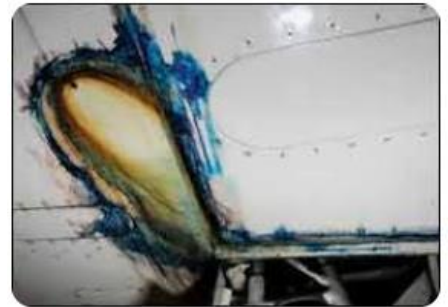
I don't think there is a rigid definition of a Pre-Purchase, however, some say it should be the equivalent of an Annual Inspection.

What are the key things you feel must be checked on a Mooney Pre-Purchase? Are there things that only a Mooney Service Center would check?



An Annual Inspection would be the best way to ensure that an airplane is airworthy. Yes, there are certain things in a Mooney that are peculiar and that only someone with Mooney experience would be familiar with.

They have wet wings, no fuel tanks, just sealed wing skins so fuel leaks are a problem. Also, the landing gear is special. The flight controls are push-pull rods and not control cables. I believe where a Mooney experienced mechanic/IA would be of most value is when reviewing the logbooks. The maintenance history tells the story of the plane and how well it has been maintained. I could tell, just by reviewing the logs, if you should even look at the plane. The date of the last Annual would be important to determine whether to invest in an Annual, which of course is a big expense.



It was always difficult as a shop



owner to even do a pre-purchase inspection/Annual, especially if the plane needs a lot of work. The buyer walks away unhappy with spending a lot of money and the seller is really unhappy as if I just killed the deal. To make matters worse, my shop could have found an unairworthy condition to make the plane unflyable with an unhappy owner. Been there, done that. I really didn't want to do pre-buys.



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Fly retractable! This coupon and \$8.00 puts you at the controls of the sleek and speedy Mooney Ranger. With a qualified pilot at your side you can sample the thrill of high performance flying. There are no other charges. No obligation. So check with your nearest Mooney dealer today. While you're there register for the "Adams" custom-matched set of gold-plated Colt .45's to be given away.

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## Safety Alert Issued for Aluminum Propellers

By General Aviation News Staff · April 17, 2024

The NTSB has issued a Safety Alert warning pilots about the importance of proper inspections and maintenance of aluminum propeller blades.

SA090, released in April 2024, notes that aluminum propeller blades can be susceptible to fatigue cracking and fracture if a small nick, pit, or corrosion on the surface or edge is not found and repaired during preflight inspection or maintenance.



“Such damage can concentrate stress from normal airplane operation loads, resulting in fatigue crack initiation and growth followed by propeller blade fracture,” the safety alert warns.

Fatigue cracking and fracture of a propeller blade can lead to airframe and engine damage and a possible loss of control, it continues.

The safety alert also notes that airplanes used for aerial application and coastal operations may be at higher risk for propeller blade damage because they can be exposed to chemicals or salt-laden moisture, which can cause corrosion that leads to a propeller blade fracture from fatigue cracking.

“Any airplane operating on an unimproved or backcountry airstrip is also at high risk for propeller blade damage because loose rocks, gravel, or debris on unimproved airstrips can create small nicks on aluminum propeller blades that can turn into large fatigue cracks,” according to the safety alert.

[READ MORE](#)

## Garmin Options Start with *NOT* Ditching Your G430 or G530



A service advisory issued by Garmin on January 4 threw some operators of its legacy products into a tailspin, inclusive of conspiracy theories about planned obsolescence.

No one should be surprised at the situation. Garmin has been whispering about this possibility for a handful of years.

Unfortunately, the [verbiage of the advisory](#) was a typical chalk-dry narrative written in legalese, so some folks cut to the wrong chase.

The reason for curtailing support of the GNS 430 and GNS 530 simply became a parts supply issue. It is no longer viable for vendors to produce the parts for 25-year-old technology when the market has a dramatically increased demand for the new technology. Essentially, the old units would have to be redesigned with new innards, so what's the point?

That said, Garmin hoarded what remained of the supply.

The GNS 430 is most affected because the nuts-and-bolts module that drives the display is no longer available. The cover glass or lens of the display, however, is still replaceable. The bezel, buttons, knobs, etc. can still be replaced along with the repair of other functionality issues—at least as long as supplies last. So far, the GNS 530 display can be replaced in addition to the items mentioned above. Garmin will also continue to support the databases.

If your G430 or G530 is repairable, a flat fee starting at \$2,000 will be charged. If the unit is not repairable, you're given the option of having it returned as a doorstep for an assessment fee of \$500. Or you can tell Garmin to keep it, and the company will give you a \$650 credit toward the new units.

The good news is that sending in a unit with an operable display grants you an opportunity to trade it in on Garmin's new products with a rebate that ranges from \$1,000 to \$1,750.

Food for thought: eBay lists GNS 430's from around \$3,000 to \$7,500, depending upon whether it is WAAS equipped. The GNS 530 lists in the range of \$4,500 to \$10,000. It's hard to say exactly the price that these units are actually selling for, or if they're actually marketable, considering the support circumstances.

