The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

April 2018

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West Coast Mooney Club

We are excited, here at The Mooney Flyer, to be hosting the inaugural Fly-In for the West Coast Mooney Club on April 14 in Paso Robles, CA (KPRB). Since our magazine is FREE, we thought our BBQ lunch should also be FREE. As of this writing, we have 36 Mooneys and 73 crazy Mooniacs registered. You can still **REGISTER HERE**. We need you to register so we can provide the right amount of food. One Mooniac is taking delivery of his new M20F that morning and flying directly to the Fly-In. Now that is MOONIAC SPIRIT! There is nothing better than a Mooney fly-in with the BEST PLANES and BEST PILOTS in the world! Meetup with old friends and make new ones! There will also be an optional visit to the Estrella Warbird Museum (www.EWarbirds.com) between 10am-5pm. **CLICK HERE** for the Fly-In Arrival Document. The Mooney Flyer wishes to thank and acknowledge Mike Rogers, who formed the West Coast Mooney Club this past month! We are excited.

M20M Bravo Valuation

On the heels of adding the M20K and M20R, this month we have added the M20M Bravo to the Mooney Valuation Tools. Check it out and give us your feedback.

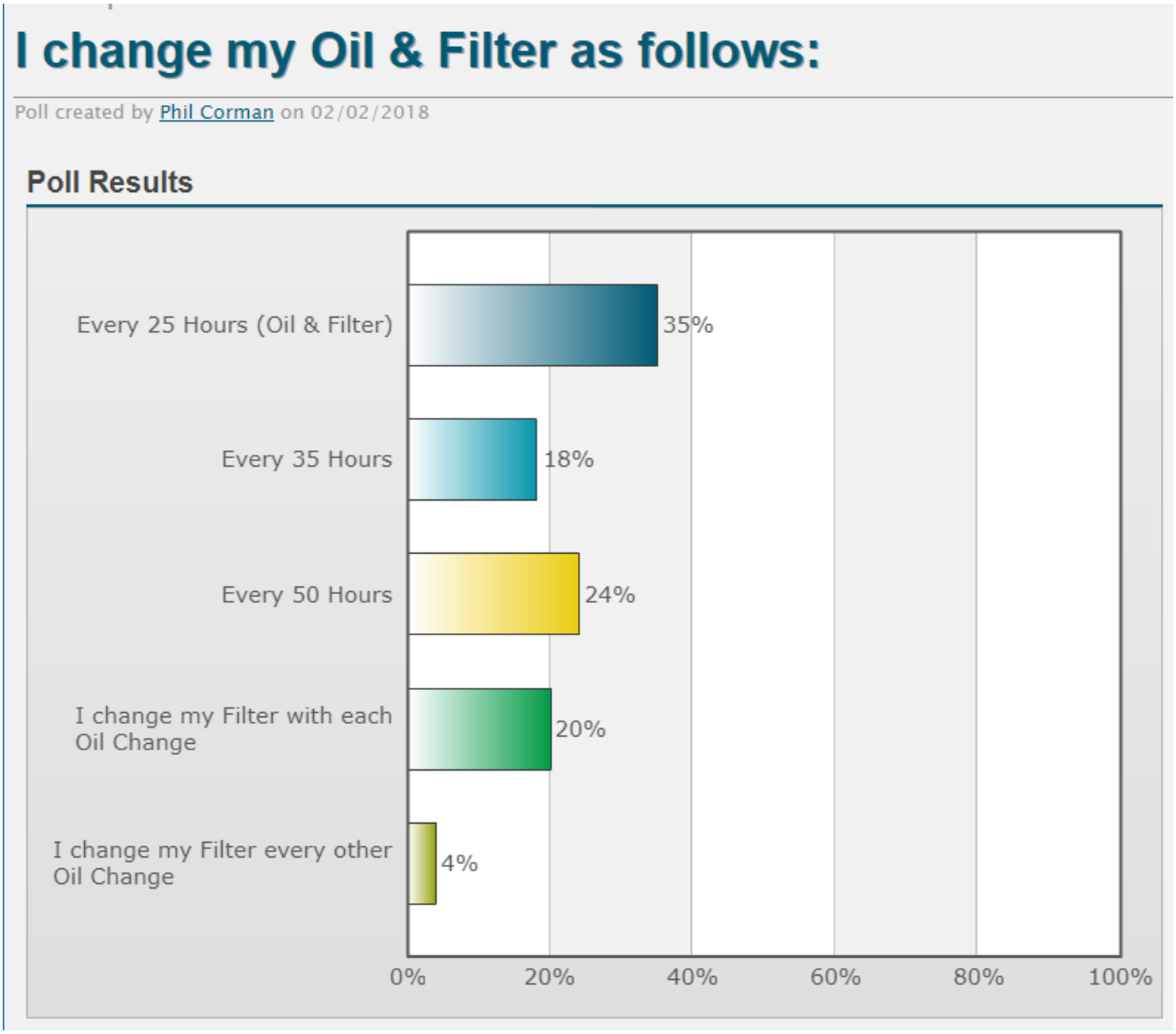
TMF techtips

At GNS startup, if you see "FP WYPT locked!" on the 430/530 screen, this means that when the NavData Card was UPDATED, the waypoint(s) in the flight plan catalogue no longer exist in the new database. Thus, locking the nonexistent waypoint.

You should remove the flight plan with the invalid waypoint(s). If that doesn't work, remove all of the stored flight plans. The "FP WYPT locked" message should then go away.

To remove/delete a flight plan:

1) Press the FPL (flight plan) button.
2) Turn the small knob one click to the right to access the flight plan catalogue.
3) From the Flight Plan Catalog Page, press the small right knob to activate the cursor, turn the large right knob to highlight the flight plan to be deleted, then press the MENU Key to display the Flight Plan Catalog Page Menu.
4) Turn the large right knob to highlight 'Delete Flight Plan?' and press the ENT Key.



Next month's poll:"Regarding Pattern Entries…." **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 M20M

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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We love getting mail!

Just read through the latest issue and saw that you have a Valuator for the M20R, so I checked it out. One thing I see is that you only go up to model year 2007. This makes some sense because there aren't too many models in the fleet newer than that. Mine is a 2006-2007…it was built in 2006, but sold in 2007 so I've seen it listed both ways.

But the problem is, that even in late 2006 and 2007, Ovations came standard with G1000 and you don't list that in your avionics options. If you plan to make some updates to this, I would suggest that you add in some new variables, such as:

- G1000
  - WAAS vs. non-WAAS (most of them will be non-WAAS unless they have been specifically upgraded, as was mine, which was a $23K event so that should add some value)
- STEC 55x autopilot vs. GFC700 (GFC700 will be standard after 2008 I believe, but many of the early G1000s…mine included…have the STEC. Some people upgraded to the GFC700 even in the newer models so that would have an impact on valuation.)
- Traffic capability
  - TIS-A (standard)
  - Active Traffic (an option)
  - Full ADS-B in/out (a recent option, which I see you do have)

Based on my quick test of the system with what I could enter, I believe your valuations are quite a bit higher than what I see when looking at the market, but it does give a good place to start the negotiations.

Cheers!

Jeff S

I have a few points of clarification re the article on Fuel Leaks.

1. Wood wing Mooneys have removable metal tanks.

2. Metal wing was designed by Ralph Harmon long after the Mooney brothers left the company, so it is highly unlikely they had anything to do with the design of the wing tanks.

3. The sealant used in the 1960s metal wings was very different than the current *ProSeal*. It was pink in color, dried out, got brittle and powdery on the surface, causing the top coat to peel off. That sealant likely could be damaged by a hard landing due to brittle condition, although I had some still in good condition 50 yrs later.

4. I seriously doubt the current sealant can be damaged by a landing. I have not found any 1980 or later P*roSeal* in a hard or brittle condition, and the wing would have to actually bend to cause loss of adhesion. Anyone ever see a Mooney wing bend?

5. I suspect that most failures of a current *ProSeal* is from either contamination of the metal when the sealant was applied, or the sealant wasn't properly mixed, or temperature was outside sealant cure limits. I have found sealant more than 10 years after application with both parts of the sealant unmixed and uncured. I also found that several Mooney shops try to accommodate customers by doing patch work in a few days. Tank repairs take time, at least a week or more if you do a proper cleaning and allow each step to cure before proceeding to the next step, and use all 3 sealants called for in the manual. Doing less, or skipping steps is asking for future leaks.

