The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

February 2017

Editors
Phil Corman
Jim Price

Contributing Writers
Bruce Jaeger
Bob Kromer
Tom Rouch
Paul Loewen
Geoff Lee
Linda Corman
Mike Elliott

To Subscribe
Click Here

To Advertise
Click Here

Features

In Every Issue

Click Here to Subscribe **Click Here** For Back Issues

If you would like to donate to keep **The Mooney Flyer** healthy, please send your donation via your PayPal account to sales@TheMooneyFlyer.com

In California, there are only 2 top Mooney Service Centers that we bring our Mooneys to, LASAR and Top Gun Aviation. After a lifetime of exceptional ownership and service, the Loewens' want to retire and sell LASAR. They have been operating for more than 42 years. We know, we attend their regular anniversary fly-in parties for us Mooniacs up in Lakeport, CA. In addition to top service, LASAR has bailed us out on countless occasions for parts that nobody, even Mooney, had. I was AOG up on the Olympic Peninsula a few years ago with a broken throttle cable. I called every place imaginable. Initially Dan, at LASAR, indicated he did not have the part, but a few hours later, he located one and FEDEX'ed it to me and it was installed the following morning.

So LASAR is also your first stop for parts, and often the best price.

We hope someone who has the same love of Mooneys purchases and keeps this landmark of Mooney Service & Parts going for another 42 years or more.

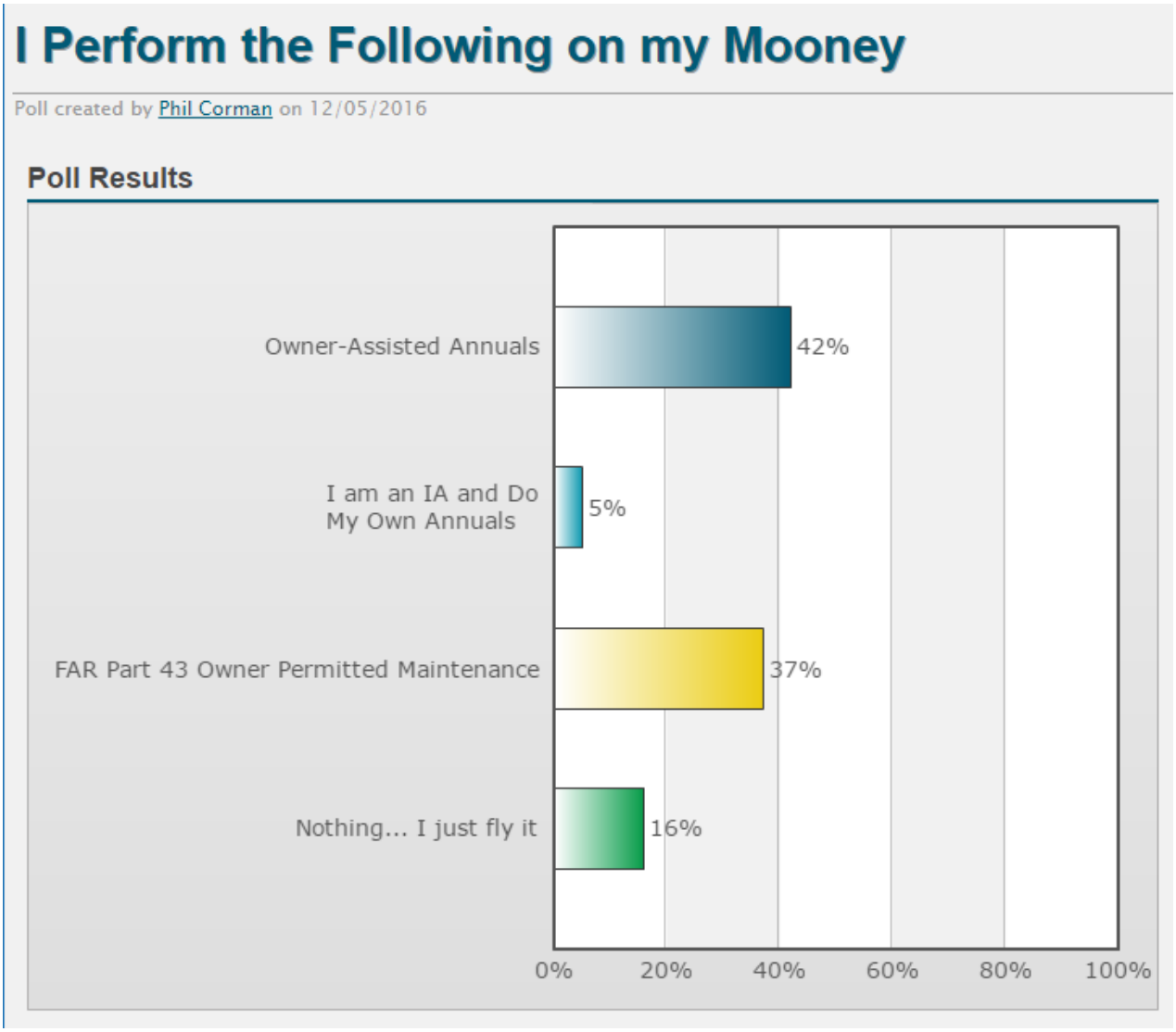
LASAR FOR SALE

Lake Aero Styling & Repair "LASAR" is alive and well….. and available for purchase.

Owners, Paul & Shery Loewen are ready to retire and motivated to sell their business.

LASAR has been a prosperous business for 42 years with 10 employees, is one of the world's largest Mooney parts suppliers and one of the most profitable repair stations in the Mooney Aircraft field.

Open to reasonable offers and ready to negotiate (707)263-0462



Next month's poll: "When Landing, I…." **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

RE: Mooney Instructor Listings -- So I wanted to extend a big thank you for including me in the instructor list of the Mooney Flyer. I've found the listing of my name and credentials to be extremely useful in finding new students who are looking for someone with Mooney know how and experience. This has been a previously difficult connection between Mooney pilots and Mooney Instructors.

Thanks for having an instructor list as it has had a big impact on my customer connections.

Regards,
William W

RE: Turbulence -- First wow, my whole long discourse in the last Flyer! Hope some of it was helpful to pilots. From that last issue I have a couple of additions to the great article on California turbulence. It was great coverage of a serious regional annoyance. I'm sure you and most other Mooney types can add specific areas with special considerations as well. A couple of places that I have learned need special caution, easily done, may be flown by a lot of us. North out of the high desert and south from it. I've used the Owens Valley a lot between Reno and the LA Basin, both directions. If there is any west wind I stay on the east side of the valley despite it being just a little longer. But it is almost always rather smooth and as a bonus, with a west wind, it is rising against far less steep terrain than the other side. It usually gives some noticeable lift, making up a bit for the extra distance. We know what the west side can do with wind. Remember Steve Fawcett! In dead calm the west side is a scenic ride, but only then. Go look for wildlife. I have never seen any yet.

The Cajon pass is a tempting route down from the Mojave. I cut it reasonably close to the northwest wall on the way to "Cable" one day and suddenly found myself in a right wing up knife edge. I of course had enough altitude, so lowering the nose and slowly leveling the bank as I turned a left 90 got me far enough in the "middle of the air" to not feel another bump. I have been more cautious in that area since. I had Flight Following or for whatever reason was in contact with ATC, so let them know what was there.

Leaving Riverside one morning to go to Vegas I talked to the briefer and was warned not to depart for Vegas at all. There was "Extreme" turbulence in the Cajon Pass. His words. So I just made a slight alteration. I got about halfway to San Bernardino and asked if a circling climb would be

permitted. It was, so I made large circles up to 11,500 and headed for Nevada. Not a bump. So when in doubt, go a different way.

My wife and I spent a night in Fresno starting the diversion late one afternoon headed home from San Diego when freeway traffic in the Mojave was passing us. I wouldn't try the Owens on either side at night in that wind. Expect anything. Headed to Reno from Sacramento one day, traffic eastbound on I-80 was passing me. Using GPS, I found it was a 100 knot wind from the east. It is not supposed to do that. Staying in about the center of the Truckee River gorge was rather smooth. Drifting to either side putting us downwind of peaks got very rough at once. So learn to read the terrain.

I spent a night in Sacramento once because of turbulence in Reno, that was as a passenger on an American Airlines flight! That pilot earned his year's salary in the decision to take a wave off. This stuff does not just work for us smaller folk.

Thanks again for the great publication.
Lin Manning

RE: Banking & Stalling -- I'd love to get into a discussion of banking and stalling. I am as serious as death about my comments stating that stall speed is independent of bank angle and is only dependent on airframe loading. The fact that too many pilots still kill themselves in Loss of Control (LOC) accidents, often in the base turn to final, supports my supposition that people still don't understand what causes an airplane to stall and/or what are the forces on the airplane. We live all our lives in a 1G gravity field and we think of that as "normal". The airplane doesn't. It is in accelerated flight at 1G all the time unless maneuvering and then because most pilots want to keep the velocity vector parallel to the ground, the load factor increases above 1G and requires even more lift from the wing.

The first thing to get straight is, what is a turn? We tend to think of a turn is a change in heading over the ground. This is not correct. A turn is any change in the velocity vector of the airplane. When you pull up the nose, that is a turn because the airplane is now flying in a different direction. When you lower the nose, that's also a turn. A turn is always accomplished by changing the lift being produced by the wing in such a way as to unbalance the forces on the airplane and accomplish a change in direction -- any direction -- of the airplane.

A problem arises when people flying airplanes think in two dimensions. They most often think in terms of maintaining the velocity vector parallel to the plane of the earth when turning, i.e. the so-called "level turn". It is this propensity that gets people in trouble. If you are at low airspeed and need to make a big change in the direction of your velocity vector, you need to give up trying to keep the plane of the turn parallel to the plane of the earth because you need more force (lift) than your wing can provide. It is going to stall. The way you prevent the stall is to allow the nose to "fall through" as you make the turn, thus allowing all the lift to be available to change the velocity vector relative to the plane of the earth. If while doing that, you realize that you are going to end up so nose-low (velocity vector intersecting the plane of the earth) that you cannot bring the nose up to level (change the velocity vector to be parallel with the plane of the earth again) before impacting the earth, you have to abort the turn, roll out, and apply all available lift to turning in the vertical plane (raising the nose). God help you if you don't have enough airspeed. It can be a real exercise in sphincter control to add power and allow the airplane to remain nose low long enough to convert altitude to enough airspeed (trading energy of potential to kinetic energy) to accomplish the necessary turn. And that brings us up to a discussion of Va and what it really is.

