The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

March 2018

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Mooney Quiz

I often communicate with John Hillard, an amazing Mooniac from Down Under. It's amazing how many Mooniac friends we have made over the years, but John just won't go away and we love that. John wrote the following interesting questions to me this past month and I'd like to share them with all of you.

How many lubrication points are there on your Mooney?
Of that total, how many points are accessible without removing a panel?
How many of this total does your A&P know about?
How many were lubed in your last Annual?

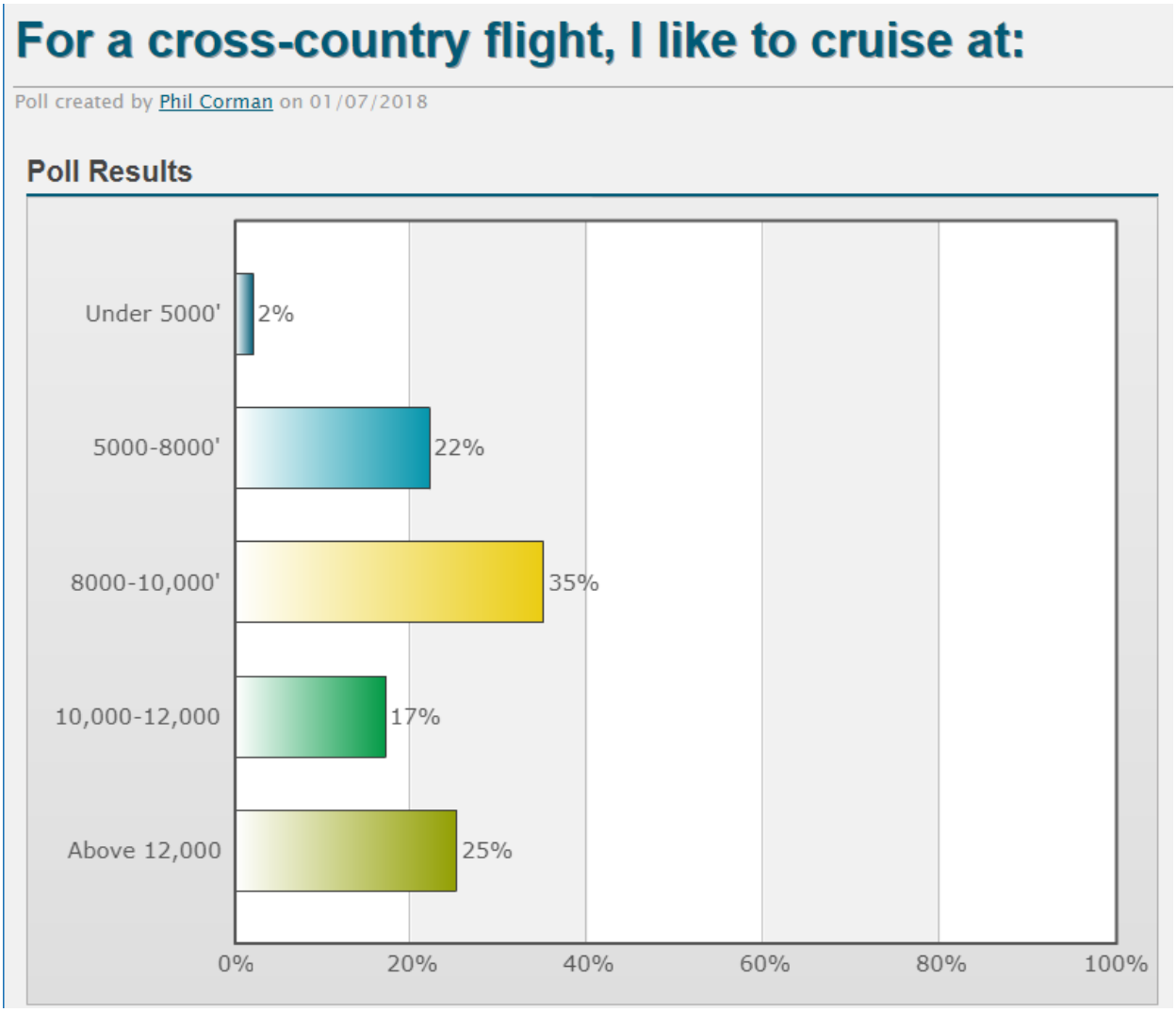
We, at The Mooney Flyer, know the answer to the first question, because John told us… Duh! Send us your answers and we will send a small prize to the first response that is correct.

Ovation (M20R) Added to Valuation Tool

Last month, we added the M20K to the Valuation Tool. We got so much positive feedback that we went ahead and added the M20R. Please let us know how it's working for you. **CLICK HERE** to go directly to it.

MooneySpace Fly-In hosted by The Mooney Flyer on April 14 at Paso Robles, CA

Fly-Ins are always fantastic events. The camaraderie of fellow Mooniacs is just a great experience. So when folks on MooneySpace were looking for a place to fly in Central California, we gave them Paso Robles (KPRB). We will host this fly-in and provide a BBQ for all those that attend. As a plus, attendees can walk down Taxiway Foxtrot to the Estrella Warbird Museum for an optional visit. CLICK HERE to Register so that we can plan on the amount of food. We will provide parking near Phil Corman's hangar, the site of the feast.



Next month's poll:"I change my Oil/Filter as follows:" **CLICK HERE** to vote.

Appraise Your Mooney's Value

Don't forget about our cool new **Appraise your Mooney's Value** calculator.

M20C M20E M20F M20G M20J M20K M20R

CLICK HERE for the most comprehensive list of Mooney Instructors in the US.


PROP SUPER CENTER
RAM AIRCRAFT, LP
We won't be undersold!
Mooney Props
TOP PROP
HARTZELL
PERFORMANCE CONVERSIONS
Airplane Eligibility | Prop Style | STC #
M20A-J | 2 bladed Scimitar | SA0241CH-D
M20C, D, E, F, G | 3 bladed | SA4529NM
M20J | 3 bladed | SA4529NM
M20K | 3 bladed | SA1505GL
M20R | 3 bladed Scimitar | SA02004CH
M20R, S, TN | 3 bladed Scimitar | SA03024CH
M20R, S, TN | 3 bladed Composite | SA02482CH
McCAULEY
BLACKMAC
Airplane Eligibility | Prop Style | Part #
M20A-G | 3 bladed Scimitar | PL60152
M20C, D, G | 3 bladed Scimitar | PL60154
M20E, F | 3 bladed Scimitar | PL60149
M20J | 3 bladed Scimitar | PL60136
M20K | 3 bladed Scimitar | PL60199
M20R | 2 bladed | M20R241-01
M20R | 3 bladed | M20R418-01
M20S | 2 bladed | M20S239-01
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Mooney Fuel Tanks

Patch or Reseal?

After “Death” and “Taxes”, there is one more “sure thing” in life, and that is, “A Mooney fuel tank will develop a leak”. I also ride motorcycles, and remember when a Harley Davidson was sure to leak on my garage floor.

The million dollar question we are asked by readers is, whether or not to “Patch” or “Reseal”. As with most Mooney questions, it depends. The average expected life for original sealant is about 20 years. Your “mileage” may vary. There are stories of tanks that have leaked before that. So, when was your last reseal? If you are at or above 20 years, you might consider a reseal over a patch. It’s a big decision that varies significantly in cost and assurance.

There are two things to remember as you assess the nature of your fuel leak. 1). The evidence on your wing is no indication of where the actual leak resides, but you might be able to narrow it down to an area. 2). If the tank only leaks when it is filled above a certain level, the owner assumes that the leak must be above that level. But this is NOT necessarily true. Sometimes the weight of the fuel forces a leak lower.

Leaks can come from the tank or the fuel selector valve, or even the fuel gauge sender. There is seldom only a single source. On our Mooney, we had 5 leaks. A recent service center found 24 leaks on a Mooney they were patching, and then the owner elected to have a complete reseal.

Locating the Source

Clearly, if you smell fuel in the cabin, the leak should be addressed immediately. That is bad. In some cases, if the leak is in a forward tank, it will leak into the leading edge of the wing and run down into the cabin. If there are fuel stains around the fuel selector, then duh, that’s the source. This is an easy fix with a new O-ring. Sender units are also fairly easy to fix. If you see stains on the tank walls, above the sending units, you can often tighten the screws unless the gaskets have worn out. These last two problems do not require a patch or a reseal.

Patch the Tank

Most of the time, a leak starts in the form of a “seep”. This is the slightest form of a tank leak. It stains the wing, but generally does not drip onto the hangar floor or tarmac.
Most of the time, leaks can be patched. Patches cost

less to the owner, but come without any warranty. A patch, performed by a knowledgeable service center, **takes 2-4 days**. We know two that are extremely reputable; 1) Advanced Aircraft Services in Troutdale, Oregon and 2) Houston Tank Specialists in Houston, Texas.

When patching, the original sealant is not removed. If the sealant is faulty at the leak, then it is removed and then patched. Otherwise, sealant is applied on top of the existing sealant.

After a patch, you will most likely fly home and all will be well. If a leak was not found or the patch job is faulty, you might return. There are no guarantees with patches, but they are significantly less expensive than a reseal.

