The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

August 2014

I ♥ TO FLY FAST

MOONEY FLYERS

Mens' and Ladies' Core Performance Dri-Tech Polos. Most sizes are a donation of $29.99

FREE SHIPPING in the Continental USA

Mens' and Ladies' Sport-Tek Cool Dri Tees. Most sizes are a donation of $23.99

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Brush Twill Hat, Donation of $19.99

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Editors
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Tom Rouch
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Geoff Lee
Linda Corman
Michael Riter
Cliff Biggs
Mike Elliott

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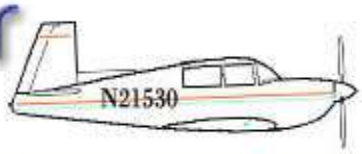
Features

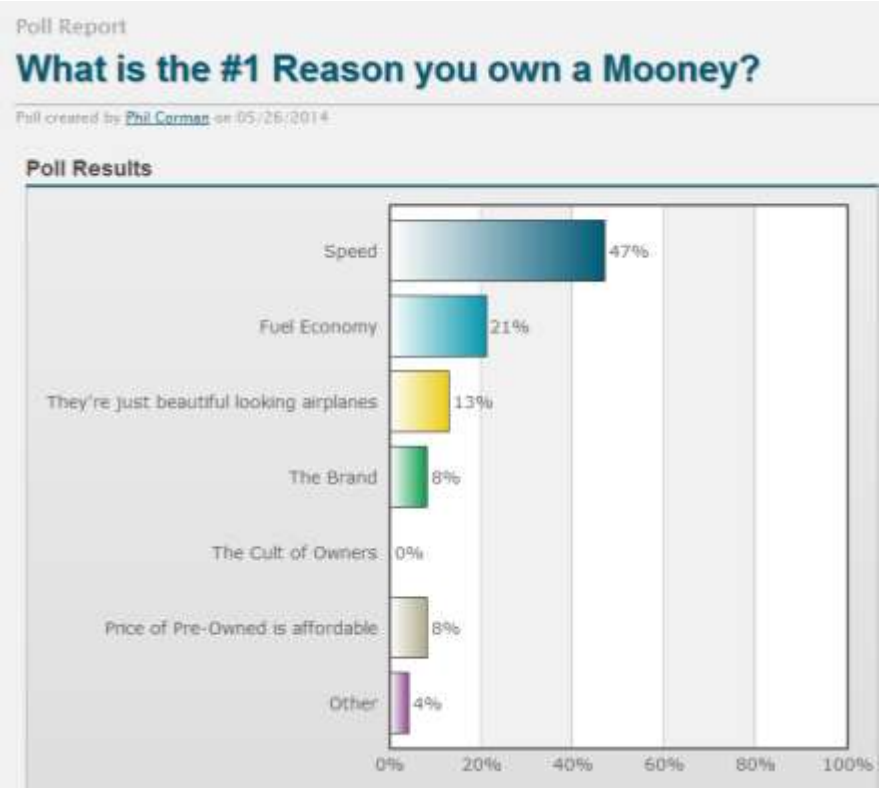
In Every Issue

From the Editor

Phil Corman



Here are the results of last month's survey on your expectations of the new Mooney International. The question was "What is the #1 reason you own a Mooney?". The overwhelming #1 reason was "the need for speed"!



Next month's poll: What Are Your Primary sources of Mooney Information?

CLICK HERE to vote.

Mooney Flyer Apparel

Did you notice that you can now purchase *very cool* Mooney Flyer shirts & hats.

CLICK HERE to take a look.

We are big fans of Mike Busch, The Savvy Aviator.

This month he wrote an excellent blog on **The Dark Side of Maintenance**. He outlines the concept of MIFs, or Maintenance Induced Failures. Every owner should read this article. It is an excellent read. **CLICK HERE** to read it.

Mooney Flyer Error: Last month we re-wrote a primary law of Physics in our Forced Landing article. We indicated that $F=MA^2$. It is actually $F=MA$. The law we were intending to refer to was $E= ½ MV^2$. Our conclusion was still correct. Thank you to a few of our readers who were actually paying attention to our article and to their Physics 101 class.

Appraise Your Mooney's Value

Don't forget about our cool new **Appraise your Mooney's Value** using Jimmy Garrision's valuation. Jimmy is from All American Aircraft, the country's largest Mooney reseller. We have implemented the models for M20C, M20E, M20G, M20F & M20J. Click on your model to simply complete the valuation. You no longer need paper and pencil. Just another benefit to our subscribers. These forms are currently Beta test quality. Please send errors to us.

M20C M20E M20G M20F M20J

Mooney Model Chronology

http://www.mooneyevents.com/chrono.htm

Year	Model	Serial #	Description	No. built	Factory price
1948	M18 Mite	02 to 12	25hp Crosley auto engine -- later converted to Lycoming 65hp O-145. Single place. Mite features listed here at Dave Rutherford's Mitesite. Mite #1 was N3199K, now hanging at Smithsonian Institution, Washington, DC. Mite #3 was N3159K, now at Sun 'n Fun Museum in Florida.	11	$1,995
1949	M18L Mite	02 to 67	Lycoming 0-145-B2. Single place. Michael Bolinger's N246MM. Early Mite panel.	66	$2,795
1950	M18L Mite	68 to 82	Lycoming 0-145-B2. Single place.	15	$2,795
1950	M18C Mite	201 to 240	Continental A65-12 or -8. Single place.	40	$2,965
1951	M18LA Mite	101 to 114	Lycoming 0-145-B2. Gross weight increase from 780lb. to 850 lb. Maneuvering, max structural cruising, flaps extended speeds increased to match M-18C Mite. Single place. Photo of N60MM.	14	$2,965
1951	M18C Mite	241 to 249	Continental A65-12 or -8. Single place.	9	$2,965
1952	M18LA Mite	115 to 135	Lycoming 0-145-B2. Single place.	21	$2,995
1952	M18C Mite	250 to 277	Continental A65-12 or -8. Single place. Christopher Byrd's N4075V.	28	$2,965
1953	M18LA Mite	136 to 145	Lycoming 0-145-B2. Also known as "Wee Scotsman." Single place.	10	$2,840 - $3,029
1953	M18C Mite	278 to 299	Continental A65-12 or -8. Also known as "Wee Scotsman." Single place. Steve McGuire's restored N85PM was the first aircraft produced in 1953.	22	$2,965
1954	M18C Mite	300 to 322	Continental A65-12 or -8. Single place. Vernon Flacksberth's N4147.	23	$2,965
1955	M18C55 Mite	323 to 357	Continental A65-12 or -8. High-canopy models. Single place.	35	$2,965
1955	M20 Mark 20	1001 to 1010	Lycoming 0-320 (150HP). Wood wing. Four place.	10	$12,500

Readers often ask about the differences and the lineage of the Mooney airplane types. This website has the best overview of the differences between Mooney M18 and M20 types.

At the very least, it's good bathroom or bedtime reading and will better prepare you for the next Mooney Trivia game.

MOONEY TRIVIA

We hope you find it useful.

Mooney In the News at EAA AirVenture

The Winning Bid - $646k

Mooney's president, Jerry Chen, handed over the keys to the first airplane to roll out of the Kerrville, Texas. The airplane, a $699,000 280-horsepower Continental TSIO-550G-powered Mooney M20TN Acclaim Type S, was put up for auction by Mooney at Sun 'n Fun 2014. It's a 242-knot aircraft! The winning bid of **$646,000** was placed by Ricardo Pascoe of Bedford Corners, New York. Pasco's instructor, pictured above, received the keys in his place.

Every cent of the $646,000 winning bid will be applied to the new Mooney History Museum at the Kerrville airport. Chen said that this museum will celebrate Mooney's past, but will also have a strong educational focus. A conceptual drawing of the building was unveiled at the press conference. Tom Bowen, Mooney's COO, explained that the structure features a Quonset hut design to honor the past and all-glass walls to signify the future. The museum will also have a large aircraft parking area so that pilots can fly in to visit.

There were 107 bidders in the auction, but only **29** completed the financial approval process to become eligible to bid. The other 28 qualified bidders will be offered Acclaims at a "special" price, Chen said. He added that no more than five additional airplanes would be delivered under these terms.

Thomas Horne

A Hefty Price Tag?

The new Acclaims will sell for $699,00. This might seem a bit high, but according to AOPA's Editor at Large, Thomas Horne, this price tag is a bargain among today's new piston-single prices.

New Orders and Build Projections

As of August 1st, there are 14 US orders for new Mooneys, and 10 orders from China. On the first day of EAA AirVenture, three more orders were placed by Premier Aircraft Sales, a Mooney dealer based in Fort Lauderdale, Florida.

Mooney expects to build one new airplane a month this year, two airplanes per month in 2015, and three per month in 2016.

In addition to the Acclaim, Mooney is also building the 310-hp Mooney Ovation3.

The production ratio will be five-to-one; one Ovation for every five Acclaims.

What about the Beloved J?

Jerry Chen, when asked if he would consider reintroducing the highly popular Mooney 201, replied, "It's hard, but we are working on it".

An Office in Beijing

Mooney now has more than 150 combined employees at the Kerrville manufacturing and service facility and its new Global Headquarters in Chino, California. Additionally, later this summer, Mooney is opening a Beijing, China, office with its own, newly appointed vice-president of sales and marketing—Peter Claeys.

Flight Simulators – for Training and Sales

Mooney is partnering with Redbird Flight Simulations, having already purchased three feature-rich, full-motion FMX simulators.

These state-of-the-art simulators we be located at Kerrville, Chino, and Bejing.

The customized and calibrated flight simulators will mimic every aspect of a Mooney aircraft, including their impeccable in-flight experience.