Most pilots don't understand is that Va (maneuvering speed) is more than just the speed at which a sudden full deflection of the controls may be made without damaging the airframe. It is also known as "cornering speed". It is the speed at which the tightest turn can be made. If you want to make the smallest possible turn radius, you need to be at Va and pulling right to the limit of your airframe, 3.8G for our Mooneys operating in standard category. At any speed lower than Va, the available "pull" decreases and your turn radius increases. Likewise, at any speed above Va. Once you get down to "stall speed" your wing is only able to produce 1G worth of load without stalling and you can't turn at all without giving up the use of some of the lift to counter gravity. If your velocity vector is intersecting the plane of the earth (nose pointed down) and you are at the speed at which your wing can only produce 1G of load before stalling, you can never get enough extra lift to change your velocity vector. The only option is to increase the speed (kinetic energy) of the airframe in order to increase the available lift. That means using both gravity and engine power to increase the energy in the airframe so that a turn may be accomplished before the airframe intersects the plane of the earth. (This is otherwise known as a "crash".)

So how do we teach this stuff so that it sticks, and people stop stalling their aircraft in an overshooting turn to final? I think that the answer is 180 degrees from the current FAA path as demonstrated by the adoption of the ACS. We need people to practice taking their airplanes in and out of the stall, with the stall warning on, at various speeds including approach. They need to feel and understand where the stall is going to occur and how, at different airspeeds. They need to practice this until the "feeling" becomes intrinsic.

Maybe I should write a book.

Brian Lloyd

Jim and Phil, you do a terrific job with TMF. The question I have for you is I just moved up from an M20J to a Bravo with dual batteries. What is the best way to implement the Battery Minder? Thanks in advance for your help

Editor's Note: I have an M20S which is identical in regards to 2 batteries. You can wire them independently, which I recommend. This, of course, requires you to bring 2 connectors forward. I brought mine to the hat rack for easy connections. I continually leave the BatterMinder connected to one or the other battery and alternate the charge after each flight.

If you wire them in parallel, then it confused the BatteryMinder if 1 battery needs charging. It will charge both, which is not necessarily desirable.

George C

WASHINGTON - The Federal Aviation Administration (FAA) and the City of **Santa Monica**, California have reached a settlement agreement to resolve longstanding litigation over the future of Santa Monica Airport. The agreement requires the city to maintain continuous and stable operation of the airport for 12 years, until December 31, 2028, and after that the City has the right to close the airport.

In recognition of the city's authority to make decisions about land use, the agreement allows Santa Monica to shorten the airport's single runway to 3,500 feet from its current length of 4,973 feet. The city is obligated to enter into leases with private aeronautical service providers to ensure continuity of those services until the runway is shortened and it decides to provide such services on its own.

"Mutual cooperation between the FAA and the city enabled us to reach this innovative solution, which resolves longstanding legal and regulatory disputes," said FAA Administrator Michael Huerta. "This is a fair resolution for all concerned because it strikes an appropriate balance between the public's interest in making local decisions about land use practices and its interests in safe and efficient aviation services."

PHIL CORMAN

MAINTENANCE THINGS EVERY MOONEY OWNER SHOULD DO

When it comes to maintenance, there are two types of Mooney pilots in the world. The first is very hands-on and will perform every owner-permitted maintenance specified in Part 43. The other type of pilot only wants to fly and knows very little about maintenance or becoming involved. Clearly there are A&P/IA owners who can perform maintenance, and others who simply get involved in annuals. But, you get the point.

Let's start with the easy stuff.

Tire & Brake Maintenance

Check the air pressure in your tires regularly. Start off by putting a gauge on all three tires every 2-3 weeks. If they are holding pressure, then you can extend your check interval. Always inflate your tires properly. It is better to slightly over inflate your tires than to under inflate. Check the tires when the ambient temperatures are cooler. A temperature change of 5°F (3°C), produces approximately one percent (1%) pressure change. It can take up to 3 hours or more after a flight, for tire temperatures to return to ambient. Also, if your aircraft is heavy, you will need to increase the pressure by 2-4% when filling, to end up with the proper inflation.

Your tires are "legal" until the cord is showing. Yikes. For many of us, that is too late. When the tread is barely showing, you are safe, but with a minimal margin of safety. At the latest, change the tires when you have little or no tread; perhaps sooner.

The brakes are easily checked. 1) Check the wear on the brake pads and 2) ensure that there is normal scoring on the disk. Remember that the brake fluid gets old and thickens with age. Check it at every annual and replace it if it doesn't appear clean and have the proper viscosity.

Engine Oil & Filter

Change the oil every 25-35 hours, and change the filter every time that you change the oil. We know it's messy to change the filter, but it is well worth it. Besides flying your aircraft regularly, changing the filter is one of the cheapest things you can do to prolong your engine's life.

So as not to singe your hands and arms, do not worry about getting the oil hot. Start the draining process late one afternoon and come back the next day. Voila! To increase the drainage, take an awl or small screwdriver and gently punch a hole in the top of the filter. The next day, when you

want to unscrew the filter, you can minimize the mess by packing absorbent rags all around the filter. You will need to safety wire your filter, which takes practice. Use 0.32 stainless wire. If you are uncomfortable with the safety wire tool, you can twist it by hand. Be careful not to over tighten. If you are not careful, you can break the attach point on the engine. After you have wired the filter, tighten it up with a ¼ turn of the filter. That'll snug it up perfectly.

There are two things you should do on each change. First, cut the filter and look for metal. This tells you a lot about your engine. The second thing is to capture some oil, about halfway through draining, and send it to Blackstone Labs, or the lab of your choice. Oil analysis will tell you more about your engine than checking the filter. But remember that oil analysis must be done regularly, because the analysis is about "trends" in the oil, more than absolute readings.

Optionally, you should consider using CamGuard. Scientifically, oil will drain from the upper engine in approximately 36 hours. CamGuard keeps your upper engine lubricated for up to 500 hours. After applying CamGuard to my engine, my Iron readings plummeted and my filter is as clean as a baby's behind.

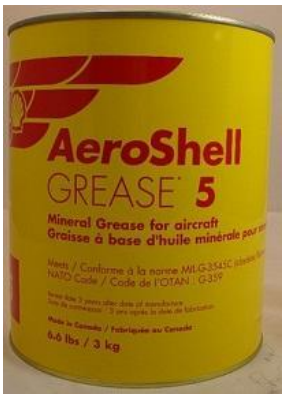
Spark Plug Maintenance

Half way to annual, I check my plugs. They are easy to pull, and with a kit from Aircraft Spruce, you can check the gap and set it perfectly. Consult the illustration above for doing your initial visual check. After your check, clean each spark plug as necessary. After cleaning, then check the gap and adjust with the tools shown **in** the illustration above.

When putting the spark plugs back into the engine, be sure that you have an accurate torque wrench and tighten to the specification in your Service Manual.

Lubrication

The great thing about our Mooneys is that instead of cables/pulleys, we have push/pull rods for all of our control surfaces. This is another feature that makes our Mooneys astounding to fly. You must remember to keep the rod ends and hinges lubricated at all times. Generally, this is easy. The



hardest part is removing some of the inspection panels to get to all of the places requiring lubrication.

Use Tri-Flow Lubricant on all rod ends. Use light 3-in-1 oil on flight control hinges.

Do not forget to take a few minutes and squirt grease into all your Zerk fittings. Your Mooney is not a car, so use the proper grease. Aeroshell Grease 5 is perfect for our Mooneys.

What the FARs say

Section 43.7 Persons authorized to approve aircraft, airframes, aircraft engines, propellers, appliances, or component parts for return to service after maintenance, preventive maintenance, rebuilding, or alteration..... ..... (f) A person holding at least a private pilot certificate may approve an aircraft for return to service after performing preventive maintenance under the provisions of Sec. 43.3(g).

FAR 43, Appendix A..... ..... (c) Preventive maintenance. Preventive maintenance is limited to the following work, provided it does not involve complex assembly operations:

(1) Removal, installation, and repair of landing gear tires.

(2) Replacing elastic shock absorber cords on landing gear.

(3) Servicing landing gear shock struts by adding oil, air, or both.

(4) Servicing landing gear wheel bearings, such as cleaning and greasing.

(5) Replacing defective safety wiring or cotter keys.

(6) Lubrication not requiring disassembly other than removal of nonstructural items such as cover plates, cowlings, and fairings.

(7) Making simple fabric patches not requiring rib stitching or the removal of structural parts or control surfaces. In the case of balloons, the making of small fabric repairs to envelopes (as defined in, and in accordance with, the balloon manufacturers' instructions) not requiring load tape repair or replacement.

(8) Replenishing hydraulic fluid in the hydraulic reservoir.

(9) Refinishing decorative coating of fuselage, balloon baskets, wings, tail group surfaces (excluding balanced control surfaces), fairings, cowlings, landing gear, cabin, or cockpit interior when removal or disassembly of any primary structure or operating system is not required.

(10) Applying preservative or protective material to components where no disassembly of any primary structure or operating system is involved and where such coating is not prohibited or is not contrary to good practices.

(11) Repairing upholstery and decorative furnishings of the cabin, cockpit, or balloon basket interior when the repairing does not require disassembly of any primary structure or operating system or interfere with an operating system or affect the primary structure of the aircraft.

(12) Making small, simple repairs to fairings, nonstructural cover plates, cowlings, and small patches and reinforcements not changing the contour so as to interfere with proper air flow. (13) Replacing side windows where that work does not interfere with the structure or any operating

system such as controls, electrical equipment, etc.

(14) Replacing safety belts.

(15) Replacing seats or seat parts with replacement parts approved for the aircraft, not involving disassembly of any primary structure or operating system.

(16) Troubleshooting and repairing broken circuits in landing light wiring circuits.

(17) Replacing bulbs, reflectors, and lenses of position and landing lights.

(18) Replacing wheels and skis where no weight and balance computation is involved.

(19) Replacing any cowling not requiring removal of the propeller or disconnection of flight controls.

(20) Replacing or cleaning spark plugs and setting of spark plug gap clearance.

(21) Replacing any hose connection except hydraulic connections.

(22) Replacing prefabricated fuel lines.

(23) Cleaning or replacing fuel and oil strainers or filter elements.

(24) Replacing and servicing batteries.

(25) Cleaning of balloon burner pilot and main nozzles in accordance with the balloon manufacturer's instructions.

(26) Replacement or adjustment of nonstructural standard fasteners incidental to operations.

(27) The interchange of balloon baskets and burners on envelopes when the basket or burner is designated as interchangeable in the balloon type certificate data and the baskets and burners are specifically designed for quick removal and installation.