Reseal The Tanks

This process usually takes three weeks. In resealing, all of the existing sealant is removed, usually with chemicals that dissolve the exiting sealant. This is messy, labor intensive, and if not properly done, can affect the painted surfaces of your Mooney. That's why there are only a few places we know of: 1) *Weep No More in Willmar, MN (BDH), is the king of reseals. 2) *Advanced Aircraft Services in Troutdale, OR, (TTD). 3) Houston Tank Specialists in Houston, TX. 4) Wet-Wingologists, Ft Lauderdale, FL (FXE). (*Located in a Mooney Service Center).

After completely removing the original sealant, a new/fresh sealant is applied. The above four businesses guarantee their work for seven (7) years.

The cost varies, depending on the tank capacity; short/medium/long body. Long body Mooney reseals can run above $12-13K, but it's much less for smaller tanks.

CLICK HERE for an excellent article by Don Maxwell "DMAX". Don shares his process for locating leaks and patching them. If you are a DIY'er, this is must reading. It's all done with soap and mirrors.

The sealant used in the sixties is still in some Mooneys, and as long as it doesn't leak it is okay. However, once it starts leaking, it is difficult to repair/patch, because it is hard to find where it is sound enough for the new sealant to bond. From somewhere in the seventies Mooney went to the current compounds which last a very long time. How long depends on how clean the metal was when it was applied, the storage climate; in a hangar or outside, how full the tanks are kept, etc. I have heard of brand new Mooneys needing repairs in the first few years. I expect some will go 30-40 years with no problem. The current sealant does not typically dry out or get brittle like the sealant of the sixties. Most leaks start where there is a poor bond, or at the top of tank if a wing is painted with dark paint, when it has a lot of sun exposure.
– Kelly M

Magnetos and Hot Props

Hot Props

If a propeller is a “hot prop”, two things need to happen:

1) There has to be some fuel left in the engine.
2) A spark has to reach the spark plugs.

Normally, if the mag key is in the OFF position, this will prevent a spark from going to the spark plugs. But, if the switch has a loose connection, or if the switch is old and intermittent, a spark can still reach a plug, regardless of the key position.

That’s why it’s so important to shut down your engine correctly, to ensure that there is no residual fuel in the engine. If you do that, even with your mag key in a position other than OFF, you’ll be safe. If your propeller is moved and a spark manages to reach the spark plugs, the engine won’t start, regardless of the position of the mag key.

Shutting Off an Engine Correctly

Starve the engine of fuel.

1) That is, pull the mixture to IDLE CUTOFF.
2) When the prop stops, turn the mag key to OFF.

Why Wait until the Prop Stops?

When starving the engine of fuel, with the key switch in BOTH, the engine continues to burn all the residual fuel. If you were to turn the key to OFF while the prop is still turning, you’ve just removed the spark and some unburned fuel can lurk inside the engine. If your magneto grounding system were faulty with fuel remaining in the engine, if you turn the prop by hand the wrong way, ever so slightly, the engine can start. Yes, it’ll just run for a few seconds, but that’s long enough to kill you.

Turn the Prop by Hand in the Opposite Direction of its Normal Rotation

If you need to move the prop so you can attach a tow bar, turn it in the opposite direction of which it normally turns. Then, even if there’s residual fuel in the engine, a spark cannot be generated.

You may have heard that one should not turn a prop backwards. However, it’s okay as long as you turn the prop less than one revolution.

Which Way Does it Turn?

Here is an easy way to remember how to rotate a prop backwards. When sitting in the cockpit looking forward at your moving prop, you'll notice that it turns clockwise.

When an aircraft without an electrical system needs to be hand propped, the lucky guy who does the honors, stands on the left side of the prop and turns it counter-clockwise.

When you're standing in front of a propeller, you should stand on the right and turn it to your clockwise.

Turn it clockwise

Magnetos

To understand why it's important to turn a propeller backwards, and why turning it in the normal direction can generate a spark, it's important to understand how magnetos work. Most piston-powered aircraft have magnetos, unless they have electronic ignition.

See http://smoothpowerllc.com/ for more information about an electronic ignition for your Mooney.

When a magneto is turning, it generates a spark that goes to the spark plugs. This occurs regardless of whether a running engine turns it, or you turn the propeller manually! Even if you have a complete electrical failure, as long as the engine is turning, the magnetos will still generate a spark and the engine will continue to run.

There's nothing like redundance when it comes to aviation. Your engine has two spark plugs per cylinder and two magnetos. One mag sequentially fires half of the spark plugs in all the cylinders, and the other fires the remaining spark plugs.

With both spark plugs working in a cylinder, one plug will fire a little before the other, giving a more even burn, thus lowering engine temperatures. But, if only one spark plug is working, it takes longer for the good spark plug to burn all of the fuel in the cylinder. This means higher temperatures.

Checking the Magnetos

When doing a mag check with the key in either the L or R position, the RPM should drop. That makes sense because half the spark plugs are off, and the engine is putting out slightly less power. The RPM drop should not exceed the amount specified in your checklist, and the drops should be about the same in both the L and R positions.

P-Leads

With the key in the L position, only the spark plugs connected to the left mag will fire, because a P-lead is grounding the output of the right mag. Likewise, in the R position, only the spark plugs connected to the right mag will fire.

The Mag Check

When you place the key in L or R, if there is no drop, one of the P-leads is loose or broken. The engine will work fine in this condition, but you now have a hot prop! In this condition, it is very important to shut down the engine properly. If you later turn the prop by hand counter-clockwise, at some position the points will open and a spark will be sent to a spark plug. If you didn't starve the engine properly during the shut down, the engine will probably start for a few seconds and sadly, you won't be around to watch your story on the 10 O'Clock News.

When you turn the key one click to check one of the magnetos, you will always turn the key back one click to get back to the BOTH position. But sometimes when pilots check the magneto that's two clicks away, they only turn the key back one click to the right as they try to return to the Both position. If that's the last mag you checked, you're now set up to take off on one magneto! To avoid this, first turn the key two clicks to the left, back to BOTH, and then one click to the left and then back to BOTH.

If you have an Engine Monitor, all the EGT temperatures (depicted here by the blue bars), should indicate a rise when you have the key in the L and R positions. All of the EGTs should fall when you return the key to the BOTH position. If the temperature for one of the cylinders falls when in the L or R position, this tells you that one of the spark plugs in that cylinder is not working. Note the cylinder number so you can get it fixed.

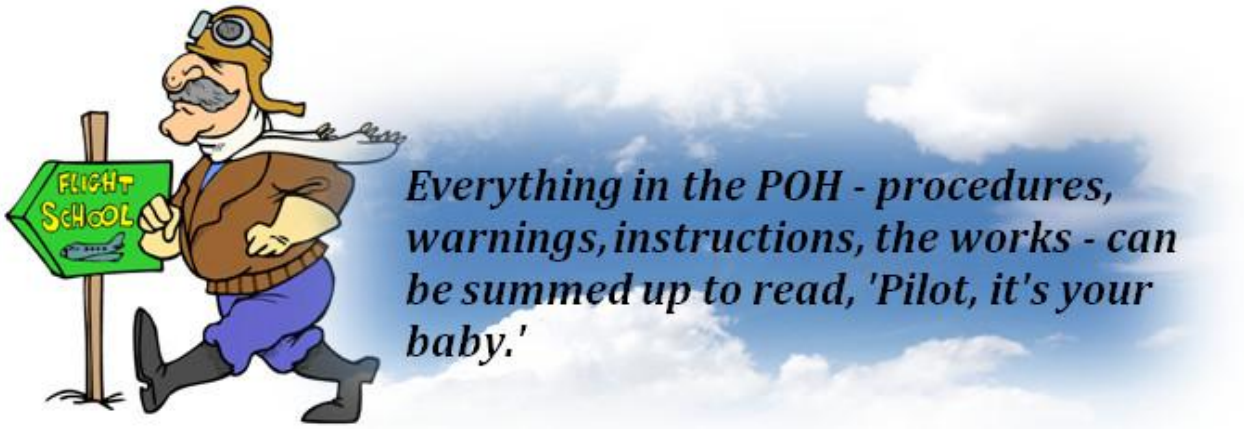
Timing Problems

If an engine becomes rough during flight, it could be because one magneto has developed a timing problem. In that case, switch to the L and R positions to see if the engine runs better in one of those positions. If it does, leave the key in that position for the rest of the flight and report the problem to your mechanic.

Shutdown Mag Check

Some mechanics say that before you pull the mixture to IDLE/CUTOFF, you should verify that both mags are properly grounded. You can do this by briefly switching the key to the OFF position, then back to BOTH. Hopefully you'll hear the engine stopping, which verifies that both mags are properly grounded. With the key in the BOTH position, shut down the engine properly by pulling the mixture to idle.

Put the prop on your left side before you move it clockwise, do the mag checks and engine shutdown procedures properly, and you will add years to your life.



Should One *Broadcast in the Blind*?