"It's as authentic as you can get", noted Tom Bowen, Chief Operating Officer for Mooney. These simulators step up our sales game like never before because they will show any prospective pilot just how responsive a Mooney aircraft is in flight." The Redbird FMX simulators will have Mooney branded graphics, wraparound visuals, scenario-based training capability and an electric motion platform. While these simulators will be used for sales, they will also be used for both transition training and pilot proficiency training.

We're Not Even Mooney Pilots: Love reading your "Mooney Flyer". It's so well done; Informative, enjoyable and very online user friendly. We are happy Cessna 182 owners and find most, if not all the articles, very applicable to 182 thinking. Even on occasion, makes me think I might want to get a Mooney. Ha!
Dave B and Camille N

Bad Physics in Forced Landing Article: Let me first say that I think the Mooney Flyer is one of the BEST publications in aviation, let alone in the Mooney world. I look forward to each issue at the beginning of each month and I learn a great deal from each issue. I must point out, however, that the article on forced landings in the July issue has a serious error. On page eight in the third paragraph you confuse Force with Kinetic Energy. You state that Force = Mass x Acceleration(squared). This is wrong. Force = Mass x Acceleration. Kinetic Energy = .5 x Mass x Velocity(squared). The Kinetic Energy increases or decrease by the square of the velocity, Not the force. Kinetic Energy is related to Force by displacement. For example, Force x distance = .5 x Mass x Velocity(squared). You can relate this to everyone by saying that "If an aircraft comes to rest in a given distance (say, 10 feet), the force will be diminished by 4 times if the velocity it is traveling at is halved". I do think everyone got the message though. Again, thanks for all the great articles.
Mike S

Albert Dyer's Article: Albert's article on Mr. Speer was pure delight and pleasure to read. What a great story and thank you for sharing it. **Editor's note**: Here is a picture of Albert's Mooney and his dad.

I am new to the Mooney community and find **The Mooney Flyer** an excellent resource. One day I may be brave enough to submit an article for consideration. In the meantime, I would like to recommend a CFI for your list of Mooney instructors. If he can teach me, he can teach anyone!
Kendall G

We Don't Need No Stinkin' Water

In our Fuel Tank, that is

Water gets into our fuel tanks in three primary ways. First, it can be pumped into your aircraft when buying 100LL. This is not very common, but does happen. Second, it's formed by internal fuel tank condensation. This happens when your Mooney sits for a while with unfilled tanks. Third, rain or other external water sneaks past the filler cap O-rings. All you need to remember to do is change two O-rings (recommended annually). The first is a larger O-ring pictured in the photo (below left). The second is a smaller O-ring at the bottom of the filler cap. To remove and replace it, you must remove the nut.

Perform these replacements, keep your tanks filled between flights, and siphon for water in your fuel before flying, and "You won't have no stinkin' water in your fuel"… That is always a good thing.

As of this publication Mike Elliott survived an awful crash in a Mooney Bravo in Greenwood, IN. For those of you that don't know Mike personally, he's a fantastic person, great CFII, and the cofounder of The Mooney Summit. We wish him a complete and speedy recovery. The Mooney Community is fortunate to have such a person in our circle.

Ground Effect

Ground Effect is mostly good, unless you are trying to land with excess airspeed.

PHIL CORMAN

There are many truths about Mooneys that we all know, or should know. My favorite one is that a Mooney will not take off until it's ready and will not land until its ready, regardless of the will of the pilot in command. Airspeeds on takeoff and landing, as we know, are even more important in our Mooneys, essentially because of their laminar flow wing. This article focuses on "ground effect".

We have all experienced ground effect in the seat of our pants, or in an extended float while landing because we might be a few knots faster than we should be. It is true that ground effect is more pronounced in Mooneys, primarily because of the proximity of the wing to the ground. Ground effect is enhanced the closer the wing gets to the ground. In general, our wings get a lot closer to the ground than high wing Cessnas and a little bit closer than Cirri or Pipers.

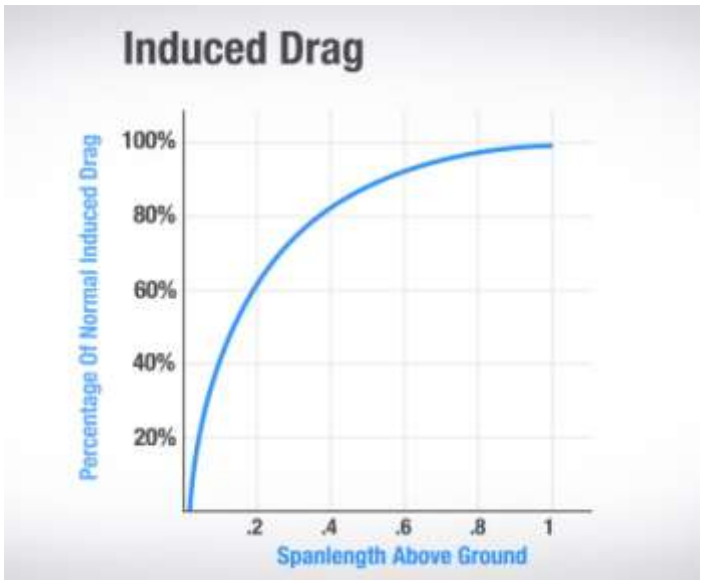
First and foremost, ground effect has little to do with an air cushion, a common mis-belief. Rather, it has everything to do with **wingtip vortices**. These vortices are one of the main causes of induced drag on our Mooneys. Wingtip vortices, like most things in General Aviation, are both good and bad. Let me explain. The illustration on the left shows the vortices at altitude. The illustration to the right shows how the wingtip vortices are abbreviated due to the proximity to the ground. Essentially, there is "less" downwash in ground effect.

O'Hare Approach Control to a 747: "United 329 heavy, your traffic is a Fokker, one o'clock , three miles, Eastbound." United 239: "Approach, I've always wanted to say this...I've got the little Fokker in sight."

The bottom line is less downwash also results in less induced drag. Lift always points perpendicular to the relative wind. Downwash angles the relative wind downward, pointing lift backward. When you have less downwash, your lift vector isn't tilted back as far, so more of it points up (opposing weight) and less of it points back (acting as drag).

It takes energy to create downwash and vortices - and that loss of energy creates drag. So, when you're in ground effect:

- You have more vertical lift, opposing weight,
- You have less rearward lift, reducing drag
- You have smaller vortices and less downwash, reducing drag



The power of ground effect intensifies as the wing gets closer to the ground. In the diagram to the left, it shows the significant reduction in induced drag as the percentage of span length of the wing is above the ground. Our Mooney wingspans tend to be 36'. So, at 36' AGL, there is little ground effect. But at 60% of our wingspan, or 21.6' AGL, the induced drag about 90%. At 20%, or 7.2'' AGL, the induced drag is only about 40%. Voila, ground effect.

Ground Effect is Good & Bad

Well, it's mostly good, unless you are trying to land with excess airspeed. In a Mooney, this is more pronounced than in most other single engine aircraft due to the laminar wing and its proximity to the ground. So, it's bad in this case. Actually, it's not. It's simply a law of aerodynamics. But, as pilots, we maintain that it's not good. Here's an example when it's very good: If you want to depart with a short or a soft field takeoff, you can utilize ground effect, especially in the Mooney, to your advantage. In a soft field, the sooner you get into ground effect, and stay there, the less drag on the Mooney due to the gear rotating on that soft surface. On a short field takeoff, the sooner you get that rotational drag eliminated, the sooner you will build up airspeed for that short field departure. The trick is to stay in ground effect. The amount of help you will get can be determined in the "Induced Drag" diagram (above).

Normally it's advantageous to retract your gear to reduce parasitic drag, but at such low altitudes required to leverage ground effect, it's a bit tricky.

Ground Effect in WW II

Bombers utilized ground effect to their advantage during World War II, especially in the Pacific. By flying in ground effect over the ocean, these bombers effectively increased their range by flying just above wave tops on their return to base. This often determined the difference between ditching and making it back to base.

Found at a Fly-In

VINTAGE MOONEY GROUP DISPLAY DAY

OWNER: *John Q Mooney* HOME: *Yes*

AIRCRAFT TYPE: *Flyable* MILITARY TYPE: *No*

ENGINE TYPE: *Couldn't Tell Ya* HORSEPOWER: *Enough*

SPEEDS: T.O. *Does Sometimes* CRUISE: *Fast* CRUISE: *Awesome*

PRIMARY USE: *Extreme Fun (Hard to believe it's legal)*

CEILING: *Don't know... haven't been there yet.*

MANUFACTURER: *Mooney International*

HISTORY & NOTABLE FACTS: *Has a really good looking owner*

Mooneys Under The Midnight Sun

by Wolfgang Oestreich

If there is a more beautiful site than Mooneys together at a Fly-In, well, we don't know of one!

It's Wednesday, 18th of June, when I pull my 1977 Mooney 201 out of the hangar. Fortunately, last week's bad weather forecast didn't show up. So, I departed from my home base northbound, to Rügen,the biggest German Island in the Baltic Sea. Only a few clouds were in the blue sky and a light wind let me pass the 150 mile flight in roughly an hour. As I approached Rügen, I could hear other Mooney crews sending their position reports. At the end of the day, 27 Mooneys had arrived on the ramp on this small airfield. I could see Klaus and Annette's Ovation (from Denmark) and Pierre and Andy, who had flown their Mooneys from France. As it is every time, Peter and his Mooney were the first to arrive (from Hungary). Mooniacs were coming with their kids, or with their dogs. This is a real family meeting. **EMPOA** (European Mooney Pilot and Owner Association) invited everyone for their annual meeting. More than 40 people filled the meeting room in the evening, when the board presented their report. The EMPOA has now reached more than 200 members and is still growing. Some of the advantages of being an EMPOA member are special insurance conditions, technical support and flight training. The training has been organized twice, in cooperation with the MAPA Safety Foundation. Additionally, EMPOA became a type organization within AOPA. And EMPOA is doing more. During the largest European Fly-In, with more than 1,300 aircraft, there were 23 Mooneys. Yes, Mooney is alive overseas.