(28) The installations of anti-misfueling devices to reduce the diameter of fuel tank filler openings provided the specific device has been made a part of the aircraft type certificate data by the aircraft manufacturer, the aircraft manufacturer has provided FAA-approved instructions for installation of the specific device, and installation does not involve the disassembly of the existing tank filler opening.

(29) Removing, checking, and replacing magnetic chip detectors.

(30) The inspection and maintenance tasks prescribed and specifically identified as preventive maintenance in a primary category aircraft type certificate or supplemental type certificate holder's approved special inspection and preventive maintenance program when accomplished on a primary category aircraft provided:

(i) They are performed by the holder of at least a private pilot certificate issued under part 61 who is the registered owner (including co-owners) of the affected aircraft and who holds a certificate of competency for the affected aircraft (1) issued by a school approved under Sec. 147.21(e) of this chapter; (2) issued by the holder of the production certificate for that primary category aircraft that has a special training program approved under Sec. 21.24 of this subchapter; or (3) issued by another entity that has a course approved by the Administrator; and (ii) The inspections and

maintenance tasks are performed in accordance with instructions contained by the special inspection and preventive maintenance program approved as part of the aircraft's type design or supplemental type design.

(31) Removing and replacing self-contained, front instrument panel-mounted navigation and communication devices that employ tray-mounted connectors that connect the unit when the unit is installed into the instrument panel, (excluding automatic flight control systems, transponders, and microwave frequency distance measuring equipment (DME)). The approved unit must be designed to be readily and repeatedly removed and replaced, and pertinent instructions must be provided. Prior to the unit's intended use, and operational check must be performed in accordance with the applicable sections of part 91 of this chapter.

(32) Updating self-contained, front instrument panel-mounted Air Traffic Control (ATC) navigational software data bases (excluding those of automatic flight control systems, transponders, and microwave frequency distance measuring equipment (DME)) provided no disassembly of the unit is required and pertinent instructions are provided. Prior to the unit's intended use, an operational check must be performed in accordance with applicable sections of part 91 of this chapter.

Lake Aero Styling & Repair "LASAR"

"Serving your Mooney needs since 1975" in Lakeport, CA

www.lasar.com

Office or Service: (707) 263-0412 **accounts@lasar.com**

Parts: 707 263-0581, (800) 954-5619 **Parts-Mods@lasar.com**

THIRD CLASS MEDICAL REFORM IS ALMOST HERE

In early January, 2017, the Federal Aviation Administration (FAA) issued a final rule (PDF) that will, after May 1, 2017, allow general aviation pilots to fly without holding an FAA medical certificate as long as they meet certain requirements outlined in Congressional legislation.

FAA Administrator Michael Huerta said, "**The *BasicMed* rule** will keep our pilots safe, but [it] will simplify our regulations and keep general aviation flying affordable."

BasicMed, **written into a new Part 68 of the FARs,** takes effect on May 1, 2017. This will allow time for a comment period on the information collections, as required by the Paperwork Reduction Act of 1995. After that point, pilots will be able to fly **certain aircraft** without holding a medical certificate, providing they comply with a number of FAA provisions – found on the next page under "Do You Qualify".

Do you qualify?

The answer is "Yes", if you fly an aircraft that is authorized under federal law to carry not more than 6 occupants and has a maximum certificated takeoff weight of not more than 6,000 pounds

Now, here's a list of qualifications that YOU must meet in order to operate under *BasicMed*:

- You must possess a valid US driver's license. Individuals who do not have a medical certificate and whose driver's license has been revoked or rescinded for any reason, are not eligible to use this rule, unless the driver's license is reinstated. Any restrictions on a driver's license, (e.g., corrective lenses, prosthetic aids required, daylight driving only) also apply under this rule.
- You must have held a medical certificate at any time after July 15, 2006. (This 10-year "Lookback" period applies to both regular and special issuance medicals. Pilots who have never held an FAA medical certificate, including student pilots, will need to go through the Medical Certificate process one time only.) You must not have had the most recently held medical certificate revoked, suspended, or withdrawn. **Pilots whose most recent medical certificate was revoked, suspended, withdrawn, or denied will need to obtain a new medical certificate before they can operate under the reforms.**
- Your most recent application for airman medical certification must not have been completed and then denied
- You must have taken a medical education course within the past 24 calendar months
- You must have completed a comprehensive medical examination with a licensed physician within the past 48 months. Note that Physician's Assistants are not *state licensed physicians*. Aviation medical examiners are required to be state-licensed physicians, so pilots could continue to visit their AME for the physical exam required by BasicMed.
- You must be under the care of a physician for certain medical conditions
- Must have been found eligible for special issuance of a medical certificate for certain specified mental health, neurological, or cardiovascular conditions, when applicable. Details can be found at *BasicMed*, pages 73-76.
- You must consent to a National Driver Register check.
- You can carry no more than five passengers
- You can operate under VFR or IFR, within the United States. BasicMed Pilots cannot fly internationally, unless they receive authorization from the country in which they will be flying. You could call AOPA's Pilot Information Center (800/USA-AOPA) or the country's aviation authority to see what is needed to fly in that country.
- You must operate at less than 18,000 feet MSL and must not exceed 250 knots.
- You cannot fly for compensation or hire

The "Lookback"

The "lookback" applies to the expiration date of the medical certificate, which is determined using the "Date of Examination" on the certificate and the duration periods listed in **14 CFR 61.23(d)**.

For those who had a regular medical certificate, the expiration date depends on their age—age 40 or over, or under 40—at the time of the exam.

Persons age 40 or over on the date of their examination would meet the 10-year period described in FESSA if their examination was on or after July 15, 2004. This date is based on the two-year validity period for third class medical certificates issued to persons age 40 or over. Persons under age 40 on the date of their examination would meet the 10-year period described in FESSA if their examination was on or after July 15, 2003. This date is based on the three-year validity period for third class medical certificates issued to persons under 40 years of age that was in effect prior to 2008.

So, you've met the initial requirements and want to fly under *BasicMed*. After the law takes effect, you must:

- Visit any state-licensed physician at least once every four years and
- Take the free Aeromedical Factors online course every two years.
    - The course will be available for free on AOPA's website.
    - A certificate of completion of the course and the checklist from the physician must be kept in the pilot's logbook;
- Alternatively, pilots may carry a legible representation, defined as a smartphone image of the document. It's got to be able to show to an FAA inspector if asked.

The Medical Examination

Participating pilots will visit a state licensed physician. The pilot will give their physician a completed Aeromedical Self-Assessment Checklist, which will be developed by the Federal Aviation Administration (FAA) and ready by May 1st. The physician will then complete a physical examination and affirm the absence of any medical condition that could interfere with the safe operation of an aircraft. Physicians will be instructed to exercise their discretion to address any medical conditions identified and to determine if any tests are needed.The information from the checklist that you'll complete along with your physician, will not be sent to the FAA. Some of the base details concerning the comprehensive medical examination can be found at *BasicMed*, pages 70 – 73.

AOPA has an online site called *Fit to Fly, which has resources for physicians*. AOPA will continue to develop more information as the implementation date approaches.

Special Issuance – Yes, it's still Possible

The big winners under Third Class medical reform are pilots flying under a Special Issuance certificate. If you have had a special issuance medical within the 10-year Lookback period and your

medical status is unchanged, you should be able to fly under BasicMed provided you meet all the other qualifications, including being under the treatment of a physician for your medical condition. There is no requirement to go through the lengthy and expensive process of renewing that Special Issuance medical every two years.
For the purposes of *BasicMed*, the FAA has identified certain medical conditions that will require a pilot to obtain a **one-time** special issuance medical:

Cardiovascular: myocardial infarction (heart attack); coronary heart disease that has required treatment; cardiac valve replacement; and heart replacement. Pilots with a cardiovascular condition will still need to get a one-time special issuance, but successful completion of a clinical evaluation will satisfy the process for getting an Authorization for Special Issuance of a medical certificate with no mandatory waiting period.

Neurological: epilepsy; a transient loss of control of nervous system functions without satisfactory medical explanation of the cause; and disturbances of consciousness without satisfactory medical explanation of the cause.

Mental Health: personality disorder that is severe enough to have repeatedly manifested itself by overt acts; psychosis defined as a case in which an individual has manifested or may reasonably be expected to manifest delusions, hallucinations, grossly bizarre or disorganized behavior, or other commonly accepted symptoms of psychosis; bipolar disorder; and substance dependence within the previous two years as defined in FAR 67.307(a)(4).

Pilots who have a clinically diagnosed mental health or neurological condition will be required to certify every two years that they are under the care of a state-licensed medical specialist for that condition. Details of how that certification process will work have not yet been determined.

The regulations do not permit individuals with select mental health, neurological and cardiovascular conditions to participate in BasicMed without first obtaining a special issuance medical certificate from the FAA. For medical conditions, as determined by a physician, that may interfere with the safe operation of an aircraft, physicians shall exercise medical discretion and develop a treatment plan to enable the individual to qualify for BasicMed at a future date.

If you develop a new condition that requires a special issuance medical certificate, you will have to apply for a one-time special issuance for that condition.

What if my current medical certificate expires before May 1st?

Timing is everything. If you wish fly as pilot in command through May 1st, you'll need to get another 1st, 2nd, or 3rd class physical from your aeromedical examiner. If you do not wish to fly as pilot in command during the period between your medical expiration and the implementation of *BasicMed*, you can wait until May 1st and then comply with BasicMed.
Pilots also have the option to let their medical certificate expire and not fly as pilot in command between the expiration of their medical certificate and the start of BasicMed on May 1. Pilots who opt to do this might consider flying with an instructor to keep their flying skills sharp during this period.

What if my current medical certificate expires after May 1st?

You can continue to operate under your medical certificate until it expires. Then, you'll need to either:

- Contact your aeromedical examiner and get a 1st, 2nd, or 3rd Class FAA physical – or
- Comply with BasicMed (Online Course and Medical Exam)

Can I flight instruct under BasicMed?

Yes. The FAA has stated that "flight instructors meeting the requirements of this rule may act as PIC while giving flight training without holding a medical certificate, regardless of whether the person receiving flight training holds a medical certificate." The FAA considers the flight instructor who is acting as PIC to be "receiving compensation for his or her flight instruction" under instructor privileges, but is "exercising **private pilot privileges** while acting as PIC of the flight."

BasicMed is Not a Magic Wand

Please understand that any medical condition that would have disqualified you from flying before May 1st, 2017, is still disqualifying under *BasicMed*.