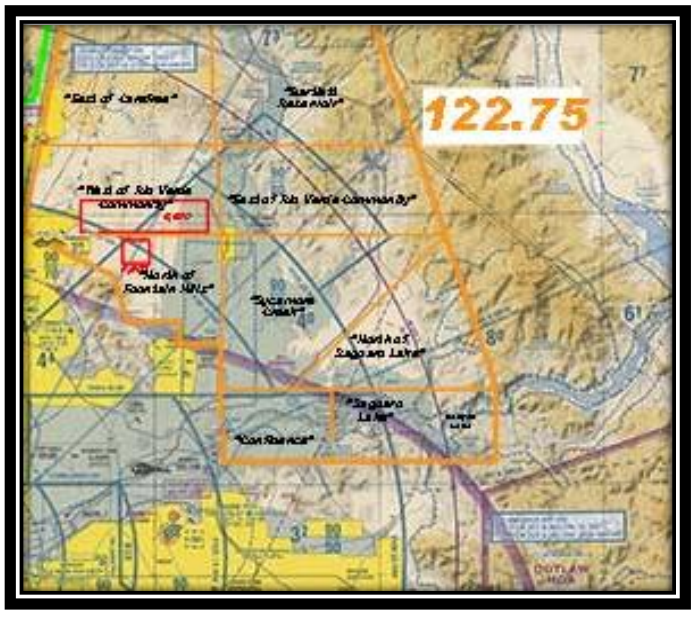
I'm not aware of any authoritative aviation publication that recommends that pilots should make "blind announcements"on the Common Traffic Advisory Frequency (CTAF), just because they are practicing maneuvers near an airport.

Yet, for some flight instructors and non-instructors, this has become a routine practice. Sure, their intent is to improve safety, but I am not sure it accomplishes that purpose. Their intention is to alert the aircraft that are transiting the area that some flight maneuvering is occurring out there, so everyone should be on the lookout.

However, there's a problem with that. If I am not a local pilot, I don't know where the Buster Brown Shoe factory, Springdale Country Club, or the Sanderson Farm is located. So the blind announcement has actually not communicated anything to me. Further, if I am transiting an area on a cross-country flight, I will most likely be talking to ATC on the flight following frequency. I won't be tuning into every CTAF frequency along my route of flight so I can hear the announcements.

There is also the issue of frequency congestion. Since many airports use the same CTAF frequency, a blind announcement at maneuvering altitude can muck up CTAFs many miles from the intended location. When an announcement is made in the blind, no one else can talk, and this could be blocking an important announcement at another airport. This doesn't enhance safety.

What should we do? Let's just communicate with local ATC and request traffic advisories. ATC can give us call outs for any traffic that looks like a conflict. If someone isn't making blind announcements on CTAF, that frequency remains available for the guys in the pattern.



In the Phoenix area, the local Arizona Flight Training Work Group has very appropriately designated frequencies for the various training areas, (and there are a lot of them).

The AIM suggests that we monitor/communicate on the CTAF when within 10 miles of the airport. Keeping the blind broadcasts to only those recommended in the AIM, will help keep the frequency clear for communication between those that have a need.

Avoiding an Unintentional Gear Up Landing

The below YouTube video, was shot by a passenger from the back seat of a Trinidad. It shows the pilot calmly bringing the plane down to a beautiful runway somewhere in Europe, the gear-warning horn screaming all the way. The backseater kept the video running (no one was injured) as the pilot walked around his wounded plane, scratching his head and running his hand over the now-curled propeller blades—a pathetic end to what should have been an enjoyable excursion.

Like running out of fuel, **gear up landings occur with amazing regularity.** Gear up landings rarely meet the damage or injury requirements for a National Transportation Safety Board (NTSB) report or investigation and they are seldom reflected in general aviation safety statistics. **NASA's Aviation Safety Reporting System (ASRS) receives** an average of 60 reports every year. In 2017, the NTSB's investigated 100 gear up landings. To be fair, some of those occurred because of gear extension failure or engine failure. One M20E and 2 M20C pilots forgot to lower the gear. It's worth developing a plan to avoid the scraped bottom, trashed prop and engine-teardown that comes with a gear up landing.

Here are five simple steps, which, if ALWAYS followed, will remind you to lower your landing gear.

1. Avoid Distractions

A momentarily distracted brain has been the demise of countless beings since the dawn of time. An inattentive gazelle is ambushed by a leopard. A driver talking on a cell phone runs a red light. A pilot interrupted midway through his preflight misses something crucial. And of course, a distraction during the approach and landing phase leads to a gear up landing. Distractions can come from anywhere: a crying child, a mechanical anomaly, difficult weather, and revised ATC instructions are all common.

Always observe a "sterile cockpit" during the busy times, such as taxi, takeoff, approach and landing.

2. GUMPS Check

G	Gas
U	Undercarriage
M	Mixture
P	Prop
S	Switches & Seatbelt

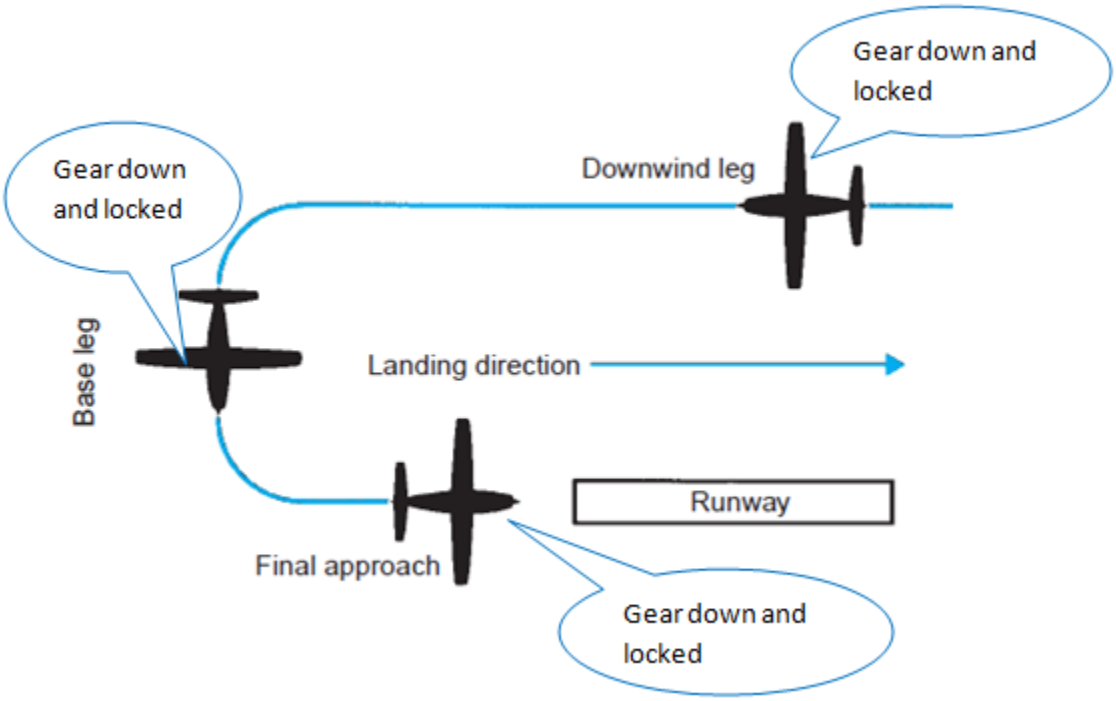
Use your checklist and GUMPS. In addition to the initial check, you should check your gear "DOWN" an additional two times before you land.

3. Don't Move Your Gear Hand

Assuming you've slowed below gear extension speed, lower the gear and leave your hand on the gear handle or switch until you confirm the gear is actually down. Do this via the gear indicator light and the backup indicator on the floor. Say out loud, "Gear down and locked" before actually releasing you hand from the handle or switch.

4. Be Consistent, VFR

The best defense is to extend the gear at the same point on every flight, in the same way, with the same thought process. For the VFR pilot, gear extension usually occurs on downwind when abeam midfield. For straight-ins, use the same distance to the runway each time.



The Last Check

On final approach, some pilots, including me, use full flap extension as a reminder to check the landing gear. Other pilots routinely check gear position at 500 feet above ground level. Whatever you use as a trigger, practice this final-approach gear check enough that it becomes a firm habit. If you find yourself on final within 500 feet of the ground with the landing gear still up, you may not have time to fully extend the gear from less than 500 feet above ground level. This may be the time to go around, climb to pattern altitude and fly another approach.