What are the options? If you simply want to replace the functionality of losing the G530 or the G430, purchasing a GPS 175 Navigator together with a GNC 215 Nav/Com might be the easiest solution. Both units combine on your panel to an area only about three-quarter of an inch taller than a G430, with one a GPS and the other a radio. The combined sticker price is \$11,190.

Although the model units mentioned above are new technology with touchscreens and high-resolution displays, forking over \$13,795 will buy you a GTN 650xi, which includes features not available on the

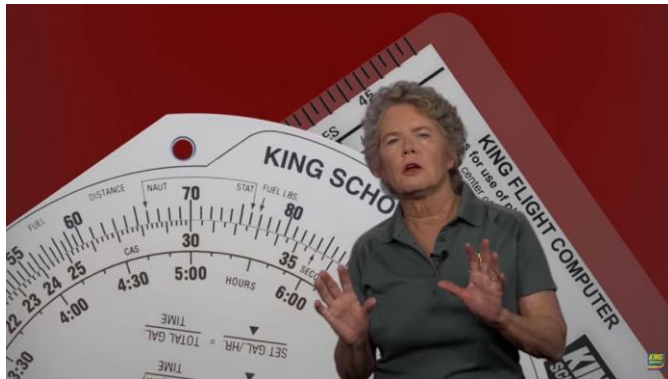


GTN 175 and GNC 215. The features are too numerous to mention, but suffice it to say, you have to determine if the extra \$2,605 is worth it.

The final option is to go all out and buy the GTN 750xi for \$19,995. The unit has a larger display screen and is about 3 inches taller than a G530. Decisions. Decisions.

At the end of the day, maybe your current budget is to wait until the G530 or G430 completely breaks. At least Garmin has options. Unfortunately, none of them are cheap.

## ***King School releases free course on how to use the E6B***



A new free course, “How To Use Your E6B Flight Computer,” has been released by King Schools.

Noting that many student pilots struggle to comprehend a manually operated E6B, the course features Martha King explaining how to “master the infamous ‘Wiz Wheel,’” according to King School officials.

“When you are proficient with one, the manual E6B can be just as handy as an electronic flight

computer when taking your private pilot written test. But it really shines when your practical test examiner ‘fails’ the batteries on your electronic flight computer, and then says: ‘Ok, what now?’” company officials said.

In the course, Martha covers a variety of topics, including how to calculate speed, distance, fuel consumption, flight times, and more on the calculation side of the computer. Also, there is a discussion on cross-country route planning on the wind side of the computer.

“These lessons had an interesting journey to become a free King Schools course,” said King Schools CEO and Co-Owner Barry Knuttila. “In 2021, we took E6B lessons from our Private Pilot Ground School and Test Prep Course and published them in a YouTube playlist. Since then, those videos have had more than 353,000 views and fantastic reviews. The popularity of the videos prompted us to expand the lessons to include cross-country planning and to create an easily accessed stand-alone free course that takes advantage of our iLearn LMS (Learning Management System) and also allows the use of our King Companion app to download and take the lessons even when off-line.”

You can enroll in the full course for free at [KingSchools.com/E6B](https://www.kingschools.com/E6B).

## Aithre's Cabin Oxygen Generator



This generator supports one person up to 18,000' or two persons up to 15,000'. Watch the video by clicking on the photo or go to <https://www.youtube.com/watch?v=fSrcRjEygLc&t=1s>.

See <https://aithreaviation.com/> for ordering and more information.

## Should You Take an Airport Markings refresher, so you won't D'oh!?



Click on the YouTube graphic to open a free course, "Guide to Airport Signs and Markings"

You can also click on this link:

<https://www.youtube.com/watch?v=FeqcAPFvyFk>

## EAGLE Projects Approval For PAFI Unleaded Fuel In 2025

The End Aviation Gasoline Lead Emissions (EAGLE) group expects the lone survivor of the congressionally mandated Piston Aviation Fuel Initiative (PAFI) to be approved by late 2025, but it may not be completely suitable for all engines. In a press briefing on Tuesday, Tim Owen of Continental Aerospace told dozens of stakeholders and media representatives that the Lyondell/Basell/VP Racing fuel is now in full testing by the FAA and, if all goes well, will be through all those tests by the third quarter of 2025.

In addition to engine tests in static cells and in aircraft, the fuel has to be evaluated for its interaction with other parts of the aircraft from the all-important O-rings to paint. Owen said for the vast majority of aircraft engines, including those made by Continental, Lycoming and Rotax, the transition will be seamless. But he said for some of the 143 other makes of engines making up 9% on the FAA registry there "may have to be modifications" to the engines or operating procedures.