You're Still Accountable

A pilot who holds a medical certificate may choose to operate under BasicMed and not exercise the privileges of his or her medical certificate. Even though a pilot chooses not to exercise the privileges of the medical certificate for a particular operation, the FAA retains the authority to pursue enforcement action to suspend or revoke that medical certificate where there is evidence that the pilot does not meet the FAA's medical certification standards.

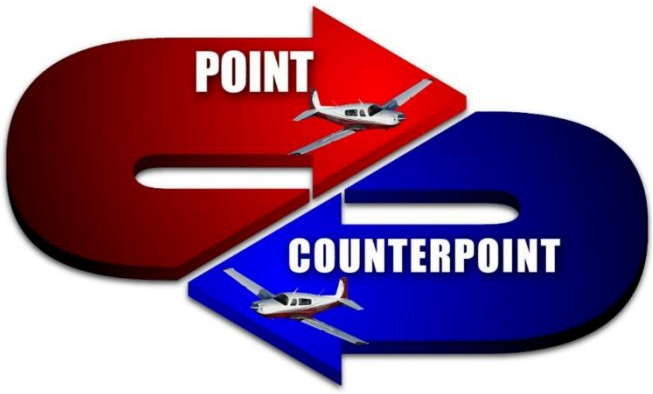
More Information

AOPA has developed a suite of online resources for pilots and physicians called "Fit to Fly Resources". Hopefully, this information will help you make the most of the reforms so you can enjoy your freedom to fly.

Additional References:

AOPA Article
FAA Circular
AOPA Details

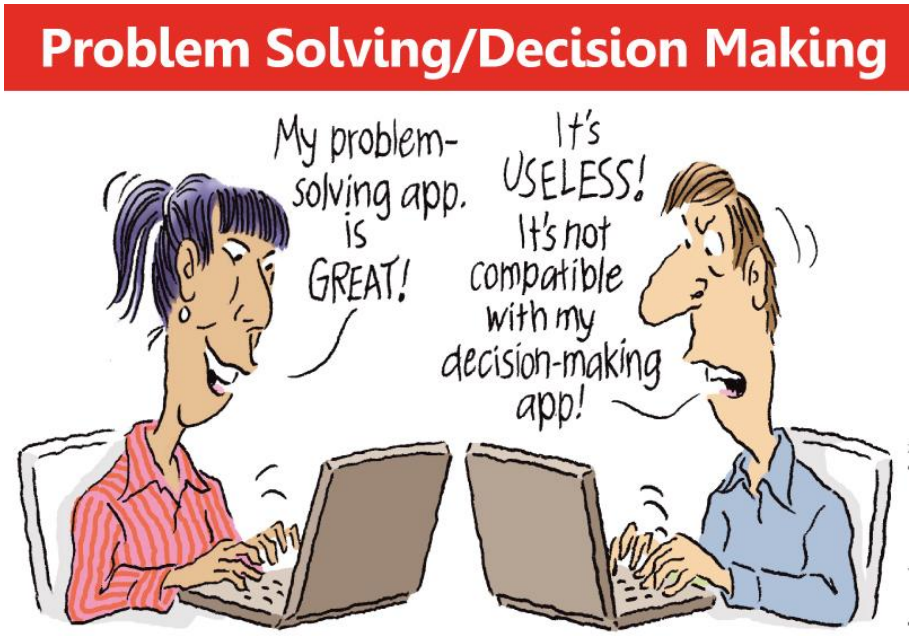
BasicMed **F**requently **A**sked **Q**uestions (FAQs) are answered HERE



POINT VS. COUNTERPOINT – NEW MOONEY OR UPGRADE

We sometimes arrive at a decision point. Do I buy a newer/bigger/better Mooney or upgrade my current one? The final decision is usually made on emotion and more by the heart than by rationale. We get pretty biased if we see a potential Mooney on the ramp that has exceptional "ramp appeal". Great paint… great interior… great panel… you know the situation. We need to be talked out of it. Let's face it. We own and/or fly a Mooney because we want to do so, and figure out a way to make the finances work.

You might own a nice C/E and it's working nicely for you. However, you are thinking of upgrading to a J, or maybe even an Ovation. The first question is, "Why?". Is your current Mooney working nicely for you, or are you in need of more interior room, or a faster cruise? It might be that you want to fly higher to get out of the lower level turbulence across the mountains.



Need Options Not Available in your Current Mooney?

Well, you're probably looking at upgrading to a newer Mooney. Perhaps you would like to go faster. If so, you have options. You could go to http://www.lasar.com/mods.asp and look at the preponderance of mods that can give your current Mooney more speed. Paul & Shery make it easy to see a good estimate of your speed gain for each mod. Do these mods get you to your desired cruise, or climb rate? If so, you've got a good option. There is something to be said for staying with the one you know. If your current Mooney is serving you well, then you need to take that into account. A new Mooney might have some hidden problems/costs that could make your decision costly.

If it's room/space you're looking for, then your only path is an upgrade.

Other Motivations

Your engine might be getting closer to TBO and you don't want to deal with that maintenance. Or, you might want a better panel. These are tough decisions. If your engine has built up a lot of hours SMOH, then if you sell it, you are going to lose some value; maybe significant value. On the other hand, if you know that engine well, it might go significantly past TBO. Engine Analyst Mike Busch of *Savvy Aviator* has written an awful lot about TBO. If your engine is healthy, reaching TBO might be as significant as crossing a state line.

On the panel front, it is darn true that the cheapest avionics you can buy are the avionics that are already in the panel. A GTN 750 installation that may cost $20K or more to install, may only add a fraction of that to the resale value. So, if your motivation is purely a better panel, then buying the Mooney with your dream panel may be the way to go. On the other hand, no panel is your "dream panel", unless you designed and had it installed that way.

Three Real Decisions

#1: I own an Eagle (M20S). I thought about upgrading to a Bravo. Then I realized that the Eagle was a fantastic foundation that met all of my basic needs. I can always repaint the exterior, redo the interior, and upgrade the panel exactly the way I want it. And my favorite cruising altitudes were below 14,000', usually closer to 10 -12K. I decided that keeping the Eagle, which is in mint condition and a known entity, was the right thing to do.

#2: A friend owns a fantastic M20K. He was strongly considering a Bravo as he does a significant amount of business flying from California to Texas and points east. This mechanically sound K, was also one of the fastest K's in the sky. After much deliberation, he decided to stay with the K. He completely re-did the panel with G500/GTN 750/ MVP 50 and then added long range Monroy tanks. According to him, this has been the best decision ever.

#3: A J owner was thinking about upgrading to a bigger Mooney, or even switching for another J. Again, this J was pristine and so he repainted it, went with a new interior and it perfectly fits his mission. He did not need to go higher, faster, or further and the upgrade was his optimal choice.

Is there a Definitive Answer here?

We don't think so. Most decisions are made by the heart when it comes to owning a Mooney. Sometimes, no matter what we tell ourselves, we just want a newer, faster, bigger Mooney. But, unless your mission has changed (bigger family, longer flights, need for greater speed than can be had with mods), then an upgrade to your current sweetheart seems to make sense. Remember, no matter what anyone says, the J/K models remain the best price/performance for the vast majority of Mooniacs.

FUEL EXHAUSTION

November 1st, 2007 – PANAMA CITY, FL CAUSE: The pilot's inadequate preflight inspection, which resulted in a loss of engine power during cruise flight due to fuel contamination. A factor was the pilot's impairment due to recent cocaine use. N4091H, M20K (Destroyed)

The accident airplane had not flown for an undetermined period of time, and the pilot was planning to conduct a 30-minute local flight. The pilot's mechanic attempted to prepare the airplane for the flight, and while prepping the airplane he drained water from both fuel tanks for approximately 45 minutes. He started the engine and let it run for 15 minutes. During that time the pilot arrived at the airport, and the mechanic suggested to the pilot that he allow him to fully drain the fuel tanks prior to his flight. The pilot refused and he and the passenger boarded the airplane. The flight departed, and shortly after the pilot reported a loss of engine power and ditched in the Gulf of Mexico. Examination of the airplane revealed water contamination of the fuel. Review of the pilot's toxicology report revealed the use of controlled substances. Post mortem toxicology testing performed on the pilot was consistent with the regular use and very recent smoking of cocaine, likely within 1 hour of the accident. The pilot's medical certificate was expired at the time of the accident.

March 3rd, 2007 – VISALIA, CA CAUSE: The pilot's inadequate in-flight fuel system management, which resulted in fuel starvation and a loss of engine power. N6628U, M20D (Destroyed in 2009)

The airplane collided with a berm during a forced landing in an industrial building construction site following a loss of engine power. The pilot stated that during the preflight inspection he did not check the fuel quantity. He stated that a month prior to the accident the airplane had been "topped off," and then flown about an hour from the right fuel tank. The pilot also said that during the 160 nautical mile accident flight he did not recall switching fuel tanks. About 3 miles north of the destination airport the engine sputtered and lost power. He switched tanks and activated the electric fuel boost pump, the engine restarted momentarily, then sputtered and lost power again. The pilot switched tanks three or four more times to no avail. Post accident inspection of the airplane by the FAA revealed that the right fuel tank was empty and the left tank contained about 6 gallons of 100LL aviation fuel. The fuel line to the carburetor did not contain any fuel. The fuel selector valve was selected to the right tank position. The electric fuel pump was activated and no fuel pressure indication was observed. The fuel selector handle was moved to the left fuel tank position and a fuel pressure indication was observed in the normal operating range.

February 28th, 2007 – LANDENBERG, PA CAUSE: The pilot's improper preflight planning, which resulted in a loss of engine power due to fuel exhaustion, and subsequent forced landing to a field. N3278F, M20F (This aircraft is still flying)

The pilot of the Mooney M20F departed on a local flight. Approximately 30 to 35 minutes after takeoff, the airplane's engine began to sputter, which was followed by a total loss of power. The airplane sustained substantial damage to the firewall and airframe during an ensuing forced landing to a field. Examination of the airplane revealed that both fuel tanks were intact, however, they contained no fuel. The pilot stated that he did not experience any mechanical problems with the airplane and attributed the loss of engine power to fuel exhaustion. He reported 2,065 hours of total flight experience, which included approximately 292 hours in the same make and model as the accident airplane.

February 9th, 2007 – INGALLS, KS CAUSE: The pilot's inadequate in-flight planning and decision making, and failure to refuel while en route, resulting in loss of engine power during cruise due to fuel exhaustion. Contributing to the accident was the poor weather at the pilot's destination. N5737M, M20K (This aircraft is still flying)

According to the pilot, he was diverting to another airport, after attempting an instrument approach at his original destination. The pilot reported that, " the engine started to sputter again, then quit. I was out of fuel." The pilot performed a forced landing to a field, resulting in substantial damage. An examination of the airplane's systems, conducted by the FAA, revealed no anomalies.