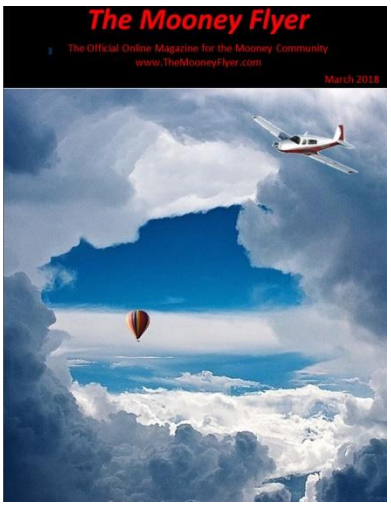
By following the manual procedures, I stripped and resealed a tank that was still leak free 7 years later when I sold the aircraft. Just my perspective after spending several months working on Mooney tanks, and owning a 1965 Mooney for 18 years.
Kelly
Editor Note: Thank You Kelly. Your willingness to continue to share your extensive knowledge on a regular basis with us Mooniacs is truly appreciated!

The Mooney Flyer has to be the best thing ever. I'm presently in the market for a Mooney!!! I'm not a first time owner though. Well, it's my first time owning a light aircraft. I've got a King Air 350i and a Hawker 800XP !!!
Sanjay
Editor Note: Wow, Thank You Sanjay! Feedback like this keeps us going!

Thanks for keeping my Adverstisement in The Mooney Flyer. It was noticed by one of your readers. They came, took a look and we made a deal. I will be sending you a well deserved donation.
Mike

Another great cover picture. I am also a balloonist...God help the balloon pilot on the cover!
Marty H

Is there any reason that I shouldn't use the high boost when priming my engine for cold starts? I find that it starts quicker than when I use the low boost, but I don't want to cause any damage by doing something that's not in the POH. Thanks
Ron T



Editor Note: *We recommend using the HIGH BOOST Pump for 5-8 seconds on a Cold Start. Works like a charm.*

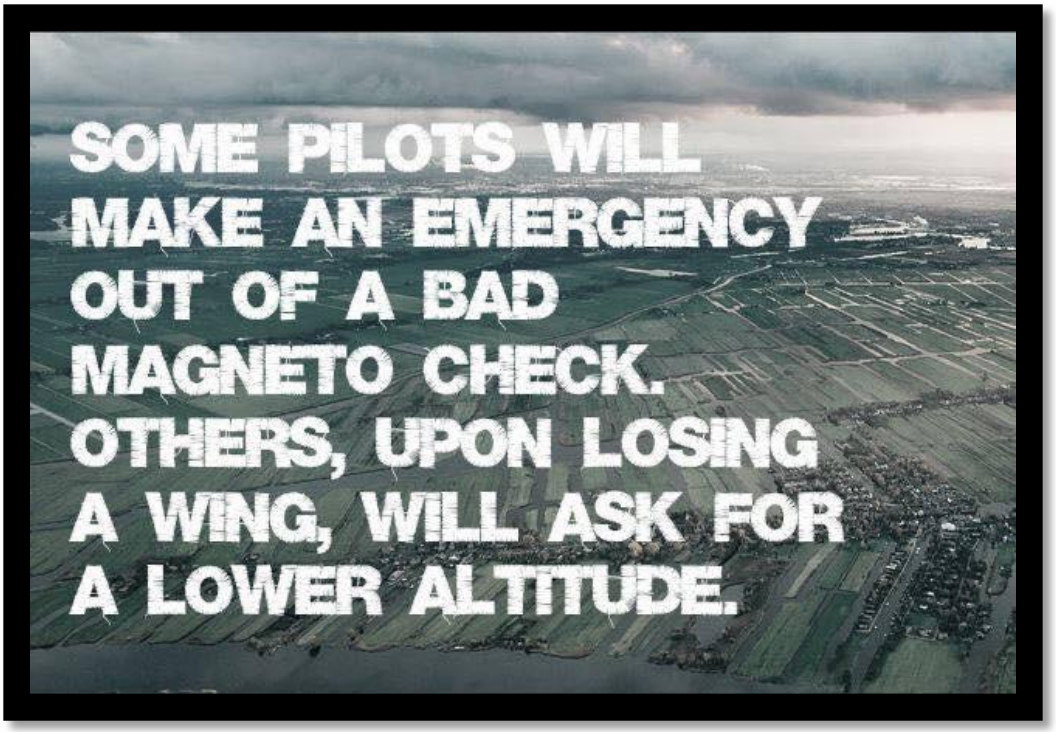
Did the article on **Hot Props and Magnetos** get truncated? The hot prop on my 231 is one of the more mysterious pieces of equipment, even after reading the AFMS for it, and an article on the care and feeding of them would have been really useful.
John C

Editor Note: John, my article was about props that might still be “mag hot" and therefore dangerous. Were you looking for some information about the heated boots on your 231’ prop, also called a “hot prop”? I have one on my 252. According to my MSC, the prop overhaul shops and the prop manufacturer are the experts on the care and feeding. The boots failed a preflight once. The connections, after being exposed to engine heat, broke. It was a quick fix.

I just wanted to add something to your article from something I was taught waaaaaaaay back in '62 when I was young and had a memory for retaining important information. I remember my instructor, an ex WWII pilot, giving me instructions on how to test the magnetos. His advice was much like you suggest with one addition, also test the magnetos in flight. I don't know how much validity his advice has, but his premise was that in flight the magnetos are under greater stresses and loads than they are during a run up. If there were problems developing with the magnetos it would show up at that time rather than when they are lightly loaded. His advice, which I have followed through all these years, is to do a magneto check when entering the downwind before doing any pre landing chores. FWIW

Keep the great articles coming!

Regards
Rich



IFR .REVIEWS

Descending Below the MDA/DH/DA

(FAR 91.175)

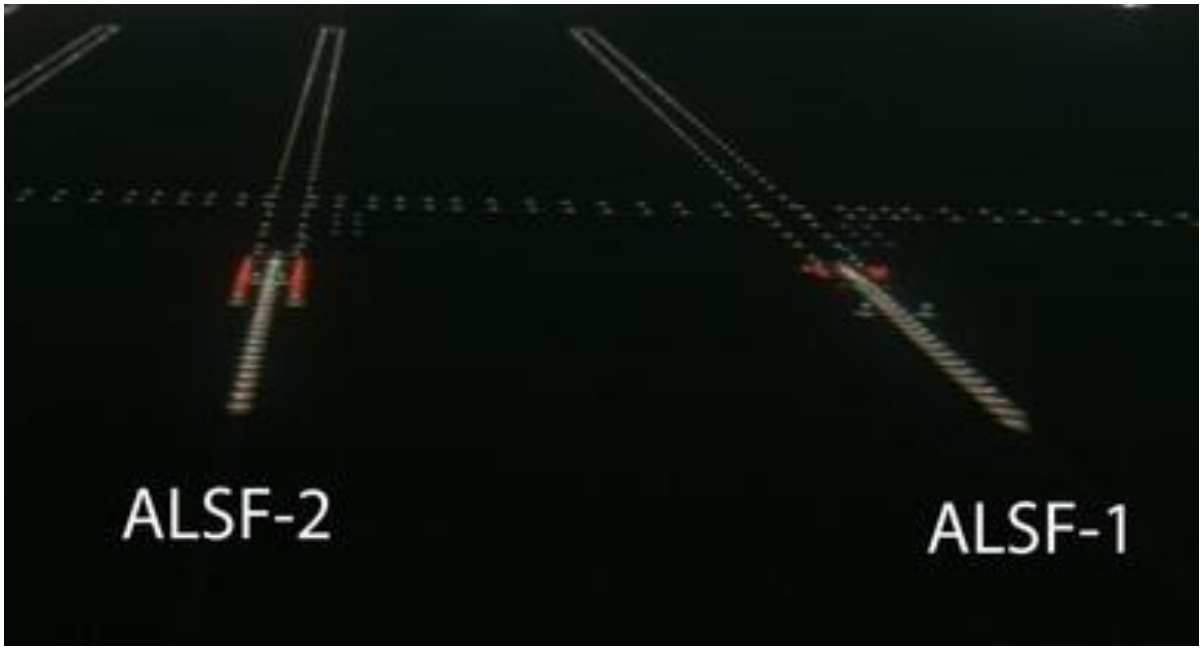
Approach, Part 91 Operations

If the weather conditions are reported to be below minimums, you can still try the approach, just to "take a look". **However, you must never descend below minimums, unless . . .**

