The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

April 2020

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Departments

Features

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From the Editor

Phil Corman

Thank You

We wanted to thank our new Mooney Flyer contributors this month. First, **Rolf Winterscheidt** wrote an excellent article on Flying his Mooney from Germany to the USA via the North Atlantic. This was a great adventure that many of us might shy away from, but not the intrepid Rolf!

Then came **Lee Fox, who** wrote "Is GUMP Enough?". We share his thoughts, and with the high level of gear ups in Mooneys so far in 2020, we feel this is a mandatory read for all Mooniacs.

And finally, **Michael Weinstein** regales us with Mooniac Origami

Thanks to these wonderful contributors. The Mooney Flyer is only as good as its contributors.

West Coast Mooney Club Summer Convention at Sunriver

WEST COAST MOONEY CLUB
FAST FLYING - FUN TIMES

The Mooney Flyer hosted the first West Coast Mooney Club Fly-In with 55 Mooneys and about 120 attendees at Paso Robles, CA (PRB) in April 2018. We are excited to announce that The Mooney Flyer will be hosting a Wine Night at the Summer Convention at Sunriver on Friday June 12. We will be providing Paso Robles wines, along with Firestone Brewery Beer and Hot & Cold Hors d'Oeuvres. We're currently planning to have this Soiree in a hangar at S21 from 6-8pm. It's on us. So please join us.

ATC Center Boundaries

In case you were wondering where each ATC Center's territory was located, here they are.

GlobalAir.com's Annual Student Scholarship Open for Enrollment

The Calvin L. Carrithers Aviation Scholarship is awarded annually to four students pursuing a career in aviation

LOUISVILLE, KY., March 2, 2020 – The GlobalAir.com Calvin L. Carrithers Aviation Scholarship is now accepting applications.

After its initial launch in 2014, a total of 24 aviation students have been awarded the scholarship, many of whom are now making a positive impact on driving the industry forward.

The Calvin L. Carrithers Aviation Scholarship is awarded to four US Citizen-students enrolled in an accredited University/College Aviation Program during the 2020-2021 school year.

Applications must include a letter of recommendation and a short essay. This essay should detail the applicant's interest in aviation, future career path, and how they intend to complete their aviation program.

Scholarship recipients will be required to maintain a weekly blog in which they highlight their experiences with flight training, course work, and their continued participation in the aviation community.

In 2019, students from the University of Nebraska Omaha (Nicole Lund), Purdue University (Austin Fields), Southern Utah University (Savanna Paulsen), and Arizona State University (Cameron Sansone) were hand-selected by the scholarship committee to each receive the $1,000 award.

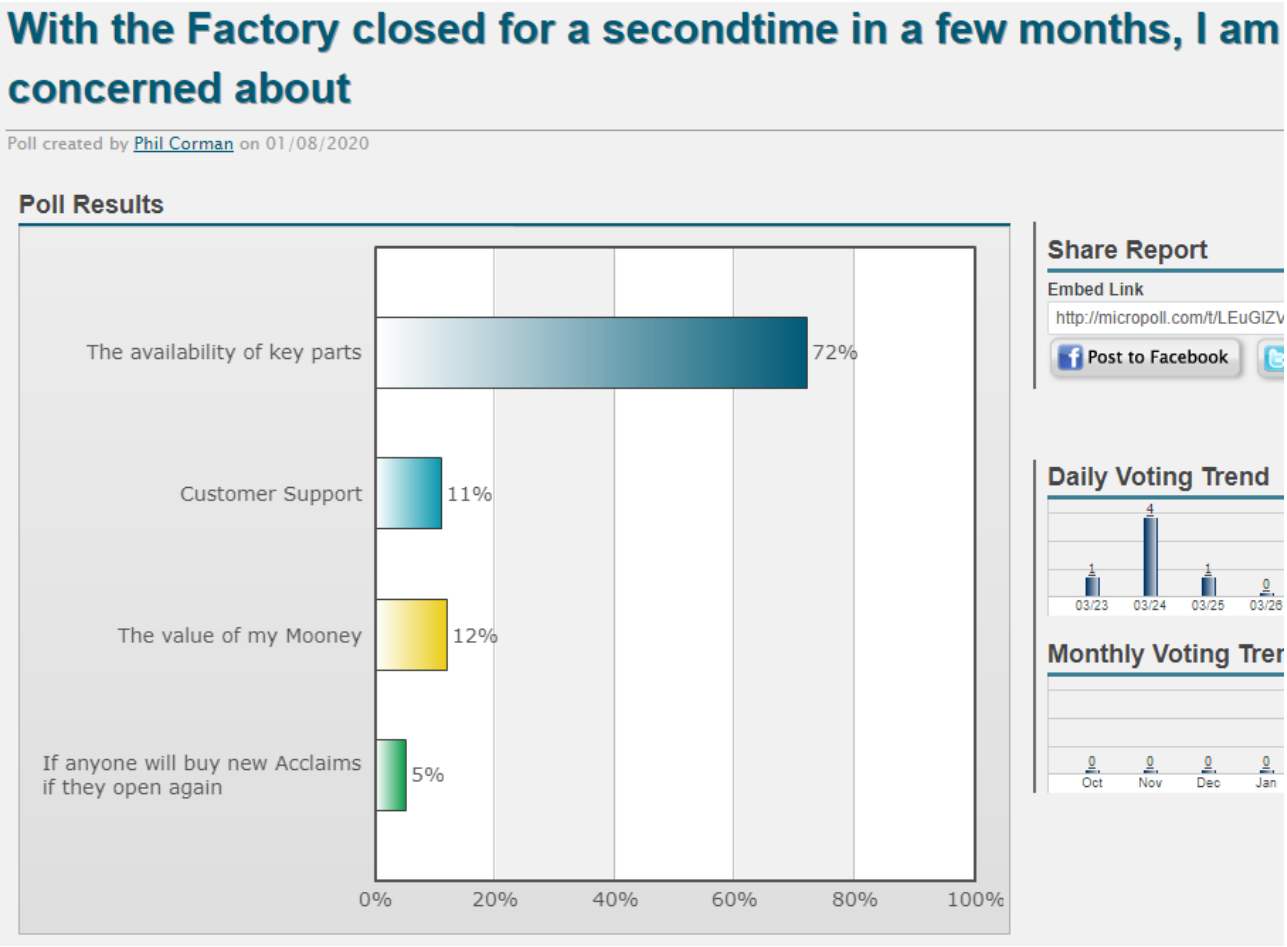
The scholarship will be awarded in increments of $250 twice during the fall semester and twice during the spring semester to fund flight fees and progress training.

Jeff Carrithers, President and CEO of GlobalAir.com explains, "The scholarship program produced great results this past year. As the aviation industry takes great strides to encourage a career in aviation, we wanted to provide support for this great initiative in any way possible. We are excited to be able to offer the next generation of aviation professionals with the necessary means to further their educations."

The scholarship committee is encouraging qualified and passionate aviation students to apply before the deadline of August 15th, 2020. Scholarship winners will be notified no later than September 1 of their selection and acceptance into the program.

The application can be accessed at: www.globalair.com/scholarships/

Colleges or students that would like more information about the program can contact former Calvin L. Carrithers Aviation Scholarship recipient and current curator Addi Hemphill (addi.hemphill@globalair.com).



Next month's poll: "During the Quarantine, I.." **CLICK HERE** to vote.

Letters to the EDITOR

Editor@themooneyflyer.com

I would have to agree with AOPA – The Mooney Flyer is one of the best sources of information better in some respects than AOPA Pilot and other publications. Nice Job. Of one note for the ADS-B ad for tail beacon or wing beacon - they are certified only for out and for a max altitude of 18000 according to the different shops I have talked too. The ADS-B section on confirmation was terrific as I had never seen that anywhere before. Much appreciated.
Hutch

In your March 2020 piece: Mooneys Make Better Pilots, I couldn't agree more. I'm just curious though as to why you didn't include "those Beechs" in with the Cessnas and Pipers. (Except probably the Piper Comanche.)

I have very little time in a F35, but the time I had in it, I found it extremely easy to land. In fact, after the only two times I landed it, I remember asking the PIC in the right seat: "Does it really matter what your speed is on short final, as long as it's somewhere within reason?" To which he replied: "No, not really."
John M

Small & Big Engine Issues

Engines are always talking to us. The question is "Are you always listening?"

Engines communicate with vibrations, and when they are running rough, hot or cold. With Engine Monitors, they tell us about a bad magneto, struggling spark plugs, clogged fuel injectors, etc.

Compression tests tell us about piston rings and ill-fitting valves.

Most engine failures are preceded by some form of warning.

Small Problems

Abrasion

Dirt that gets past, or around, the air filter will cause a lot of problems in an engine, and piston scuffing is the primary concern. Most air filters do a decent job, even when they are dirty. If you change your air filter on a regular basis, then this problem is pretty easy to avoid, but remember, it's also important to check the whole air induction system down-stream of the air filter to make sure there are no cracks or other problems that could be letting dirt in. It's also important to check the alternate air door or carb heat door to ensure it is closing properly and not allowing unfiltered air into the system. Remember, alternate air is NOT filtered.

Fuel Dilution in your Oil

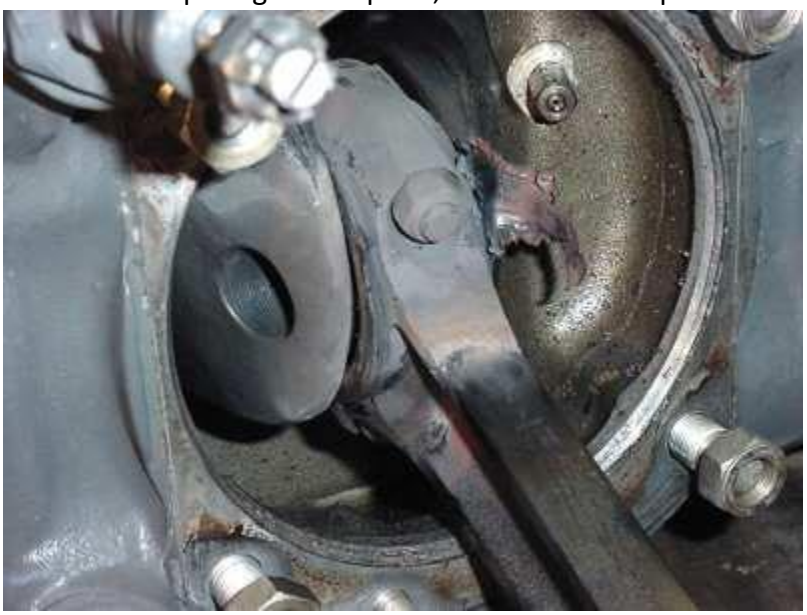
This generally includes any fuel level between 1.0% and 3.0% that keeps showing up again and again. This is not a normal situation, but it doesn't necessarily cause engine problems in the short term. Still, since fuel is a contaminant, it will cause the oil to oxidize faster than it normally would. That typically causes problems like stuck oil control rings.

Oil Consumption

All engines are designed to use some oil. What you really want to watch out for is a change in how much oil is being burned. If you always use 1 quart every 10 hours and it suddenly jumps to 1 quart every 3 hours, then you know something has changed. If you're not leaking oil, it's either getting past the rings or the valve guides. You can buy a lot of make-up oil for the cost of a top overhaul, but there will probably come a time you'll have to bite the bullet and fix the issue.

Corrosion

If you fly at least 5 hours per month, that should keep this minor problem off your mind, though we all know that life doesn't necessarily allow 5 or more hours per month. Still, if corrosion is minor it should easily disappear once the engine is back to flying regularly. If corrosion gets so bad that it causes pitting on the parts, that's when the problem elevates to major status. Also keep in mind, turning the prop by hand does little or nothing in terms of lubrication. Additionally, a fast taxi will not evaporate the condensed water. You really must fly for almost one hour at cruise to ensure you have burned out all of that rust-causing water in your engine.



Bigger Problems

Oil Starvation

Whether it's caused by oil consumption left unchecked or severely worn bearings that are not allowing oil get to all of the parts, this type of problem will cause an engine to fail, and it's usually accompanied by the worst sound your engine can make — silence.

Spun bearings

When the babbitt is worn off your bearings, either due to hard use, abrasive oil, or lack of oil, you will start to lose oil pressure. If the problem gets severe enough, the spinning shaft will weld to the

bearing itself and spin in place. Once this happens, the engine is pretty much shot, though amazingly enough, it might still run, but not for long.

Conclusion

It's rare for engines to fail suddenly due to minor issues, so when you see something going on, that doesn't necessarily mean you need to get out the wrenches or head straight to the engine builder and demand a repair. Usually, you'll have some time to see if the problem persists or becomes worse. Once that has been established, then some action will likely be required to keep the engine going, but the cost should be minor compared to the hassle and expense of having to replace the whole engine. So, test your oil every now and then. Chances are good your engine will look perfect, but if it doesn't, you're better off knowing about it sooner rather than later, and on the ground rather than in flight.