What Can You do?

Think about fuel while you're planning on the ground. Perhaps there is some weather to our south, so just to be safe, let's add another 45 minutes, ensuring that we're within our weight and CG limits."

The FAA says 30 minutes additional fuel (reserves) for VFR day and 45 reserves for VFR night and IFR. Why not tighten the rules? Why do just enough to get by? Why not carry an an hour of fuel reserve? For an extra 30 minutes in a Mooney, depending on your model, we're talking about a mere five to ten more gallons.

To avoid fuel starvation, it's vital that pilots carefully check the following:

1. Thoroughly check all fuel tank vent lines for obstructions before any flight. If outside temperatures have been at or below freezing, there might be some ice in the vent lines. If insects are swarming near your airplane, look for mud dauber nests or similar problems.

2. "Sump" ALL the fuel drains before flight, removing ALL contamination. If you can't get a fuel sample from a drain, you should investigate further. It may indicate contaminated fuel tanks and/or the presence of ice crystals in the fuel.

3. Don't trust your memory or the gauges. Always visually inspect fuel levels and don't assume a tank has been fueled.

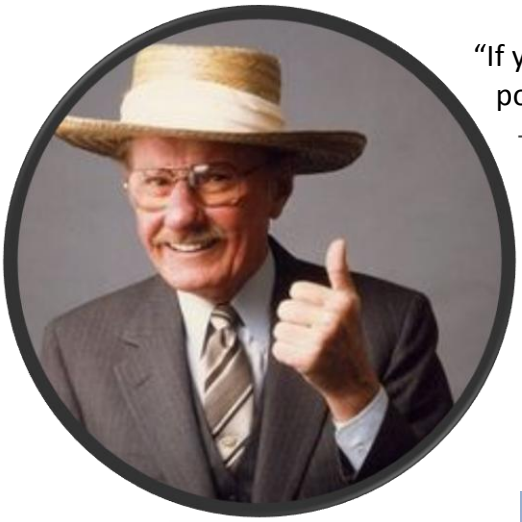
4. When switching fuel tanks in flight:

- Keep an eye on the fuel pressure, EGT, or other reliable engine power gauges to ensure that fuel flow and combustion are normal.

- Don't let go of the fuel selector handle until the engine has run several, reliable seconds on the newly selected tank and be ready to put it back where it was if switching tanks causes a power interruption.

5. Before the approach or landing, make your final fuel tank selection change when you are above pattern altitude. If you're above 1,000 feet above terrain (higher if over adverse terrain and/or in IMC), you'll have a better chance of recovering if the engine falters. You could consider making your final tank selection, if needed, just prior to descent from cruise. Please use a tank that has sufficient fuel for the approach, missed approach/ go-around, and climb to at least 1,000 feet AGL (higher if over adverse terrain and/or in IMC). When you get to the "GUMP" checks (Gas, Undercarriage, Mixture, and Prop), hopefully, you will have already verified the "Gas" portion when you were above 1,000 feet AGL.

6. Use your checklists for ALL phases of flight. Not only will that practice help you remember the checklist items, but it will keep you from attempting a take off with an improper tank selection.



"If you're faced with a forced landing, fly the thing as far into the crash as possible."

— Bob Hoover

If your Mooney could fly at the speed of light, would your landing lights work?

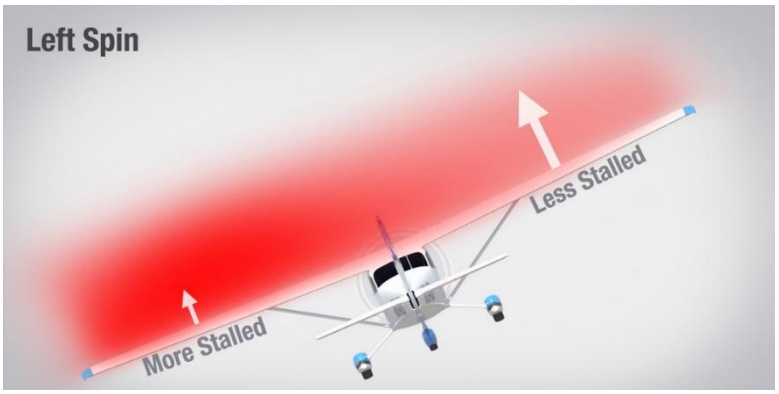
FAA RULE CHANGE ON TEACHING SLOW FLIGHT

by Robert Reser

There is a new conversation going on about the recent FAA change regarding teaching slow flight. They make the change. We don't really need to worry about whether it is right or wrong; it's now the rule. Just keep on teaching flight. Their concern is the prevention of loss of control incidents.

Okay, teach slow flight as always. The specific method doesn't really matter as long as the Student can control flight to any given indicated airspeed. If proficient in this, he can demonstrate it in the manner the regulators want and at the same time, still be safe at the slower indicated-airspeeds as always taught.

This is reminiscent of the olden days, when it was deemed safer to make longer power-on approaches rather than the idle-power landings that had always been used. The result is, we still have loss of control with base turns to approach. But an unintended consequence is that we no longer have any proficiency in idle-power landings, which also happens to be the procedure for making engine-out approaches and landings. Another unintended consequence is burning a lot of training time driving out for the longer approach. If training continued teaching proficiency in idle-power approaches ("short approach"), for certification demonstration purposes, the longer approach is a piece of cake. Anyway, we are always subject to doing one or the other on any given landing so we must be proficient in all kinds of approaches.



The proposed circular approach and landing currently being tested. is also just a variation of normal approaches. The actual turn to base and final is always subject to positioning on the downwind and requires adjustment, depending on that and related wind conditions. In addition, the constant turn from downwind to final still requires leveling the wings at some point, to check that the final is clear.

Let's just concentrate on teaching how to control the aircraft in all these situations. If we have the Student proficient enough for a certification ride, we can teach him what to demonstrate on the check ride in a couple of flights.

HANDLING FLIGHT

What is this loss of control that we worry about? It's either stall, takeoff or landings gone wrong or spatial disorientation. These are three distinctly different things. Though consideration of risk taking is extremely valid, once in the air, the pilot must be able to handle any encountered unusual conditions.

How does stall occur? Pulling and holding the control wheel aft…the only way. The Pilot stalls the aircraft…end of story! When maneuvering, it is considered normal to use elevator input. However, it is important that the Student understands the cause of a stall and the necessity with maneuvering to release some aft control before allowing the machine to attain a stall.

Statistically, off-field landings seldom touchdown before midfield of the chosen area. (Don't want to be low or slow). One half of off-field landing fatalities occur from overrunning the site. Teaching proficiency in the idle power landing, teaches having the landing area unmoving (collision course) on the windshield. This is the desired procedure for all landings. Proficiency in a forward slip is attained at the same time.

Landing wind conditions often cause control loss. A Pilot must be aware of strong crosswinds and during landings while slowing from braking, he or she should be ready to add power for propeller blast to reduce the weathervaning effect on the fuselage. Added power can often retain or regain marginal directional control, even while braking.

Inadvertent IMC

How do you handle spatial disorientation? As described in early model Cessna's 150 and 172 emergency procedures: Turn loose of the control wheel, concentrate and believe the turn and bank instrument or the attitude indicator. With rudder control, push to cause a standard rate turn and hold for one minute> Reverse rudder to show zero turn and fly out of the condition. Add some power if needing to assure more terrain clearance. If at night, adding power and flying straight ahead may allow re-attaining night references. Otherwise, turn back in the same manner.

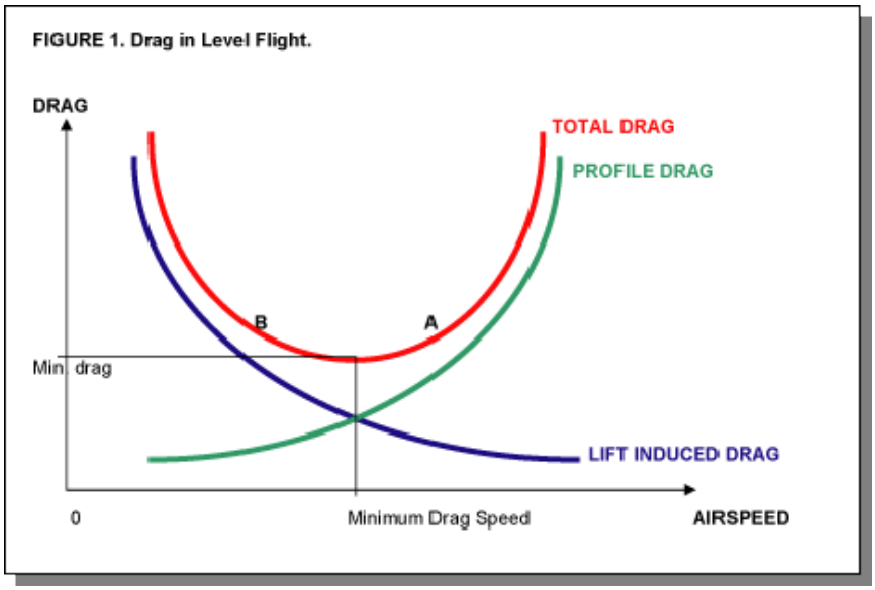


FIGURE 1. Drag in Level Flight.

How do we teach aircraft flight control to enable the Student to become proficient in these particular situations? It requires assuring an understanding of how control works. The initial flight is particularly important, since the Student will always think, "That is the way it is done".

A quick way to introduce control to an initial Student is to fly their first few flights without touching the control wheel until the landing roundout. This leads to understanding the use of rudders to steer for taxi, heading control, and turns. Initially, wiggling the pedals for directional control through all ground operations through liftoff, teaches more precise steering. Furthermore, rudder-only control allows early awareness of the kinesthetic feeling in the seat.

The initial flight is with a set elevator trim to approximate Vx. With takeoff power and mixture set, brake release will accelerate the aircraft and the aircraft will become airborne when proper lift is obtained. When airborne, continued rudder steering toward distant sighted objects and keeping them unmoving, maintains directional control.

Once airborne, exercises in power and elevator trim-change for altitude, indicated-airspeed, and level turns with no control wheel input, will show the Student what the controls do and how they

are used to direct the flight. After understanding how rudder and power affect flight, use of ailerons and elevator will be incorporated.

This requires the Instructor be proficient in hands-off flight control prior to teaching. These procedures lead to the concept of "hands-off" flight control as outlined in the 2014 Mar/Apr FAA Flight Safety-Brief, page 13. This article should be required reading for all Pilots.