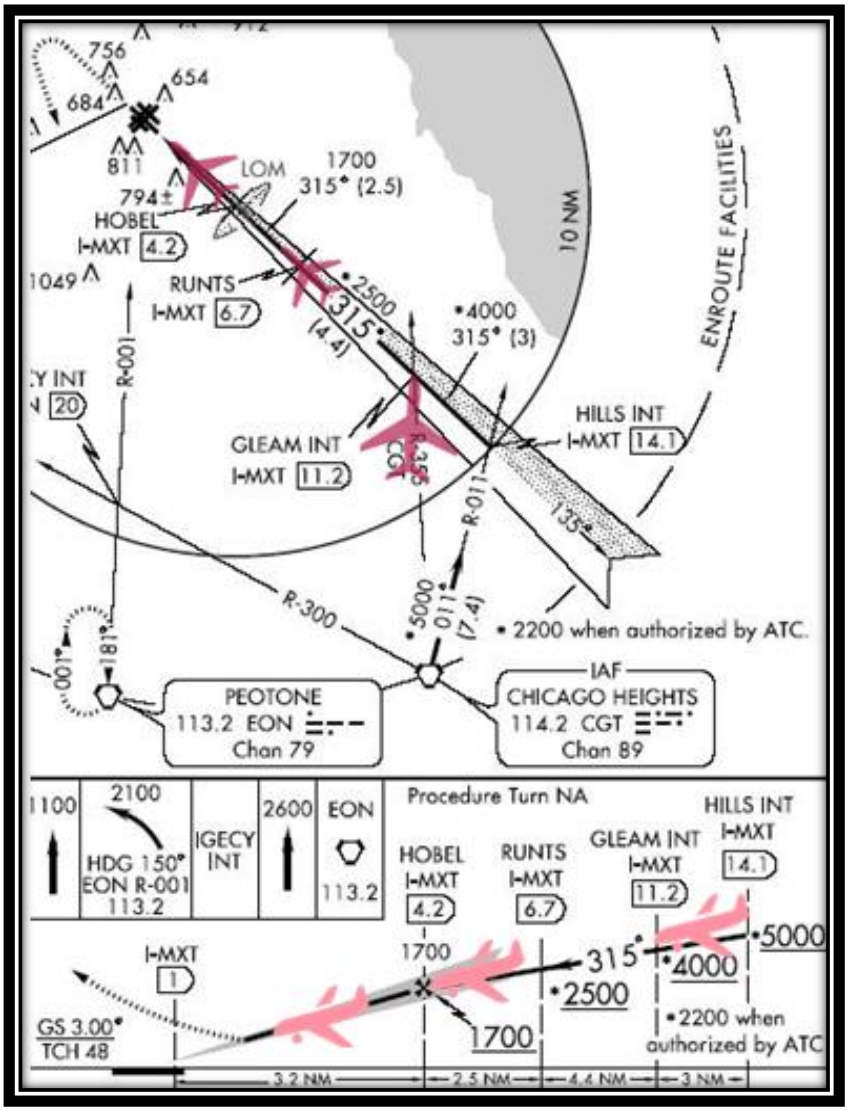
Be Consistent, IFR

IFR pilots generally extend the gear on a precision approach when one dot high as the glideslope needle moves toward intercept, or at the FAF on a non-precision approach, with an audible GUMPS check at least twice afterwards.

Although slightly earlier than on a VFR approach, extending the gear before the final descent offers several benefits when in IMC:

1) Dropping the gear increases drag and changes the power requirement for a given descent profile.
2) Doing it early helps achieve a stable approach. More importantly, if the gear fails to deploy, you're not dealing with it while closer to the terrain and obstructions you cannot see.

IFR pilots use a variety of other approaches, but you can still lower the gear at the FAF, even for a circling, visual, or contact approach, so long as you have the approach loaded into your panel. Unusual approaches, where you may not cross the FAF, reinforce why it's crucial to run a GUMPS check on base and again on final. If ATC wants your speed above gear extension past the FAF you can reply with "Unable", abandon the approach, or tell yourself your risk just went up and be sure the gear is down before the DA or MDA.

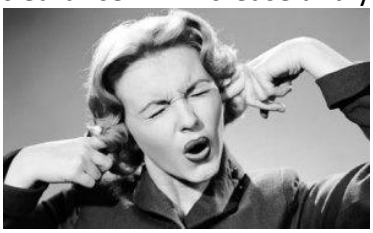


Call an Audible: "Gear Down and Locked"

Have you ever parked your car, subconsciously clicked the lock button on your fob, and then walked away to the store or theater, only to ask yourself, "Did I lock the car?" How about if you lock the car and audibly say to your companion, or if you're solo, to yourself, **"I locked the car".** That makes a big difference because when your brain hears you audibly, it comes in loud and clear. When you are away from your car, doubts, if any, will be short lived and you'll remember with confidence that you surely locked your car.

It's the same thing when you audibly say to yourself that the "Gear is down and locked". Do this whether you're solo or with a plane load of passengers. Your mind will become your co-pilot and the audible will increase your chances of being safe. Of course, it's three times better when you do this at least three times.

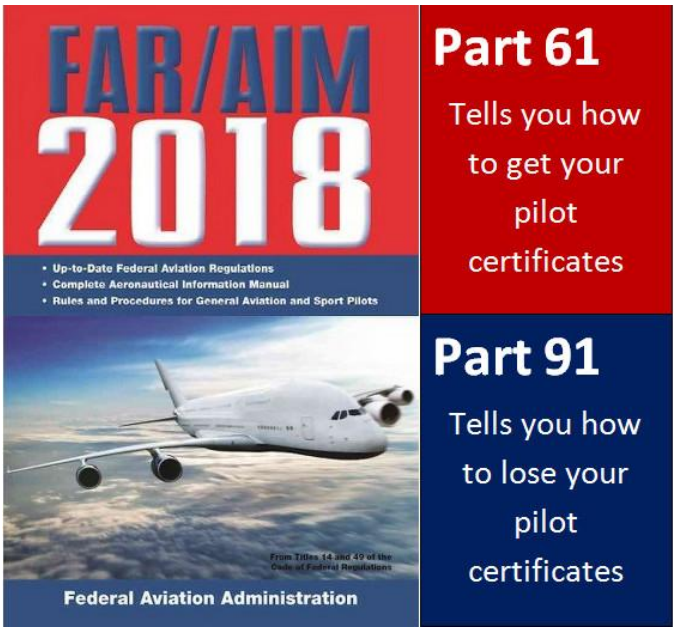
Try an audible when the tower clears you to land. Your chances of remembering this clearance will increase and you'll land with confidence.



Listen for unusual noises, like **the Gear Warning**. Please, don't just accept a blaring noise.

We in the Mooney community, will be, when we follow these easy steps, the safest pilots in the entire world. We should never again hear about a Mooney that unintentionally landed gear up.

Fly Safe, Jim



MOONEY INTERNATIONAL CORPORATION **SERVICE BULLETIN**

Click **DL** to Download the Service Bulletin from Mooney.com Support

M22	M20	M20A	M20B	M20C	M20D
M20-314A 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL
M20E	**M20F**	**M20G**	**M20J**	**M20K**	**M20L**
M20-318 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-325** 2016, Dec 14 DL **M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-325** 2016, Dec 14 DL **M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL	**M20-325** 2016, Dec 14 DL **M20-318** 2014, June 2 DL **M20-314A** 2012, 29 Feb DL **M20-313A** 2012, 29 Feb DL
M20M	**M20R**	**M20S**	**M20TN**		
M20-324A 2017, May 26 DL **M20-325** 2016, Dec 14 DL **M20-321** 2016, Nov 1 DL	**M20-324A** 2017, May 26 DL **M20-327** 2017, Mar 22 DL **M20-326** 2017, Mar 6 DL	**M20-321** 2016, Nov 1 DL **M20-322** 2015, June 23 DL	**M20-324A** 2017, May 26 DL **M20-327** 2017, Mar 22 DL **M20-326** 2017, Mar 6 DL **M20-323** 2016, Mar 4 DL		

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 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.

Noorduyn Norseman C/N 427 CF-GYY

submitted by Mike Alain

Montreal Aviation Museum's Noorduyn Norseman restoration project began with the recovery of a damaged airframe from Kuby's Aircraft Ltd. in Kenora, Ontario. It was wingless and without an engine,. The business at Kuby's was changing and their bone yard needed to be cleared.

Norseman C-FGYY (Noorduyn C/N 427) had been involved in a takeoff accident in 1985 and had been sitting, somewhat cannibalized and exposed to the elements in Kuby's yard for decades. We were offered the airframe for free if we could remove it at our cost. At the end of August 2017, Mike Alain travelled to Kuby's and supervised the recovery of the airframe and the loading onto a 53' transport trailer. He also picked up a large number of Norseman parts including wings, stabilizers, rudders, skis, wheels, and countless other small parts. The whole lot was trucked to Ste. Anne de Bellevue and unloaded by a gang of enthusiastic volunteers on September 1, 2017.

Work began immediately to strip the airframe in preparation for rust removal and painting, while tagging every part removed from the airplane. No registration mark was visible on the aircraft and no data plate was found, either in the cockpit or in the cargo area. A data plate bearing the number 435 was eventually found on the tubular frame under the floor of the pilot's seat and the same number was stamped into the frame. Although this caused some confusion at first, we learned that from Norseman C/N 100 and later, Noorduyn used a separate series of serial numbers for frames and aircraft. Airframe S/N 435 has been identified as the one used to build Norseman C/N 427.

#427's History

Not surprisingly, our Norseman has an interesting history. Like many bush planes, C-FGYY has passed through numerous hands over the years, and like many Norseman aircraft, she started life in the USAAF during World War II as a UC-64A.

Norseman #427 was completed and accepted on March 30, 1944 and was officially available to the USAAF on April 6th, 1944, but remained at the Noorduyn factory for five days for additional testing.