What to Do

It's easy and here is a simple list of things you can do:

- ✓ Fly Regularly (Once per week at least)
- ✓ Use CamGuard
- ✓ Change the Oil & Filter every 25-35 hours, but not longer than three elapsed months
- ✓ Cut and inspect your Oil Filter for metal parts
- ✓ Perform Oil Analysis (It's more detailed and show trends)
- ✓ Watch your EGTs at cruise. Set your Engine Monitor to Normalized so you can easier see changes
- ✓ Never let your Lycoming CHTs rise above 380°
- ✓ Never let your Continental CHTs rise above 400°
- ✓ Borescope all your cylinders at every annual

Borescope showing Issues

UNIT

MAKE/MODEL: Continental IO-550-BB
FUEL TYPE: Gasoline (Leaded)
ADDITIONAL INFO: Beechcraft B-36

OIL TYPE & GRADE: Phillips XC (A/C) 20W/50
OIL USE INTERVAL: 31 Hours

COMMENTS

We're not sure what changed between the March sample and now, but we sure do like it. Aluminum and chrome had been a thorn in this engine's side for a long time and it was starting to look like excess wear from the cylinder area might just be a fact of life for this engine, but not anymore. If you changed something operationally or mechanically, that seems to have done the trick. If nothing changed, then this improvement is a mystery, albeit a good one. No harmful contamination was present and the oil's viscosity was on the money for a 20W/50. Great report.

ELEMENTS IN PARTS PER MILLION

		UNIT / LOCATION AVERAGES						UNIVERSAL AVERAGES
MI/HR on Oil	31		15	27	29	26	44	
MI/HR on Unit	352		321		307	280	223	
Sample Date	8/4/2019		3/25/2019	12/5/2018	8/20/2018	5/8/2018	2/17/2018	
Make Up Oil Added	1 qt		0.5 qts	0.50 qts	1 qt	3 qts	0 qts	
ALUMINUM	10	15	**22**	**15**	**17**	11	**16**	7
CHROMIUM	7	18	**26**	**20**	**25**	**21**	**25**	8
IRON	27	31	41	34	35	25	37	31
COPPER	5	10	6	5	7	5	**10**	4
LEAD	2759	3910	3038	3880	3753	4102	6487	4103
TIN	0	1	0	1	0	1	2	1
MOLYBDENUM	2	5	7	5	7	8	8	4
NICKEL	4	5	4	4	6	5	7	8
MANGANESE	0	0	0	0	0	0	0	0
SILVER	0	0	0	0	0	0	0	0
TITANIUM	0	0	0	0	0	0	0	0
POTASSIUM	1	0	1	1	0	0	0	1
BORON	0	0	0	1	1	1	0	1
SILICON	6	9	6	8	8	10	11	8
SODIUM	1	2	2	2	2	2	2	1
CALCIUM	113	61	128	111	91	1	1	41
MAGNESIUM	1	1	1	1	1	0	0	1
PHOSPHORUS	63	51	169	91	63	8	2	561
ZINC	4	4	3	4	4	2	4	4
BARIUM	0	0	0	0	0	0	0	0

PROPERTIES

	Values Should Be*						
SUS Viscosity @ 210°	89.0	86-105	88.6	86.3	90.1	94.3	93.3
cSt Viscosity @ 100°C	17.75	17.0-21.8	17.64	17.08	18.01	19.02	18.78
Flashpoint in °F	455	>430	445	450	470	**445**	**450**
Fuel %	<0.5	<1.0	<0.5	<0.5	<0.5	0.8	0.5
Antifreeze %	-		-	-	-	-	-
Water %	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Insolubles %	0.3	<0.6	0.3	0.3	0.3	0.5	0.5
TBN							
TAN							
ISO Code							

* THIS COLUMN APPLIES ONLY TO THE CURRENT SAMPLE

In flight, clear communication is directly connected to safe flight operations. Clarity in communication is important for you, and me, and every other pilot, not to mention our passengers.

Let's say that a pilot called out a position report saying, "I'm over the lake."

This is great information, especially if you're in an area, where there's only large body of water in the area.

What if you're in Winter Haven, Florida, where there are 50 lakes within the city limits. More than two dozen are visible from the traffic pattern. Reporting "over the lake" is as useless as reporting that, "Mooney 257 Kilo Whiskey is in the air." Where's Waldo?

Reporting over a landmark that is well known to you may be confusing to someone who is on a cross country and landing at your airport for the first time. He or she may not know where "the golf course" or "the cement plant" is located.

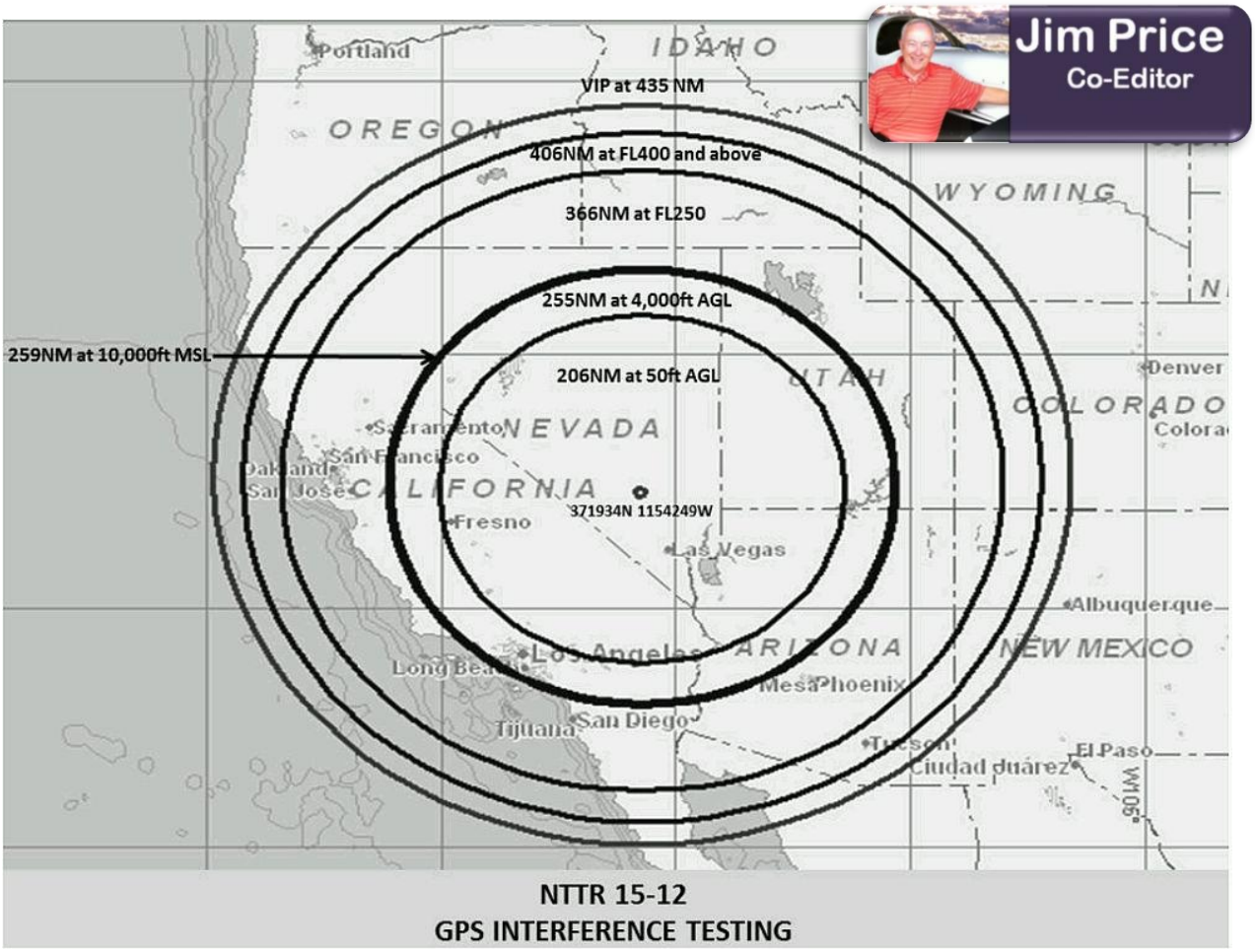
We've all put our foot in our mouth from time to time. We stumble over our words. We misspeak. Sometimes we do things that are just flat out dumb. Yup. I have embarrassed myself many times.

But if we could put some thought into our communications with each other, if we could seek clarity above brevity — while embracing brevity as a means of avoiding long, rambling missives that never quite get to the point — we'd all be better off.

In the air, on the ground, even across the kitchen table, clear communication makes our lives better, safer, and more fulfilling.

Stop Buzzer and Military GPS Jamming

In an AOPA 2019 survey, 1,200 pilots responded and more than 64% of them were concerned about Military GPS Jamming.



There are parts of the country, mostly in the Western part of the United States, where GPS jamming NOTAMs have been pretty much daily for years, with little impact on pilots and their aircraft operation. It is incredibly rare for you to be affected by Military GPS Jamming.

I live in the Phoenix area where a jamming "circle" affects my area of flying almost every day. Personally, I have experienced a problem once; not in the Western US, but when I was flying West, enroute to Pensacola, FL (KPNS). ATC had warned me that the jamming was about to occur, so I was ready. Since I learned to fly before the advent of GPS, it was almost second nature to switch over to VORs and airways and pilotage for the GPS loss segment of the flight, and other than the novelty, it was a non-event and now, I have the Tee shirt.

In the rare instance, when you're at the right altitude and right radius from the jamming, the Ground Based Augmentation System, and the Wide Area Augmentation System could be lost.

'Stop buzzer'

Suppose an affected pilot is low on fuel in LIFR and his or her refueling stop only has a GPS approach. They'll crash from fuel starvation if they can't land now. It is for perilous situations like this that "***Stop Buzzer"*** may be used. "Stop buzzer" isn't something that you can just declare, and ATC automatically stops the jamming. First, ATC management will determine if the situation is a stop buzzer event. It might be that your GPS went out and now ATC is providing vectors to your destination. If it's a problem caused by the jamming, ATC will coordinate with the GPS jamming official and they will stop the jamming.

According to the ***Pilot/Controller Glossary***, "stop buzzer" is a term used by ATC to request suspension of "electronic attack activity." Pilots should only use the phrase when communicating with ATC, or over the emergency frequency 121.5 MHz, if a safety-of-flight issue is encountered during a known GPS interference event. Or, if you're panicking and can't remember the code phrase, you can say, "Mayday Mayday, I lost my magenta line and now I have no clue where I am. For the love of God, please turn it back on".

The FAA encourages pilots to report GPS anomalies in accordance with ***Aeronautical Information Manual*** paragraphs 1-1-13 and 5-3-3. AOPA encourages pilots to document any effects of GPS-interference testing on their aircraft by filing a report using the FAA's **GPS Anomaly Reporting Form**.

You'll need to know the following when you report the anomaly:

- Approximate UTC time of event
- Altitude, mag heading, and bearing from the nearest airport, NAVAID, fix, city or lat/long
- Number of satellites tracked at the time of the anomaly
- The name of the ATC facility (Center, TRACON, etc.) to which you reported the problem

Plan Ahead

If you are flying an approach in marginal weather, review the missed approach procedures and always plan what you will do if you should experience a disruption in your GPS navigation signal at any point in the approach. Expect the unexpected, especially in today's technologically advanced aviation system.

GPS Anomaly Reporting Form

* indicates a required field.

* Name:

* Email:

Phone: e.g. (123) 456-7890

* Date of anomaly: mm/dd/yyyy

* Approximate UTC time of anomaly: --:-- --

Aircraft type and tail number:

Where did you experience the anomaly? (Bearing from nearest airport, navaid, fix, city or lat/long):

If contacted, what is the name of the Aviation facility you reported the GPS Anomaly to (ARTCC, TRACON, ATCT, FBO etc.)?

* Make/Model/SW Rev. of GPS receiver used:

* What was your altitude at the time of the anomaly (MSL)?

e.g. 12500 MSL

What was your mag. heading at the time of the anomaly?

deg. (e.g. 275)

How many satellites were being tracked at the time of the anomaly? 1

* Summary: (Please provide any additional information, unusual screen displays, etc):

Over the Atlantic – A Flight over Ice and Water

By Rolf Winterscheidt

I have only had my German PPL, including FAA recognition for a few years, so I am relatively new to aviation. I had to think about it for a few days, after my brother-in-law proposed that he and I fly in a Mooney M20E, without ferry tanks and a de-icing system, over a cold Ocean to the USA. For me, a trip of over 4,000 NM through wind and weather is a problem, even if we had already made a few flights through Europe and the USA. Several thoughts shot through my head. What happens if we experience an engine failure over the frozen water. That's not on the list of experiences I want to have. Not only that, the big white nothing over Greenland doesn't really have good landing spots. Nevertheless, we got as much information and prepared the best we could.