It has been demonstrated that using the hands-off concept for initial training, a Student can be proficient enough for solo in five hours and able to complete all PPL requirements within thirty hours. Try it. You may like it!

Send your questions for Tom to TheMooneyFlyer@gmail.com

Question: What are the top items an owner should check regularly?

A good question and there are checklists, but I thought about this from a simple but critical point of view. These items do not replace doing a thorough pre-flight checklist.

1. **Check tire pressures**. The nose tire is important for good steering and the main tires provide traction, braking, and support during a landing. It's important to keep them inflated properly.

2. **Check the flight controls for freedom of movement**. There are a lot of rod ends on your Mooney that can rust and stick. In the tail assembly alone, there are about ten rod ends. Get a can of Tri-Flow. You'll find that a little shot or spray will do wonders. Wipe off the excess.
The hinges of the flight controls use a very light oil, about like 3 in 1 oil. (That's better than nothing)

3. **Lubricate the door seal**. Buy a can of silicone spray. Using a soft cloth, wipe the seal with the silicone. This will help keep the seal from drying out and keep it from sticking to the frame. Also, use the same cloth to wipe your control yoke shafts. This will clean and lubricate the shaft. Then, wipe off the excess.

4. **Avoid Flat Spots.** If your plane, like most, is parked long periods of time, once in a while, move it about 1-2 feet fore or aft. This helps prevent flat spots.

5. **Avoid Cover Scratches.** If your airplane is covered up outside, pull the cover once in a while and clean the windshield. This removes dust and sand that can cause scratches when it's windy.

6. **Febreze it.** Planes can get "smelly" after sitting a long time. Spray the cabin with Febreze and "breathe happy".

Just doing these few items, will help keep your plane in good shape.

Flightlight – What Every Pilot Needs

ASA has introduced the Flightlight, a 3-in-one LED flashlight that toggles between red, green or white, depending on your cockpit needs.
With an **LED life of 100,000 hours**, the included alkaline batteries can keep this flashlight illuminated for up to **17 hours**, according to ASA officials.
The on/off switch located on the bottom allows for easy cycling through the colors — no separate filters, heads or extra attachments are required.
The adjustable flashlight head provides easy flood and spot beam settings.
The lightweight aluminum body is durable and weather resistant, and the ergonomic textured handle makes for simple one-handed operation and compact storage.
Price: $19.95, which includes three AAA batteries.

ASA Contact information
8:00 am – 4:00 pm (Pacific Time), Monday – Friday.
U.S. 800.ASA2FLY
Local 425.235.1500

Free AOPA Aeromedical Course

The FAA has reviewed the AOPA Air Safety Institute's aeromedical online course and confirmed that it meets the third class medical reform requirements that Congress created last summer. Pilots would need to complete the course, which AOPA will offer for free, every two years in addition to seeing their personal physician every four years to operate under the law.

The course covers a variety of health subjects, including the importance of exercise and diet and their effect on your performance in the cockpit, as well as providing in-depth information on heart health and diabetes. The course concludes with a quiz. Pilots must pass in order to earn the certificate that is kept in their logbooks for reference if the FAA were ever to ask. Those not passing the first time can review the course and retake the quiz until they pass. AOPA will notify pilots when the course is available to take.

AOPA also is preparing a suite of online resources for pilots and physicians to help them make use of the new rule and ensure implementation goes smoothly.

Instrument Flight Procedures Gateway

Wouldn't it be something if the FAA notified you any time a change is made to an instrument flight procedure you rely on, like that familiar ILS approach to the home airport that you usually fly after a long, tiring journey?

Turns out, there is. It's the FAA's Instrument Flight Procedures Information Gateway. AOPA is working with the FAA to make it even easier for pilots to use the gateway to request a new procedure, fix, or route.

You can subscribe to receive notifications about procedure changes at airports of your choice. In addition, pilots can use the gateway to request a new procedure, fix, or route. Patience will be needed after submitting a request, since it can take up to two years for a proposal to become a published procedure.

Garmin Headquarters Classes

For pilots who are considering an avionics upgrade or those who already have an existing GTN 650/750 and/or G500/G600 installed in the panel of their aircraft, Garmin is hosting several classes tailored specifically to flying with this avionics suite.

This two-day class provides a collaborative environment designed to help pilots transition from analog flight instruments to Garmin glass panel flight displays.

A presentation and practice format offers attendees the opportunity to practice real-world in-flight scenarios with Garmin avionics. Training classes begin at 8 a.m. and conclude at 5 p.m. each day and include a factory tour, lunch and a Kansas City BBQ dinner. Cost to attend the course is $625.

These classes are hosted at Garmin Headquarters in Olathe, Kansas on

- March 9-10;
- March 23-24;
- May 18-19;
- June 8-9;
- Sept. 11-12;
- Oct. 19-20.

GTN 650/750 Pilot Training, Olathe

Pilots may also take advantage of training classes tailored specifically to the GTN touchscreen series.
Several one-and-a-half day classes are available for $495 and highlight loading and activating departures, arrivals and instrument approach procedures, flying holds, flight plan modifications and more.
GTN-specific class dates are also hosted in Olathe, Kansas and are on the following dates in 2017:

- March 16-17;
- April 1-2;
- May 13-14;
- Oct. 5-6.

Garmin Regional Classes

These classes will provide the same in-depth instruction offered at Garmin Headquarters, covering the G500/G600 and GTN 650/750 avionics suite.

Cost to attend any one of the regional classes is $795.

Below are a list of dates and locations:

- Feb. 23-24: Flight Safety Academy; Vero Beach, Florida;
- June 22-23: Garmin AT facility; Salem, Oregon;
- Sept. 21-22: AOPA National Aviation Community Center; Frederick, Maryland;
- Nov. 2-3: Garmin Chandler office; Chandler, Arizona.

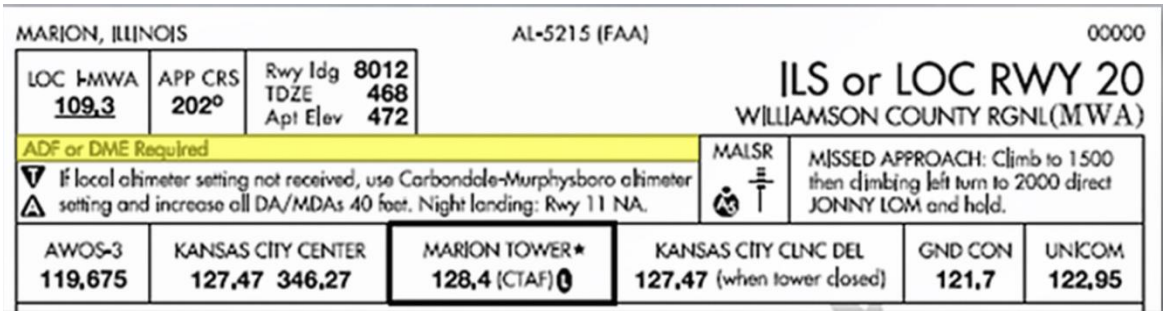
ADS-B Air/Ground Assessment

Did you get an Air/Ground failure on your ADS-B Performance Report? You're not alone. The FAA has detected numerous ADS-B equipped aircraft reporting airborne mode while stationary or taxiing. The installer can correct some issues, but other issues stem from decisions made by the avionics manufacturer. The FAA is working with avionics manufacturers to better understand the symptoms and next steps.
To clarify, the ADS-B avionics makes the Air/Ground decision. The ADS-B Performance Report includes an assessment of the ADS-B avionics' ability to determine airborne vs. ground mode. If you receive an Air/Ground failure, please first work with your installer for guidance on appropriate corrective action. If the issue remains, reach out to your avionics manufacturer. If you're still experiencing issues, please email 9-AWA-AFS-300-ADSB-AvionicsCheck@faa.gov and request a review. Please attach the ADS-B Performance Report with Subject: 'PAPR Review Request – Air/Ground Failure' in your email to help expedite a response.

The FAA, general aviation associations, and the charting industry are working to update the plates to make to read

The FAA will be adding a box near the top of the approach plate above the briefing area that lists the type of navigation equipment necessary to enter the procedure and to fly any portion of the procedure. The title of

the approach plate will continue to list the equipment required to fly the final approach segment, such as ILS or LOC.



READ MORE

F-16 MECHANIC INVENTS BETTER TOOL TRAY

The result is the Grypmat**, a** malleable form-fitting nonslip tool tray that stays close at-hand without marring an aircraft's surface.

I intend to live forever… So far so good

NEW TAX LAW: IS YOUR AIRPLANE DEDUCTIBLE?

FLYING

CONVERTIBILITY

fixed gear today . . . . . retractable tomorrow

Mooney Master goes 'em all { CESSNA 172 / CESSNA 175 / TRI-PACER / CHEROKEE / MUSKETEER } one better

The Mooney Master is the only fixed gear plane on the market selling in the low-price category with the design, rugged construction and flight-safe engineering for big plane performance. The Master is an experienced, tested, and proven aircraft, with years of research and engineering development behind it. Super strength metals, famous pyramid and load-bearing construction techniques make the Master the most rugged plane in its field.

GOOD, SOLID STABILITY . . . . Here is a safe, easy to fly plane that lets a rank beginner fly like a seasoned pilot. The Master makes an ideal flight instruction plane with easy transition to retractable.

LOOK AT THE EXTRA FEATURES: Wide stance landing gear, steerable nose wheel, modern low-wing design, variable hydraulic flaps, and a hefty 180 horsepower. Student or experienced pilot, you'll like the solid, safe, responsive feel of the Mooney Master. It's easy to handle on the ground or in the air. You'll like the safe, sure landing speed that lets you touchdown at a slow 57 mph.

PLUS THE BIG EXTRA—CONVERTIBILITY: No other plane can offer the versatile feature of conversion to retractable gear when you're ready for high performance flying. You can start and stay with the same plane and step up to fast, 180 mph, high performance flying at tremendous savings. Mooney's quick, positive, easy-to-operate manual gear gives you all the money saving advantages of retractable gear. You get extra speed, extra range, extra performance for less operating dollars and you get 'em without the worry and expense of electrical or hydraulic gear. For the perfect answer to present and future needs, Mooney goes 'em all one better—fly the modern 'convertible' MOONEY MASTER — a dollar-saving, practical investment for years of flying pleasure. The proof is in performance — ask for a demonstration ride.

Write for complete information kit giving rules, articles of incorporation, membership forms, and organization plans for forming a flying club or group ownership plan.