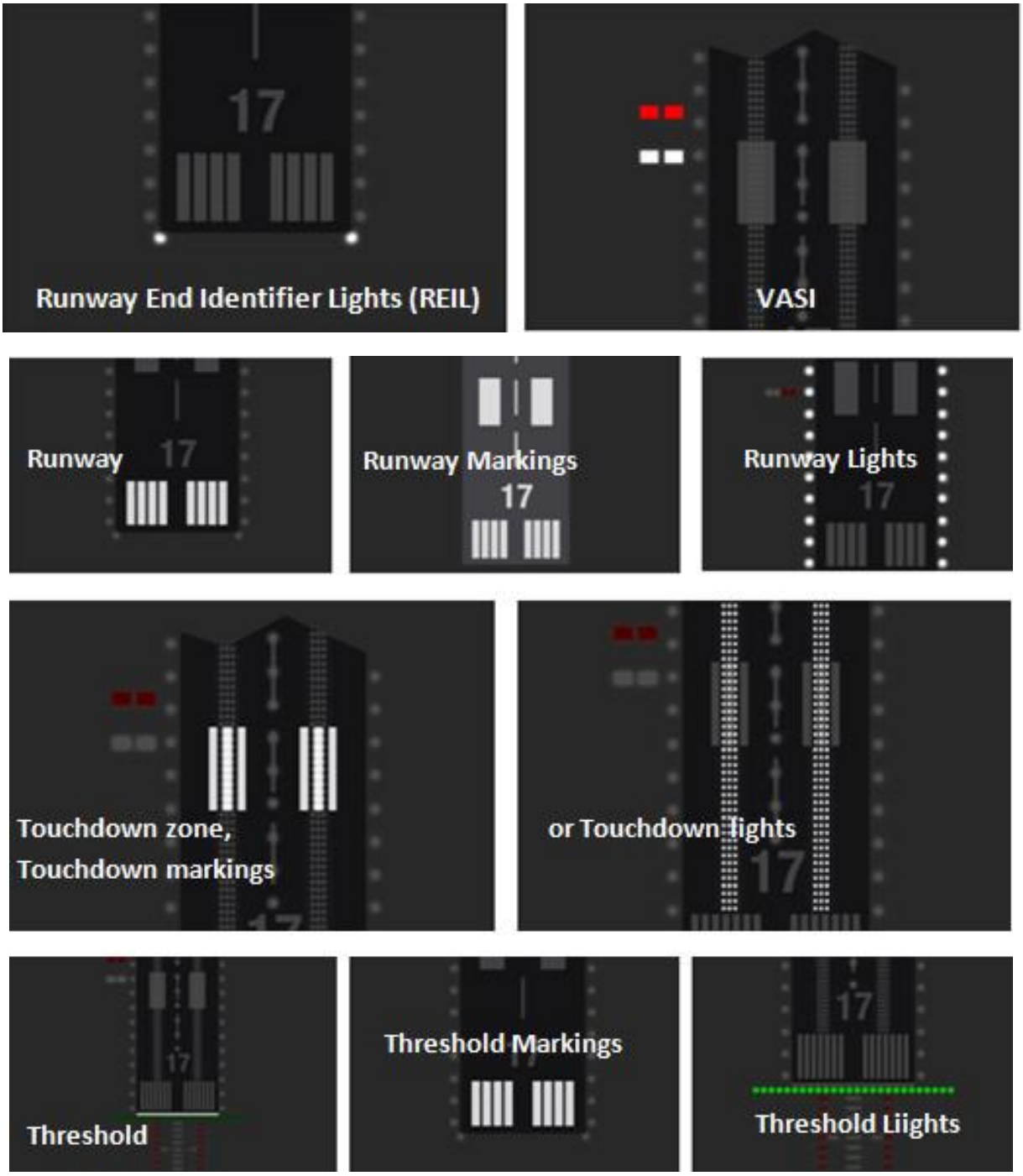
- You're in a position to land on the intended runway using a normal rate of descent and normal maneuvers. (Part 121 & 135 operators must land in the touchdown zone).
- You determine that flight visibility is at or above that which is required to complete the approach.

If the approach lights, (ALSF 1 or ALSF 2), are in sight, you may descend to 100 feet above the Touchdown Zone Elevation (TDZE)*, if either of these are clearly visible:*

- The Red Terminating Bars (ALSF 1 system)
- The Red Side Row Bars (ALSF 2 system)



In the absence of an approach lighting system, you may descend below the MDA/DH/DA and land if <u>any</u> of the following are in sight:



PHIL CORMAN

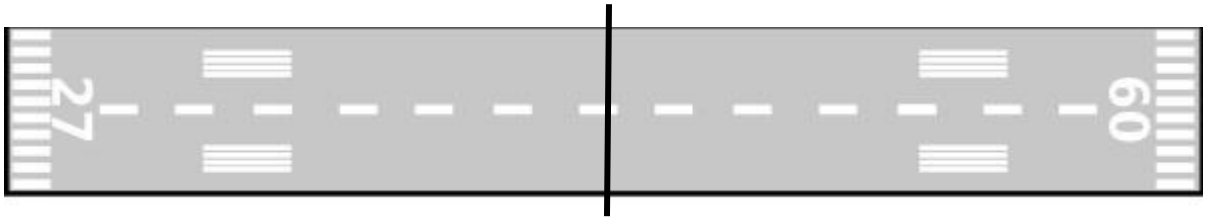
Accelerate Stop

So many pilots concentrate on making good landings in their Mooneys. As seasoned Mooney pilots will tell you, Mooneys are actually easy to land. They simply require a good stabilized approach and for you to be on the correct airspeed for the conditions that day.

In this article, I'm going to concentrate on flying your Mooney safely before even taking off. No, I'm not going to talk about taxiing. You already know to taxi at a safe speed and to deflect the control surfaces to effectively "dive away from the wind". What we will focus on is when, or how, to determine the appropriate time to "abort a takeoff run".

It is important to remind everyone that it takes less runway to land properly, than to take off. Basically, our Mooneys are better at stopping than accelerating.

Most of us are familiar with the 50/70 rule for this which states, "you should have 75% of your takeoff speed at 50% (half way) of the runway. This is especially useful at unfamiliar airports where you will need to do some preflight planning to determine the half way mark on the runway. Yes, you should know your home airport's half way points on all runways, duh! The 50/70 rule can also be extremely useful during higher Density Altitude takeoffs.



Let's use 4,000' foot runway as our first example. I need to make my continue/stop decision at the 2,000' point on the runway, which leaves me with 2,000' to stop. Remember, Mooney brakes are notoriously weak, especially in heavier models. In my Eagle, I rotate at 64kts. My 75% speed is 48kts. If I haven't achieved a ground roll speed of 48kts at the half way point, the 50/75 rule says I should pull the throttle and abort the takeoff. Can I stop in 2,000'? Maybe. You need to take into account several factors, including:

1. Gross weight
2. Wind
3. Flaps
4. Density Altitude

Instead of the 50/70 rule, some Mooney pilots use the 1/3- 2/3 rule which states that you should achieve 2/3 of your takeoff speed at the 1/3 runway mark. This is less common, but surely more conservative and may suit some Mooney pilots better

The heavier you are, the more distance you will need to decelerate to zero kts. If there is a headwind, that headwind will help you to decrease your deceleration distance, since your groundspeed was lower than your takeoff speed. Flaps reduce your takeoff roll speed, so you need to take that into account. Lastly, higher DA increases your ground speed while having

the same takeoff airspeed, so more distance will be required in a higher DA environment. It's unlikely that you would see exactly 48kts, so assume the worst case of 47kts. Could you stop in 2,000'? If the runway were 3,000', could you stop in 1,500' at the same speed? Remember, airspeed is your determinant speed, but groundspeed at the decision point is a huge factor in your stopping distance.

Another factor that you should not forget or neglect is that you will not necessarily pull the power exactly at the midway point. It would be human to take 1 – 2 seconds in your decision and your hand skills, to pull the throttle back to idle.

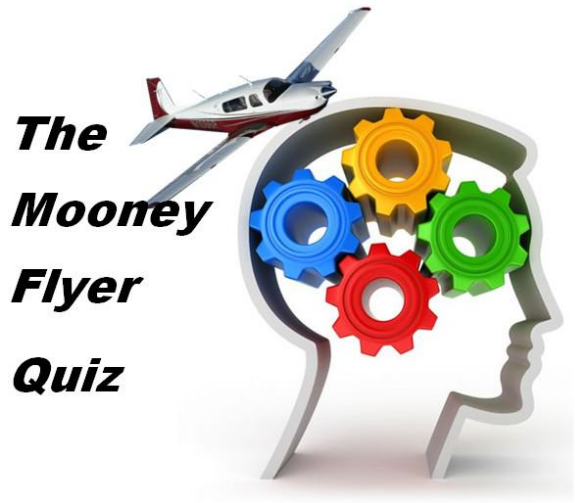
To be prepared to make this decision, you need to think about it for each and every takeoff. Ensure that you know the runway midpoint. If you have a copilot, ask them to call it out as you are approaching it. Do NOT fixate on the airspeed. Keep it in the corner of your eye as always. And, make the go/no-go decision no later than the midpoint of the runway, not afterwards. The biggest thing might be that you are already prepared to make the go/no-go decision at the beginning of the runway. This is the same as being prepared for an engine failure on each takeoff. Don't get lax because you have made hundreds or thousands of perfectly running engine departures.