Photos taken by Andy Hoegl and Michael Steinbrunn.

A special highlight of this evening was the presentation from Hennig Huffer. Hennig, a multiple earth-rounder, talked about his experiences during his flights around the world during the 70s and 80s in Mooney E and J models. He first did this in a small Bolkow 207, with and endurance of only 500 miles. His mantra was: Everything starts with the first step! What an inspiring presentation.

The next day was filled with trips around the island of Rügen. Some crews took a boat tour along the famous Cretaceous coast. Other crews followed the vestiges of the past and visited the ruins of a tremendous project during the Nazi occupation. There is a three mile long holiday village, which, of course, was used during the end of the occupation, but only by military forces. At this time, it was the longest building in the world and could host more than 20,000 people. What a waste of resources.

Friday was flight day. After the annual meeting, EMPOA planned a fly-out to Bunge. This is on Gotland, a Swedish island in the middle of the Baltic Sea. During June, daylight lasts a very long time in this region and the people were celebrating "Midsommar" within their family circles.

The weather was good as we passed the Danish Island Bornholm and followed the Swedish coastline. This two hour flight was a piece of cake for our speed machines. In the evening, seventeen Mooneys were counted on this former military airfield. That evening, we started our "Midsommar" celebration within the circle of our Mooney family, with local food and drinks. This celebration lasted until the morning. We had a lot of "Mooney talk", but of course we talked of other things. Editors Note: The other topic was "Daring Adventures".

The next day, some groups formed and discovered nature's beauty in the countryside. In the afternoon, we explored the historic city of Visby. During the Middle Ages, this city was part of the "Hanse" trade organization.

Sunday morning, our five days with old and new friends were over. We had to go back to our home bases. We had some good flights and had new experiences. We saw interesting locations and I'm sure that some of the pilots will return and spend some more time there.

Geoff lee.

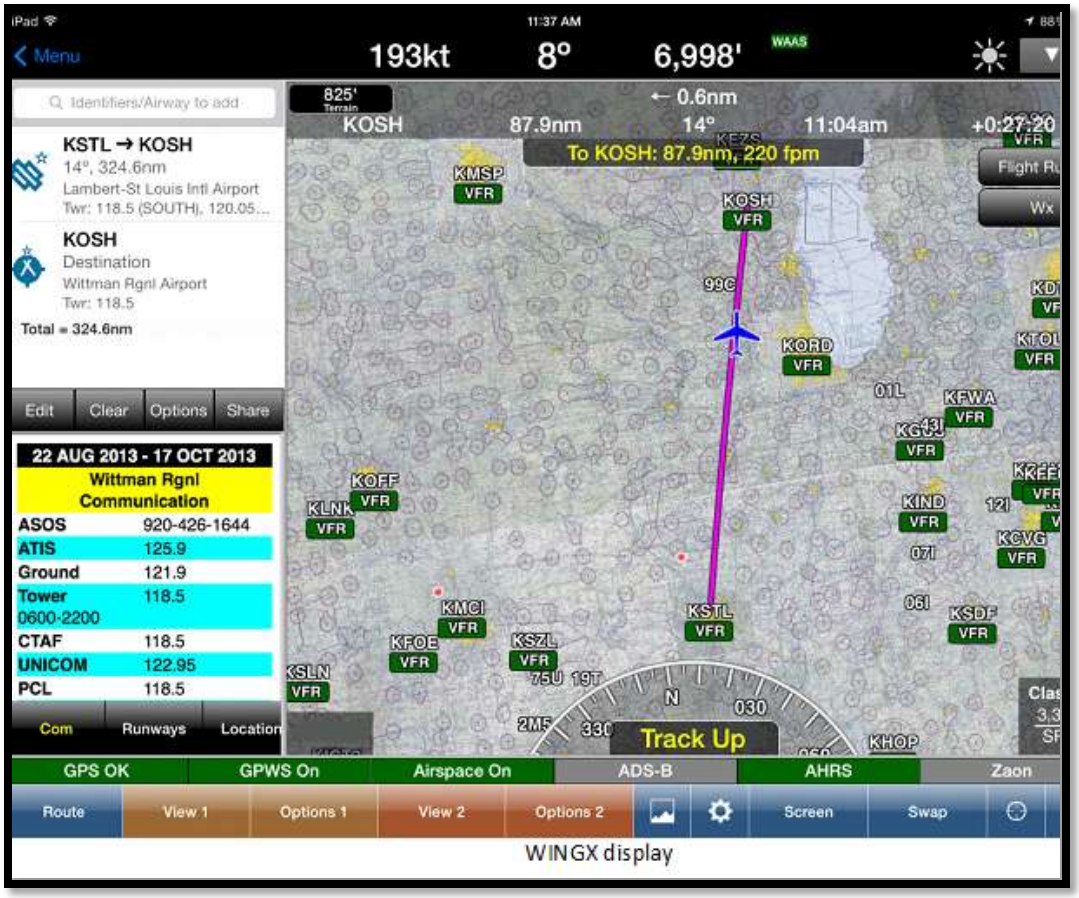
CFI

iPad Flight Planning App

Since many of us fly vintage Mooneys, I shall assume that most of us are not heavily invested in glass panels and high end Garmin panel mounts.

Whenever I climb into someone else's cockpit to instruct, I am always armed with my trusty Garmin 496. More and more, I am asked questions regarding the use of different iPad and tablet flight planning apps. I find myself needing and trying to learn, at least a little, about the popular flight planning applications that abound for the iPad, *i.e,.* ForeFlight, WingX Pro, etc. It seems I am required to read the instructions or review the YouTube presentations and subsequently relate my findings to them in an instructional tone, typically after we are airborne!

I tend toward task minimization, panel focus and situational awareness in the cockpit. It is unsettling for me to observe a student or pilot with his or her head down; fingers poking screens, while the needles on the panel gauges start to wander and the aircraft diverges from the course and altitude. It causes VFR flight to become more collision threatening than flight under IFR. At least under instrument rules, someone else is looking out for airborne devices that the plane may come into contact with and providing a "heads up" if we deviate from our approved trajectory. There, that's off my chest.



WINGX display

The iPad planning application that, thus far, appeals most to me is WINGX. I like the top of the screen positioning for desired track and actual track. ForeFlight is certainly not difficult to use and provides an enormous amount of useful information for preflight planning. However, in flight, I personally find WingX needs less finger poking to get pertinent flight tracking information. This is a subjective observation that I am sure will raise comment from the ForeFlight devotees.

Bless 'em all for essentially eliminating paper maps and wads of approach plates in the cockpit.

In the foregoing WingX depiction, desired track, speed and altitude are displayed on the black stripe. Actual track, distance to destination, etc., are displayed in the upper gray stripe. Desired Track and Track are two numbers that I like to keep adjacent on any navigational display. It makes it easier to fly a straight line by simply keeping the two numbers the same. If the differential angular amount between the desired track and track remains constant, as one holds a specific compass heading, then that angular amount is compared to the compass heading and provides the compensating crab angle for any crosswind factor. It also indicates if the wind is coming from the right or left of the aircraft.

Looking at the buttons on the bottom of the screen, a place for the beginner to start tapping prior to getting airborne would be the Blue "route" button. This will present the map and two small windows. One window shows where to enter the route to the intended destination. The other will reveal all the frequencies pertinent to the destination, plus a slideable black strip that will allow the user to select further information about the destination, such as a runway diagram and facility information.

It is not immediately evident to the new user that the action of tapping buttons a second or third time adjusts secondary window size and subsequently gets rid of it. The "options" buttons provide a selection of what type of map (IFR/VFR) is to be displayed and the overlays that can be added to each, such as weather, terrain, airways, runway extensions, etc.

Tapping the "screen" button will display a split screen that can show what the user chooses from the menu provided by "Options 2" button; an IFR chart, approach plate or airport diagram. The "switch" button will simply swap the position of the screens. The left screen is the prime position. A second tap of the screen button will display only the left screen. (*I initially had a mental block regarding that second tap on these buttons).*

A very useful piece of info displayed below the gray stripe, at the top of the screen, is distance to destination and the descent rate that would place the aircraft at pattern altitude upon arrival. Since most Mooneys use approx. 550-650 feet per minute to hold a 3-3.5 degree glide slope, one could blithely motor along toward the destination until about a 500-600 FPM descent rate appears, using it as a guide for a respectable VFR descent to the airport pattern environment. Of course one must first peruse the map display for any geographical or man-made projections that might noisily interfere with that descent path.

Tapping the button that looks like a white mountain on the bottom row, reveals a horizontal projection of the planned flight path with any terrain obstructions colored in red that would render the aircraft un-airworthy if the existing altitude or flight path were to be maintained. There is, in the bottom left corner of all screens, a small gray box that normally contains GPS/WAAS information. However, if it is tapped, it will surrender your exact position, distance and bearing, relative to the nearest navigational fix. With this, position reporting becomes less a matter of guesswork or estimate.

When viewing multiple Charts, the selections available from the Options button will change, allowing you to select a chart based on phase of flight. For instance, the airport diagram will be displayed in the

takeoff phase, and the approach chart options for the destination airport will display. To view a different chart, press the Select button in the lower right corner of the chart. Tap the screen button to return to a single chart.