There are two other fuel developers involved. General Aviation Modifications Inc.'s G100UL has been granted an STC that allows its use in every engine on the registry. At Sun 'n Fun it announced that Vitol Aviation, which is licensed to manufacture the fuel, has made 1.2 million gallons of conforming fuel that is now available for sale. Swift Fuels' 100R has now been submitted to the FAA for STC testing and it also plans to submit it to ASTM International. Swift Fuels CEO Chris D'Acosta told the meeting that once 100R is fully approved, it will replace the 94UL it is now selling to 30 retailers in the U.S. GAMI does not plan to submit its fuel to the ASTM process.

[READ MORE](#)

## ***NATA Challenges GAMI's Assertion that G100UL is 'Commercial Availability'***



The National Air Transport Association (NATA) says General Aviation Modifications Inc.'s (GAMI) FAA-approved G100UL is not yet "commercially available" even though the licensed manufacturer of the unleaded avgas, Vitol Aviation, has more than a million gallons of it for sale. In a statement, the organization, which represents FBOs and fuel distributors, said that because G100UL has not been granted a consensus standard by ASTM International, it cannot be considered commercially available.






"Because the FAA does not indemnify any entity in the supply chain for damages caused by fuel-related issues, fuel distributors and FBOs will similarly lack assurances that the unleaded fuel they are selling will not expose them to liability," the statement says. "At present, G100UL is not commercially available for distribution and sale in the U.S. largely due to the fact it does not have an ASTM International product specification."

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# Mooney

Events

# AROUND THE WORLD

	<p>Contact Dave at <a href="mailto:daveanruth@aol.com">daveanruth@aol.com</a> or (352) 343-3196, before coming to the restaurant, to have an accurate count. Events begin at 11:30</p> <p>May 11: Lakeland (<a href="#">LAL</a>)          June 8: Sebring (<a href="#">SEF</a>)</p>
	<p>Sign Up at <a href="https://www.mooneysafety.com/ppp-registration/">https://www.mooneysafety.com/ppp-registration/</a></p> <p><b>2024 Event locations:</b>          Owensboro, KY, <a href="#">June 21-23</a>      Burlington, VT, <a href="#">Sep 6-8</a>          Dallas Ft Worth, TX, <a href="#">Oct 18-20</a></p>
	<p>2024 AGM fly-in will be to Port Lincoln in South Australia. You will be able to enjoy fabulous Coffin Bay oysters, swim with the tuna, visit local wineries and much more.</p>
	<p>Learn more at <a href="https://www.empoa.eu/index.php/en/">https://www.empoa.eu/index.php/en/</a></p>
	<p>June 28-29: The Mooney Flyer RoundUp.  <a href="#">CLICK HERE</a> for details.  <a href="#">CLICK HERE</a> to Register</p>



# Aircraft Vibes



I love our Mooney and can't find enough stuff to buy surrounding it. I have countless hats, shirts, Mooney logo jackets, Mooney bracelets, and much more.



But what I don't have yet is a silhouette model of my Mooney to hang in my man cave. That is exactly what Aircraft Vibes has to offer.

[CLICK HERE](#) to learn more about these wall hangers and possibly to buy one.

You can buy a pre-made silhouette or have a custom one built for you.



## Parts for Sale

### 1959 Mooney 20A - Seeking Mooney Purist \* \$17,000

Hangar stored for years, now ready for overhaul(s) and refurbish. \* Airframe and engine 1439.1 TT. McAuley prop. O360 engine. Wood-wing.

\* Would consider selling only the engine and prop. However, sentimentally prefer to find a Mooney Lover seeking a great project. \* Telephone: 419 591 6477 for further information.

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

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

**For sale:** Wing Covers (front & rear) for M20J. Great condition includes storage bag. Price (including shipping UPS ground, cont. US) only \$279.00. Contact: Dwight Wilcox at: [dw\\_1@verizon.net](mailto:dw_1@verizon.net)

## Mooney gear actuator and parts FOR SALE

- Plessey actuator removed. 7743 hours. Back clutch spring has 1166 hours.
- Spare Plessey back clutch spring. Purchased in 2012 with "several hundred hours".
- Manual extension Spool and Cable for Plessey, installed in 2021, 206 hours.

Best offer. Parts will be sold separately.

Contact: CarolAnn Garratt, [cagarratt@gmail.com](mailto:cagarratt@gmail.com) or leave msg at 352-342-7182.



For Sale: Complete exhaust system from 1975 M20C. Excellent condition. Drilled for EGT sensors. Approximate 2,750 hours TT. Removed for Power Flow upgrade. \$350. For information: 541-382-6752; 541-410-1121; [jhl1csrs@yahoo.com](mailto:jhl1csrs@yahoo.com)



For Sale: Polished Hartzell 3 blade spinner P/N: A-2295-4P. Fits Mooney M20J and M20C with STC and other applications. Complete with bulkhead. \$500. For information: 541-382-6752; 541-410-1121; [jhl1csrs@yahoo.com](mailto:jhl1csrs@yahoo.com)





# *Rusty Pilot* or *Old Pro*



## **INSTRUMENT PROFICIENCY CHECK** Study Guide

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