We both bought a Switlik one-man life raft that has a double bottom, a life transmitter with GPS, plus 406 and 121.5 MHz transmitters. We brought tons of nutritious, but not necessarily healthy food, like Snickers and Bifi. We had enough water in small bottles. We also had a Little John and Travel Johns in our luggage for smaller human needs. (There is little room for inhibitions up there). As my worries vanished, anticipation increased. Then I was informed that I needed a Visa for the USA. Oh dear! However, this hurdle was quickly cleared, as well as Internet filling stuff like eApis. I thought, "I know we have forgotten something." Be that as it may, a solution was always found. This attitude had to prove itself several times during the trip. I didn't worry much about the Mooney. The alternator was new in order to eliminate annoying crackling on the radio. Even though I wanted to be prepared for everything, because of previous European trips, I had confidence in the Mooney and its technology.

The big day came like an exam day. I was a little tense, but had a strong desire to make this unique trip. We flew to Mönchengladbach, Germany. The Mooney's 200 HP benefited us when flying in the mountains. I had a thick wetsuit with me, which I call "Blue Klaus", just in case we need to get into the life raft in the freezing Arctic Ocean.

I partially dressed in it, but in an emergency, I could pull it up above my waist. We practiced this scenario several times and it somehow worked.

Check Oil

We started in typically crappy German IFR weather (instrument flight), headed for Calais, France (LFAC). There, we would refuel. Then we flew to Stornoway, Scotland (EGPO). On this route, we experienced most of the trip's unpredictable icing. Friendly people in the tower showed us the latest weather information. Here we also put on our dry suits. Comfort is different, but it is better than expected. Our longest leg to Reykjavik, Iceland was next. It was a good five hours with water below us and a constant headwind. When we had land in sight, we also saw Eyjafjallajökull. In 2010, this volcano erupted and provided us with a free field in the air without the big planes. It's a shame that I didn't have a license then. We later learned that another volcano is steaming in Iceland's hinterland. From above, the landscape looked quite different than the scenery back in Germany. The volcanoes had apparently let off steam a few times.

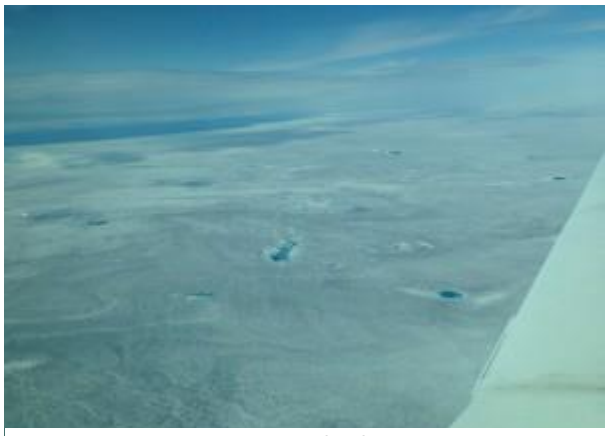
We had flown enough, so we spent the evening in Reykjavik, where we enjoyed a local restaurant. I was tired and the weather looked worse and worse. Tomorrow we'll see what's going on.

The threatening weather actually arrived the next morning like an oversized water bomb from Greenland. You could see it clearly in the weather programs. Another pilot canceled his flight to Greenland. However, we did not see any greater risk of icing and decided to fly deeper and more South if necessary. VFR (visual flight) would not be feasible, but fortunately, the freezing level was only around 6,000 ft. We dressed like oversized Teletubbies, with our rubber suits, emergency transmitters around our necks and a precise plan. On the flight to Kulusuk, Greenland (BGKK), the weather remained IMC, but there were no large gusts or heavy rains. We had a 30 kt headwind which slowed us down, but since the leg was a little shorter than the previous day's flight, I felt more comfortable. As we descended to land in Kulusuk, we saw icebergs floating in the sea. What a sight! This is Greenland!

Kulusuk Greenland (BGKK)

The slope is gravel, but very long. Only later did I realize that I don't have to worry about the propeller and whirled up stones. We got out of the airplane, I removed my blue Klaus and refueled the Mooney.

Refueling in Kulusuk, Greenland



Ice Cap Bleeds

Weather briefing

Suddenly, thousands of stinging mosquitoes were around me. I'm a mosquito magnet anyway; they eat me up! We brought DEET, which did a good job in the tropics, but it cannot score completely here. These mosquitoes are too strong.

The next leg was the overflight over the ice cap to Kangerlussuaq (BGSF) on the West side of Greenland. My endorphins poured out in buckets, so to speak. Thoughts like global warming and the melting of the polar caps came to my mind. It's all so close now. And, just before Kangerlussuaq, I saw bluish water emerging from the ice. It looked like the ice cap was bleeding blue.

We spent the night in Sondre Stromfjord, as the place is still called. Since Greenland is a Danish territory, some Danes also work here. You can easily distinguish the Danes from the real Greenlanders. We slept in the only hotel situated at the airport. When we entered the hotel, we asked ourselves, “are in we in a hostel?” It is so spartan, but enough for one night. The prices were high, but this was understandable since everything except ice must be imported.

The hotel's breakfast hall is the waiting room for passengers, and in the evening, it is the restaurant. An airplane arrived at 9:30 a.m. and the breakfast buffet suddenly ended, since it is also the arrival hall. That's what I call timing and using existing resources. Air Berlin flies there regularly to take passengers to ships like the Hurtigruten, which explores Greenland.

I had hoped for VFR weather the next morning and was not disappointed. The meteorologist in the weather station makes the weather forecast for all of Greenland. He looked very competent and like everyone here, he was quite friendly. I do not have an IFR certificate, so this day, I could fly the leg to Canada. The icy water below, which had been with us for a good four hours, was no longer terrifying and we were becoming more experienced. The machine check now goes hand in hand without words, as does putting on the wetsuits. If, contrary to expectations, I cannot get through VFR, I have an experienced Mooney IFR pilot as a backup. It is very important to me to fly real VFR and not even close my eyes and fly through a thin layer, even though I have learned a lot from my brother-in-law. We would then be

able to air-file an IFR flight plan without any problems. The forecast wind shear at the start was not there, and the weather was not anything like the Caribbean. Only the 50 knot headwinds were clearly visible on the GPS, but it was fairly smooth. The radio was quiet because not many pilots fly here. I enjoyed the communicating with "Sondrestrom" and then my Canadian colleagues. I just hoped that I would stay relaxed on my next flight to Detroit. Then, just before Iqaluit, Canada (CYFB), the weather got worse. We still made it to the airfield in VFR conditions. I had carried out an intercontinental flight and I proudly documented this in my flight log.

Talking to Locals

It feels like Iqaluit is exactly in the middle of nowhere. Flyers and fishermen come here; nobody else. That evening, we sat in a local bar and talked to a local. We realized that the clocks tick differently here, and I longed for comfortable Germany, even if the hotel was surprisingly modern. There is sporadic WiFi when the hotel's satellite dish can see through the thick layers of clouds.

Approach to Inukjuak, Quebec (CYPH)

The next leg to Inukjuak, Quebec, Canada (CYPH), included a lot of IMC weather. Because of Canadian forests, we flew over a moon-like landscape that leaves little space for emergency landings. That must be due to the long, cold winter. The last leg over lots of water was done. The blue Klaus had given me some security. I'm glad that I didn't have to use it.

Parking in Inukjuak, Quebec (CYPH)

Inukjuak feels like a neighboring town of "in the middle of nowhere", even if it is hours further south in Canada. Crosswinds of 25 knots with gusts of 35 made the windsock look like it was about to burst. We landed gently and straight and rolled to the tower. The backdrop may have sprung from a Steven Spielberg film. Again, it was unreal. It uses the slope from the first to the last meter. Wow! As announced by telephone, we wanted to fill up here, but the lady in the terminal building had little interest. The gas station attendant apparently had a new phone number

and she didn't know what to do next. We appeared to be stranded for now.

With just under two hours of fuel in the tank and the next airport with AVGAS about 300 NM away, there were no options. Via Facebook, she reached the gas station attendant. After a few hours he was in place. Negotiating when the other person knows that you are at their mercy is difficult. So, we bought a barrel of AVGAS for less than $1,000. Just get us out of here! A short time later, the barrel of AVGAS appeared in front of us. What now? No gas pumps... Nothing. I wondered what MacGyver would do. We found an oil-smeared hose and pierced the barrel. Is it all that good? I have doubts. Ultimately, we got the machine full by detouring the hose and replacement canister. We had to leave the rest of the AVGAS, at least a third, in the barrel.

Barrel Fueling at Inukjuak

During the mag check, pebbles hit the propeller. At this point in time, we had no idea how bad it had damaged the propeller. We took off, full throttle and a heavy gust caught us at the start of the takeoff run. We were quite straight across the track, but with over 50 knots shortly before takeoff. I am more than grateful for the 200 HP Mooney. It flew straight up, and the fence of the airport is now just a memory. Shortly after taking off, a cylinder became too warm and we throttled down; I caught my breath. Inukjuak must be enchanted. Maybe it was bad fuel? The barrel looked a little rusty. Finally, the cylinders normalized. Because we were not wearing our “suits”, we stayed close to the coastline. If something happened, 12,000 ft should give us enough time to overcome the first shock and to clear our heads. The landscape slowly changed from moon craters to forests. Now and then, as we neared civilization, roads could be seen.

Propeller Damage

In Timmins, Ontario (CYTS), we were back to reality with a great western hotel and real restaurants. We took a taxi into the city, past seaplanes anchored by lake houses. It looked almost cheesy. It's so idyllic here. The Canadian forests do the rest. I felt comfortable here.

Approach to Timmins (CYTS)

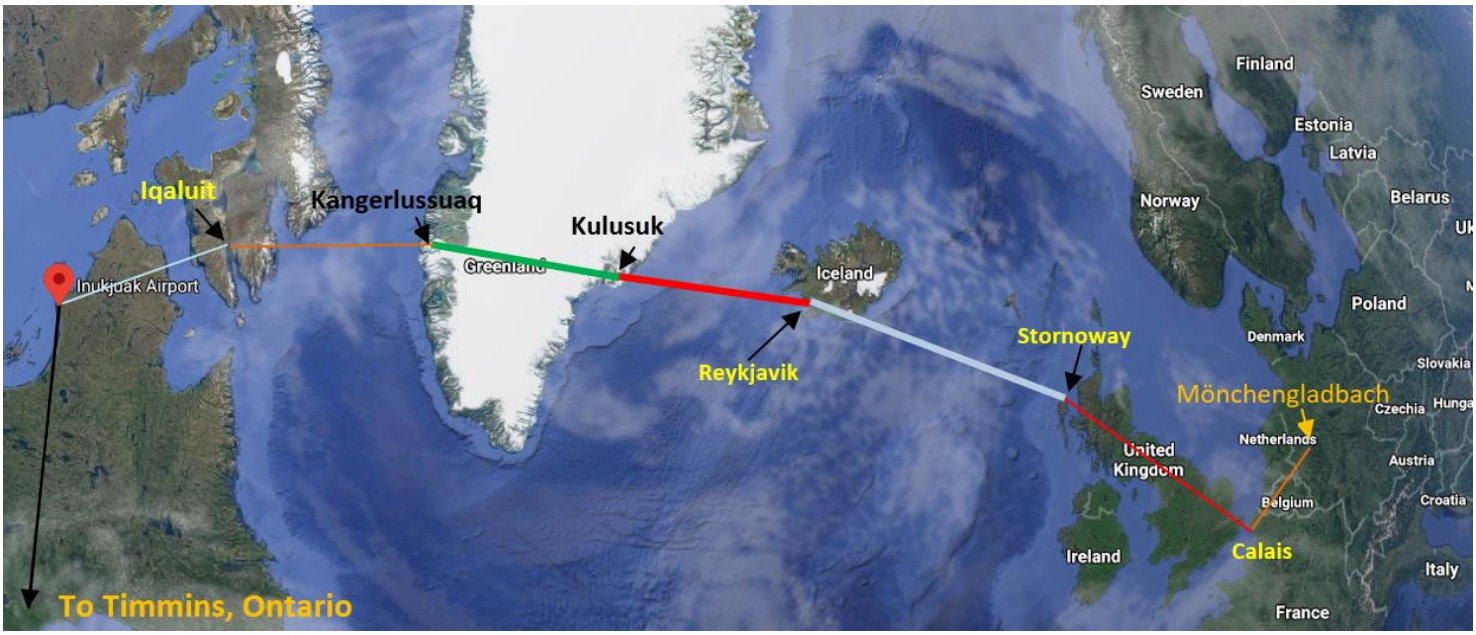
The next day, we wanted to make it to Chicago, the end point of our trip. Since we were still in Canada and I only had a B1 / B2 visa, I had to fly the Mooney alone from Windsor, Ontario, Canada to Detroit, Michigan, USA. My brother-in-law came to the USA by taxi, which also works with ESTA. Since it was only 8 NM, the journey was not too long. I looked forward to the radio. It was getting hectic here between the air spaces. But the controllers were very relaxed and ultimately passed me on from tower to tower. I got a landing permit at the handoff and I could even choose a runway.