The far right button, with the magnifying icon, is the “Search” button. A tap will provide a list of nearby navigational fixes and thus a means of quickly searching for airports, VORs, intersections, etc. This can be used to modify or deviate from the existing route; essentially a “Go To” button, not found in most iPad apps. Of course, all one needs to do is tap on any map location to readjust a route or get “Go To” info.

GPS geo-referenced aircraft, course line positioning and terrain overlaying on the approach plates are options. The GPS positioning on the airport diagrams is standard. Traffic and weather depiction overlaying is readily achievable.

To display/overlay the included Internet weather, one would tap the “Wx” button on the upper right corner of the chart. ADS-B weather requires the addition of an optional receiver/antenna. Chart scale change is accomplished by the usual “pinch and spread” action of the thumb and forefinger, the resolution in all cases is outstanding.

A thoughtful feature is located at the top right corner of the screen. The small Yellow button, when tapped, will lock the screen, preventing inadvertent contact from altering its geographic positioning. Normal tracking is unchanged.

The WingX application provides infinitely more planning and actual in flight information than is related herein. There is, in the MENU tab of the application, a HELP button that gives a level of guidance to some of the finer grain detail information.

Light criticism is made regarding the fact that the only instructions for using the application are put forth in the form of a series of YouTube clips which have not been updated since the inception of the programming, which has constantly been upgraded. The first two clips are mind numbing and need to be redone, sans the verbal superlatives.

This short dissertation is offered only as a quick “starter” look at the WingX app, which offers all the primary features provided by other brands. The application requires some practice to master, as do any of the competing applications.

Cliff Biggs

ATP, 767,757,737,727, A320, LRJet, CE500, MU-2, Wright Bros Award, A&P 46 Yrs, B707, B727, B720, B747, DC-10, DC9, DC-8, CE500

Tails From A Wandering Mooney

18,401 Days Later, Like a Moth to a Flame- A Mooney Returns to Kerrville

50 years, a half a century, has gone by since N1969Y was released from the confines of production to the skies of the USA. 50 years and 5,000 plus flight hours later it sits on the ramp at Kerrville looking across to its birth place. A birth place now being "resurrected" to produce the prodigy of Al Mooney's unique design.

A lot of things remain the same but a lot of things have been improved over these long years. Gone is the dog house cooling baffle and the massive engine air inlet only to be replaced with a much more useful and aerodynamic design. The ubiquitous "backwards" tail remains, a pinnacle of design excellence and functionality. The wing, virtually unchanged from long ago, remains a testament to strength and function. From an early day's speed of 140 knots to a blistering speed of 242 knots today, the Acclaim is the fastest certified single-engine piston airplane produced today. Over a 100 knot increase! As a whole, a remarkable, time proven, design.

As with any timeless design, be it cars, boats or airplanes, certain designs attract a following, a following of collectors and aficionados. Such is the fate of our Mooneys.

Some of us fawn over fifty year old Cs and Es and others look at life from up high in much newer Bravos and Acclaims, but all of us regale in the unique design of the Mooney.

Our purpose for being here is to get a first hand look at how things are progressing in Mooneys return to production. With the hope that our reception would be well received, we made our calls to Mooney Headquarters and were rewarded with an appointment to view the production facilities. Mr. Luis Acosta, Sales and Marketing Coordinator for Mooney kindly did the duties of guide throughout our time at the plant.

As with any aircraft production company operating under today's restrictive FAA access guide lines, we were met at the gate by the Security Guard, Stan, and shown where to sign in, get our visitor badges and our safety goggles. Trust me, Stan knows his job well and takes it seriously, one would not want to run counter to him (he was also very pleasant and accommodating). Mr. Acosta met us at the gate also.

Our first stop was the Main Office building which resembles more of a small house than an office building. After about five minutes here, I came away with the feeling that not only is the Mooney a very efficient airplane but those who run the show also know how to do things in an efficient manner. No where did I see waste or sloppy operations. They seem to run a tight ship.

Our next stop was, in fact, the main production line. The first thing evident when we entered, was how clean and neat the entire line was. As a person who comes from a machine shop and production background, I view cleanliness here as sign of quality. If they pay this much attention to cleanliness then the product quality is assured.

We saw three airframes up on their wheels in descending order of completion, with the first in line nearly complete and the last with just the forward shell and welded steel cage. On the other side of the building were 4 sets of wings, also in descending order of completion lined up to mate with the fuselages. Right out at the front of the line was the completed auction airplane sitting there with its Oshkosh debut livery ready to fly away.

We were told that about 70% of the original work force has been retained and that they were focusing on turning out 6 airplanes this year and ramping up to two per month next year. As with any production line that sits idle for some time, just getting it up into operation is monumental project. All the back fill of the supply chain has to be accomplished at the same time assembly of the final product is on going. Looking around at the operation, it seems that they have it under control.

We touched on what models they were going to produce and mention was made of rehabbing early airframes by me. With the production at this time needing to concentrate on turning out "conforming articles" for the FAA, they will be producing both Acclaim Type S and Ovation3 new airframes for a while anyway. More of the Acclaims than Ovations are forecast.

After our production line tour we were shepherded into the Engineering Dept where we viewed a bee hive of activity. We were introduced to Bill Craig who took over from Mr. Bill Wheat and we talked with Mike Miles of Flight Test (he tests every airframe off the line in flight).

All in all, we came away with the feeling that these are people that are dedicated to producing the finest of products, they know how to keep an efficient production system working and they are people who care about their customers.

To be perfectly honest, we do have one big complaint with the new Mooney factory; they do not answer their published phone number 830 896-6000. This is, in fact, a voice mail system only. Unless you have a direct extension number to someone, you probably won't be making contact any time soon. Now, could this be related to running a tight ship and everyone is doing three jobs? Could be, but, it does need to be addressed. Mr. Acosta allowed that one could call the sales line at 800 456-3033 (it goes directly to his office) to speak to someone immediately if needed.

For those of you who could not make it to Air Venture, we will end this missive with a picture of the auction airplane as presented at Oshkosh. We were graciously granted permission to photograph it with the admonition of not publicizing it until after its debut at Air Venture.

Unable to Outclimb the Terrain

Just because you always fly the same arrival or departure at a particular airport, doesn't mean that you're safe or correct!

JIM PRICE ATP, CFI-I, MEI

N6709U, M20C – 1 Fatal, 1 Serious
July 22, 2013, South Lake Tahoe, CA (KTVL) Field Elevation, 6,269 Feet
VMC prevailed in the area at the time of the accident.

At 1053 PDT, the automated surface observing system at TVL was reporting: Wind 020 at 5 knots, visibility 10 miles, temp 26°C, dew point 9° C, and altimeter 30.24. Density altitude was 9,044 feet.

Witnesses heard the pilot, Steven Lefton (67), of Palo Alto, CA, announce his intention to depart via South Lake Tahoe's runway 36, with a right downwind departure on the airport's UNICOM/CTAF. The airport has rapidly rising terrain on the east side (right side) of runway 36.

After liftoff, about midfield, Steven did turn for a right downwind departure.

After the right turn, Steven expressed concern to his wife Karen, that the airplane may not be able to out climb the rapidly rising terrain. Steven banked left to avoid a tree near the top of a ridge. Karen heard the stall warning horn come on, and the airplane descended into the trees, coming to rest inverted on the forest floor.

Steven's wife Karen survived, in part, because a flight nurse, Beth Frisby, was hiking nearby and was able to race to the accident scene. Her husband, El Dorado County Sheriff deputy, Damian Frisby, tracked Beth's location via her phone's GPS and dispatched more personnel to the location.

According to the pilot operating handbook, accounting for the wind, temp and density altitude, a M20C pilot could expect about a **330** to **490 FPM** rate of climb. Using the best angle-of-climb airspeed of about 82 mph, to clear the ridge ahead (180 feet above the airport elevation, not including trees), which is within a 1/4 mile, the airplane would have to maintain a **981 FPM** rate of climb – an additional 33% to 50% climb rate that was not there on July 22nd.

The Surrounding Area

The FAA's Airport Facility Directory (A/FD) for South Lake Tahoe (KTVL), indicates that the airport is surrounded on the east, south, and west by rapidly rising terrain.