MOONEY

MOONEY AIRCRAFT, INC. KERRVILLE, TEXAS

FLYING—August 1963

CIRCLE NO. 51 ON READER SERVICE CARD

23

The Mooney Flyer Fly-Ins

March 7-12: Loreto, Mexico (MMLT) – Fly to Baja Mexico with fellow Mooney pilots and stay at La Mision resort, or another hotel of your choice. Enjoy Loreto. Take an optional flight to San Ignacio for a worldclass whale trip. More details later. We will walk you through how to do this flight and return. You can even meet us in San Felipe and go through the simple entry procedure with us.

Register

March 17-18: **Spring Training Baseball & BBQ** (Seattle v SF Giants): Goodyear, AZ (KGYR). Fuel and Hangar discounts. **3/17 Afternoon**: Presentation by Ryan Reeves, Gen. Mgr Lux Air, about the Goodyear Airport's 75-year history. Tour the German Air Force training; Lufthansa training fleet, and dozens of airliners parked in the desert. **3/18**: 1:10 pm Seattle Mariners v. San Francisco Giants at Peoria Stadium 16101 N 83rd Ave, Peoria, AZ 85382 (tickets at the door, or http://m.mlb.com/mariners/tickets/spring/index)

6:00 pm, BBQ at the home of Mooney owner Jeffrey Lawrence.
Hosted by Jeff Mirsepasy (Cell: 206 679 6477 Email: jeffmirs@gmail.com)

Register

MAPA Safety Foundation
MooneySafety.com Mooney Pilot Proficiency Program

February 10-12: Fort Meyers, FL (KFMY)
April 7-9: Santa Maria, CA (KSMX)
June 2-4: Chatanooga, TN (KCHA)
Sep 8-10: Frederick, MD (KFDK)
October 6-8: Dubuque, IA (KDBQ)

All Meetings at 11:30am

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

February 11: Bartow (KBOW), Nivis Landing
March 11: Fort Pierce (KFPR), Tiki Restaurant
April 8: New Smyrna Beach (KEVB), Lost Lagoon Grill
May 13: Flagler (KFIN), High Jackers Restaurant
June 10: Sebring (KSEF), JR's Runway Cafe
July 8: Williston (X60), Pyper Kub Cafe
August 12: Lake Wales (X07), Shuttle to TBD Restaurant
September 9: Lakeland (KLAL), Hallback's Bar & Grill
October 14: Flagler (KFIN), High Jackers Restaurant
November 11: Vero Beach (KVRB), C.J. Cannons Restaurant
December 9: Punta Gorda (KPGD), Skyview Cafe

Other Worthy Fly-Ins

April 4-9: Sun n Fun (KLAL) http://www.flysnf.org/

July 24-30: Airventure (KOSH) http://www.eaa.org/en/airventure

AOPA Regional Fly-Ins

April 28-29: Camarillo, CA
September 8-9: Norman, OK
October 6-7: Groton, CT
October 27-28: Tampa, FL

PORTABLE OXYGEN KIT

We found the perfect "complete" portable oxygen kit for those of you that do not have a built-in oxygen system. The kit is quite complete and the quality is very high. It's sold by Precise Flight, the same folks that sell Speed Brakes for our Mooneys. We highlight the 2 person kit which includes everything you need for yourself and 1 passenger. There are solo packs and 4 person packs as well, depending on your need.

The kit contains:

- 6.3 CU. Ft. Aluminum Oxygen Cylinder
- 6.3 Cubic Foot Case With Shoulder Strap
- A-5 Oxygen Flow Meter With Tubing And CPC Connector
- 2 Oxymizer Cannula For Use With Flow Meters
- 2 Standard Face Mask - Certified to 25,000 Feet
- Two-Person Oxygen Pressure Regulator

Arizona

Jim Price (CFII, MEI, ATP). Chandler, AZ (KCHD). 480-772-1527. JasPriceAZ@gmail.com Proficiency training and IPCs. Website: www.JDPriceCFI.com.

Ken Reed (CFI, CFII, MEI, ATP), Tucson, AZ. 520-370-3693. Owns M20K and has previously owned an M20C, M20F & M20M. *kr@klrdmd.com*

Boris Vasilev (CFI, CFII, MEI, AGI), Phoenix Area. 602-791-9637 freedomflightservice@gmail.com.Time in M20C through M20R models. Private commercial and instrument training, BFR's, IPC's, and FAA Wings.

California

Geoff Lee, San Martin, CA. 69050@comcast.net. CFII, 11,000+, Mooney Rocket owner. Teaching since 1969.

Don Kaye (Master CFI) Santa Clara, CA. (408) 249-7626, Website: www.DonKaye.com. Master CFI. PPP Instructor, MAPA, 8 years; Owner: M20M. Total: 10,265; Mooney: 8454; Instruction: 5641

Chuck McGill (Master CFI) San Diego. CA 858-451-2742, Master CFI, MAPA PPP Instructor, M20M, M20R, M20TN, Website: Click Here. Mooney: 6000; Total: 13,000 Instruction: 9800

Rodrigo Von Contra, Oakland. CA. (510) 541-7283, Rodrigo@vonconta.com. Sets record in a Mooney. 7,000 hrs. CFII & Gold Seal; Garmin (including G1000) training; Ferry flights (experience in Central & South Amer) transition training & Aircraft Mgmt; Owner: M20J/Turbo Bullet

George Woods, Woodland, CA (O41). (530) 414-1679, georgemichaelwoods@yahoo.com. Fixed wing CFII, Multi-Engine, Helicopter, Glider & Gyroplane CFI. Owns Mooney Rocket.

Paul Kortopates, San Diego Area. (619) 560-8980, Kortopates@hotmail.com. PPP Instructor, MAPA; Owner: M20K/252. Total: 2500; Mooney: 2000

Mike Jesch, Fullerton, CA. (714) 588-9346 (e-mail is best), mcjesch@pacbell.net. Total: 20,000

Instruction: 1500, FAASTeam Lead Representative, Specialites: Airspace, Garmin 430/530, Proficiency flying; Wings Program, VP Pilot's Asso. Master CFI for ASME, IA.

Colorado

Chad Grondahl, Colorado Springs (KCOS), chad@sundhagen.com.
CFI, CFII, MEI & ATP, Mooney owner (M20F) and FAA Gold Seal Flight Instructor specializing in transition and proficiency training, mountain flying, flight reviews, IPCs, turbocharged aircraft checkouts, ferry flights, and air-to-air photography of your Mooney. Experience: 4,500 hrs TT - 1,800 hrs Dual Given - 750 hrs in Mooneys (most models).

Ben Kaufman, Fort Collins, CO. (KFNL). (CFI/CFII) – (801)-319-3218 - bkaufman.mba@gmail.com.

Connecticut

Robert McGuire, Durham. Cell: 203-645-2222, rmcguire007@hotmail.com. MAPA Safety Foundation Instructor; founding partner, Aero Advocates Aviation Consultant. Total: 6500; Mooney: 5000

Winslow Bud Johnson, smgemail@aol.com, 203-348-2356. Bud specializes in teaching in the M20K and has logged more than 1,500 hours in that aircraft.

Florida

Mike Elliott Tarpon Springs. (CFII) Master CFI. 317-371-4161, mike@aviating.com. Quality instrument & commercial instruction, transition training, ownership assistance, plane ferrying. Mooney: 1600; Instruction: 600

Ronald Jarmon, Panama City. (850) 251-4181. ***IAELLC@gmail.com***. Total: over 7000. WILL TRAVEL! Will accompany customer out of Country, ferry flights, mountain flying, avionics training, Garmin Products. Total: over 7000. Web Site***: IslandAirExpress.com***.

Robert McGuire, Hawthorne. (203) 645-2222, (Dec – Feb), rmcguire007@hotmail.com. MAPA Safety Foundation Instructor; founding partner, Aero Advocates Aviation Consultant. Total: 6500; Mooney: 5000

Ted Corsones, Naples. tedc@corsones.com, 239-263-1738. Total: 7500, Mooney: 4500, Instruction: 2000+. ATP & MCFI for MEL, MES, SEL, SES, Instrument Airplane & Glider. Master Instructor Emeritus. He serves with the MAPA Safety Foundation as an instructor, treasurer, and chief financial officer.

Georgia

Jim Stevens, Atlanta. USAF, Col, (ret), CFII. 404-277-4123. Instrument, commercial, IPC, BFR, transition training, ferry flights. 20 year owner of 1968 M20F. Total: over 6000; Instruction:1500

Kansas

John R. Schmidt, Fort Leavenworth and the Kansas City area. (COL, USAF, Retired). Instrument and commercial instruction, transition training, BFR. (913) 221-4937. jspropilot@att.net

Maryland

George "Brain" Perry, Maryland area (Frederick). Commander, USN, Retired. Senior Vice President, AOPA Air Safety Institute. 5000+ hours TT in lots of different aircraft, including F-14 and F-18's. 1000 Hours in Mooneys of all flavors. 1000 hours of dual given. CFII / MEI / ATP / 525S. He currently owns and flies a 1999 Eagle M20S and fly about 200. George.perry@aopa.org

Massachusetts

Ralph Semb, ralph@bowling4fun.com, 413-221-7535. I own and fly a M20S Eagle.

Minnesota

Joe Allen, Minneapolis, jp.allen926@gmail.com, 612-636-5216. I own and fly a M20J and am able to provide BFRs and Mooney Instruction.

New Jersey

Parvez Dara, daraparvez@gmail.com, 732-240-4004. ATP, MCFI SEL/MEL with an advanced ground Instructor rating. Parvez has owned a Mooney M20J and a Mooney M20M (Bravo).

New York

Jack Napoli, Long Island. TT 6,000 hrs & Mooney time 3,000, jacknapoli12@gmail.com 631-806-4436. He has been flying since 1965 (before he owned a car) and has 6,000+ hours of total flying time including 3,000+ hours in Mooneys. He owns a M20K-231.