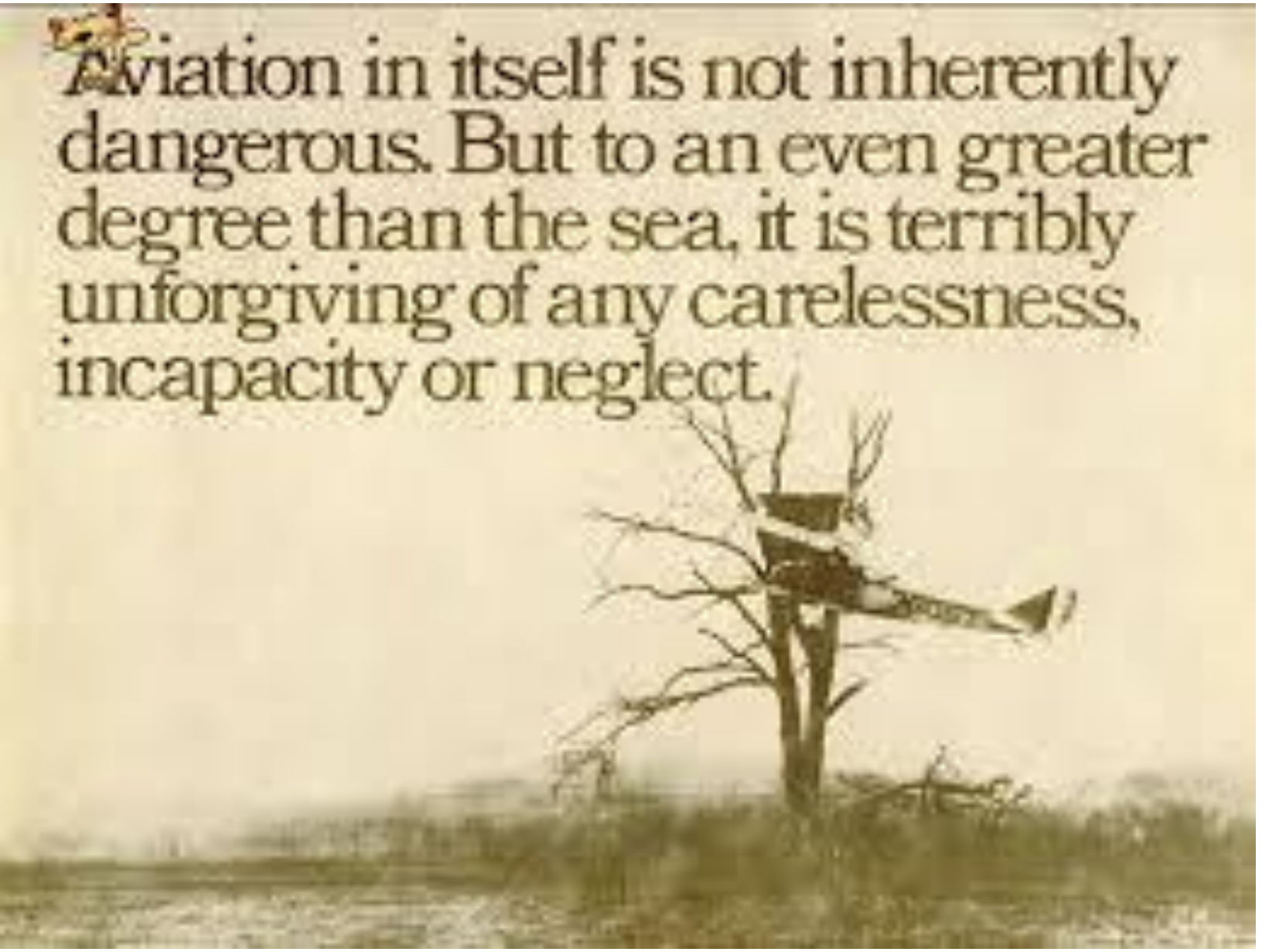
Chicago Skyline

After eating the last unhealthy emergency rations, the flight continued to Chicago. We canceled the last stretch and flew VFR under the O'Hare Class B airspace. O'Hare is the fifth largest airport in the world. Here we could let our eyes wander one last time at the Chicago skyline.

I experienced a lot on this flight and learned even more. I had great confidence in the Mooney, the weather forecasts and, last but not least, in my brother-in-law. Would I do it again? Definitely yes! But maybe next time in South Africa, where I also have a flying brother-in-law.

My next goal is the EASA IFR rating. This flight would not have been possible without the IFR and when you fly to the USA in a Mooney, the sky is really open.





Is a GUMP Check Enough?

By Lee Fox, *MAPA Safety Foundation CFII, former American Airlines Training Captain*

Sometimes, a pilot intentionally chooses to land gear up. However, those occasions are rare.

Everyone has been taught to perform a GUMP check in some form prior to landing, so why do we have gear up landings?

Most pilots perform their GUMP check about the same time before landing. The most common places are on downwind or at the final approach fix. Talking to several competent, conscientious pilots who have had a gear up landing, reveals that something out of the ordinary was going on that interfered with their normal flow. There was a system malfunction that needed their attention. Traffic or other factors required them to modify their planned approach/traffic pattern and maintain extra vigilance while maneuvering in the pattern, or something distracted them, etc. Bottom line, their flow was interrupted, and they did not do their GUMP check (or equivalent) at their customary time and then things got really busy. Many had been rattled to some degree (near miss in the pattern, autopilot acting up on final during an IFR approach, gotten way behind

The leading cause of gear up landings is an interruption in the Pilot's landing procedure, when he or she is taken out of their landing checklist.

the airplane during descent, trouble finding an unfamiliar airport), and were out of their comfort zone and their normal routine. And for those "Oh, this could never happen to me" pilots, you're right… until it does! The typical gear-up landing results in more injury to the plane than to the occupants, but the inconvenience, down time, and increased insurance rates are all great incentives to avoid them.

Let's look at each item on the GUMP check separately for a moment and prioritize them. "G" (gas) includes fuel being on the proper tank and boost pump on. Nobody would ever advocate intentionally ignoring this item, but let's look at the *consequences* of non-compliance. The chances of something catastrophic happening if this item is missed are relatively slim. We'll come back to "U" later. An uneventful landing will also be the likely outcome if "M" (mixture) and "P" (prop) are overlooked, but go-arounds might be a little interesting for a moment. Again, no one is advocating intentionally not attending to the G, M & P items… we're just looking at the likely outcome ***if*** they were overlooked. We could also add "F" (flaps) and "S" (seat belts) to this list and expect the same non-catastrophic outcome for non-compliance under most circumstances. It is most likely that the pilot is the only one who will ever know that these GMPFS items were missed. Don't ask me how I know.

However, the "U" (undercarriage) item is a little different. Forget to perform that pesky little task just once and everyone will know! The outcome will likely be catastrophic. If you're at a controlled field with an alert tower operator you may get one final reminder before it's too late. If you're relying on the gear horn to save the day, that's probably not a good idea. Noise-cancelling headsets, task-saturation tunnel vision, mechanical failure, and outcome bias are all working against you.

So, what can we do to avoid a gear up landing? Since most pilots typically perform their GUMP check at the same point in their pre-landing routine and sometimes that point is pre-empted by other emerging priorities, how about adding one final gear check at a point that occurs during *every* landing? A good practice to introduce into your normal routine is to do an additional gear check on "short final" or "over the threshold." And make it a verbal habit—even if you're solo! This is just a quick, "Gear Down" verbal call-out after a glance at the gear light(s). Many airline pilots routinely do this extra check. I even do it when flying fixed gear aircraft just to be consistent. The benefit of this is that your copilot and/or frequent passengers will be backing you up on each landing if they don't hear you say it. Doing it verbally, even if solo, becomes a good habit and gives you a final sense of security right before landing that you haven't forgotten something very important no matter what has happened up to that point. What's the downside? I even experienced a flight where the gear indicated down during the downwind GUMP check, but there was no gear light on short final. This was caused by the impeccable timing of the bulb burning out in the pattern between downwind and final. Thank goodness for the "football" mechanical gear position indicator in our Mooneys!

Bottom line, continue to complete a pre-landing or GUMP checklist as usual, but add a quick verbal "Gear Down" check when "over the fence." The less gear up landings we have collectively, the less our skyrocketing insurance rates will increase!

Installment #7

by Brian Lloyd, CSEL/CMEL, CFI/CFII

Spring is here! (No, it's not). Spring is here! (No, it's not.) Down here in South Central Texas it is that time of year when the warm winds off the Gulf of Mexico fights it out with the cold fronts out of Canada. Temperatures here oscillate between 75°F and freezing. The wind alternates between the South and North. Yesterday, right after the cold front went through, winds out of the North were 20kts gusting to 30kts. The hangar door stayed closed.

But in the gaps, there are breathtaking days. Today it is cold and clear – perfect flying weather. At least one of the planes will come out today, even if it's only for a 20-minute aerobatic yank-n-bank session. Nothing quite works out the kinks like 15 minutes of +5G/-2G, "Yee Haw!"

The Tiger Moth has come out a couple of times. The weather was cold and beautiful last Saturday too. I decided to brave the cold in an open-cockpit biplane and head over to Fredericksburg for breakfast. Let's see … double socks, long underwear, flight suit, shearling-wool-lined leather jacket with mouton collar buttoned up to my chin, leather helmet, and lined leather gloves. Pretty much only the lower part of my face was unprotected. As a result, my grin was frozen to my face, at least until after the first cup of coffee warmed it back up.

The weather was changing and the winds had switched to the south. Unfortunately, it meant learning the crosswind capability of the Tiger Moth, which is not great. Both of my landings required 100% aileron on landing. Nothing was left. That was with less than 10kts of actual crosswind component. I was prepared to go around and head for a runway more into the wind if the need arose, but it ended up OK. At least now I know the limits. The Moth is definitely a fair-weather airplane.

So, what else has happened? I did get an interesting response to adding my name to the International Aerobatic Club's roster of aerobatic instructors. I have been teaching “gentlemen's” aerobatics for many years, i.e., the ability to do a full range of positive-G aerobatic maneuvers, safely. My target audience is the person who has built or acquired something like an RV-8 and wants to be able to have a bit more serious fun than just flying somewhere for lunch. I don't pretend to teach or perform competitive aerobatics.

Imagine my surprise when I received a call from an aerobatic competitor asking if I would be willing to help her by correcting her forms from the ground. I, of course, agreed, and as a result, she has pulled me into the local IAC chapter where I am learning a lot about how competition aerobatics differ from what I have been teaching. She owns two Pitts S-1 aircraft and a Hatz biplane. We have done one hop in my CAP10B. Our approach to flying the airplane is different. She is all-in all of the time. I'm a bit more laid-back and focused on smooth. No matter. I'm learning and so is she! Cross pollination in aviation is a great thing.

I also got roped into joining the local CAF squadron. It has a PT-19, a North American SNJ, and a DC-3. I am looking forward to adding the PT-19 and DC-3 to my list of aircraft flown. Right now, it is all about turning wrenches on the aircraft to get them ready for the flying season.

Life is good.

So, what about Mooneys? Tom F wrote that he likes my articles (thanks Tom!), but that I only write about 5% of what I know about Mooneys. That may be true. This column is a stream-of-consciousness thing. I sit at the computer and see what comes out of my fingers. Sometimes I have no idea what I am going to write about, so I just let what is on my mind at the moment come out. It seems to be working, but I understand those who want more or something specific. If you want me to write on a specific Mooney topic, let me know. I will find a way to use it to kill another cow.

As many of you are aware, one of my “hot-buttons” is upset recovery training. I was talking about this with another Mooney instructor from the West coast and I suggested that he go out and try some accelerated stalls in his J-model as a precursor to upset training. I like using the accelerated stall as a practice maneuver to keep the upset response – unload, roll, recover – fresh. When you are doing an accelerated stall, the Mooney does not give much warning, (especially if you turn off the stall warning horn), and if done from a left turn, will almost always rapidly drop the left wing. The first time it happens, it will definitely catch you by surprise and you will experience the startle response that delays action. But once you have done it a couple of times, you will begin to react properly and automatically. It is a great exercise.

Except the other CFI was afraid to do it.

"Do you know how hard it was during flight testing to get the Mooney to recover from a spin? I am not going to spin the Mooney."

I was a little confused and asked, "I am not suggesting you enter a spin, only that you try some accelerated stalls. What is wrong with that?"

"Do you know how hard it was during flight testing to get the Mooney to recover from a spin? I am not going to spin the Mooney."

(Uh, I might be seeing a developing pattern here.)