The aircraft was delivered to the USAAF as aircraft No. 43-35353 on April 11, 1944, arriving at Perry AAF, Florida on April 20, 1944. It was assigned to the 1st Fighter Squadron, 2nd Air Commando Group, Lakeland, Florida. On August 26, 1944, the aircraft was damaged; ground looped on landing at Gainsville, Florida. After being transferred to 451st Base Unit, Salinas, California, it was damaged in a weather-related landing incident at Lemoore, California on December 12, 1944.
After the war, #427 was transferred to the Reconstruction Finance Corporation, Augusta, Georgia on September 15, 1946 for disposal as surplus.
Norseman #427 entered civil aviation when it was sold to Walker Airways, Detroit, Michigan, and registered NC63743.

Our Norseman returned to Canada when it was purchased by Queen Charlotte Airlines, Vancouver, BC, and registered as CF-GYY on September 20, 1951. Between 1951 and 1979 the aircraft was registered to a number of different owners, including Sault Airways, Ltd., Kyro's Airways, Gibson Airways, Thousand Lakes Airways, W.H. Lytle and R.C. Richards and back to Thousand Lakes Airways, all located in Ontario.

On June 25, 1985 a float buckled on takeoff in high winds at Bishop Lake, Ontario and #427 overturned. The pilot was uninjured but the Norseman never flew again. Some records show that the certificate of registration (C of R) was cancelled in 1985 or 1986, but the Canadian Civil Aircraft Register states that the C of R was cancelled on November 20, 2001.

The aircraft was reported sold in April 1986 and again in 1994 but no details are available, probably because the registration was assumed to have been cancelled. The damaged airframe was next reportedly seen at Kuby's Aircraft Ltd., Kenora, Ontario in 1992, where it sat outside for decades.

The Movie *The Snow Walker*

The Canadian movie, The Snow Walker, in which a Noorduyn Norseman was depicted crashing, was filmed in 2002. The movie's plot has the main character piloting a Norseman with a young Inuit woman aboard, when it suddenly loses its engine and crashes above the Arctic Circle. Norseman CF-JIN (C/N 55), piloted by Dave Robertson, was used to film the movie's in-flight sequences. Model airplanes were used to shoot the actual crash scene. Kuby's Aircraft Ltd. in Kenora, Ontario supplied the written-off Norseman airframe (CF-GYY), which was transported by barge to Rankin Inlet, where it was set up as a prop to film the scenes that included the crashed airplane.

Send your questions for Tom to TheMooneyFlyer@gmail.com

Question: What causes Mooney fuel tanks to Leak?

Answer: I will go back to my early days when I was a Crew Chief on B-52, serial number 52-0006. That was in 1955. The B-52 is the best example of wet wing fuel tanks and bladders.

The B-52 wing tanks are **wet wing**, while the fuselage tanks are **bladders**. The wet wings help save weight and is formed by the wing skins and ribs in the wing. All the metal to metal "seams" are then covered by a special sealant, and a "tank" is formed. Boeing used bladders in the B-52 fuselage since it's so big you couldn't effectively seal such a large area. Many GA planes use bladders and some made fuel tanks that are actually part of the wing. This is so mechanics can actually unbolt and remove a section of the wing. Piper did this on many models, but that is why they are much slower than any Mooney. In the mid fifties, Al Mooney chose the wet wing, and I always wondered if he borrowed Boeing's idea, including which sealant he would use.
The wet wing tank is only as good as the sealant used and how well it is put on. Mooney did a very consistent and good job through the years, considering that the final sealing was done through small access holes in the wing.

Repair in the field, however, is very difficult due to lack of fuel tank access. But, that is a matter for another discussion.

Leaks occur because of several factors. First and most obvious is age. We now see many aircraft that are 50 plus years old and some, with the original sealant, are still leak free. However, quite a few Mooneys that are in their twenties, seem to need a complete reseal. A big factor everyone misses is, as the newer models came out, they had larger fuel tanks. This additional fuel capacity includes more chances to leak.

I believe that hard landings have a big effect, exacerbated by old shock discs and gear system wear. I don't know when, but I believe in the late seventies, Mooney started putting a metal plate on the top of the main gear that just "slides" in place. When you have a hard landing, the discs push up and "pops" these plates out. We found so many of these missing, that we just quit replacing them years ago. That's because they really serve no useful purpose. My point is that hard landings put a shock into the main spar, which is where we find the most leaks.

It is a good idea to keep as much fuel as you can in the tanks, because it will keep the sealant wet. Dry sealant will eventually crack and leak.

We always refueled our B-52s after landing to keep the wings wet. This also allowed us to get the outrigger gear down, since the wing had a 47 foot arc at the tip. We always kept the wings full and varied the fuel load with the fuselage tanks. Not surprisingly, fuel leaks were not a big problem.

Install bladders? We have installed many bladder kits with good success, but you do lose some useful load. For a long time, we also lost fuel capacity, but the kits evolved and now we can keep the fuel capacity, but of course, these kits cost more.

Currently, the bladder kit and install cost is about the same as a complete reseal. The main difference is there are only a few places in the country to get your tanks resealed, but any capable shop can install bladders. It's a big cost either way.

There are just no easy answers to the fuel leak problem. Owners are understandably frustrated over the cost and downtime. However, I have experienced the same level of frustration, trying to fix fuel leaks.

Evolution of the Mooney Summit by Neil Cohen

I've owned a vintage Mooney since 1989. After logging 2200 Mooney hours, if I've learned one thing, it's that I still have a lot to learn. However, with the exception of one MAPA maintenance workshop in the 90s, I had no Mooney-specific training during my first two decades of Mooney ownership.

I compensated for the lack of continuing Mooney training by faithfully reading every issue of the The Mooney Flyer, and by participating in MAPA's Mooneylist, and later Mooneyspace.com.

Then in November 2013, someone named Mike Elliott posted this on Mooneyspace:

> *Because of the generosity of Dr. Ron Dubin, we are holding the first Mooney Summit on Feb 7-9th in Panama City. The purpose is to help better the breed and a social event for Mooney pilots and their spouses. Wings credit seminars will take place along with scheduled IPC's or BFR's, shopping, dining, pampering and beach activities are available for the non-flying partners. The cost of the event is free, but the space is limited. If you would like to participate, please read the enclosed invitation and follow the procedure to sign up. I look forward to seeing some of you!*

Several phrases in Mike's posting caught my attention: *"Panama City", "social event for Mooney pilots and their spouses", "The cost of the event is free".* Becky and I had once flown to Panama City for a winter weekend and enjoyed that brief getaway. She was all for this social event away from the (comparatively) brutal Memphis winter. Oh, and did I mention it was free?

I was one of the first to register, and that earned us a complimentary room for the weekend, courtesy of Ron Dubin. As I later learned, Ron had recently used Mike (CFII) for a BFR/IPC in one of his three Mooneys. Ron alternates between a 1982 201, a 1980 Rocket and his 1994 Bravo. Ron offered to donate the use of his many Panama City Beach units, if Mike would help him organize a "safety and social Mooney Summit".

Some of the highlights from my first Mooney Summit experience:

- Seminars were well organized, relevant, and presented by knowledgeable and accomplished airmen. Topics included engine management, fuel tank issues, aeromedical factors, inflight icing. While I'm reluctant to mention specific speakers for fear of leaving out someone, Carol Ann Garratt's "My Flights around the world" presentation was entertaining and informative for both pilots and non-flying attendees.
- There were 24 Mooneys on the KCEP ramp. I met Mooney owners and their significant others, putting a face to several I already "knew" from Mooneyspace. There was plenty of time to socialize, which made the event interesting for my non-pilot spouse. This included the now-famous Friday evening reception in Ron's 15th floor Penthouse, with a large roof top balcony overlooking the Gulf of Mexico. Continental Motors hosted the group's dinner .

The inaugural Mooney Summit was such a hit that Mike and Ron immediately decided to do it again. Mooney Summit II would be held in late October 2014, just 8 months later. Since a number of interested Mooniacs were unable to attend the first Summit due to facility limitations, Ron arranged to move from the 24-seat Bamboo Theater to the much larger Seahaven Beach Conference Center just up the road. Mike delegated planning functions to several volunteers

including Bill Gilliland, who would handle web design, data management, and attendee sign up for Summit II.

Then on July 11th 2014 Bill perished and Mike Elliott, his CFI, was seriously injured when Bill's M20M collided with terrain shortly after takeoff from the Greenwood Municipal Airport (HFY), Greenwood, Indiana. With Mike in critical condition just 100 days before Summit II, many expected the Summit would either be cancelled or postponed. But Mike was adamant that "the show must go on". When the word went out, registration filled in just 2 days. Mooney Summit II was bigger and better, with 68 pilots and 120 total attendees.

Inspired by the accident at KHFY, Mike and the rest of the Summit governing board formed The Mooney Summit, Inc., a 501(c)(3) tax-exempt organization. While the Mooney Summit remains a free event, attendees are encouraged to make donations that qualifies them to participate in a raffle of items donated by both vendor and individual sponsors. Beginning with Summit IV in 2016, the raffle was augmented with an auction of donated items, with bidding culminating at the Saturday evening reception. All donations and auction proceeds in excess of program expenses go to the Bill Gilliland foundation, which was formed to provide emergency crisis intervention and financial assistance for the families and survivors of downed Mooney pilots.