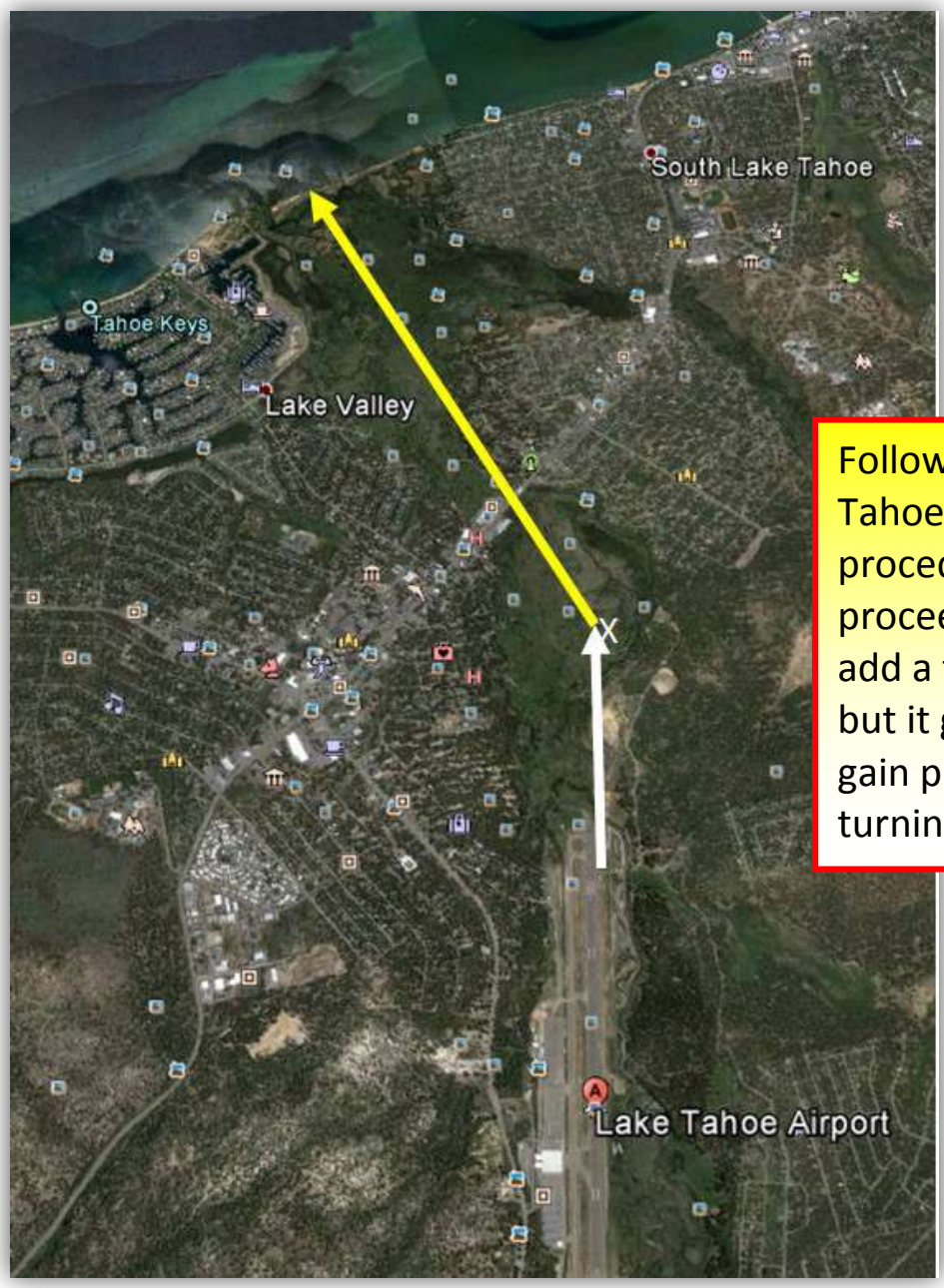
AIRPORT REMARKS: Attended Sep–May 1500–0000Z‡, Jun–Aug 1500–0400Z‡. Birds and waterfowl invof arpt. After winter storms Rwy 18–36 opens before all taxiways are clear. Arpt surrounded on E, S and W by rapidly rising terrain. Tfc advisories and sequencing in the tfc

This Google Earth view shows the rising terrain on the East and South of KTVL.

Departure Procedure

The A/FD further notes that for noise abatement, the preferred departure runway is 36. Pilots are advised to continue straight out for 1 mile, and then left to 320° at the white arrow until reaching the shoreline. (See graphic, next page).

depart Rwy 36, rwy heading 1 mile, left 320° at white arrow to shoreline.



Following the South Lake Tahoe noise abatement procedure before proceeding on course, may add a few minutes to a flight, but it gives pilots a chance to gain precious altitude before turning south.

Thoughts on DA and the "Normal Departure Procedure"

When asked about her husband's concern for Density Altitude, Karen Lefton said that it was something that he was always aware of and concerned about.

Steven Lefton had been to South Lake Tahoe many times and his wife said that the turn at midfield [for a right downwind departure] was his normal departure procedure for that airport.

What can you do so that you can always have "sweat-free flights"?

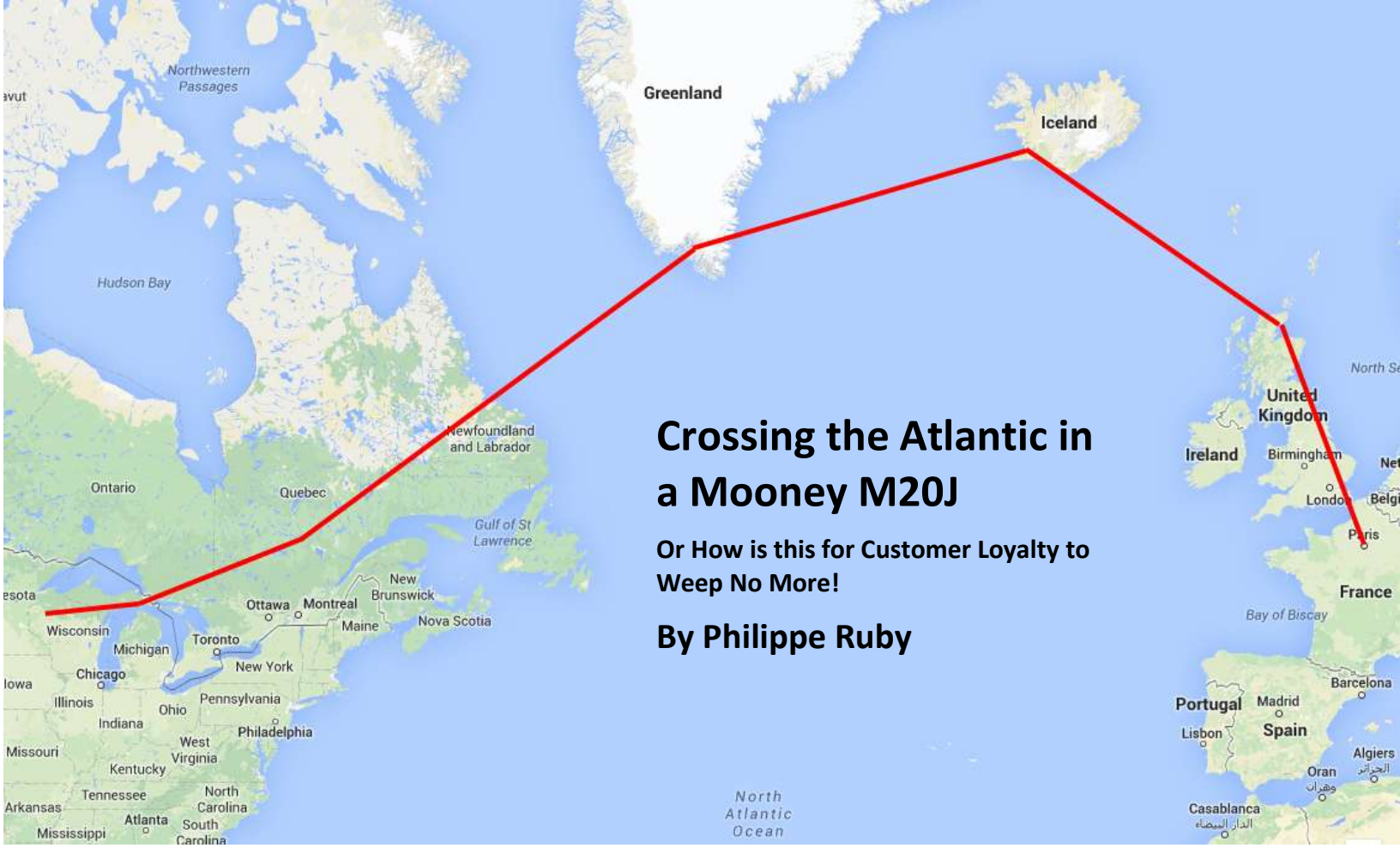
- Just because you always fly the same arrival or departure at a particular airport, doesn't mean that you're safe or correct!
- You should thoroughly study, as part of your preflight preparation, all appropriate documents, including the A/FD, asking yourself:
  - Has a new procedure been added?
  - Have I missed something?
- Respect all of the surrounding terrain.
- Abide by <u>all</u> of the recommended procedures.
- Have a healthy respect for Density Altitude and its effect on the takeoff and climb capabilities of your Mooney.

A post accident examination of the airframe and engine revealed no evidence of mechanical malfunctions or failures that would have precluded normal operation.

The NTSB probable cause(s):

"The pilot's decision to turn into rising terrain that would have required performance in excess of the airplane's maximum climb rate to clear after taking off at a high density altitude."

Ref: http://www.ntsb.gov/aviationquery/ and http://www.kathrynsreport.com/2013/07/mooney-m20-crash-at-south-lake-tahoe.html and http://news.softpedia.com/news/Tahoe-Plane-Crash-Caught-on-Camera-Pilot-Dies-While-Wife-Is-Rescued-370633.shtml and http://www.isciencetimes.com/articles/5703/20130723/tahoe-plane-crash-kills-pilot-steven-lefton.htm



A North Atlantic flight...again!!! Yes, I think we all agree that crossing the Atlantic in a single engine piston aircraft does not make a Lindbergh out of you anymore. However it is still challenging and requires lots of preparation. I hope this report will help.
Today is June 2nd. We are 3 brave men ready to go. The aircraft is a 1980 Mooney M20J in pristine condition. I acquired that aircraft at the end of 2008, and had it nicely refurbished at the Mooney factory in Kerrville in 2010. Now I have the opportunity to cross the pond one more time.

Most Mooney owners have some sort of quest for speed and efficiency. I am no different, and scrolling through the Mooney mods, I believe the Monroy long range fuel tanks are, by far, the best improvement one can make to a Mooney. In Europe the price and availability of AVGAS, as well as Landing fees, can vary dramatically from one country to the other. The Monroy STC is, in that respect, one of the best options to address these problems.

What is the relationship between the transatlantic flight and the Monroy tanks? Well...when you have a look at the kit, you quickly understand that it needs serious expertise to achieve a correct installation. In other words, the biggest threat from a poor installation is a fuel leak, which should not be part of the equation when you install long range fuel tanks!

There are some maintenance stations in Europe capable of performing the work, but let's face it, the real know how is in the US. Paul Beck, at Weep No More in Minnesota, is probably one of the most knowledgeable people when it comes to preventing or repairing fuel leaks.