Perhaps there is a sense that I am willing to fly the Mooney closer to the edge. The real point I am trying to make is that the edge is substantially farther out than most pilots realize. We have been told how dangerous stalls are and how they can lead to a spin. With no experience, we stay as far away as possible. I pointed out that it takes quite a bit to push the Mooney over into a real spin. By the time you are anywhere near a spin, you really have gone WELL beyond the normal limits for a proper recovery. In fact, that is what the whole accelerated-stall exercise is all about – turning the recovery process into an automatic reflexive response long before a spin can even begin to develop.

Here is where the FAA and I part ways. The FAA wants me to teach stall avoidance by never letting a student go anywhere near a stall. That is fine, but it doesn't prepare us at all for the time when it happens by surprise. You could experience a turbulence-related upset (I did on my circumnavigation), an autopilot induced stall, or something else that hasn't yet come to mind. If you practice upset recovery you will respond correctly in an instinctive manner. In my upset over Myanmar, I marveled at how my hands and feet just 'did the right thing' and I felt like an observer. If you never ever get near it, you will NOT be prepared when it actually happens to you.

There are four stages to learning:

1. Unconscious Incompetence: You don't know what you don't know. This is where we all start before we begin to learn something.
2. Conscious Incompetence: You know what you don't know. This is the beginning of learning something new.
3. Conscious Competence: You are able to do something competently while you are actively thinking about it. This is where many of us end up with our flying maneuvering experience.
4. Unconscious Competence: The is the point where we get after much practice and the skill becomes "muscle memory". We just automatically Do the Right Thing after many years of practice many of us get that way landing our airplanes and can even carry on a conversation while doing it, all without giving it a second thought. Certainly, this where most people are when they are driving a car.

So, focus on what it takes to get from Conscious Competence to Unconscious Competence and that is PRACTICE. No matter how much you talk about something like upset recovery, it still takes practice to get to that final level of competence. You can't talk your way around it. You gotta do it!

Here's the dead cow for the month:

You can't just talk about flying skills. You have to practice them until they become Unconscious Competence.

As a CFI, I feel like I need to be able to demonstrate any maneuver out of the private pilot, instrument, or commercial ACS/PTS so I go up and practice everything periodically. It keeps me sharp and competent as an instructor. Periodically, you should do this too.

Here is a quick rundown on accelerated stall maneuver. Basically, you are forcing the airplane to stall at a higher-than-normal speed by increasing the load factor. If you do it from a 60-degree bank level steep turn, you will want to fly the maneuver at 1.4Vs0. That is a little above approach speed. At that speed, the airplane will be able to sustain 2 G's at stall. If you aren't comfortable with this, slow down even more, e.g., 1.2Vs0 or 1.3Vs0, and then put it into a left turn and start to increase the G-load. (Pull on the yoke.) When the airplane stalls, immediately relax the back pressure or perhaps push the yoke just a little. We don't want to push negative G's, just reduce the positive G's. This is the important part. Practice letting the stall surprise you with your head outside, not inside, and recover. As you get more comfortable with this you can increase the available G-loading by increasing the airspeed. As long as you keep the airplane below Va for your gross weight, your Mooney or you won't be hurt. You do recall that Va decreases as the gross weight decreases, right? Better remember this if you plan to do accelerated stalls anywhere near Va.

As long as we are talking about pulling and turning, how about another dead cow! Most people think that the smallest turn occurs at low airspeed. Turns out (ha – pun) that is not the case. To tighten up a turn you must apply more force to the airplane. G is directly proportional to turning force, so you need to pull more G in order to tighten up the turn. If you are near the level stall speed the wing is only able to maintain 1 G, so nothing is left for the turn. Turning force increases by the square of airspeed, so as you increase your airspeed, you can turn tighter… up to VA. At Va you cannot pull any more G's without damaging the airplane, so at that point, the increasing speed increases the diameter of your circle. So, the magic number for the tightest turn possible is Va. In fact, the military calls this speed "cornering speed" rather than "maneuvering speed".

So … *The smallest turn radius in your airplane occurs at maneuvering speed (Va).*

Most people find it difficult to get there because they will be pulling over 3G's and the stall warning will be screaming. This is another reason to practice accelerated stalls. It prepares you for a time when you really need to "reef" the airplane around in a tight turn.

I could go on about this stuff, but remember what I said about talking about it versus doing it? Yeah, well, go do it! If you aren't comfortable doing accelerated stalls by yourself, find a CFI who is, or better still, take some aerobatic lessons. Or, you could come visit me near San Antonio. We can do upset recovery training in the CAP10B and some "where is the edge" practice in your Mooney. I promise you a good time. Oh, and we have some really good breweries around here too! Hmmm, flying, beer, and brisket. (Wink!)

Well, it is time to get ready to ferry an airplane for maintenance and then a spin endorsement for a new CFI candidate – a passionate, aviation-oriented young woman from the UK. Here's hoping you have a great flying day. Remember …

Fly safely. Fly better. Have fun!

Garmin Pilot Updates for IFR

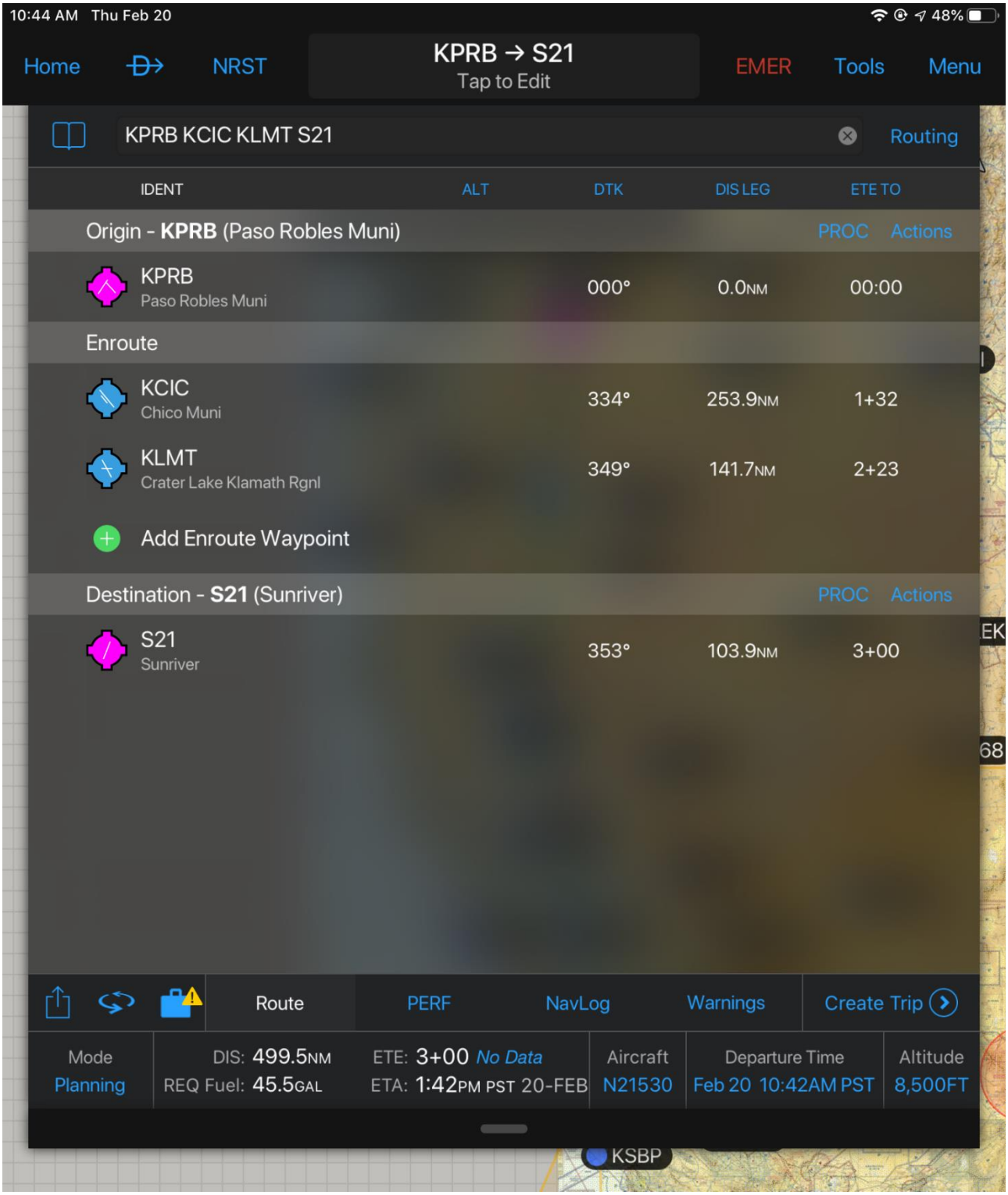
ForeFlight has always been my main tool for Flight Planning and In-flight guidance. It is the gold standard, but ForeFlight subscriptions have significantly increased as they added multiple subscriptions and forced pilots to the higher cost by putting most enhancements into those subscriptions. Enter Garmin Pilot V10 which has added a host of IFR Tools.

More and more, Garmin Pilot has the Look and Feel of its Avionics systems. This makes the whole experience more consistent and therefore easier to deal with in the cockpit. The latest Garmin Pilot update, version 10, continues this trend, with design changes and feature additions that will feel familiar to anyone flying with a GTN 750 navigator or a G3000 glass cockpit. Most of the changes have to do with the route and flight planning tools, specifically on the Map page. That might sound simple, but the changes are significant, especially for IFR pilots. In fact, it's one of the biggest updates in recent years.

Flight Planning

First, go to the Map page and tap on the route preview at the top of the screen. This will bring down the route planning window, with the familiar route search box at the top. You can type in your flight plan here (e.g., KPRB KCIC KLMT S21) and the app will auto-fill your departure and destination in the route window below. But you'll also notice new options, including specific Origin, Enroute, and Destination sections. This makes it more intuitive to create a complicated route, and it essentially imports most of the features of the Flight Plan page into this one window.

Now tap on the data headings to change what the app displays (e.g., DIS LEG, for leg distance, can be changed to DIS REM, for distance remaining to destination). There's also a new Actions text button next to the Origin and Destination airport, which gives you quick access to airport information or changes to your desired airports. The familiar Routing option is still there, showing popular routes between your airports, as are the options for departure time and altitude at the bottom right.



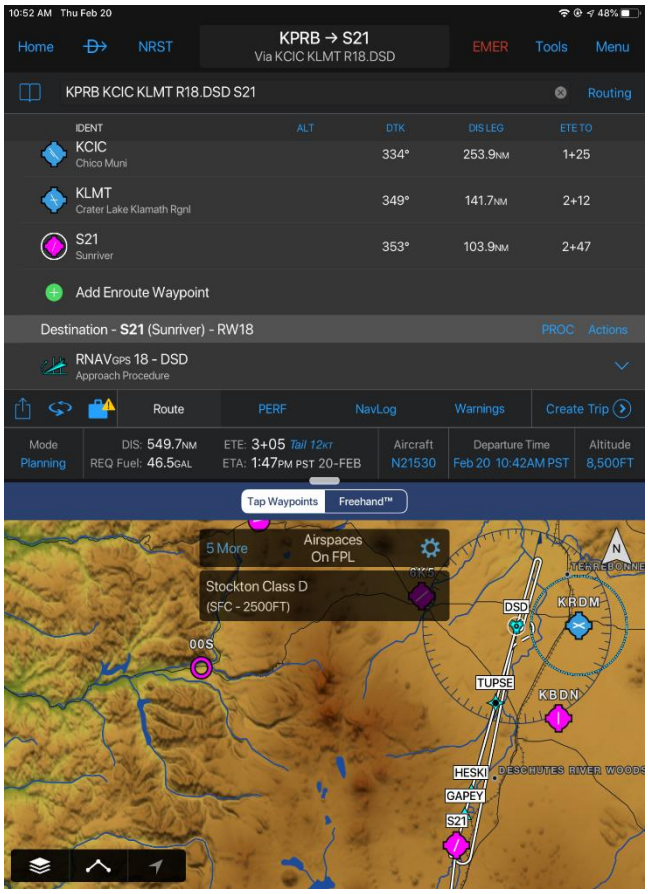
At the bottom of this window, additional buttons offer more detailed information. Tap on the "PERF" button to configure aircraft performance values (to ensure accurate time enroute estimates), "NavLog" for a detailed navigation page for your entire flight (including distance and fuel estimates), or "Warnings" to see the highest obstacle, (very helpful for helicopter pilots). Finally, you can tap "Create Trip" to send this new route to the Trip Planning page and save it.

There are also separate Planning and Navigating sections, a welcome change in our opinion. By default, you'll start in the Planning mode, meant for pre-flight work on the ground. When you're ready to fly, tap the button and it will switch to Navigating. This changes to the familiar Garmin navigation view, showing the active leg with a magenta arrow and adding more instrument approach options (see below).