Fast forward to the present. Interest in the Summit remains strong, and attendance has consistently filled the venue to capacity. Certain traditions have evolved. In addition to the Friday reception and Saturday dinner, JoAnn Dubin (Ron's better half) often provides a wonderful pre-seminar breakfast. More recently, KECP FBO Sheltair and the Mooney Summit have co-hosted an open house on Summit Friday, open to all who fly or drive in and is not limited to Summit attendees. Mooneys are invited to fly into KECP for seminars, vendor displays and a lunch provided by Sheltair.

Mooney Summit VI is scheduled for Sept 28-30, 2018. Ron and Mike, who have invested a tremendous amount of time and effort toward this enterprise, announced at Summit V that Seth Meyers and Lee Drumheller will take over the lead in planning, communicating and implementing Summit VI.

Seth, who lives in a Maryland suburb of Washington, DC and flies a M20J Missile 300, is the other "Seth Meyers". Lee is regional sales manager for Premier Aircraft Sales, based in Auburn AL. I'm sure that Seth & Lee will rely heavily on Mike's experience as they continue to grow the success of what has become a premier annual Mooney event.

The proposed agenda for Mooney Summit VI is available at https://www.mooneysummit.com/. Check this website often, as updates and new information is posted. A new feature is in the works for the afternoon of Airport Day, Friday September 28th. Eight subject matter experts will host a series of 30-minute Roundtable discussions, with participation limited to the number of seats available at each SME's table. The Roundtable discussions will continue for 3 hours, and participants can rotate up to six times.

Becky & I have attended all five Mooney Summits, and are already making plans to attend Mooney Summit VI.

The Big Screw EZ Tiedown

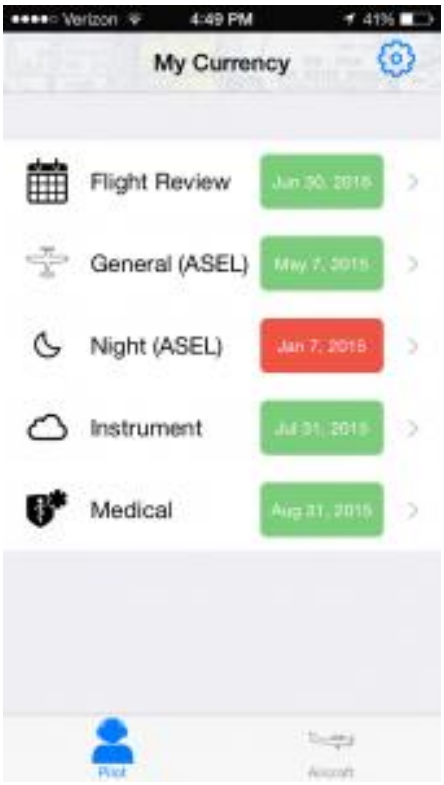
At the Sport Aviation Expo in Sebring, Florida, a new aircraft tiedown was introduced. It's called the Big Screw EZ Tiedown. Visit their website: https://bigscrewtiedown.com/

Complete setup is $150.

Straps only: $70

An app to help you track flight currency $1

When it comes to logging time and events, many pilots have moved to a digital logbook, like Log Ten Pro. It has the capability to automatically track the various aspects of pilot currency. In one convenient location, you can keep an eye on stuff like tailwheel landings, night currency and number of recent instrument approaches for IFR in one convenient location.



For those that haven't made the transition to an iPad app logbook, or are looking for another way to track your flying, we suggest checking out an app called Flight Currency. This simple but effective $0.99 app allows you to enter each currency event in a single location. Each event currency expiration date is color-coded green or red to allow quick identification of your flight status. The app also has a separate area to track the various aspects of aircraft inspections, VOR receiver tests, and GPS NavData expiration.

The Flight Currency app allows you to keep track of your pilot and airplane currency in a single location.

Pilot currency tracking:

- Medical certificate currency
- Flight review expiration
- Day and night landing currency, with the ability to separate by single or multiengine airplane, land or sea, and tailwheel airplanes
- Instrument currency, with the ability to add individual approaches, holding or IPC completion dates

Aircraft currency tracking:

- Annual inspection
- 100-hour inspection
- Transponder inspection
- ELT inspection
- Registration expiration
- Altimeter/Static-system inspection
- VOR receiver test
- GPS NavData expiration

The Flight Currency app is available for $0.99 for both iPad and iPhone in the app store.

100LL aviation fuel unavailable at a number of Canadian airports

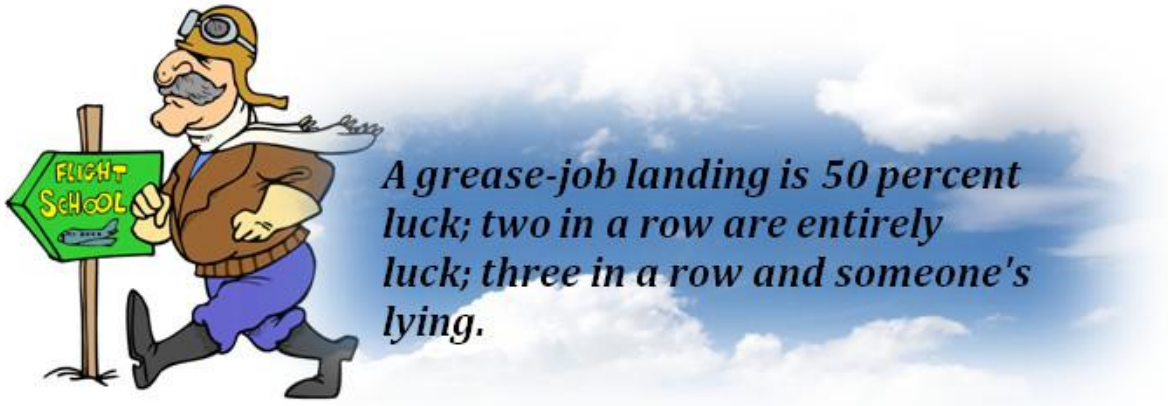
This is in connection with a quality-control problem affecting fuel from the only refinery in the country that produces the fuel used by most general aviation aircraft.
Pilots are urged to check notices to airmen to verify the fuel's availability at their Canadian destinations before departure.
According to Nav Canada's Flight Information Centre in London, Ontario, NOTAMS had been posted Feb. 15 for several airports advising "FUEL 100LL NOT AVBL."

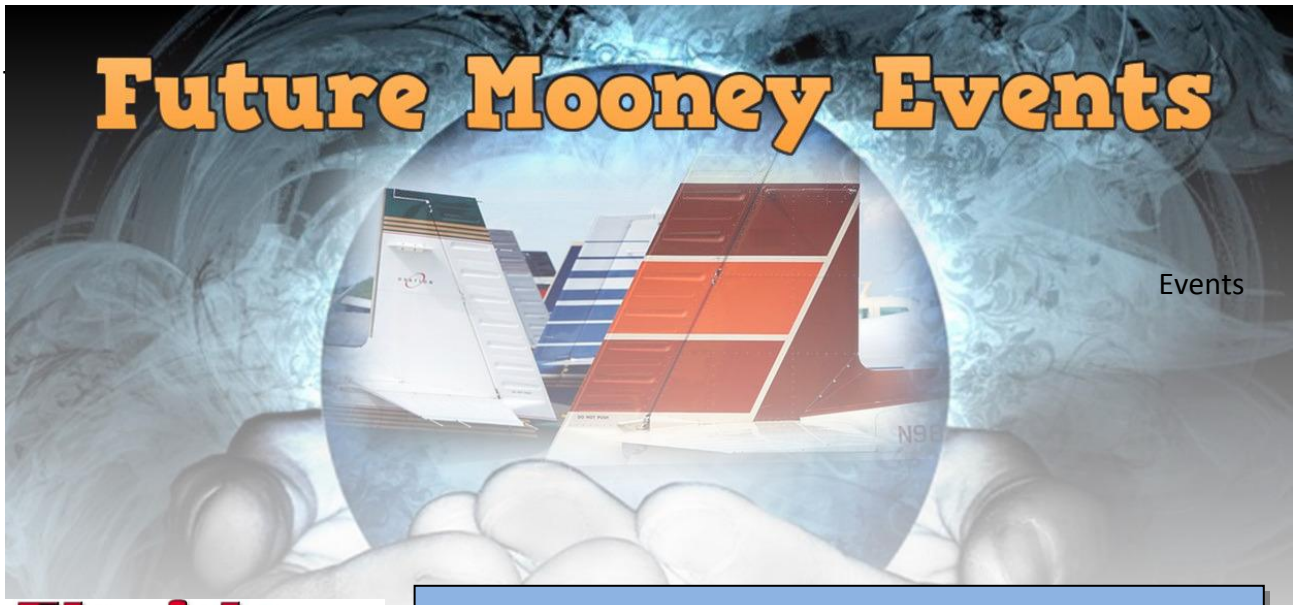
TALCO Acquires RAJAY(R) PARTS, LLC

San Antonio, TX (February 20, 2018) TALCO Aviation Corporation announced today has entered into a definitive agreement to acquire RAJAY Parts, LLC, the leading general aviation turbocharging company focused on supporting thousands of aircraft currently operating a legendary RAJAY(R) system. RAJAY(R) Parts, LLC is an FAA PMA facility which owns 48 FAA STCs which includes Piper, Cessna, Beechcraft, **Mooney**, Lake and several other aircraft manufacturers.