Weighing the two factors: If you do not abort the takeoff and do not climb out before running out of runway, then you will be travelling faster and do more damage to your Mooney. In the other scenario, either you stop successfully on the runway, or are travelling much more slowly and already on the ground.

Additional References

BoldMethod: CLICK HERE

Mountain Flying: CLICK HERE



1). Your POH may or may not contain a published crosswind component for takeoff and landing. How is a safe crosswind component determined?

A. It was the highest wind speed that was blowing on the day the factory test pilot proved that the aircraft (and pilot) could handle the crosswind.

B. It's at least 20 percent of the stall speed in the landing configuration (Vso).

C. Beyond this limit, the pilot will "run out of rudder".

Answer: B. If Vso is 60 knots at max gross weight, 20% of that is 12. 700 pounds lighter, Vso is 50 knots. 20% of 50 is 10. Mooney also explains in the M20K handbook:

> The velocity of the crosswind component for which adequate control of the airplane during takeoff and landing test was actually demonstrated during certification. The value shown is not considered to be limiting.

2). The POH lists lots of airspeed limitations. Some are marked on the airspeed indicator and some are not. Which speeds are not marked?

Answer: Va (Maneuvering speed), Vx (Best angle of climb speed), and Vy (Best rate of climb speed) are not marked on the airspeed indicator.

Required markings on an airspeed indicator:

1. The never exceed speed (**V**ne) – a radial red line.
2. The caution range – a yellow arc between the red line and the upper limit of the gree arc.
3. The normal operating range – a green arc with the lower limit at the stall speed with the landing gear and wing flaps retracted, and the upper limit at the maximum structural crusinig speed (**V**no)
4. The flap operating range – a white arc with the lower limit at Vso (stall speed with the landing gear and flaps estended), and the upper limit at the maximum flaps extended speed (**V**fe)

3). Does maneuvering speed (Va) change with gross weight?

A. Va increases as the aircraft weight increases
B. Va decreases as the aircraft weight decreases
C. Va remains constant regardless of aircraft weight
D. A & B are correct.

Answer: D

Maneuvering			
VA @ 2092 lbs	101	VA @ 2250 lbs	104
VA @ 2900 lbs	118		

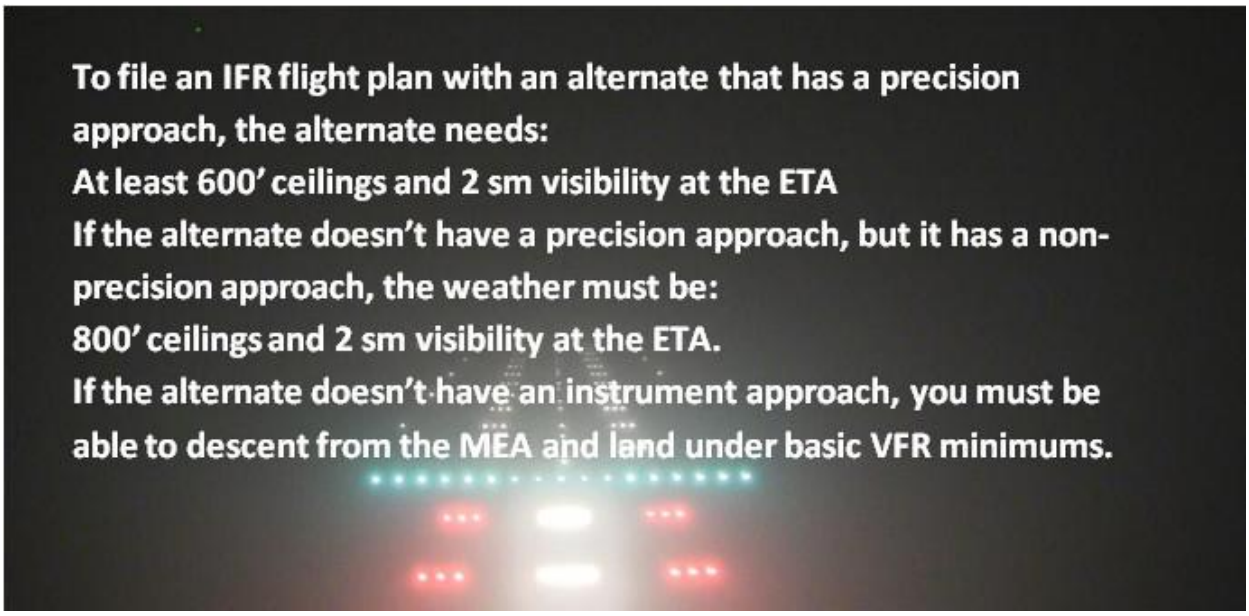
The wing or control surface will stall before the critical load factor is reached. If the critical load factor is exceeded, airframe damage could occur. As the aircraft weight decreases, less air over the wing is required to produce the force necessary to exceed the critical load factor. So, Va decreases as the aircraft weight decreases.

4). I don't know about you, but my fuel gauges have never been the picture of accuracy. When are fuel gauges required to be calibrated accurate?

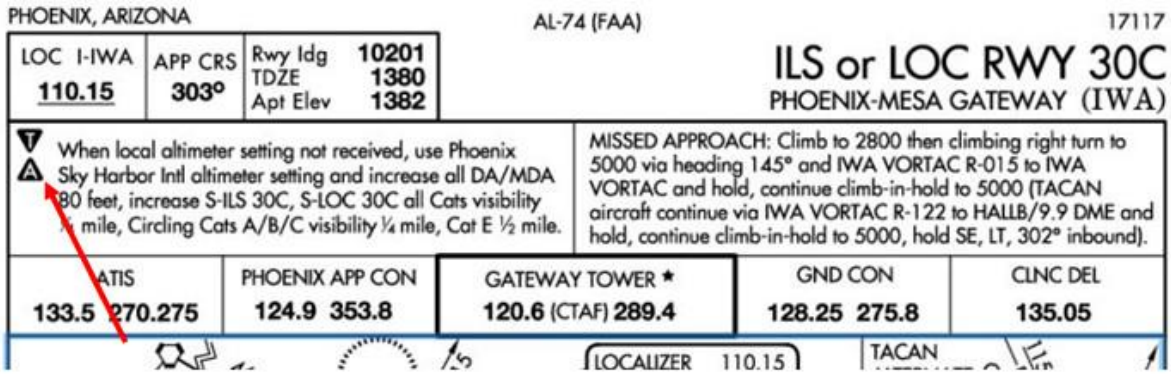
A. At the full and empty indications
B. When the fuel remaining is equal to the usable fuel
C. At the full, half and empty indications
D. When there is zero usable fuel in the tank, the gauge must read "zero"

Answer: D. FAR Part 23 requires that there must be a means to indicate to the flight crew members the quantity of usable fuel in each tank during flight. An indicator calibrated in appropriate units and clearly marked to indicate those units must be used. Each fuel quantity indicator must read "zero" during level flight when the quantity of fuel remaining in the tank is equal to the unusable fuel supply, (zero usable fuel).

5). To file an IFR alternate, what's the minimum weather conditions that must exist at the at the alternate ETA?



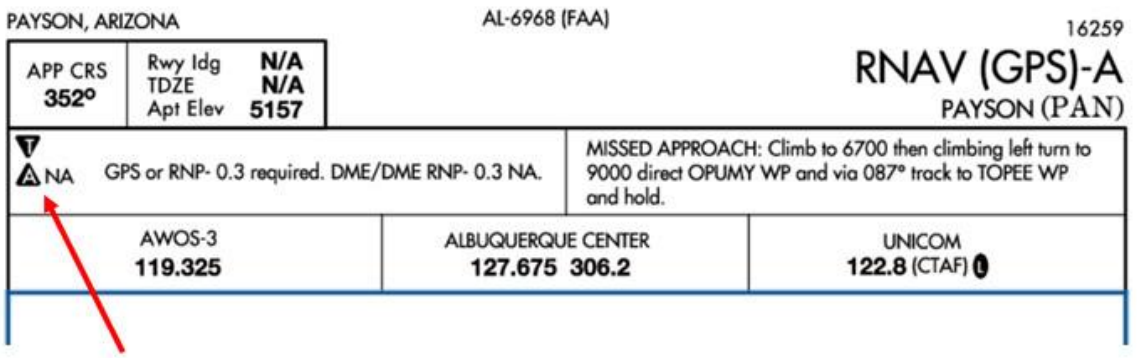
6). If an airport has nonstandard alternate minimums, you'll see an inverted A triangle symbol on approach plates:



This means that this airport has nonstandard alternate weather requirements.