Is it worth a round trip to the US from France, with all the additional costs involved? Yes! Every minute of it. My intention is not to do a lengthy report describing the weather and the scenery along the route, but rather focus on numbers to help you estimate the cost of such a trip.

Leg #1: LFPT, Pontoise (Paris) to EGPC, Wick (Scotland)

COST: $986.63

Flight Rules: IFR.

Route distance: 619 NM – Actual flight time: 4h 21min.

Fuel Consumption: 39.6 US Gallons at 9.1 US Gallons/ hr

Fuel cost: $460.00 - $11.62 per US Gallon.

Landing and parking fees: $36.63, (1 night stop)

FBO: Far North Aviation – Contact: Andrew Bruce.

The stop in Wick is necessary unless you have your own "very expensive" survival equipment. Andrew will be more than happy to rent you the polar survival kit which is mandatory when crossing the Atlantic. It is made up of:

- Survival Suit: $86.00
- Life Raft: $232.00
- Portable ELT: $172.00

Andrew has established a clever partnership with Irving in Goose Bay, where you drop the equipment as you enter Canada. It is good to know that Wick is a port of entry. Andrew will take care of the customs and make great arrangements for Wick accommodations.

Leg #2: EGPC, Wick (Scotland) to BIRK, Reykjavik (Iceland)

COST: $994.78

Flight Rules: VFR.

Route distance: 652 NM – Actual flight time: 4h 30min.

Fuel Consumption: 39.6 US Gallons at 8.8 US Gallons/ hr

Fuel cost: $435.00 at $10.98 per US Gallon.

Landing and parking fees: $76.45 (1 night stop).

Handling fee: $196.61.

Customs fee: $286.72 (2 pilots – 1 passenger).

FBO: BIRK Flight Services.

The choice of flying VFR or IFR goes with the weather of the day. The IFR route will take you above high ground and the altitude (above FL090) could make things difficult if you encounter ice. Flying VFR, you

have the option to remain over the sea all the way to the destination, giving you a bit more flexibility in an icing environment.

Flying above Iceland is a breath taking experience. Reykjavik is a great city to visit and if I had a bit more time, I would have loved to have spent more time there.

Leg #3: BIRK, Reykjavik (Iceland) to BGBW, Narsarsuaq (Greenland)

COST: $892.72

Flight Rules: VFR (Max altitude is FL055 over the sea) – IFR only if HF radio equipped.

Route distance: 672 NM – Actual flight time: 4h 49min.

Fuel Consumption: 42.5 US Gallons at 8.8 US Gallons/ hr

Fuel cost: $720.34 - $16.95 per US Gallon.

Landing and parking fees: $44.28 (2 hr stop).

Handling fee: $128.10.

As mentioned, if you are not HF radio equipped, the only option is to fly VFR or fly a more northerly route that goes via Kangerlussag (BGSF).

Greenland is all high ground, with a MSA at FL130. In VMC, flying at 8500', coming from BIRK is "fine". The approach in Narsarsuaq is absolutely beautiful, but the same thing in IMC could be an absolute nightmare.

Note: Should the weather deteriorate as you reach Narsarsuaq, you have the option to fill in IFR with Sondrestrom FIR or Narsarsuaq ATC, (At that stage you will be in VHF range). In this case, I can only recommend that you have a thorough look at the Jeppesen charts before you intend to land there.

In Greenland, there are very few alternate airports.

Leg #4: BGBW, Narsarsuaq (Greenland) to CYYR, Goose Bay (Labrador, Canada)

COST: $652.97

Flight Rules: VFR (Max FL055 over the sea) – IFR is allowed if you are HF equipped.

Route distance: 675 NM – Actual flight time: 5h 44min

Fuel Consumption: 48.3 US Gallons at 8.4 US Gallons/ hr.

Fuel cost: $512.06 – $10.60 per US Gallon

Landing and parking fees: $61.45 (1 night stop)

Handling fee: $79.46

FBO's:

- IRVING to drop the survival equipment
- WOODWARD AVIATION SERVICES if you need Avgas

Not much to say about Goose Bay. It is the Port of entry when you arrive from Narsarsuaq. Same as before, you will have to fly VFR on that route if you are not HF equipped. Should the weather deteriorate, you can file IFR when you are within VHF radio range.

Leg #5: CYYR, Goose Bay (Labrador, Canada) to CYMT, Chibougameau (Quebec, Canada)

COST: $183.70

Flight Rules: VFR .
Route distance: 579 NM – Actual flight time: 4h 23min.
Fuel Consumption: 40.1 US Gallons at 9.1 US Gallons/ hr
Fuel cost: $183.70 (partial refill: 21.24 US Gallon) - $8.65 per US Gallon.

Leg #6: CYMT, Chibougameau (Quebec, Canada) to CYAM, Sault Ste Marie (Ontario, Canada)

COST: NONE

Flight Rules: VFR
Route distance: 450 NM – Actual flight time: 2h 59min
Fuel Consumption: 28.3 US Gallons at 9.5 US Gallons/hr

Leg #7: CYAM, Chibougameau (Quebec, Canada) to KANJ, Sault Ste Marie (Michigan) -

COST: $198.80

Flight Rules: VFR
Route distance: 6 NM – Actual flight time: 6min.
Fuel Consumption: 1.6 US Gallons
Fuel cost: $198.80 (partial refill: 30.12 US Gallon) at $6.60 / US Gallon

That is probably one of my shortest flights ever, between 2 different airports. KANJ is a port of entry for the USA. I want to remind you that at that stage, all non-N-registred aircraft need to complete a TSA/FAA waiver prior to entering US airspace. On top of that, it is a requirement that all aircraft entering or departing the US, need to fill in eAPIS form.

Leg #8: KANJ, Sault Ste Marie (Michigan) to KAHH, Amery Municipal (Wisconsin)

COST: NONE

Flight Rules: VFR.

Route distance: 343 NM – Actual flight time: 2h 50min.

Fuel Consumption: 29.6 US Gallons at 10.4 US Gallons/ hr

Leg #9: KAHH, Amery Municipal (Wisconsin) to KBDH, Willmar Municipal (Minnesota)

COST: $350.49

Flight Rules: VFR.

Route distance: 117 NM – Actual flight time: 50min.

Fuel Consumption: 7.9 US Gallons at 9.5 US Gallons/ hr

Fuel cost: $350.49 (Full refill: 56.53 US Gallon) at $6.20 per US Gallon.

Here I am in Willmar, home of **Weep No More** and **Willmar Air Service**. For me, it is a great combination. While Paul installs the Monroy Long Range Tanks and checks for fuel leaks, Brian, at Willmar Air Service (authorized Mooney Service Center) will carry out a thorough 50 hour inspection. It is now time for me to catch an airline and fly back to Paris.

I want to take this opportunity to thank both Paul and Brian for organizing my transfer back to Minneapolis International Airport.

IN SUMMARY: LFPT to KBDH (1980 Mooney M20J)

Flight time:	30h 32min.
Route distance:	4,113 NM
Average Speed:	134.7 Kts
Fuel Consumption:	277.5 US Gallons – Average Fuel Consumption: 9.09 US Gallon/ hr
Fuel cost:	$2,860.39 – Average Fuel Price: $10.31 per US Gallon
Additional costs:	$1,399.70

Oregon Central Coast

by Linda Corman

Well, summer is here and the weather is heating up. When it gets close to 100 degrees in Paso, we start looking for a cooler place to fly our Mooney. This time, we decided to go someplace that we had never been: The central coast of Oregon. We packed and headed north after checking out the weather. The Oregon coast can be pretty low IFR and can change in minutes. After slightly less than a three hour flight we landed in Coos Bay, also known as North Bend, at the mouth of the Coquille River. This is a very interesting airport as we landed coming in over the delta of the river with a sizeable bay.

The airport is located on an arm of the bay. We can not say enough good things about the people at **Coos Aviation**. When they say they are a full service FBO, they are telling you the truth. They helped us get a great rate on a rental car and also the crew rate at the local Red Lion hotel. We left our Mooney in their care. The winds were gusting 35 knots, and after 2 days, we went back just to see how she was doing. Coos Aviation had parked her in a hangar because of the winds, at no added charge. She was happy and so were we.

Florence: On our first day on the central coast, we headed to the small town of Florence; only an hour drive from Coos Bay along some wonderful coastal scenery. We checked into The **Old Town Inn**, near the old town of Florence, which runs along the banks of the Siuslaw River. The hotel wasn't much to speak of, but the location was ideal. We were only a minute to all the restaurants and shops. There are 5-6 blocks of shops, restaurants, lounges, parks, and riverfront. The first shop I noticed was a wine and chocolate tasting room located on Bay street called **Firenze**. Tasting wine and eating chocolate are two of my favorite things to do. As it happened, I was their first customer. The shop had just opened the day we arrived. I loved both the

wine and chocolates. After exploring the cute old town, we asked for a dinner recommendation and were directed to the **Waterfront Depot**. This restaurant is so popular that you have to arrive a little before four p.m. to even get into the place. As it was, we ended up eating at the bar. This actually was very nice as we met some locals and had a great meal with friendly people. The next morning we decided to continue up the coast to the town of Newport. But, before we left Florence, we needed breakfast. Phil located a cute little breakfast place on the 101, 2 blocks from our hotel called the **Little Brown Hen**,. We didn't expect anything great, but we were surprised with the how good our breakfast was. I had one of their specialties, brown rice hot cereal. It was wonderful. I need to find out how I can make it at home.