Instrument Procedures

Another change to the flight planning page is the ability to load full instrument procedures, including arrivals, departures, and approaches. While you obviously can't use your iPad to fly an LPV approach to 250 feet, the software features are basically the same as a panel-mount GPS, so it's a great backup. From the flight plan page, tap the "PROC" button next to the origin or destination, then load the procedure and transition you want.

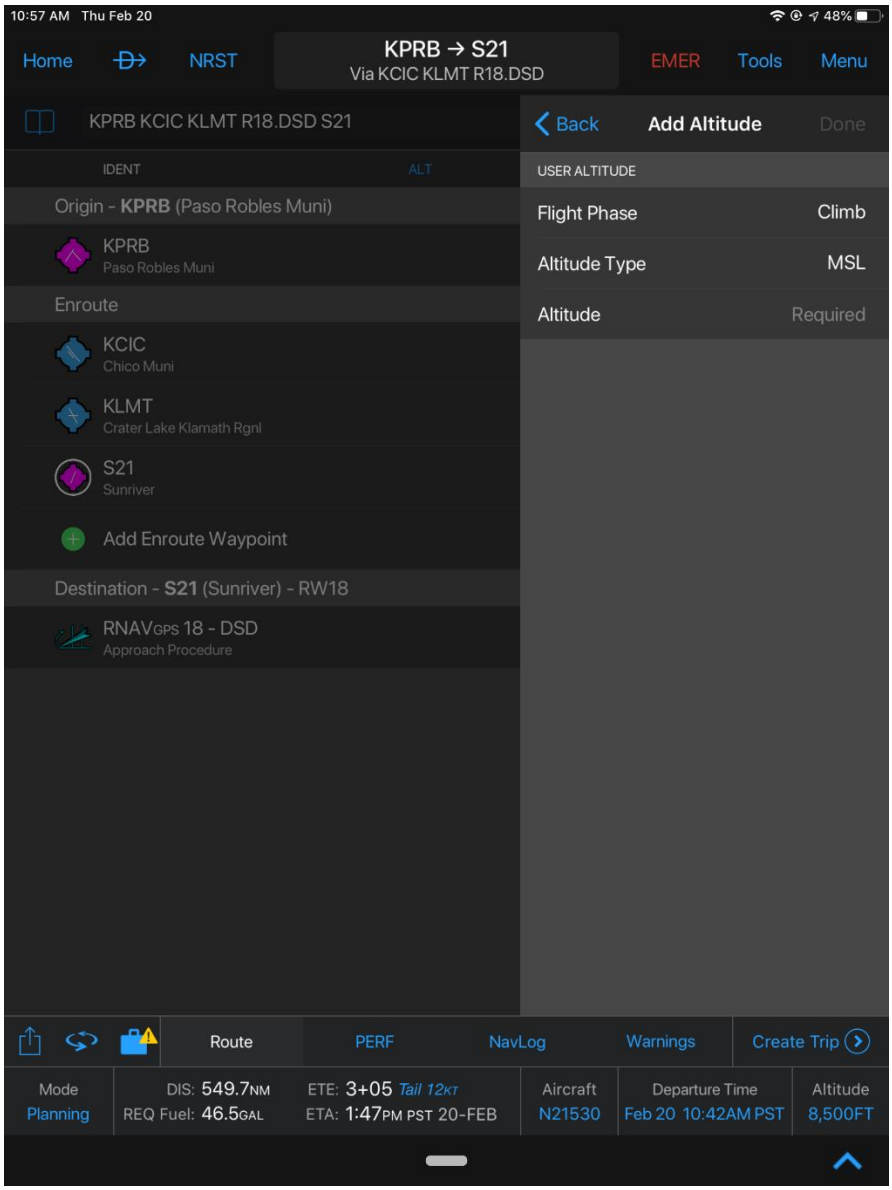
For a SID or STAR, a new visual procedure selection tool makes it far easier to pick the right one. Tap "PROC", then tap "Select Departure/Arrival". You'll see a list of procedures, but also an option to Select On Map. This will pop up a full-screen view of the various procedures, much like ForeFlight's Procedure Advisor. It's easy to see which one might apply to your route. Tap on one to add it to your active flight plan.



Beyond arrivals and departures, Garmin Pilot now offers powerful approach profiles. Tap "PROC" and then Select Approach. From here you can pick an ILS, LOC, or RNAV approach, complete with initial fixes or vector-to-final mode. Loading an approach will add it to the flight plan and automatically add altitudes for each leg. It will even add published holds to the missed approach segment. In flight, when you're in Navigating mode, you can tap on PROC to activate an approach or activate vector-to-final, just like you would with a GNS or GTN series navigator. Note that instrument approaches are available in the US, Canada, and Latin America.

Altitude Constraints

The last major planning piece to be added is the third dimension, altitude. Garmin Pilot now allows you to add altitude constraints to any enroute waypoint, a great feature that mirrors the latest version of the company's GTN software. Tap a waypoint in the flight plan view, then tap Add Altitude Constraint.



You'll be presented the option to pick whether it's a climb/descent, MSL/flight level, and altitude. When you tap done, the new vertical navigation will be added to your flight plan and displayed in the ALT column.

You can even add an Along Track Offset waypoint. For example, if you're cleared to "cross 20 miles south of GAVNN intersection at and maintain 10,000 feet," Garmin Pilot can add a waypoint that shows GAVNN minus 20 miles. From there, you can add an altitude constraint.

All these new tools are helpful for reviewing terrain clearance, enroute weather conditions at altitude, and for getting the most accurate time and fuel estimates—especially if you plan to step climb or change altitudes during a long flight. However, it's worth pointing out that this isn't quite a full VNAV tool, at least not yet. You can put in a crossing restriction, but don't expect any vertical guidance.

In fact, the best way to use the altitude constraints is with the Profile View on the split screen. This will show your flight from the side, complete with terrain and weather. We use this a lot when avoiding icing conditions, since you can overlay the forecast icing at different altitudes. At a glance, you get a great feel for the 3D weather environment.

Pilot Defined Holding Patterns

Another powerful tool for IFR pilots is the ability to create a holding fix almost anywhere, including at an existing Navaid or intersection, or by creating a user-defined waypoint. From the flight plan window, tap on a waypoint, then tap Hold at Waypoint. You'll have options to select the inbound course, right or left turns, and either leg time or distance. Tap Done and this hold will be inserted into the active flight plan.

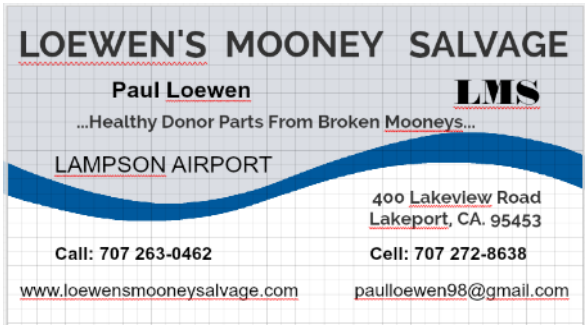
Summary

My favorite aspect of Garmin Pilot has been there for a while, and that is Database Concierge which is part of Garmin Connext. Essentially, Garmin Pilot will download all your Avionics Panel databases onto

your phone or iPad. The next time you get into your cockpit, you are prompted on your GPS, or other system, to download the latest databases that you are subscribed to. This is especially valuable when you are travelling. While at the hotel, Garmin Pilot downloads all your data transparently. So, you do NOT have to wait until you get home to update your Garmin Panel.

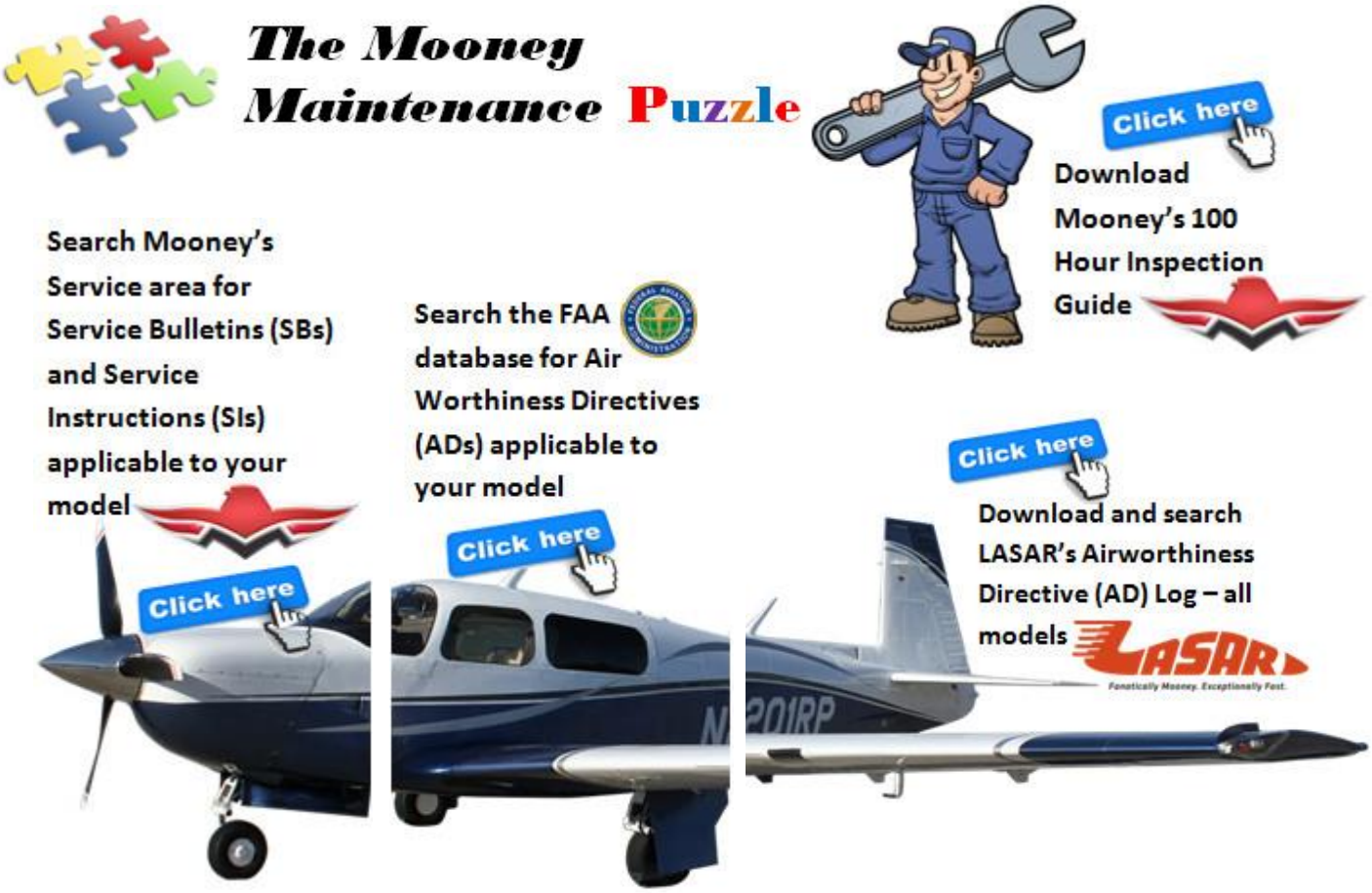
The other feature I use all the time is the simple transfer of a complicated flight plan to my Garmin GTN750. Even on a simple flight to Death Valley, I had to navigate a lot of MOA and Restricted Air space. It used to be a pain in the butt to flight plan on Garmin Pilot, only to have to re-enter it on my GTN. Now I can easily add my own waypoints to navigate around MOA, Restricted Airspace, or Terrain, and simply cross fill it to my Garmin GPS in the cockpit.

Check out the new features of Garmin Pilot and see how smoothly they fit into the look and feel, as well as the operation of your Garmin Avionics panel.



There is a big inventory of serviceable airframe parts, including wings for M20C, E, F, G, J, K & R models, empennage assemblies, fuselages, rebuilt controls, rudders, elevators, ailerons, flaps, cowls, engine mounts, landing gear and small parts.

Paul Loewen is offering them online, or by phone. The website is www.LoewensMooneySalvage.com, and he can be contacted in Lakeport, California at **707 263-0462** or by cell at **707 272-8638.** Email is PaulLoewen98@gmail.com. The used inventory is also still available through LASAR Parts at 707. 263-0581



Press Release

Lampson Field gets new restaurant……and Pilot's Lounge

By Shery Loewen

Friends of Lampson Field (1O2) are pleased to announce exciting news at Lampson Field in Lakeport, CA. After two years without a restaurant, a wonderful restaurant has opened!! Red's at the Skyroom, owned by Jeremy and Nicole Zabel, opened recently featuring updated versions of classic comfort food utilizing local, sustainable and seasonal ingredients as much as possible. They offer sit-down service with indoor and "soon to be" outdoor seating and lounge space, as well as a full bar overlooking Lampson Field.