Many airports will have nonstandard alternate requirements due to terrain considerations, and they may vary by aircraft approach category.

If you have a chart supplement, turn to the "A" pages for alternate minimums. Sorted by city name, you'll find the new weather minimums you must use to determine if an airport is eligible to file as an alternate.If you're using ForeFlight, you can click on the "alternate minimums" tab under "arrival procedures".


PAYSON, ARIZONA AL-6968 (FAA) 16259

RNAV (GPS)-A

PAYSON (PAN)

APP CRS 352° | Rwy Idg N/A | TDZE N/A | Apt Elev 5157

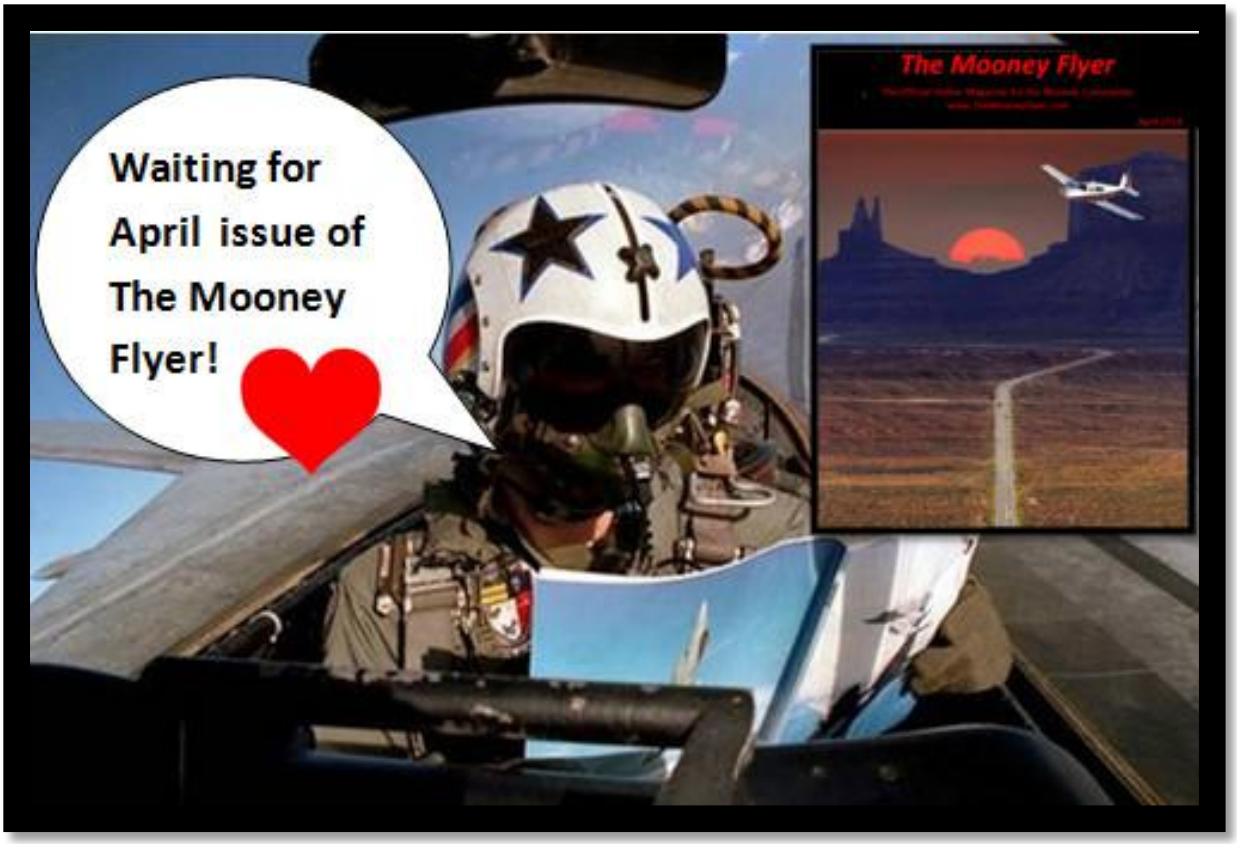
NA GPS or RNP- 0.3 required. DME/DME RNP- 0.3 NA.

MISSED APPROACH: Climb to 6700 then climbing left turn to 9000 direct OPUMY WP and via 087° track to TOPEE WP and hold.

AWOS-3 119.325 | ALBUQUERQUE CENTER 127.675 306.2 | UNICOM 122.8 (CTAF)

7). What does the inverted A triangle symbol indicated when it is followed by "NA"?
This means that you cannot file this airport as an alternate based on it having a non-precision approach.

For alternate filing purposes, you must consider it to not have an instrument approach. In rare cases, an airport might not be available as an alternate, because there's no on-airport weather reporting.



We Don't Need no Stinkin' Parachute

We are often asked about the value of the ballistic parachute found in Cirrus and as to the relative safety of it, versus the Mooney Roll Cage. What a silly question! Clearly the Mooney is safer, but here is an overview, in our opinion, of the relative value of each.
So you find yourself cruising and experience a major failure, such as an engine. What are your options, regardless of Cirrus vs. Mooney? The first thing you need to do is Fly… Fly… Fly the airplane. Setup your Best Glide speed. We recommend raising the nose to gain some free altitude as you slow to Best Glide. Simultaneously, look for your best landing option. If you have ForeFlight, consult your glide area to see if there are any airports within range. If you just made a change, such as a fuel tank switch, then switch it back. Ditto for any other changes you might have made. Then, run through your Emergency Checklist.

Now to the Cirrus vs. Mooney Tradeoffs. At this point the Cirrus POH recommends that you pull the chute. But is that premature? We think so, until you have done at least all of the stuff in the paragraph above. That's our 5 cents. I have a friend who lost an engine over the Mojave and successfully glided 15 miles to Bullhead/Laughlin airport and even had to circle once to lose altitude in the pattern before he made a smooth touchdown.

Let's now assume that there are no airport options for your emergency and you will need to land off airport. Again, you have options. If it's the Midwest and there are lots of flat fields, back country highways, or other open areas, there's some options. In the west, there are lots of deserts with mucho landing zones, or networks of straight dirt roads. If the terrain is not hospitable for a landing, then Option BEST in a Cirrus is the chute. In the latest Cirrus SR22 POH, you can pull above 580' AGL. In a Mooney, your Option BEST is to find the most hospitable area and land there. Land there like it's O'Hare International, and flare at the lowest safe airspeed to minimize the force/impact during the crash. Land between trees or big rocks, sacrificing that Mooney wing to slow you down further. And, as your last resort, remember you have the Mooney Roll Cage that will shield you like the USS Enterprise's Deflector Shield. This is not an option in the Cirrus.

To be fair, we like the value of a parachute in the Cirrus in the event that the PIC becomes incapacitated and the right seat passenger is forced to fly. Remember in these types of emergencies, the primary objective is to walk away from the landing/crash. At the onset of the emergency, the mentality should always be to walk away and think of the airplane as the property of your Insurance Company. The Mooney is replaceable, while you and your passengers are not.

Checking Mags

TMF reader Rich, wrote: I remember my instructor, an ex WW II pilot, giving me instructions on how to test the magnetos. He advocated testing the magnetos in flight. His premise was that in flight, the magnetos are under greater stresses and loads than they are during a run up. If there were problems developing with the magnetos it would show up at that time rather than when they are lightly loaded.

REPLY: Frank Setzler, owner of Chandler Aviation, Inc. Chandler, AZ (a Mooney Service Center), agrees with Rich and his instructor from long ago. That's because, when checking mags, it's all about the pressure, stress and loads.
If you have an engine analyzer, you should watch the exhaust gas temperatures (EGT's) to ensure that they rise about 50 degrees when the L and R mags are checked, compared to when the switch is in the "both" position. With an even increase of all cylinder EGT's, you can assume the magnetos are working internally at peak efficiency.

Pre-departure mag checks (Run-up)
These are more effective if they are checked under pressure by using a higher power setting (at least 15" of manifold pressure – or an RPM above 2,000). Look at your individual EGT temps to verify that all injectors are firing properly by observing that all EGT's are reading approximately the same. One clogged injector reduces more than one cylinder worth of power! Often times the operator must lean aggressively to keep from flooding the remaining good injectors with too much fuel.

After the flight mag check
A high percentage of mag failures occur in flight. Prior to engine shutdown during taxi back, it's a good idea to check that both mags are operating. Do this by selecting R/BOTH, then L/BOTH, while observing a slight drop in RPM. There is no need to heat the engine up to run-up RPM's at this point. If you want to be on the safe side, Frank's shop will always verify that when the MAG switch is in the OFF position, that indeed the engine will start to spool down. This is only done at idle RPM. To prevent backfire, it's important to SLOWLY turn the key back to "R" from the OFF position. You will notice the engine RPM coming back to life again, then "L", and then back to "BOTH". If at any time the IGN Key can be removed from the mag switch in any position other then OFF, this is an unsafe condition and the IGN switch must be replaced.