Newport

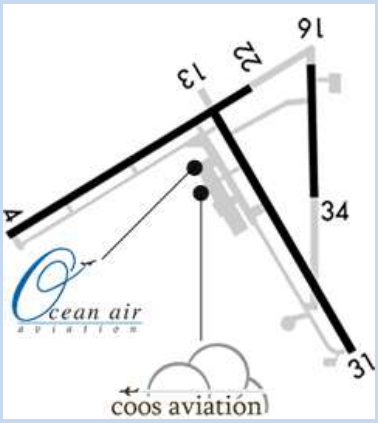
The drive was fun as we went over some of the most unique bridges I have ever seen. They seem to like the Art Deco style in bridges. After arriving at Newport we checked out the historic bay front area, which is along the Yaquina River and Bay. This area consists of a few blocks of shops, restaurants and fishing piers. We had a good time walking around, but decided after a few hours it was time to head back to Florence for dinner. This time we thought we would try another restaurant in Florence, also on Bay street, called Bridgewater/Zebra bar. Again, we had a wonderful dinner. This time we had crab sandwiches. So far, all the restaurants we tried were winners. For coffee and after dinner sweets, we walked down the street to the **Siuslaw River Coffee Roasters**. We ordered a Cafe Latte and I must say, it was the best I have ever tasted. The next day we were going south, back to Coos Bay, where we would spend the night and see some of the sights along the way to Bandon.

Bandon

Bandon is another coast side town with a harbor and 2 blocks of restaurants and shops. It seemed to be a sleepy town with arts and crafts and a couple of dress stores. We were having a hard time finding a

restaurant, as quite a few were closed that day. We finally wandered into an Irish pub called **Foley's on Baltimore Avenue**. As the world cup games were still on, the place was jammed. The food was good and typical of Irish pub grub. We had a great time drinking ales and cheering along whatever team was on the TV. The next day was our day to leave the central coast and because the weather on the coast had been foggy and windy most of our time there, I was a little nervous about an early departure. But, we were in luck, as that happened to be the one day it cleared and we had a wonderful trip back to Paso. This is an area of Oregon I would never have driven to, but having the Mooney, it made for a fun and cool vacation.

Getting There



Coos Bay (KOTH) was the most central to seeing all 4 cities. The airport is located on a peninsula in Coos Bay, which is also the delta for the Coquille Bay. It's easy to pickout and the tower is most helpful. Without a doubt, you should use **Coos Aviation**. They saved us a lot of money on the rental car and the hotel, and treated us amazingly well.

If only visiting Florence, use 6S2.

For Newport, use KONP, or

For Bandon, use S05.

What to Do

In Coos Bay, go to **Shore Acres State Park**. It includes a cliff walk over the Pacific with stunning views. You can also walk in a temperate rain forest and a beautiful botanical garden.

North of Coos Bay is the **Oregon Dunes National Recreation Area**, which has horseback riding, bike riding and sand buggy trails.

Just north of Florence, you can visit the **Heceta Lighthouse**.

In Florence, just stroll around Old Town's shops, wine tasting, coffee shops & restaurants. **The Waterfront Depot** is the local favorite and we agree.

In Newport, walk Bay Street, which is right under the bridge. It has lots of shops and is an authentic working fishing village. The Yaquina Lighthouse is here and **The Oregon Coast Aquarium**.

Bandon has an Old Town with shops & food.

Florida Mooney Lunch Group

August 9, St. Augustine (SGJ)
September 13, Lakeland (LAL)
October 14, Flagler (XFL)
November 8, Vero Beach, (VRB)
December 13, Punta Gorda (PGD)

VINTAGE MOONEY GROUP USA

August 15-17: Gold Beach, Oregon (4S1) – Join us for a fun-filled weekend on the coast of Oregon. We're arranging for discounts at The Inn of the Beachcomber and a Jet Boat tour up the Rogue River. **CLICK HERE** to check out the area. More details later.

September 27: LASAR Fly-In (1O2) – 3-in-1, including a Mooney BBQ, Splash-In Fly-in, and Pear Festival. Friday afternoon seminars. Friday evening Prop Wash, an informal wine & cheese gathering. Splash-In Pancake breakfast on Saturday morning. LASAR Mooney-Only BBQ from 1-3pm on Saturday. Shuttle service from LASAR to Splash-In & Pear Festival. Plus 100LL Fuel discounts.

October 3-5: Return to Page, Arizona (KPGA) – Join us for a day or the entire weekend at beautiful Lake Powell. Fly-into Page (KPGA). Optional activities include Lake Powell Flight Seeing Tour, Dinosaur Museum, "Blue Boat" Colorado River Tour, World Class Trout Fishing trip, Slot Canyon Tour, as well as the usual dinners on Friday and Saturday night and BBQ on Saturday at the airport.

The 2nd Mooney Summit will be hosted by Mike Elliott on **October 24-26**, at Panama City Beach, FL.

MOONEY SAFETY.COM

The **Mooney Safety Foundation** will present two distinctive pilot proficiency programs at:

September 5-7 – Roanoke, VA
October 10-12 – Branson, MO

A DC-10 had come in a little fast and thus had an exceedingly long roll out after touching down. San Jose Tower Noted: "American 751, make a hard right turn at the end of the runway, if you are able.

INTRODUCTORY OFFER

$8.00 LETS YOU STEP UP TO RETRACTABLE

Remember your first solo? Rediscover that first thrill of flying! Step up to retractable! If you're like a lot of private pilots, you probably soloed in a 150, 172, or Cherokee . . . and they're fine planes, too! But, if you're still flying "wheels down," come fly the Ranger. Tuck up your wheels and go! This one handles like a dream with the built-in safety and stability of P.C. . . . lands at a safe, slow 57 mph, yet speeds you cross-country at 172 mph cruise.

Don't wait — make a date to fly the Ranger. This coupon and $8.00 puts you at the controls with a qualified pilot at your side. There are no other charges. No obligation. Ask your Mooney dealer about his new Ranger plan that lets you step up to retractable rating at an unbelievably low cost.

MOONEY AIRCRAFT, INC., KERRVILLE, TEXAS

CLIP THIS COUPON

Send your questions for Tom to TheMooneyFlyer@gmail.com

Q1: I read an article concerning climbing my 252 and the TSIO-360 engine that indicated: "Once off, cleaned up and climbing, it's time to transition to enroute climb. Try climbing a 252 to altitude at a power setting of full throttle (36 inches manifold pressure + or – an inch), 2700 RPM, mixture set for 1450-1500 TIT fuel flow at 22.0-24.0 GPH. Full power climbs are the way to climb a 252 (and all other Mooneys) to altitude efficiently and in a way the airplane was designed to be flown. We've gone over it many times in the past, but partial power climbs give everything away (performance when you need it the most) for nothing. You won't hurt the engine climbing at full power. All the engines installed in Mooneys are rated for continuous takeoff power settings. TBO is not magically increased by climbing at reduced power. Fly the airplane to altitude at takeoff power. It's the way to fly your Mooney."

Have you any data or feelings that either embraces or disputes the M20K 252 wide open throttle and 22 - 24 GPH climb? What about other models and engines?

Answer: The question about full power climb on the 252 is applicable to almost any engine. In "my" opinion, I don't run my Chevy engine in low gear and full RPM to get up a hill and I don't believe that running an engine at full power on any engine is needed or good for the engine, to climb to altitude. Of course the engine is advertised to be able to run 100% to TBO, but we have Topped a lot of engines, mainly TCM engines, at 1000-1200 hours. So, using more power than needed, just accelerates the engine wear. I am old school and believe in best rate of climb when needed, but in most cases, I like "cruise climb" . Be nice to your engine. I won't give numbers since it can vary with each engine, but, the original 231 engine was rated at 2700 RPM and 40 inches for full power. Cruise climb would be 2600 and 36 inches. Put an intercooler on the engine, and it would be 2600 and 33 inches.

Q2: What are high cost maintenance items on a Mooney?

Answer: Let me say this first: As many of our customers know, at Top Gun, we maintain many different makes and models. The Mooney is our bread and butter and we have extensive experience on the Mooney. Compared to the costs on some of the other high performance makes and models, the Mooney is really the most cost effective plane for the performance.

First, we have a large range of models in the Mooney line. The venerable M20C, with its 180 HP engine, doesn't cost much more to maintain than a C-172 but gives a lot more performance. When you get to an Acclaim, the fastest single engine in the world, the costs will obviously be higher.

To pick some items common to all, I guess the fuel tanks and shock discs are the two items that can be costly, but these only need to be replaced after many years of operation. Engines probably take the most dollars to maintain, but this is not particular to a Mooney, but common to all planes. We maintain many 40 + year old Mooneys that are as good as new because of continued good maintenance by the owner and a good shop. The most important item to do on a regular basis is lubrication as specified in

the maintenance manual. Owners who lube in between inspections save themselves a lot of money in the long run. The most common part we replace is bearings and rod ends. These can last a long time if lubed several times a year. On many models, there is a 100 hour AD requirement to lube landing gear and flight control linkages. This is the most ignored AD applying to a Mooney.

Fool's Errand

A Mooney flight to remember

by Bud Teaters

The time period was September 1974 and I was taking a week's vacation from my job and doing the "airport bum" bit. You know, hanging around the FBO, getting in the way and sitting on the bench in front of the office with the other bums critiquing landings and takeoffs. Those were the good old days. I owned a beautiful Cessna 172 which I kept at the Aviation Facilities Inc. (AFI) Fullerton, California FBO and spent a lot of time washing and waxing my "pride and joy."

The owner of the FBO (Bill Greggs) called me aside one morning and told me of a problem he was having with an airplane that a renter pilot had flown to Sacramento. The renter pilot had left it there because he couldn't get the starter to work for the return flight. It seemed that the FBO would have to send a pilot/mechanic to Sacramento and they didn't have one to spare at the time. Bill asked if I would like to go after the airplane. He said the problem was probably only a stuck starter, which I could break loose with the insertion of a large screwdriver. He also said they would pay for the airline ticket to Sacramento and I could fly the plane back to Fullerton at no charge.