HYH

TALCO will expand RAJAY(R) products and services by offering new turbo kits to the general aviation market. The timing and sequence of make/model-specific kits will be driven by customer demand. Product upgrades and improvements are also expected to be developed to enhance the existing customer ownership experience and aircraft performance.





Events

Contact Dave at daveanruth@aol.com or (352) 343-3196, before coming to the restaurant, so we can have an accurate count

March 10: Fort Pierce (KFPR)
April 14: New Smyrna Beach (KEVB) at Lost Lagoon
May 12: Fernandian Beach (KFHB) Lunch at Brett's Waterway Café with transportation provided
June 9: Sebring (KSEF)

MAPA Safety Foundation
MooneySafety.com Mooney Pilot Proficiency Program

- **April 12-15,** Henderson, NV (KHND)
- **June 1-3,-** Fort Worth, TX
- **Sep 6-9,** Manchester, NH (KMHT)
- **Oct 4-7,** Owensboro, KY (KOWB)

Mooney Caravan

March 23-25: San Marcos, TX
5th Annual Mooney Caravan Formation Flying Clinic
CLICK HERE for details.

MAPA HomeComing - October 10-14: Kerrville, TX

Mooney Summit VI: **September 28-30**: Panama City, FL

MooneySpace Fly-In

April 14: KPRB) Paso Robles. Free BBQ at **The Mooney Flyer** Editor Phil Corman's Hangar CLICK HERE to Register so we can plan on amount of food. Visit Estrella Warbird Museum.

EMPOA Newsletter

Aschaffenburg and Pilsen 2018
June 14, 2018

A trip for all Mooniacs by Lothar Lucks and David Kromka

On Thursday, Juni 14, there will be our Annual General Meeting of EMPOA at Aschaffenburg / EDFC in Germany. We want to take this date as an opportunity to once again reunite as many Mooniacs as possible and make new discoveries during our classical five-day-trip. It should be a lot of fun!

Lothar and David have joined forces this year and worked out a program that hopefully many of you will find inspiring. The destinations of this year's trip are Aschaffeburg in beautiful lower Franconia as well as Pilsen in the Czech Republic. The intermediate sector on Saturday is not a long one for our speedmachines. By doing this we hope that we will be able to do this activity as planned, even if weather conditions should not be as favorable as they have been on our past trips. Insiders are aware that both cities are famous for their "hops juice", more on this in just a bit.

On Thursday, June 14th, our speedmachines will be touching down on the airfield of Aschaffenburg-Großostheim (EDFC). The well-maintained asphalt runway is homebase for our chief treasurer Lothar Lucks who will be greeting us there. After some happy cheering we will be taking a transfer to our hotels. At 6:00 p.m. we will attend EMPOA's 2018 Annual General Meeting at „Goldener Ochse" hotel. We hope to see a large turn-out of participants and are looking forward to your ideas and suggestions. Thereafter, EMPOA is inviting all attendees of the AGM and their partners to our traditional Mooney dinner.

On Friday, June 15th, we have to get those notepads ready after breakfast. Lothar has organised a seminar on

Mooney-specific technical issues. The owner of Aschaffenburg-based maintenance provider Spessart Air Service, Wolfgang Kerkhoff will share his in-depth knowledge about Mooneys. Since owning a Mooney goes hand in hand with technical challenges, we are already looking forward to a lively discussion and many new insights. For the non-flyers we will have a parallel program: the Schoenbusch park and his English landscape garden is waiting with some nice walks with a creamy Cappuccino. For lunch the two groups will reunite again in the Schoenbusch Inn or the beergarden before heading to the famous Dirker distillery on the outskirts of Spessart forest. The owner and master distiller himself will teach us the secrets of schnapps distillation and we will be tasting the stuff as well. Those interested may stock up on liquor for their personal bar.

Later that day, we will be heading back to downtown Aschaffenburg. During a city walk we will get to know the highlights like Stiftskirche and castle. In the evening we will be enjoying our social program: the bar district awaits and at Hofgut Hoerstein a tasty menu is prepared for us.

On Saturday, June 16th, we will have enough time for a hearty breakfast. Thereafter the shuttle bus takes us to the airfield where we prepare our Mooneys for departure: hopefully with the sun shining. Our destination will be Pilsen-Line (LKLN) airport in the Czech Republic. The flight time will be around one hour and should not pose a major problem. There are no complicated airspaces in between either. Line is a larger former Soviet Union military airfield and the atmosphere there, still breathes the charm of the communist era.

There will be a friendly reception there: beer (the famous Pilsener Urquell) will be served directly at our aircraft door and a small buffet will be the culinary prize for a safe flight.

Since the Czech republic is well known for aerobatic flying, we have made preparations for a special treat. Line is home base to a YAK-18; a rare four-seater aerobatic airplane. This will be the day for those of you who always wanted to dance in the skies with a partner and/or friends. This will be organised by the local flying school and we therefore ask for your expression of interest as soon as possible (individual booking is not part of the trip).

Thereafter, we will head straight to the historic center of Pilsen where we will check into our hotel. We will then make a short walk to the famous Pilsener Urquell brewery, where Pilsener style beer was invented. We will enjoy an exclusive visit through the production facilities. The evening will be devoted to all Bohemian cuisine and tasting the golden hops juice. It will be an “All you can drink”-Pilsener evening in the brewery’s own restaurant and those of you who have always wanted to learn tapping a Pilsener beer in style will have the chance of a free, respective lesson with a master beer tapper.

On Sunday, June 17th, we will enjoy a hearty breakfast together at our hotel. Thereafter, we will take a guided city-tour on foot. We will then board a chartered bus to Plas in order to visit the well-known baroque monastery. The huge complex was founded in the 12th century and was permanently enlarged in the times to follow. For lunch we will head to another typical Bohemian restaurant in the area of Plas. The trip will then take us to a truly strange place: the Zruc Air Park Aviation Museum. A Czech family has been collecting dozens and dozens of aircraft, helicopters, battle tanks and other technical machinery on their private land for years. Not all exhibits are in perfect or complete shape, but the sheer mass is quite impressive. There will be great opportunities for pictures and moments of awe.

The bus will then take us to Pilsen where we will have a short break at our hotel: the perfect time to check the weather and/or plan our flight for the next morning. We will then enjoy the final dinner of this tour: a stylish craft beer brewery or the town’s oldest restaurant “U Salzmannu” await. Lots of new experiences will wet the appetite for some more touring in the not too distant future.

On Monday, June 18th, our shuttle will drive us back to Pilsen airfield after breakfast.

This will be the end of our trip and all Mooniacs will head back to their home bases once again.

This year we want to offer you three different packages around the trip in order to accommodate those of you who possibly want or can only take advantage of a certain part of this trip.

Package 1: „All-Inclusive“ includes all four nights in the hotel (mostly 4*, all with breakfast) at EDFC and LKLN as well as all transfers in Aschaffenburg and Pilsen. Also included are all entry fees for the tours described. Furthermore, the described lunch and dinner meals including “All-You-Can-Drink“ in the Pilsener Urquell brewery and two drinks (beer or softs) respectively per person in the Czech Republic as well as the distillery visit and tasting and dinner at Hofgut Hoerstein (Aschaffenburg) without drinks.

Additionally, you will get a personalized T-Shirt for the trip as well as special souvenirs in Aschaffenburg and Pilsen.

Not included are particularly all drinks in addition to those described, lunch at Schoenbusch and landing fees.

Price for package 1: 600 € per person in double room, 765 € for single room.

Package 2: „Book your Own Aschaffenburg“ inlcuding all benefits from package 1 excluding the hotel accomodation at Aschaffenburg. Those opting for this package should book their accommodation at Aschaffenburg on their own. At the hotels Dalberg and Goldener Ochse we have reserved an allotment of rooms under the name of EMPOA until end of March 2018. Room prices are in the range of 100 to 140 € per person per night in double rooms inclusive breakfast.

Price for package 2: 460 € pro person in double room, 510 € for single room.

Package 3: „Infrastructure Aschaffenburg“ includes only transfers and events at Aschaffenburg as well as the dinner on Friday, June 15th. Hotel booking at Aschaffenburg has to be done independently as in package 3.

Price for package 3: 105 € per person (independent of type of room)

We are looking forward to a large participation and are sure that we will have a great trip this year. Due to logistical reasons we will have to limit the number of participants to 45 for this trip. Reservations will be made on a “First come First serve”-basis. Closing date for reservations will be March 31st, 2018.

Please make your booking as soon as possible via eMail by stating the desired package together with the names of participants and aircraft registration to David Kromka at deekay@gmx.net and copy in Lothar Lucks at LL@lucks-lucks.com as well.

The small-print: this journey is formally a Type 3 travel as stated in EMPOA executive decision 2017. With your application you do specifically agree not to receive any detailed or individual cost accounting after the trip. Regarding cancellation, you will be entitled to a 50% payback until April 30th, a 33% payback will be granted if you cancel until May 15th. Thereafter there will be no paybacks in case of cancellation or if you can’t make the trip at all.