Bad Mag or is it a Bad Plug?
Mike Busch of Savvy Aviation recently wrote, "The vast majority of 'bad mag checks' are caused by spark plug problems, not magneto problems. . . How can you tell if the culprit is the plugs or the mags? Simple: A faulty spark plug affects only one cylinder (and one EGT bar on your engine monitor), while a faulty magneto affects all cylinders (and all EGT bars)."

Retarded Ignition Timing

Frank Setzler explained, "If you get an excessive RPM drop when you switch to one mag, but the EGTs all rise and the engine runs smooth, chances are that it's not a bad mag but rather retarded ignition timing. This is often caused by mechanic error when he or she timied the mags during maintenance. It is also possible for ignition timing to drift out of spec due to cam follower wear or some other internal magneto issue. Retarded ignition timing also results in higher than usual EGT indications."

Conversely, advanced ignition timing results in lower-than-usual EGT indications, and also higher-than-usual CHT indications. Advanced timing is a much more serious condition because it can lead to detonation, pre-ignition, and serious engine damage. If you observe low EGTs and high CHTs after an aircraft comes out of maintenance, do not fly until you've had the ignition timing re-checked. Advanced timing is easily detected with an engine monitor, but you won't be able to detect it if you're just looking for RPM drop.

Cruise

Frank has observed engines running rough or with a slight miss at high power settings; often at high altitude. If the normal engine controls don't help the engine run smoother, try a mag check in the air. If you find that by going to the L and R mags, that the engine performance improves, then there is an internal problem with the mag that is OFF. Fix that mag problem when you get back on the ground! NOW. It won't get any better.

After Shutdown

Frank also recommends that owners add one more post flight task – drain the Gascolator and both wing tank sumps. This will get the water and debris out of the system so it doesn't remain in the tank or Gascolator for an extended time. Water and debris can cause corrosion issues that Frank often sees with inactive aircraft.

RADARCONTACT

THE OFFICIAL STORE OF ATC MEMES

For the die hard aviator, this web site has a lot of "interesting" items, from charted bedding, ties, area rugs and leggings, to stickers and T-Shirts.

https://radarcontact.com/

GLOBAL AEROSPACE

The Aircraft Insurance Physical Damage Claims Process

Some of the most common types of insured damage to an aircraft result from events like these:

- Hard landings
- Bird or wildlife strikes
- Gear-up landings
- Collisions with hangars, buildings or support vehicles
- Taxiing incidents
- Wind, lightning, or hail storms

Legal liability can result from many of these events, which cause damage not only to the insured aircraft, but to third party property as well. Examples are:

- Hitting a runway light
- Colliding with a hangar or ramp aircraft
- Jet wash and prop wash
- Something like paint overspray

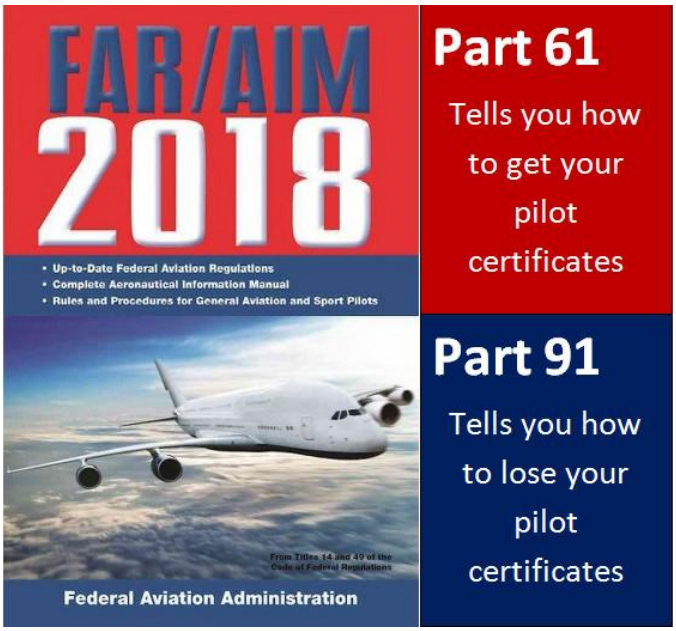
Of course, aircraft mishaps that result in injuries to passengers aboard the aircraft, people on the ground or even in another aircraft are also a serious concern.

Because each aircraft incident or accident is unique, it is important to be familiar with the provisions of your insurance policy and what the process is for getting the insurance provider involved to protect your interests.

When aviation incidents or accidents causing damage to the insured aircraft occur, the claims process typically is as follows:

1. Immediately following an incident or accident. First and foremost, seek medical attention for anyone who has been injured. As soon as reasonably possible, contact your insurance broker or the insurance provider directly to notify them of the loss and to coordinate next steps. It is also important to protect the aircraft from further damage.
2. Gather pilot information. Take steps to secure copies of the pilot's license and logbook, medical certificate, the aircraft log books and all other aircraft documents. In addition to cooperating with any investigating authorities such as the FAA or NTSB, the insurance provider may ask that you complete an incident report describing the pertinent details.
3. You and the insurance provider begin the process of determining whether the aircraft is economically repairable. It may be necessary to obtain repair proposals to determine whether the damage is repairable or whether the aircraft is a total loss. A number of factors, including the aircraft's insured value, the complexity of the repairs and particular policy provisions may come into play.
4. In the event the aircraft is repairable, you will authorize the repair facility to make the repairs. Virtually all policies pay for the cost of repairs with "materials of like kind and quality." In other words, the goal of the repair is to restore the aircraft to the condition it was in, just prior to the incident.
5. When the final cost to repair is established, the insurance provider will calculate the amount it will pay you. You can use that payment, plus your own payment for any deductible amount or uncovered costs, to pay the repair facility, after which the aircraft is returned to service. In most cases, the process is then complete.
6. If the damage renders the aircraft a total loss, the insurance provider will make payment for the insured value, less any deductible. The policy will specify how the loss will be made payable, and typically requires that you and any lienholders are included in the payment. The insurance provider is entitled to the benefit of its remaining value once a total loss is paid. Within practical economic constraints, your preference as to the disposition of the aircraft may be taken into consideration as part of an agreed cash settlement. You should expect to work with your insurance provider to finalize the transaction through an FAA Aircraft Bill of Sale and an insurance document known as a Proof of Loss used to document the transaction.

For more information, see http://www.global-aero.com/what-happens-if-my-aircraft-is-involved-in-an-accident/



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.

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by Jim Price

On March 18, 2016, just before 3:30 pm, two teens were returning from a Nashville, TN Spring Break trip, when their rental Mooney M20C Ranger experienced engine failure. The pilot crash landed near the 14th hole of Wichita's Tallgrass Country Club Golf Course. Both the pilot and his girlfriend sustained minor injuries.

The 17 year old Private Pilot had two years of experience. He reported that he conducted a preflight inspection of the airplane and noted that both fuel tanks were "filled to the rim." (The M20C holds 52 gallons of usable fuel, 26 in each tank). They departed Dickson, Tennessee (M02), and headed for the rental Mooney's home, Wichita's Col. James Jabara Airport (KAAO), This was at least a 481nm flight.

AN EXTENDED DOWNWIND

The pilot extended the downwind leg, due to inbound instrument flight rules (IFR) traffic. On that extended downwind, the engine suddenly lost power. The pilot reported that he used the ALARMS checklist, **A**irspeed, **L**anding site, **A**ir restart, **R**adios, **M**ayday, **S**ecure plane, as he prepared for an

off field landing. The Mooney flew over the top of some houses lining the Tallgrass 14th hole, then clipped a tree before striking the ground.

NTSB EXAMINATION

An examination of the wreckage revealed no preimpact mechanical anomalies. The fuel tank selector was positioned to the left fuel tank, and the electric fuel pump was in the “OFF” position.

No fuel was found in the left tank. There was no smell of fuel, no evidence of fuel spillage, and the fuel tank did not appear to have been breached.

Some fuel, about 2 to 3 inches deep, was found in the right fuel tank.

If the pilot had switched the fuel selector from the left to the right fuel tank and turned on the electric fuel pump, the engine would not have been starved of fuel.

PROBABLE CAUSE

The National Transportation Safety Board determines the probable cause(s) of this accident as follows:

- The total loss of engine power due to fuel starvation, which resulted from the pilot's improper fuel management.

WHAT CAN WE LEARN?