Who wouldn't want to fly a Mooney, even if the starter had a few issues?

Now this airplane was a very nice Mooney (M20E), tail number 9215V, and I'm sure that anyone would tell you that a guy would do about anything to get free flying in that baby. It so happened that I had checked out in that very airplane a few weeks before this incident took place so everything sounded great to me.

I appeared early the next morning to pick up my ticket and was greeted with a ticket and a box. In the box I found a very large screwdriver and a new starter. It was explained that just in case the screwdriver didn't work, the starter could be installed to fix the problem. It didn't dawn on me that this job might be a little more complicated than previously explained. Anyway, I jumped in my car and headed off to the Orange County airport to catch the airline flight to Sacramento.

I arrived at the Sacramento Metropolitan airport, and box in hand, took a bus over to the Sacramento Executive airport where the Mooney was grounded. I arrived about noon and it was already getting very warm, with the temperature climbing toward the 100 degree mark. I found the airplane parked in "visitor parking" which happened to be on the blacktop, out in the open, in front of the tower.

One look at the starter and I knew that the screwdriver was going to be of no use to me. The teeth of the starter were all gone! The starter worked fine, but couldn't turn the engine over without teeth on the drive shaft. I got the feeling that I may have been sent on a Fool's Errand, because I'm sure the

renter pilot could have seen the problem and I'm sure he would have told Bill about the real problem. I was wondering why he sent the screwdriver along.

My problem now was to find a mechanic to install my starter. If you have never worked on the inside of a Mooney cowling, you won't appreciate the problem I encountered in finding a mechanic. Oh, there were several mechanics around the field, but none would take on the job. All claimed to be too busy. I finally found a mechanic who said he would at least take a look at the job. He checked the problem and quoted me a price to replace the starter. It seemed very high to me at the time, but I was desperate by then and told him to get started.

I thought the mechanic would pull the plane into a hangar close by but he said he could do the job right there on the parking ramp. It was now about three o'clock in the afternoon and the temperature was around 103 on the ramp. We rigged a sort of tent over the engine and he went to work with me handing tools and holding things to help out.

Maybe not the ideal working conditions for replacing a starter?

It took a very long time to do the job. It seemed to me that the entire engine was disassembled to get to the starter. Every so often we would take a break and get a Coke to drink - to try to hang in there with all that heat. Finally, at about eight o'clock that evening, with only a handful of small screws left over, we started the engine and checked for oil leaks and anything else that might be amiss. Everything looked to be in good shape, so I paid the man with a substantial tip (the price that seemed high at first was much too low for the work required) and checked the weather for the flight back to Orange County airport.

Flight Service said it was clear all the way to the Los Angeles basin and then it would be overcast at about 1000 feet with the normal late evening marine layer. I left Sacramento at nine o'clock after a very long and trying day in temperatures over 100 degrees. The last thing the mechanic said to me was to be sure and keep an eye on the oil pressure just in case!

The three-hour flight back to Orange County was beautiful, with the lights of Interstate 5 guiding me all the way home. Just outside of the Los Angeles basin, I filed IFR for Orange County and was given a VOR runway 18 approach. I was a very current instrument pilot at that time and this approach should have been a piece of cake.

I entered the overcast at about 3000 feet and when I broke out at about 1000 feet, the runway was not where it should have been. I declared a missed approach and pulled back up above the overcast into VFR conditions to think things over. The controller tried to help me by saying that it looked like my directional gyro might not be set correctly. He was exactly right. I had forgotten to set the gyro and it was off enough to make me miss the approach. I realized then that I was not thinking too straight and went through the entire landing checklist again just to make sure I hadn't missed something else. The next approach was on the money, but the landing could have been a lot smoother.

When I stepped out of the plane, I found that my knees were very weak and I had trouble walking and tying the plane down. I headed for the nearest drinking fountain and consumed a large amount of fluid

which helped considerably. When I arrived home, I poured down more water to help overcome the dehydrated condition of my body.

Looking back on my experience, I found that I had been sent on a Fool's Errand and I have to laugh about how naive I was, but the FBO owner and I are still friends. As I look back on this incident now, there were several major mistakes made by yours truly. We have all heard before to be extra careful in our flying chores when tired or not in peak physical condition.

After spending all afternoon in the hot sun, you are not in real good shape to fly. I didn't have to get home that evening; I could just as easily stayed overnight in a motel. So why did I take a plane that had just been taken apart and put back together and fly three hours at night, over mountains and into an overcast instrument approach? The answer is that I was just young and stupid and was lucky to have made it home. I wouldn't push those odds again!

Originally ran in Air Facts Journal, May 20, 2014 in the series, *"I Can't Believe I Did That"*

http://airfactsjournal.com/2014/05/fools-errand-mooney-flight-remember/

Directonal Sound Finders from WWI or Mooney Pilots? You be the judge!

August, 2014

From AirVenture

L-3's Lynx Promises Low-Cost ADS-B Path

Lynx is described by L-3 as a single-box solution for ADS-B compliance with pricing starting at under $2,000. That will provide buyers with ADS-B Out capability and a WAAS GPS source to meet the 2020 equipment rule. Lynx can be upgraded with optional capabilities for display of traffic and weather information in flight, and more.

READ MORE

Aspen Avionics Expands ADS-B Product Line

EAA AirVenture - Oshkosh, WI, July 28, 2014: Aspen Avionics announced today it has expanded its ADS-B product line to include more options to meet the NextGen ADS-B mandate.
READ MORE

BendixKing Announces ADS-B Products, KSN 770 Cert

The new ADS-B products are called the KGX series and there are four products to choose from. The KGX 150 is a transceiver for ADS-B for aircraft operating below 18,000 and is equipped with a WAAS-capable GPS receiver. The KGX 130 has the same capability, but without the GPS receiver. Both are capable of transmitting data wirelessly to cockpit tablets. The new product series can be paired with existing transponders and some panel display units. Gould said prices range from $1489 to $4069, with an additional $349 for wireless capability.

Gould also said *BendixKing* will shortly receive TSO and STC approval for its KSN770 receiver and deliveries to dealers are expected by the end of August. **READ MORE**

Avidyne IFD540 GPS Navcom Receives FAA Certification, AML-STC

The IFD540 joins Avidyne's TSO'd avionics, which include the AMX240 audio panel andAXP340 Mode S ADS-B transponder, and all of these units are plug-and-play compatible. This means installation requires only removing existing avionics, inserting the new Avidyne units into the existing tray, testing them and then updating logbooks to reflect the installation. The IFD540 replaces Garmin's GNS530 and fits in the same mounting tray. Price of the 10-watt, 8.33-kHz IFD540 is $16,995; a 16-watt transmitter is optional. While the IFD540 can use the existing antenna, Avidyne offers antennas for an additional charge if needed. READ MORE

FreeFlight Receives TSO for RANGR ADS-B Receiver

FreeFlight Systems announced today at AirVenture that the FAA has granted Technical Service Order (TSO) approval to the company's RANGR FDL- 978-RX ADS-B receiver with optional built-in WAAS GPS. The system provides what free-flight described as an affordable and flexible way to add ADS-B In traffic and weather capabilities to aircraft with certified 1090ES or UAT ADS-B Out transmitters. The list price for the RANGR FDL-978-RX without the integrated WAAS GPS is $1,495 and $3,295 with the integrated WAAS GPS. **READ MORE**

Preflight Check… Oops

Next Mooney Innovation?

Product Review: DownTube Folding Bicycle

There are literally hundreds of folding bicycles on the market. These include Citizen, Xootr, Montague, Brompton and others. If you are asking why we chose this brand and model to review, here's why!

It's a 7-speed model, super light at 24 lbs, aluminum frame and components, a 7-speed Shimano Drivetrain, folding petals and adjustable stems. It folds and unfolds in 15-20 seconds. But here is the best part. When folded, it easily fits through the cargo door. There's more good news. It costs $299. You can easily spend $800-$1200 on folding bicycles, but after riding this model, you'll ask yourself why.

Click Here to see the entire website as DownTube has other models as well. These have more gears and suspension. For our mission, which is to land at an airport and ride 3-5 miles into town, this 7-speed model is ideal for price/performance. Let's make it clear, that this is a foldable road bike. If you are a fat tire person (i.e., mountain bikes), this is NOT for you. This bike feels solid and is built to last.

Mooney Instructors Around The Country

Arizona

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

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A NAFI Master CFI with extensive Mooney experience. He is also an FAA Designated Pilot Examiner and has been awarded the FAA Wright Brothers Master Pilot Award. Wallace is a retired airline pilot and Mooney owner.

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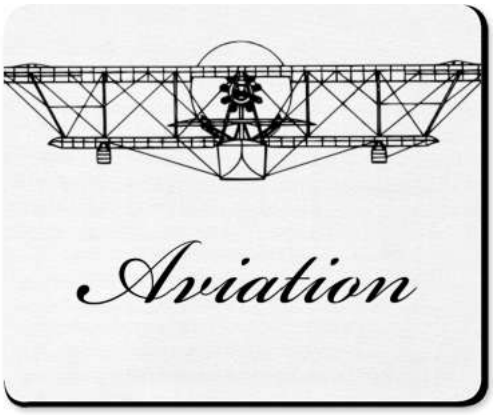

LASAR'S Free Site

Check out Lake Aero Styling & Repair's " LASAR" Web Site: www.lasar.com : New under Mooneys for Sale, "List your Mooney for free" and "Mooney Instructors." Also check out Parts, Mods, and Services! LASAR, est. 1975 **(707) 263-0412** e-mail: parts-mods@lasar.com and service@lasar.com --

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