Jeremy is a prominent local chef with a varied culinary background. He began his career as a dishwasher at the age of 14 at his family's restaurant, Park Place in Lakeport, and at age 18 was lead cook. After college, he returned to Park Place as head chef, where his passion for sourcing local ingredients began. He moved on to become the Executive Chef at the Saw Shop in Kelseyville for many years and at Hog Island Oyster Company in Napa, where he learned more about sustainability and sourcing local ingredients.

Nicole, has 19 years of experience in the hospitality industry. Her experience includes serving in full-service restaurants, diners, and cafes in both Northern and Southern California, event planning and execution in Napa and Lake Counties and managing full-service hotels for major corporations.

The Zabels have 5 children, ranging in age from 24-10. Family is at the forefront, and you'll notice a few references to those they love on their menu! We are very pleased to have a new restaurant at our local airport and wish Jeremy and Nicole and their staff much success!

More exciting news at Lampson Field is a new Pilot's Lounge for our pilot friends, located "in between" the restaurant and Lake Aero Styling & Repair, "LASAR", a Mooney Service Center for close to 50 years. There will be a "Ribbon Cutting" ceremony at the Pilot's Lounge on April 4 at noon. Come visit our beautiful community located on California's largest natural lake, Clear Lake.

Ask the Top Gun

Tom Rouch
Founder of Top Gun Aviation, Stockton, California

Send your questions for Tom to TheMooneyFlyer@gmail.com

Question: What makes a good Mooney Mechanic?

Answer: We will assume that the mechanic has an A&P license, although that doesn't make him a Mooney mechanic. They are simply a qualified airplane mechanic.

We would like that mechanic to have attended a Mooney Factory School. That would be an asset, but not really necessary.

Now, what does make the difference is OJT, on-the-job training, which is the way most Mooney mechs learn the aircraft. Also, ex-military mechanics who learned the basic skills on all types of military aircraft are great. All you need to do is teach them about the Mooney Aircraft. These usually do not have the license yet, but have the skills needed to be trained. The requirements for the A&P license are either an approved school or 36 months OJT. Then, they take the tests, which are both written and physical. I retired from the Air Force after 26 years and I was allowed to challenge the tests after I retired. (Was able to pass the tests in a short order)

Now what is different about the Mooney.

The Mooney is one of only two production planes to have a fully trimmable tail assy. The other is the Lockheed Jetstar, and I have to mention I spent two years in the Philippines maintaining four Lockheed C-140 Jetstars, so I had some experience with that type of system. The other difference with the Mooney is it has no trim tabs and the flight controls have a push-pull rod system to operate the flight controls. This provides a positive control, unlike the cable system most GA aircraft have.

To me, the only other Mooney special traits are the streamline design which spells "speed". They are built for speed and that means drag. Through the years, I have enjoyed making modifications to make a Mooney faster. A good example is our M20F, N9171V. It is easily 20 knots faster than when it was built.

All the engines are just off-the shelf, so they are no different than any other aircraft. The different systems are basically the same as other aircraft, so the main things a Mooney mechanic needs to learn is the flight controls and the fact that the aircraft was designed for speed.

PS, Pilots need to make sure the gear is down before landing and mechanics need to learn to have jacks under the plane before retracting the gear.

I have lots of experience with both.

1969 MOONEY RANGER

the perfect answer for:

★ Advanced Trainer for Flight Schools
★ High Performance Cross Country
★ Go Anywhere - Go Any Place - Go Any Time
★ Popular Rental Aircraft

1. Retractable gear (electric standard)
2. High performance (top speed 172 mph)
3. Comfortable (4 people and baggage)
4. Lowest initial cost
5. Lowest operating cost (less than any other high performance retractable geared aircraft on the market)
6. Easy to fly (touches down at 57 mph)
7. PC (positive control flight stability)
8. IFR planned panel

For complete information on performance, operating costs, and specifications write

MOONEY

MOONEY CORPORATION KERRVILLE, TEXAS

BREAKING AVIATION NEWS

Avionics Sales Above $3B for 1st Time

	Retrofit	Forward-fit	Total Sales
1Q 2019	$388,085,532	$336,082,855	$724,168,387
2Q 2019	$406,254,044	$376,471,094	$782,725,138
3Q 2019	$414,488,611	$366,319,446	$780,808,057
4Q 2019	$456,040,348	$328,244,094	$784,284,442
2019	$1,657,413,394	$1,348,426,111	$3,005,839,505

– 2019 worldwide business and general aviation avionics sales. Source: AEA.

GAN.aero

GENERAL AVIATION NEWS

Clearly fueled by ADS-B sales, Avionics business is doing fantastic with over $3B in sales. That's up 10% from the previous year. And this is on the heels of three straight years of growth.

NTSB Issues New Safety Alerts

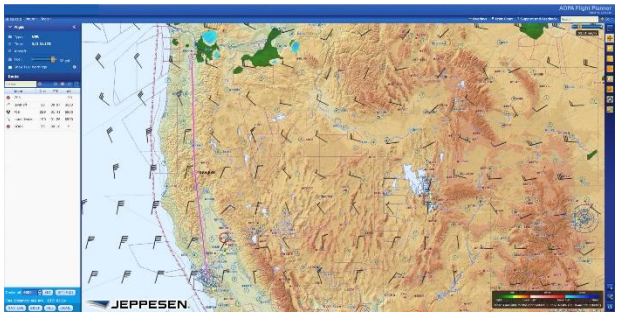
CHECKING THE INTEGRITY OF IGNITION SWITCHES

The National Transportation Safety Board recently issued two new Aviation Safety Alerts (SA). SA-080 (https://www.ntsb.gov/safety/safety-alerts/Documents/SA-080.pdf) alerts pilots and mechanics to "stay in the groove" and check the integrity of aircraft ignition switches. The SA warns that over time, key-type ignition switches and associated keys can become worn such that it is possible to remove the key from a switch position other than the OFF position. This can result in switch positioning errors and an unintended engine start. An accompanying video is available here: https://youtu.be/JDnnXjNb2vc.

AUTOMATION OVERRELIANCE AND CFIT

The General Aviation Joint Steering Committee (GAJSC) has found that reliance on automation is a precursor to CFIT events. Awareness of automation limitations and pilot proficiency in flying with and without automation are key to safe flight operations. See our fact sheet for more tips on how to cope with distractions here: http://bit.ly/375h7rP. To see the most current versions of their #FlySafe fact sheets, arranged by topic, go to http://bit.ly/GAFactSheets.

AOPA To Retire Online Flight Planner



Noting that Jeppesen will be decommissioning the underlying map structure, AOPA announced on March 2, 2020, that its desktop flight planner will go offline at the end of April 2020. The flight planner, which includes aircraft and pilot profiles, and allows overlay of various weather products as well as critical flight planning, is a popular member benefit. As useful as the AOPA Flight Planner has been, the trend is clearly toward pilots creating flight plans and profiles on tablets that can then be brought to the cockpit and, in the case of the recent Garmin Pilot app update, synced with onboard navigators.

Stop Hat Sweat with NoSweat Liners

If you like to wear a hat while flying, odds are, you probably pull it off every now and then to wipe sweat off your brow.

To take care of that problem, pilots can stick a new disposable NoSweat liner into their hat to not only instantly wick away sweat, but prevent stains, odors, and the need to keep replacing their hats.

The liners are thin and breathable, so they won't become a distraction and add just the right amount of cushion between your forehead and the band of the hat for maximum comfort.

NoSweat liners peel and stick to the inside of headwear and feature SweatLock technology engineered to instantly absorb sweat. Moisture is locked inside the liner to help prevent dripping sweat, fogging, sweat stains, acne, and odor. Each NoSweat liner absorbs around 2 ounces of sweat.

Depending on the person and activities being performed, each liner can last anywhere from one round of golf to two weeks of standard hat usage. The liners also preserve hats and keep the inside looking as fresh as the day it was bought, company officials note.

NoSweat liners are available for hats, helmets, hardhats, and visors and start at $6.99 for a pack of three and $34.99 for a pack of 25.

2020 SUMMER CONFERENCE & RETREAT

June 11th - June 14th, 2020
Sunriver Resort, Sunriver Oregon

Fly-In to Sunriver Resort Airport (S21)

✓ Fuel Discounts ✓ Low Tie Down Fees ✓ Hotel Room Discounts

Learn from some of the best Mooney and aviation experts in the country and enjoy a relaxing time with family and friends in one of the most beautiful resort locations in America.

Special Presentation By:
Don Maxwell

Don is regarded as one of the finest Mooney service providers in the country. This is a rare opportunity to hear from him in this type of setting so don't miss it!

AUTHORIZED MOONEY SERVICE CENTER
DON MAXWELL AVIATION SERVICES, INC.

Right Seat Ready!©
Companion Class for Non-Flying Passengers
Presented By: Jan Maxwell & Jolie Lucas
Get your flying partners "Right Seat Ready" with this fun & informative class

Win a brand-new Zulu 3 headset valued at $850

Sunriver Hotel Discounts, Spa Packages,
Incredible Recreation, Fine & Casual Dining & So Much More

FUNDRAISER FOR THE BILL GILLILAND FOUNDATION

This Is Going To Be A Fun and Informative Weekend.
Meet Other Pilots and Make New Friends!!

SIGN UP TODAY!

www.WestCoastMooneyClub.com

LASAR Fanatically Mooney. Exceptionally Fast.
SUNRIVER RESORT
Aircraft Spruce & Specialty Co. SINCE 1965

Spatial Interior for your vintage Mooney

Simple, quick and effective repair methods add new life to cracked and discolored plastics. Optional STC approved lower side panels add space and elegance. Installed without screws will please any mechanic.

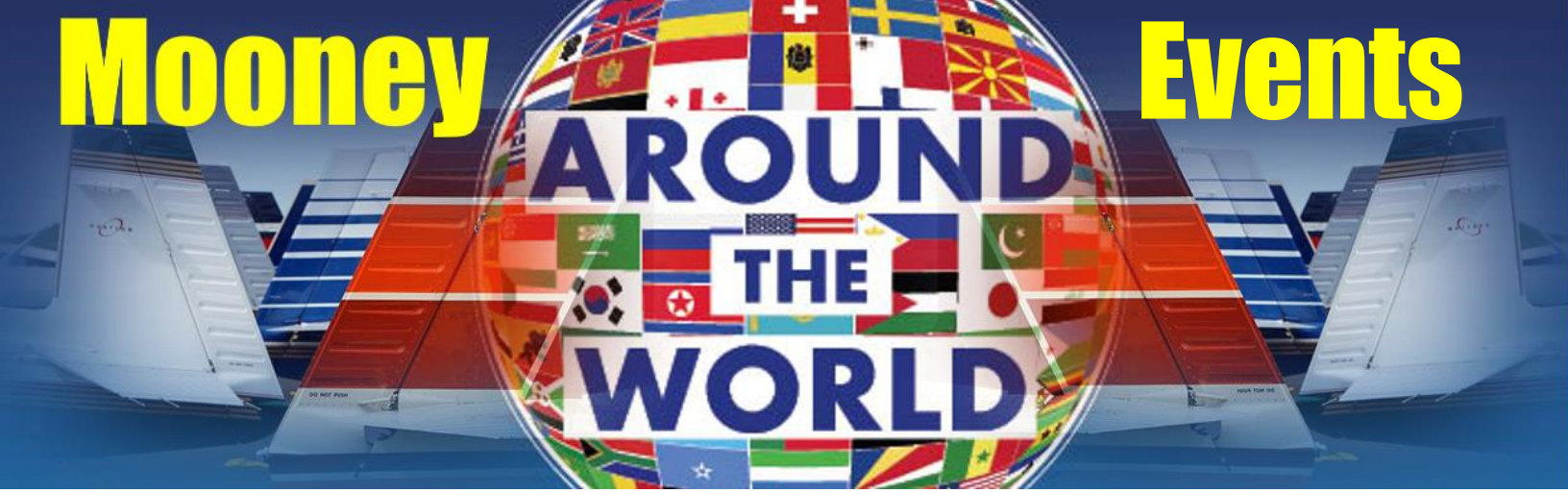
For details, visit:

www.jaegeraviation.com

Jaeger Aviation

Email: bruce@jaegeraviation.com

320-444-3042



Florida Mooney Lunch Group	*Contact Dave at daveanruth@aol.com or (352) 343-3196, before coming to the restaurant, so we can have an accurate count. Events begin at 11:30* April 11: Flagler (FIN) May 9: Sebring (SEF) CANCELLED June 13: New Smyrna Beach (EVB)
Mooney Caravan	May 14-17: Basic Clinic (PDT) Sep 10-13: Advanced Formation Clinic (PDT) CANCELLED
MooneySafety.com MAPA Safety Foundation Pilot Proficiency Programs	Jun 12-14, 2020: Ft Worth, TX Aug 21-23, 2020: Santa Fe, NM (New Schedule) Sep 11-13, 2020: Springfield/Chicopee, MA Oct 2-4: Wichita, KS **Sign Up at** https://www.mooneysafety.com/ppp-registration/
MOONEYSUMMIT	October 16-18: Tampa O'Knight (KTPF) CLICK HERE for details
Australian Mooney Pilots Association	
EMPOA	CLICK HERE for details
WEST COAST MOONEY CLUB FAST FLYING - FUN TIMES	June 11-14: West Coast Mooney Club Summer Fly-In, Sunriver (S21) CLICK HERE for details
Other Mooney Events	Apr 30-May 3: MooneyMax Conference CANCELLED

TMF PRODUCT REVIEW

Pro IFR Tools Added to Garmin Pilot

With the update, pilots can expect a near-seamless transition between Garmin avionics and the Garmin Pilot app when performing common functions, such as loading and activating instrument approach procedures, departures and arrivals, adding vertical information to flight plans and building custom holding patterns on the fly.