GUMPS

As they approached James Jabara, a simple GUMPS check might have saved them from this accident. First on this check is “Gas”.

STUPID FUEL GAUGES

Fuel gauges are notoriously inaccurate. In fact, the FAA requires that fuel gauges only need to be accurate one time. Yup! They must read “zero” when the fuel remaining equals the unusable fuel. Every other indication is the fuel gauge’s best guess.

GOOD FUEL MANAGEMENT

Because we can’t rely on our gauges, we really need to know our airplane and what’s happening in our fuel tanks. For instance, we should know how much fuel our aircraft burns the 1st hour, the 2nd hour, etc. With that knowledge, we can keep a good fuel record on our knee board. We’ll then know how much fuel is in each tank. If you’re keeping a good fuel record, you’ll know which tank has the most fuel for the approach and landing.

	Left Tank	Right Tank
	26	26
1st HR Burn	12	
Remain	14	26
2nd HR Burn		10
Remain	14	16
3rd HR Burn	10	
Remain	4	16
4th HR Burn		10
Remain	4	6

If you haven’t been keeping track of your tank quantities, then when an engine fails, the first thing to come into your mind should be, “Oh (insert your own choice word(s)! I let a tank run dry!”

THEN . . . Switch tanks. That’s the first item on most Engine Power Loss Checklists. The next steps are:

- Mags – BOTH
- Throttle, Prop and Mixture – FULL FORWARD
- Boost Pump – ON

If those steps fail to restore power, you have no choice but to fly the aircraft all the way to the crash site.

Fly Safe, Jim

Send your questions for Tom to TheMooneyFlyer@gmail.com

Question: This is a strange question. I wondered if you could tell me the kinds of problems you've seen over the years with Mooneys that were brought into Top Gun "with preventable issues". I am a new Mooney owner and curious. Looking for things like poor maintenance or improper engine/prop settings that caused problems; that kind of thing.

Answer: **PREVENTABLE ISSUES?**

I had to think about this a while, but the number one problem is easy. By far, it's forgetting to put the landing gear down. In one year, it happened at least five times. Next, would be running out of gas. The last event was a Mooney that landed in a cow pasture. We put it on a trailer and came down I-5 about twenty miles, back to the hanger.

But, when it comes to poor maintenance, the first problem coming to mind is when owners have their Annual Inspections done by someone who doesn't know the Mooney and doesn't have the Service Manual, which, by the way, is required by regulation. Annuals don't need to be done at a Service Center, but anyone doing an Annual Inspection is required to do the same checks. We have had accidents and have found more problems with landing gear because there was no preload on the gear system. There are no gear locks on the Mooney gear system, so the gear is held down by a preload on the gear, through the use of spring tension, called the"preload". Preload exists on all models, but the tension varies by model and is required to be checked at Annual, or after maintenance on the gear.

What causes gear up landings? Besides forgetting to put the gear down, (most common cause), there's no preload, broken no back clutch spring, worn out manual gear up latch, broken or jammed rod ends in the nose gear system, etc. AD73-21-01 requires that M20, and M20A, through M20G models have the landing gear and flight controls lubed every 100 hours.

We see many past due maintenance because the owners have ignored it and waited until Annual. There are ADs that are required by flight hours, and these don't allow you to just wait until Annual.

We had one plane damaged by a hard landing because the flap retract linkage broke and dumped the right flap just as it was touching down. The rod end had rusted severely and broke at the flap. Lubing rodends and hinges is actually easy and owners can do it. There are numerous things that have gone wrong because of ignored routine engine maintenance or poor operation.

Some recommendations

Depending on where you live, finding a good shop or independent mechanic is difficult. If you have just bought the plane, I will assume you had a pre-sale inspection. If this inspection found a long list of discrepancies, you should find a Mooney Service Center near you and get an Annual done by using the Mooney inspection checklist. When we do this, we understand most items are probably airworthy, but it will give you a list to work with and you can develop a plan to keep the airplane up to Mooney standards. It is not unusual for us to find 50-100 discrepancies on a forty year old aircraft. We have customers who come to Top Gun maybe every three or four years and leave with a plan to work with their local mechanic to keep their Mooney up to date.

We just had an older C model that was brought in for a pre-sale inspection. The "dealer" that dropped it off had left, and when we went to move the plane, we found the manual gear was unlocked. The Uplatch mechanism was worn and the pilot had not pushed the handle into the "firmly" locked position. Why it didn't collapse on landing is a miracle. We were lucky that we didn't try to move it with a Towbar, because that would have folded the gear. How do I know? Been there, done that. Johnson Bar aircraft are not as foolproof as people think. They can fail because of lack of maintenance or pilot error. However, in good condition, the Johnson Bar manual gear is one of the safest systems.

One last item. With the average flying time of less than 100 hours per year, that mid-year oil change should include a thorough engine inspection. As the average Mooney gets older, more TLC is needed.

Early Mooney Advertisements

HYH

ASA Updates its IFR Kneeboard $16.95

The durable brushed aluminum IFR Kneeboard helps pilots organize flight data, providing a strong surface for inflight note-taking, as well as quick access to important IFR information in the form of a permanent placard, ASA officials note.
The new version has updated information to reflect modern cockpit needs, including weather and flight planning resources, flight plan equipment qualifiers, IFR alternate requirements, reporting, lost communications, and more.

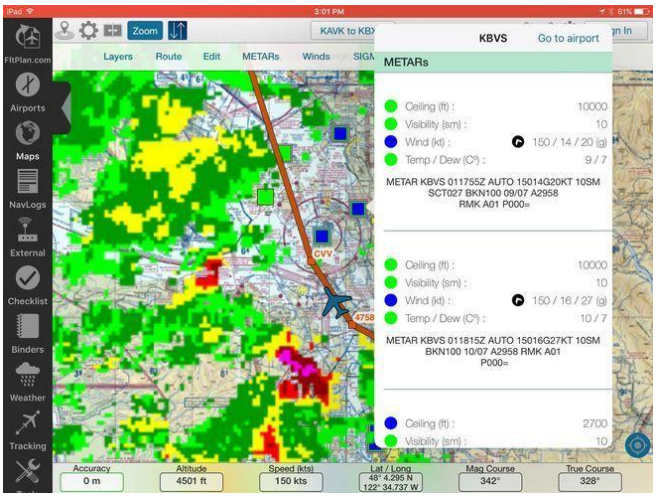
The 1-1/2” wide elastic legband secures the leg without binding, and hook-and-loop fasteners allow easy adjustment without having to remove the kneeboard. The leg band also features a pen/pencil holder.

The easy-lift, wide metal clip at the top is strong enough to hold charts and other necessary papers, ASA officials add. Price: $16.95.

Flight Outfitters Introduces the Centerline Backpack $100

One of the features of the Centerline is the ability to use the entire center compartment or section it off via a fold-down flap, officials add. This divides the main compartment of the backpack into two separate sections, each with its own access point.

Garmin Connext Now Compatible with Fltplan Go App



Garmin has added the popular Fltplan.com and Fltplan Go app for Apple and Android devices to its Connext "ecosystem" that now allows pilots to wirelessly transfer flight plans from the app to certain Garmin panel-mount avionics. FltPlan Go customers can also wirelessly receive and display aviation weather from various sources in flight including Flight Information Service-Broadcast (FIS-B) as well as ADS-B traffic, GPS position data and back-up attitude information.

The FAA will discontinue the Direct User Access Terminal Service (DUATS II) Program on May 16

Pilots will still be able to access internet-based services including weather and aeronautical information, flight plan filing, and automated services at no charge at the **flight service website**, and are encouraged to register to use it at www.1800wxbrief.com.

To continue to receive free services, users are encouraged to register Over the next 60 days, the FAA will work with current DUATS II providers on transition activities, including conducting pilot outreach, establishing commercial interfaces, and providing user migration assistance.