North and South Dakota

Doug Bodine, Commercial Pilot/Flight Instructor, Cell 605 393-7112, mei.cfii@gmail.com I am a retired USAF pilot, now working as a commercial contract pilot, so various model experience from WWII Warbirds through heavies. I have been flying Mooneys for 12 yrs and have a 201. I have been instructing since 1994 and am at about 10,000hrs. I actively instruct in tail wheel and turbine as well. I have flown all the common Mooney modifications – missile, rocket, screaming eagle, trophy, etc. Even have time in the M22 Mustang. (See also, Texas). Total: 9800; Mooney, 1300; IP: 5600/21 years

Ohio

Mike Stretanski, Delaware Municipal Airport (KDLZ), Delaware, Ohio, AGI, CFI, Mooney Owner/Flyer, Flight Physicals, Senior AME, Test prep/Written review prep, Transition Training, G1000, HP/complex endorsements. 614-975-1003 MFSTRETANSKI@gmail.com

Jeff Schnabel, based at Cincinnati Municipal Airport-Lunken Field (KLUK), Cincinnati, Ohio. CFII, MEI, ATP, A&P. 5,000+ hrs exp. Owned a 201 for 18 years, currently flying Mooney Ovation, Bravo, 201 and 231 types. Over 2,000 hrs flying Mooneys. Very experienced flying as well as maintaining these birds. And yes, I am a Mooniac. (513)484-0604 schnabel79@gmail.com

Tennessee

Shawn Cuff, Hohenwald, TN (0M3) ATP/CFI-II-MEI. Flying an M20K with Garmin 530W for local company. Relaxed and pleasant flight instruction, flight reviews and instrument competency checks. Contact: **Shawn.M.Cuff@icloud.com** or 931-230-5400. Thank you for reading and safe flying!

Texas

Austin T. Walden, Lubbock & Abilene. 432-788-0216, AustinWalden@gmail.com. PhD, Specializing in Models C thru J, www.WaldenAviation.com.

Doug Bodine, Commercial Pilot/Flight Instructor, Cell 605 393-7112, mei.cfii@gmail.com Retired USAF pilot, now working as a commercial contract pilot, so various model experience from WWII Warbirds through heavies. I have been flying Mooneys for 12 yrs and have a 201. I have been instructing since 1994 and am at about 10,000hrs. I actively instruct in tail wheel and turbine as well. I have flown all the common Mooney modifications – missile, rocket, screaming eagle, trophy, etc. Even have time in the M22 Mustang. (See also, North and South Dakota). Total: 9800; Mooney, 1300; IP: 5600/21 years

Bob Cabe, San Antonio. Cell: (210) 289-5375, Home: (210) 493-7223, bob_cabe@hotmail.com. Total: 5000; Instruction: 2000+. Pilot since 1965. Served as an instructor providing transition training for people purchasing new Ovations & Acclaims. Total: 5000; Instruction: 2000+

Brian Lloyd, Kestrel Airpark (1T7). 210-802-8FLY, Brian@Lloyd.aero. WILL TRAVEL! Owner: M20K/231; Non-Mooney :-) specialist in spin training, upset recovery training, basic aerobatics formation training, tail wheel transition. Total: 8500; Mooney: 500

Mark Johnson, Houston area. mjohnsonf16@hotmail.com. 832-773-4409. CFII, SEL. Citation 501 and a King Air 350, F-16s and F-117s; currently a T-38 Flight Instructor at Sheppard AFB as a Reservist in the USAFR. Owns an '81 M20J 201. 5800 total hours, 2200 military and 1500 hours of it in Mooney aircraft.

Jerry Johnson, Southwest Texas**.** mooney9281V@hotmail.com. 817-454-2426. Commercial, SEL/MEL CFII, Glider, Typed in C-500's. Member MAPA Safety Foundation. Owned a Mooney for over 30 years. Total: 11,000 +; Mooney: 6000.

Vermont

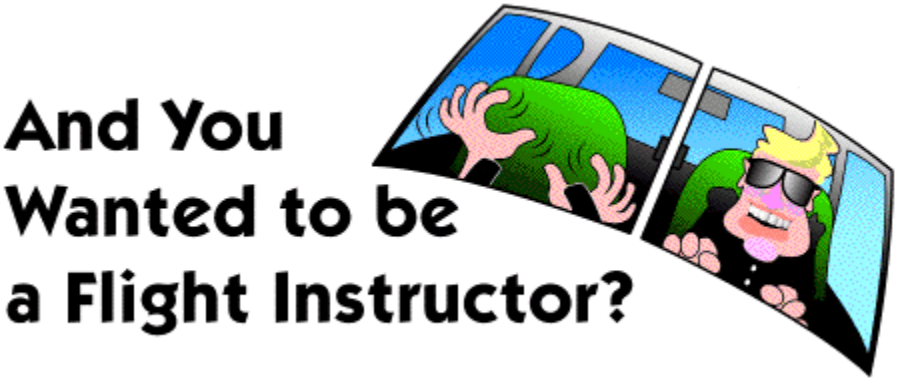
Ted Corsones, Rutland. 813-435-8464, tedc@corsones.com. Total: 7500, Mooney: 4500, Instruction: 2000+. ATP & MCFI for MEL, MES, SEL, SES, Instrument Airplane & Glider. Master Instructor Emeritus. He serves with the MAPA Safety Foundation as an instructor, treasurer, and chief financial officer.

Virginia

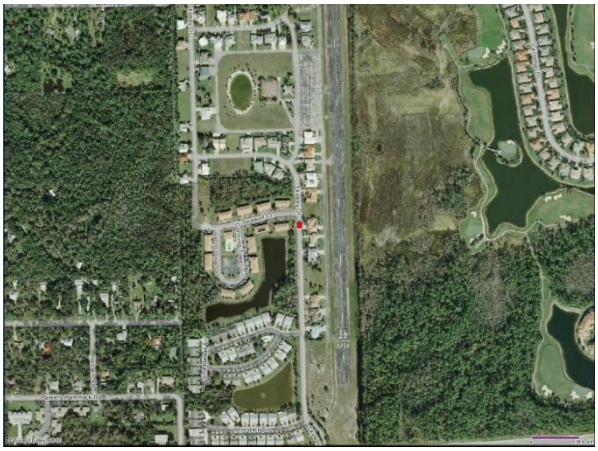
William Wobbe, Leesburg. william.wobbe@gmail.com , (713) 249-7351. ATP, SES, SEL, MEL, MES, CFI, CFII, MEI, AGI, IGI, ADX. Time in M20B through M20TN models and very familiar with Garmin G-1000, GTN750/650, and G530/430 avionics. 1600+ dual given in Private through ATP training. MAPA PPP instructor and lots of experience in cross country all weather flying including TKS Known Icing Systems. Flight Service Station Specialist and familiar with iPad weather planning apps such as ForeFlight. I can answer your questions about the Washington, DC SFRA and ICAO Flight Plans.

Joseph Bailey, *Winchester*. (540) 539-7394. b747aviator@yahoo.com ATP MEL, Commercial, SEL, SES, Glider. CFI, CFII, MEI, CFIG. EXP in Mooneys A-J. Providing initial & transition training. Total: 7800; Mooney: 500; Instruction: 3000

Lee Fox, Fredericksburg. 540-226-4312, LCFox767@gmail.com. Mooney Staff CFI, Mooney Safety Foundation. Retired American Airlines Check Airman. Owns a M20J 201. Total time: Over 20,000.



Unique air park community located in prestigious Naples Florida. The community is quiet and gated. Taxi from your garage to the runway. Perfect for aviators and hobbiests alike. Runway is 4400x100 ft/1341x30m. Lat/Long: 26-07-00.3300N/081-42-11.3090W, 26-07.005500N/081-, 26.1167583/ -81.7031414. 5 Miles SE of Naples, FL. Only $209000. Call Cara Mahoney, Coldwell Banker Residential Services, 239-272-3098 or email Ccara4realestate@yahoo.com



1994 Mooney M20M Bravo with TKS ($150,000 until 2/6/2016)

Always hangared, complete documentation including flight journal with every flight made. No damage history. New mags, turbo, alternators, and avionics. Approximately 1750 TT. August annual, excellent compressions (78-75-76-77-75-78) and oil analysis.

Garmin GTN-750 plus complete new panel plus TKS Anti/De-Ice. Avionics upgrade include GTN-750, GNC-255 #2 Nav-Com, GMA-35 Audio Marker, GLD-88 Data Link, GTX-330ex Transponder, Flightstream-210 (iPad sync to Foreflight or Garmin Connext, MD-200 CDI (full ILS backup with GNC-255), MyGoFlight iPad panel mount plus iPad yoke mount plus custom USB panel mount power supply. WX-1000+ Stormscope. Well planned panel, full redundancy with dual batteries, dual alternators, dual vacuum, and iPad AHRS. Very safe IFR machine!

Yes, at some point will need an overhaul, but all components have been rebuilt or replaced at last annual and engine runs strong. 2000 TBO or beyond (part 91). Airmark overhaul quote $39,400. It's a lot of airplane for the price, easily +$250K to go up to anything better.

Our mission is higher, faster, and more pax, so the beloved Mooney must go. If it fits your mission profile, a great bird at a great price. $165K on Trade-A-Plane, $155K to **Mooney Flyer subscribers** (firm). Call 786-581-7225.

For Sale -- Mooney M20J, IO-360-A3B6D, Exhaust System. Removed recently to install a Power Flow Exhaust System. In good, serviceable, condition, according to the Mooney mechanic who inspected it at pre-buy (7 months ago) and the mechanic who removed it (2 months ago). Asking $450 plus shipping. Shipping calculated upon sale. Located in Perry, Oklahoma (F22). Call 405-338-8992.

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

Mooney Cover

This cover will fit a newer, long body Mooney. Asking $600 (When new, these covers cost $1,149), Contact Jason Herritz at Chandler Aviation, Inc. 480-732-9118 parts@chandleraviation.com

LASAR'S Free Site

Check out Lake Aero Styling & Repair's " LASAR" Web Site: www.lasar.com New, under "Mooneys for Sale", you can List your Mooney for FREE!

Also check out Parts, Mods, and Services. LASAR, est. 1975 **(707) 263-0412** e-mail: parts-mods@lasar.com and service@lasar.com

FOR SALE

1965 Mooney M20E Super 21

TT 6425, SMOH 780, SPOH 780, 200hp Lycoming IO-360-A1A, Hartzell Prop with "B" hub (no AD), 201-style instrument panel, manual gear and flaps, Century NDS360 HSI, KX-155 w/GS, KI-209, KX170B w/ GS w/ MAC1700 digital upgrade, KR22 MB, KR 86 ADF, Northstar M3Approach GPS w/ Argus 3000 moving map, CP125 audio panel, PS Eng. intercom, WX-8 stormscope, AT-50 transponder, Brittain wing leveler, standby vacuum system, IFR certified to 20,000 ft. UBG-16 engine analyzer, LASAR cowl closure and brake caliper rotation, tanks leak free, leather interior, inertia reel shoulder belts, all factory manuals on USB stick. Owned, hangared (AZ) and maintained by A&P/IA last 18 yrs. $45,000

K. McMullen, 480 460 0639, kellym@aviating.com

1978 Mooney 201VL
$ 85,500 New Price
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

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