ARTEX ELT 4000

Product Overview

The all new ARTEX ELT 4000 is a transport-grade Emergency Locator Transmitter (ELT) that utilizes alkaline batteries. This innovative power source means that the ELT 4000 is completely exempt from FAA special condition requirements. ARTEX ELT 4000 cost of ownership benefits include a lower battery expense per cycle, no HAZMAT shipping, and easy disposal. An integrated NAV interface (ARINC429) omits the requirement and expense of installing a separate NAV interface unit.

How the ARTEX ELT 4000 works

The ARTEX ELT 4000 can be activated manually (via cockpit remote switch) or automatically (the G-Switch senses a 2.3G or greater impact), and alerts the closest Search and Rescue agency of an emergency. The 406 MHz signal, containing the aircraft GPS coordinates, is transmitted to the Cospas-Sarsat satellites and relayed to the Mission Control Center where it is immediately routed to the nearest Search and Rescue agency. The beacon will provide first responders with the exact location to within 100 meters. Finally, the 121.5 MHz homing signal assists Search and Rescue ground forces.

Ease of Installation and Retrofit

The ARTEX ELT 4000 provides a quick-and-easy retrofit opportunity with flexible installation options such as a two-wire remote switch that does not require any aircraft power. ELT 4000 is TSO approved with Legacy Switch and Antenna Systems to facilitate retrofit. Because it is a single output ELT, the ARTEX ELT 4000 utilizes the same RF output and only one coax cable to transmit both 406 MHz and 121.5 MHz signals. The built-in navigation interface reduces the need to mount a secondary external interface, greatly reducing the cost of installation. The mounting tray assembly matches the legacy ARTEX C and B Series ELT installation and thereby further reduces engineering costs.

Product Features

- Automatic Fixed Emergency Locator Transmitter
- Dual Frequency distress beacon, digital 406 MHz and analog 121.5 MHz homing signal
- Auto activation via internal G-switch
- Dual-band antenna with single connector and cable to transmitter – Blade and Whip available
- Compatible with legacy antennas
- Easy maintenance and installation
- Many cockpit remote switch options available
- Can be connected to on-board GPS via Integrated ARINC429 interface
- GPS data is embedded in digital transmission, reducing search radius down to 100 meters
- Cospas-Sarsat Type Approved
- Compatible with ARTEX 406Test.com Satellite Confirmation Testing System
- ARTEX ELT 4000 HM Helicopter version with 5-axis G-Switch available
- 5-year battery life (replaceable). Ships non-HAZMAT.

CLICK HERE for all the details and specifications from ARTEX

PAUL LOEWEN SALVAGE

USED MOONEY PARTS

Big inventory of used and rebuilt airframe parts. Wings for M20C, E, G, J & K, empennage assys, fuselages, controls, rudders, elevators, ailerons, flaps, cowls, engine mounts, landing gear & small parts. Call Loewen's Mooney Salvage "LMS" at 707 263-0462 or cell 707 272-8638. E-mail PaulLoewen98@gmail.com

1987 M20K FOR SALE

Specs are: 1987 M20K "252", 1445 TT Airframe and Engine; Location, Lakeport, CA; Complete Logs; Damage History, yes (in 1988, repaired by LASAR)

Avionics: KX165's Nav Coms;, KN64 DME; , KT76C Transponder; KFC150 Autopilot; KFC55A HSI; KR87 ADF; Apollo 2001 GPS; PMA 7000 audio panel; WX1000 Stormscope

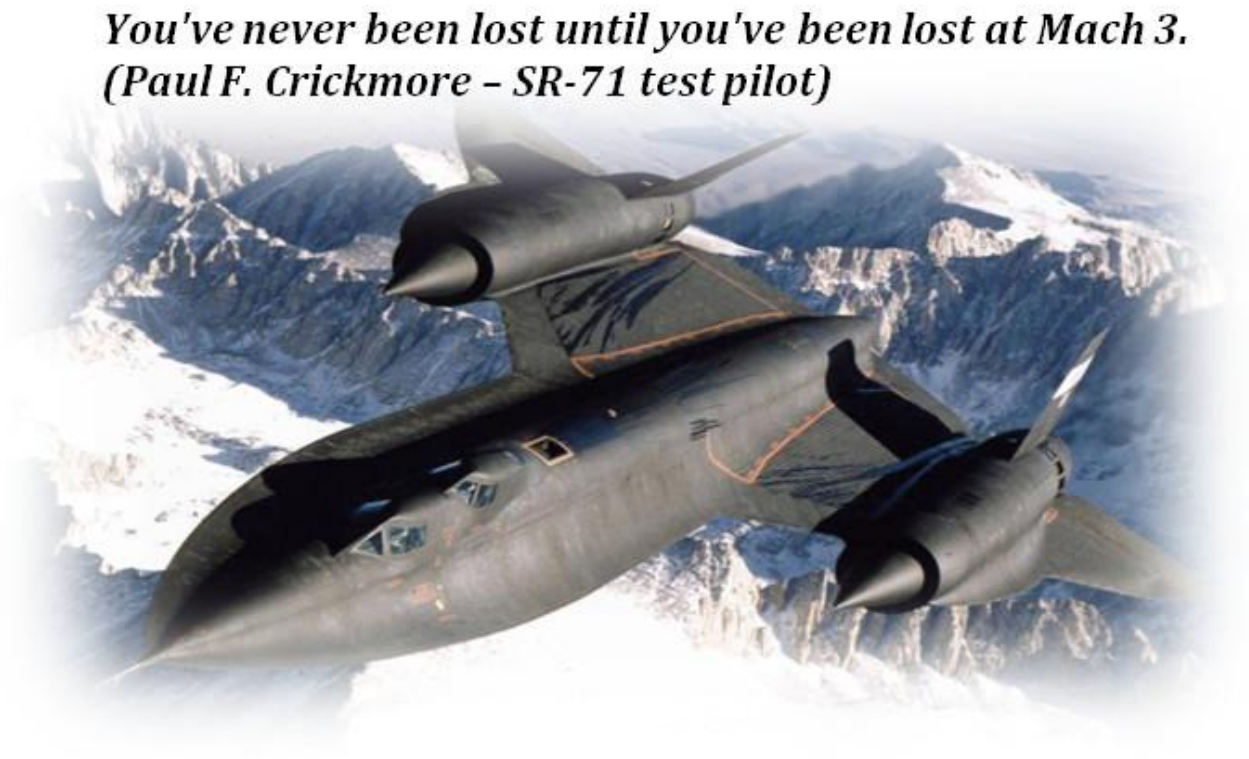
Mooney Service Center maintained all its life. MAPA Best of Series Winner.

Price: $124,000/Offer

Call Paul & Shery Loewen at: 707 263-0462

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



1978 Mooney 201VL
$ 85,500
MODEL 201 J - 200HP
mbmaksymdc10@aol.com
AIRCRAFT SERIAL# 24-0398
Lycoming IO-360-A3B6D

TIMES
AIRFRAME TOTAL: 5256

ENGINE TSMO: 878

Engine overhauled BY LYCOMING FACTORY INSTALLED 01/16/2004

Propeller governor INSTALLED 01/16/2004 OVERHAULED PRO - PROP
HOSE ASSEMBLIES FUEL OIL REWORKED 01/09/2004

GANN AVIATION

New propeller 04/01/91 MC CAULEY

Power flow exhaust system 2015
DYNAMICALLY BALANCER 5/23/95
VACUUM PUMP REPLACE 07/15/2015
NEW SKYTEC HIGH TORQUE STARTER and upgraded start relay
Electrical New zcftronics voltage regulator
INSTALLED M-20 AIR/ OIL SEPARATOR
NEW ENGINE TACK CABLE AND OVERHAULED TACH 2007

AIRFRAME
Alternate air door kit
Complete brake overhaul
PILOTS MASTER BRAKES CYLINDERS REPLACED 03/2008
ALL NEW TIRES AND TUBES
RIGHT and left FUEL TANK completely resealed 2015
12V CONCORDE RECOMBINANT GAS BATTERY

INSTRUMENTS
Altimeter, static, integrated system, transponder IFR

ANNUAL 09/01/2015

CORROSION TREATMENT each annual

RADIO
INSTALLED GARMIN GPS 430
INSTALLED GPS ANTENNA GA-56GPS
INSTALLED GARMIN 340 AUDIO PANEL

FOUR PLACE AUDIO I/C
ASPEN 1000 PRO
AVIDYNE TAS-600 traffic
STAND BY VACUUM GYRO
STORM SCOPE WX1000 PLUS
ENGINE EDM 700 4C A6 WITH FUEL FLOW
KFC 200 AUTOPILOT with altitude hold AND CONNECT TO ASPEN
1 COLLINS VHF 251ACOMM
1 COLLINS VIR351 WITH TO /FROM AIRTEX 345 406 February 2016
COLLINS TRANSPONDER TDR-950 UP DATED 03/2011
DAVTRON MODEL 811BDIGITAL CLOCK
NEW ENGINE TACK CABLE AND OVERHAULED TACH

GENERAL INFORMATION
ELECTRIC LANDING GEAR
ELECTRIC TRIM
ELECTRIC FLAPS
Control wheel steering
Navigation annunciation
System annuncator
ROSEN SUN VISORS
Mooney shoulder harness installed
Wing tip strobes
External power receptacle
Copilots brakes

Study any time at http://jdpricecfi.com/