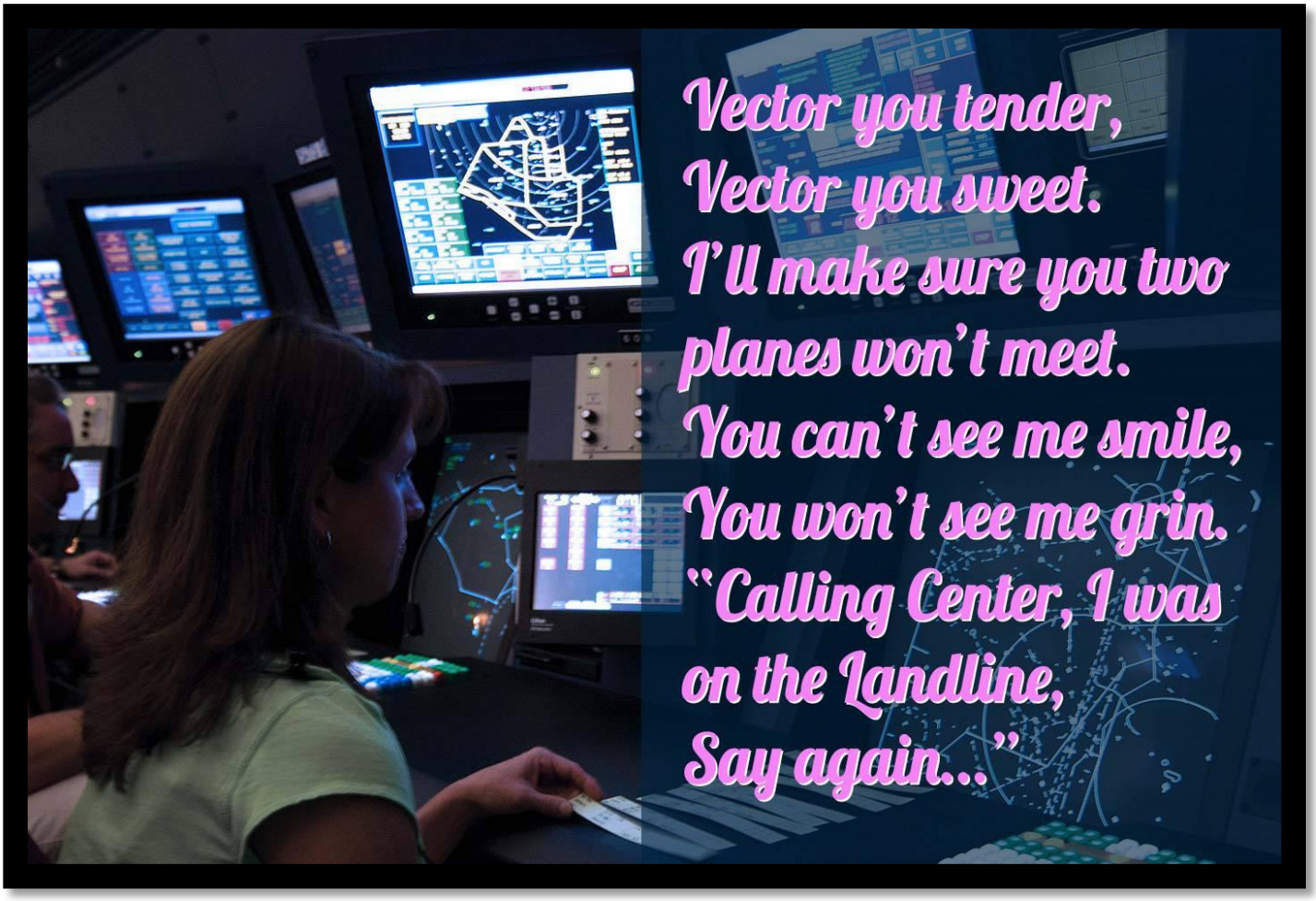
The decision to end the DUATS II contract at the end of its current one-year extension "was based on agency cost savings and an increase by pilots in the utilization of other methods of accessing preflight briefings, including commercial vendors.

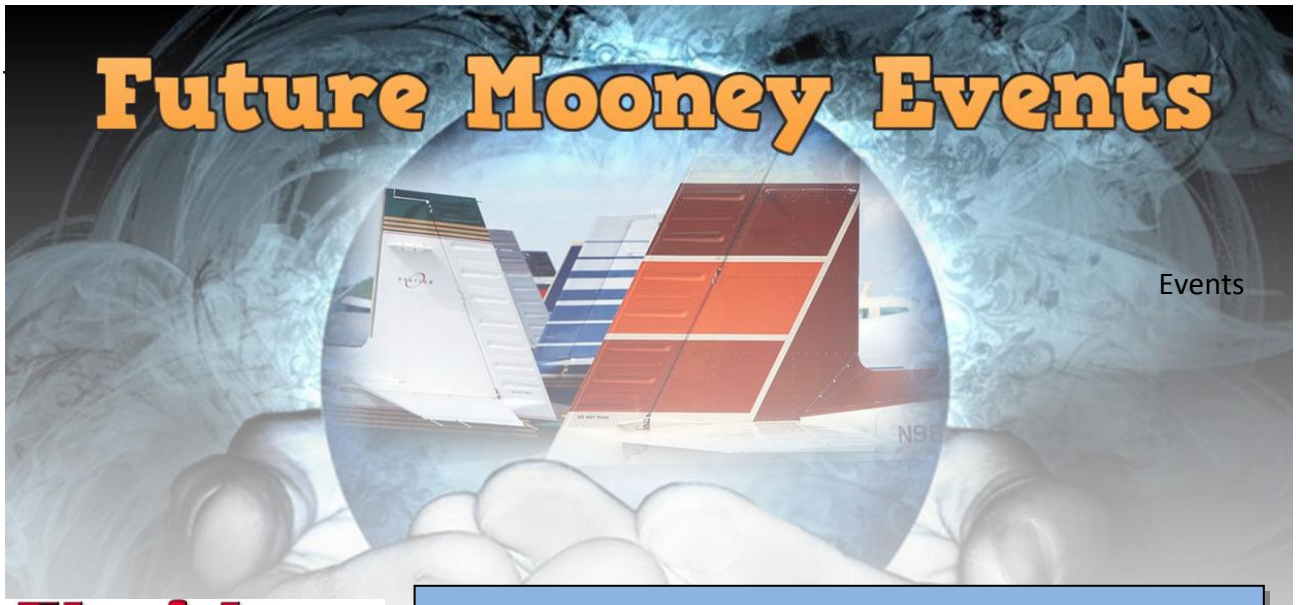
The National Transportation Safety Board's Safety Alert page

The NTSB Safety Alert page is full of extremely useful PDFs designed to help you become a safer pilot.

The articles start out with a review of past accidents, an analysis of why the accidents happened and ends with recommendations for pilots.

At this site, you can also sign up for aviation safety alert emails.





Events

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

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 TBD** - Fort Worth TX
- **Sep 6-9,** Manchester, NH (KMHT)
- **Oct 4-7,** Owensboro, KY (KOWB)

Mooney Caravan

July 21: Mooney Arrival at AirVenture 2018
CLICK HERE for details and to register

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

Reminder of EMPOA Annual General Meeting / Trip to Pilsen (Czechoslovakia)

14 to 18 June

Dear Mooniacs at EMPOA!

We would like to remind you to take notice of our Annual General Meeting at Aschaffenburg on June 14, that should be in the calendar of every Mooniac.

Also we still have some empty seats (respectively beds) for our Aschaffenburg und Pilsen trip from 14 to 18 June this year. We look forward to your bookings in the near future so that we can continue our planning. The detailed description of the trip comes attached again.

With best regards – happy landings!

David Kromka and Lothar Lucks

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 but by this we hope that we will be able to do this trip as planned even if weather conditions should not be as favorable

as they have been on our past trips. Insiders know: both cities are well known and 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 participants-wise 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 be ready to share his in-depth knowledge around 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 and a creamy Cappuccino. For lunch the two groups will reunite again in the Schoenbusch Inn or the beergarden before we are heading to famous Dirker distillery on the outskirts of Spessart forest. The owner and master distiller himself will teach us the secrets of schnapps destillation 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 Aschaffenburg downtown. 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 only 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 athmosphere there still breathes the charme of the communist era.
There will be a friendly reception anyway: beer (the famous Pilsener Urquell) will be served directly at our aircraft door and a small buffet will bet he 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 homebase 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 together with 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 and not part of the trip).
Thereafter, we will head straight to the historic center of Pilsen where we will check into our hotel. Later we will 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 always wanted to learn tapping a Pilsener beer in style will have the chance of a respective lesson with a master beer tapper for free.
The ones who are not ready for bed after this will head off for a pub crawl in town later.

On Sunday, June 17th, we will enjoy a hearty breakfast together at our hotel. Thereafter, we will make a guided city-tour on foot. Right thereafter we board a chartered bus to Plas in order to visit the well-known baroque monastery. The huge complex has been 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 in any case.
The bus will then bring 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. That way we will be all set and ready for 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 far 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 homebases once again.
This year we want to offer you three different packages around the trip in order to accomodate those of you who possibly want/can only partake in a certain part of this trip.

Package 1: „All-Inclusive" includes all four hotel nights in the hotel (mostly 4*, all with breakfast) at EDFC and LKLN as well as all transfers in Aschaffenburg and Pilsen. Equally 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 souvenir 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" inlcuded all benefits from package 1 excluding the hotel accomodation at Aschaffenburg. Those opting for this package should book their accomodation 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 numerous participation and we are sure that we will once again 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.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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

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