Professional IFR navigation tools. Within the latest Garmin Pilot upgrade, pilots have the option to load or activate departures, arrivals and instrument approach procedures. Published holds that are included as part of the missed approach are also added to the flight plan. When pilots activate a procedure with published altitude constraints, those altitudes are automatically incorporated into a flight plan within the app. Pilots can also choose to manually add altitude constraints into a flight plan.

Vertical Planning. Using the vertical planning feature within Garmin Pilot, pilots can more easily input and adhere to crossing restrictions in a flight plan. For example, pilots can manually input a crossing restriction over a specific navigational aid or GPS waypoint. With these new features, pilots can optimize their flight planning and fuel calculations.

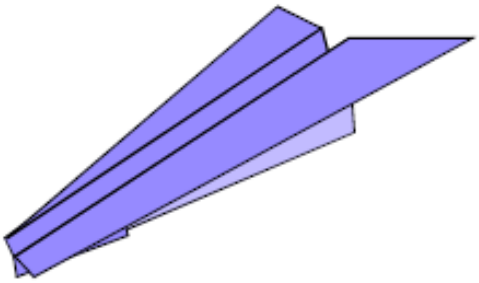
Visual procedure selector. Pilots can now more easily visualize departures, arrivals and instrument approach procedures prior to a flight using the visual procedure selector. This new selector allows pilots to simultaneously view departures, approaches or arrivals on a map alongside a flight plan so it's easier to visualize and select the most appropriate procedure based on a flight plan and intended direction of flight.

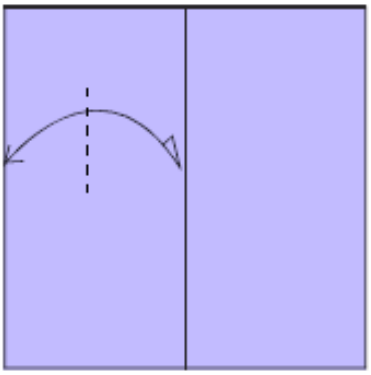
Customized holding procedures. Pilots now have the flexibility to easily build customized holding patterns. These holds may be created over an existing fix or over a user-defined waypoint and then inserted into a flight plan. When creating a hold, pilots can easily input an inbound or outbound course, select left or right turns and specify leg length in time or distance. Unpublished holds or those assigned by air traffic control are easily created and displayed within Garmin Pilot to simplify the process of visualizing and flying a holding pattern.

CLICK HERE for more detailed information from Garmin.

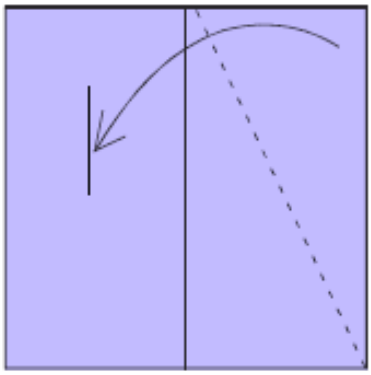
Uberlocke by Michael Weinstein

The banal exterior hides a wonderful locking fold for this unusual airplane.

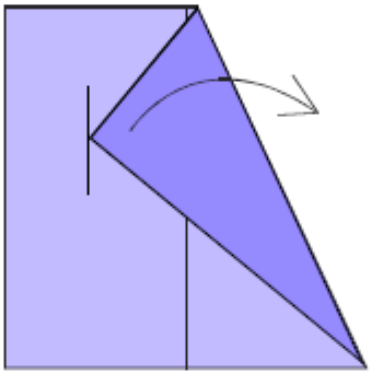




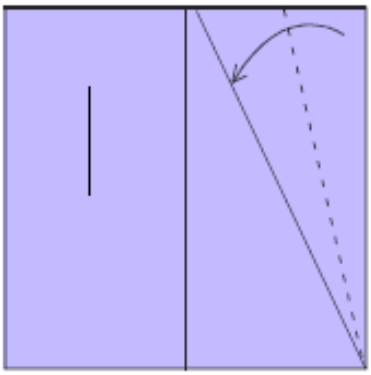
1. Valley fold so that the raw edge meets the center crease. Pinch and unfold.



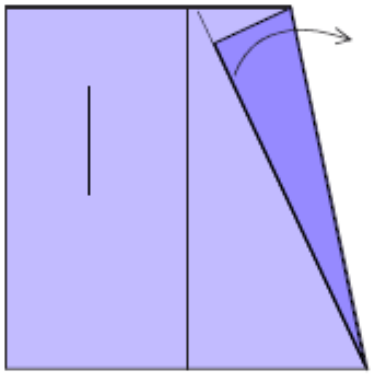
2. Make a valley fold from the bottom right corner that puts the top right corner right on top of the crease made in step 1.



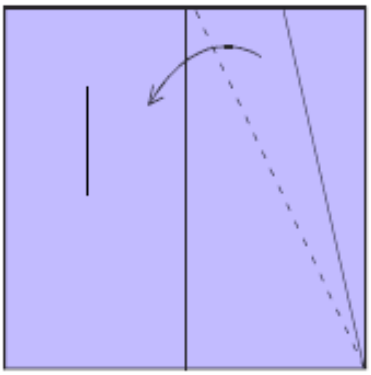
3. Unfold.



4. Make a valley fold from the bottom right corner that puts the right raw edge on the crease you just made.

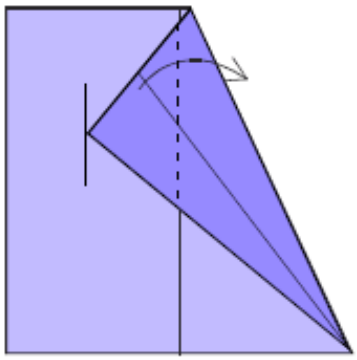


5. Unfold.

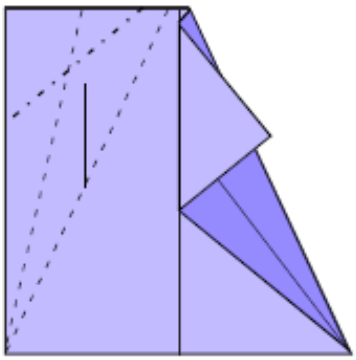


4. Valley fold along the crease made in step 2.

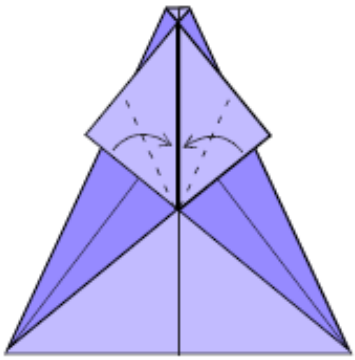
Why don't we just buy one airplane and let the pilots take turns flying it.—
Calvin Coolidge, complaining about a War Department request to buy more aircraft



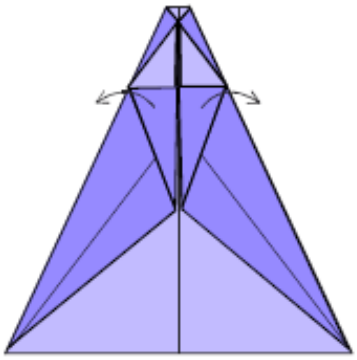
7. Valley fold the flap back along the midline.



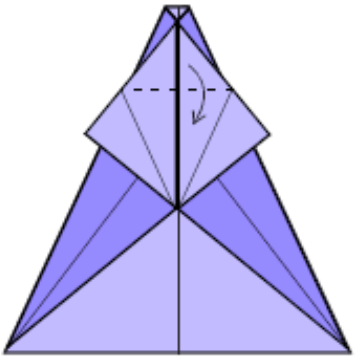
8. Fold the other side to match.



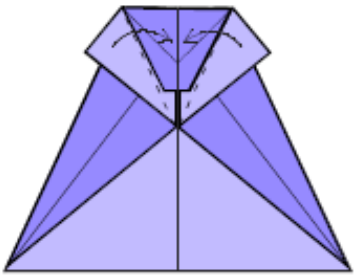
9. Valley fold the light colored flaps so that their bottom raw edges meet on the center line.



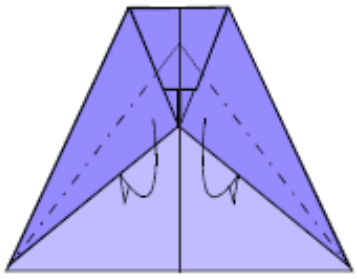
10. Unfold.



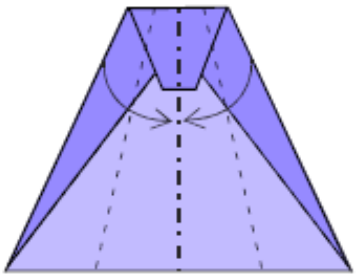
11. Valley fold the top down where the two creases hit the outside raw edge.



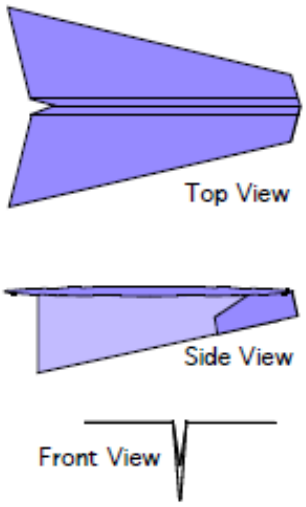
12. This is where it gets a bit fun. Valley fold the outside flaps along preexisting creases, and tuck them between layers.



13. To finish the locking fold, mountain fold the edges of the long outside colored flaps behind. The front part of the fold will be beneath layers and will not be visible



14. Fold the wings by lining up the outside folded edges and the center line.



FOR SALE Mooney Stuff

Parts for Sale

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

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

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

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

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

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

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

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

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

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

Parts for Sale

I have several Mooney parts for sale from a 1969 G model. Brand new voltage regulator (never used). Instrument light rheostat controller, cowling plugs and like new fuselage/cockpit and tail feather covers. G model POH. Contact me at Wilson Brown, located in Georgia, 678-469-6182.

1 Piece Belly Pan for M20J

I purchased this from Don Maxwell about 7/19/2017. I haven't got time to install it. Circumstances have changed and I would like to sell it for any reasonable offer. The belly pan is at the Cortez, CO airport (KCEZ). John Hutchison 47hutch@gmail.com

NEW Hangar For Sale (Camarillo KCMA) - $99,000

42'x36' in Great Condition

$218 a month covers electricity, etc.

Contact: Julie Ryan, 360.281.3488, Julierryan@comcast.net

1979 M20K For Sale

TTAF: 5155

SMOH on TSIO-360 LB Engine with 1800 TBO: 662
SMOH – engine was completely rebuilt again, but was not zero timed. Brand new cylinders were installed. 119 hours

Garmin G500 MFD
Garmin GTN750 GPS
Garmin GTN430W GPS
Garmin GDL 69 XM Weather displayed on G500, GTN750, and GTN430
Garmin GTX330 transponder with ES
Garmin GI 106A CDI
TIS traffic displayed on G500, GTN750, and GTN430
406Mhz ELT
Garmin GMA340 audio panel
EI MVP50 engine monitor with %engine power and vacuum options

Backup AI – last vacuum gage
Backup altimeter
Backup airspeed indicator
Garmin 106 glide slope gage
Century 41 3 axis AP. G500 linked to provide GPSS
Precise speed brakes
LASAR smooth one piece belly mod
Merlyn automatic wastegate
GAMI injectors
Fine wire sparkplugs
Intercooler
Brand new 115 ^{ft3} oxygen tank for 4 place
Whalen strobes
LED landing light
MT 3 bladed prop, Recently overhauled
New paint in 2003
Leather Interior – new 02-10
Panel mounted digital clock/timer
February 2020 Annual
Both Magnetos overhauled, new prop governor, overhauled fuel pump installed at annual.
Tanis Engine pre heater installed last year

Damage history: Off airport landing 1985 and off airport landing 2003. Right wing damaged. The plane was repaired by Crown Air in San Diego with a factory new wing

$149,000

Kevin@ 909-790-9359


Whether you're a Rusty pilot, dreaming of becoming active again . . .
. . . or you're a proficient, veteran
Master of
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