The Mooney Flyer

The Official Online Magazine for the Mooney Community

August 2012

Keeping the Lights on at Mooney

Mooneys – Built Like A Fighter

Transitioning to a Mooney, Learn This Stuff

Using Checklists

Mooney Adventure over the Caribbean

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Features

Keeping the Lights On at Mooney

An update on the Mooney Factory. The crew at Mooney is about eleven (11) now. In our opinion, they are truly doing the work of many more and surely "keeping the lights on". On behalf of everyone here at The Mooney Flyer, and also for the entire Mooney community, we shout out a huge Thank You!

Are Pilots Coming out of their Hangars?

It appears that pilots are flying more lately? Is it true?

Mooneys – Built Like a Fighter

Paul Loewen discusses the incredible strength of the Mooney design.

Using the Checklist – A Sign of Strength

Jim's article explores the origin and a bit of the history of the checklist and how it saved Boeing.

Instruction when Transitioning to a Mooney

We try to cover just what a pilot is getting from a Mooney-Specific instructor. We answer the question, "What are the key things you need to learn when transitioning to a Mooney"?. What other factors should be considered when selecting an instructor to transition to a complex or high performance aircraft like a Mooney with a laminar flow wing. We hope you find the information useful. It's clear, from our research, that all factors being equal, having a Mooney-experienced instructor is a plus. But that wasn't our question.

Great Circle Trip around the Caribbean

This past January, Ozzie and a small group of Mooneys flew all around the

In Every Issue

Editors
Phil Corman
Jim Price

Contributing Writers
Bob Kromer
Tom Rouch
Paul Loewen
Ozzie Kaufmann

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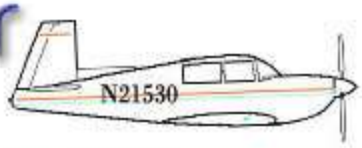
From the Editor

Phil Corman



Welcome to our 4th Issue of the Mooney Flyer. We are sincerely grateful for all of your kind emails. We are striving to be both informative and entertaining to the Mooney Community.

We attend Mooney fly-ins most every month and each time it's a unique and very rewarding experience. Every time we rekindle old friendships and make new ones. For some reasons, Mooney friends are wonderful. The fly-ins encourage people to fly to a destination that they otherwise might not have considered. Time on the ramp and a good lunch together are simply a winning formula. And you may make friends that will last a lifetime.

I read this past month that the pilot population continues to decline. If you look around the ramp, it seems that being a pilot is an older person's avocation. It makes me wonder about the future of single engine general aviation. It is truly a joy in my life and also my wife. We take our Mooney to places that we simply would not drive to. We see new things and meet new people. But this past month, I had the worst day and the best day, relating to flying in a long time. My long time friend, Bob Katzer, called me on a Saturday and asked me to come down to the airport. My daughter was getting married and I told him it would be difficult. He asked gently again. I drove down to the airport. He could not get out of the car. He gave me the key to his 1965 M20C and said, "I only have days to live and would like you to sell my airplane for me and my family." Bob had a bad day. He had a stroke earlier in the week, and then was diagnosed with terminal cancer. He died a week later. Bob was a veteran of the Vietnam war and a friend to all at Paso Robles airport. That was my bad day.

But my good day followed shortly. A young woman, from Orlando Florida, called expressing interest in Bob's Mooney. The plane's exterior and interior did not show well, but I knew that Bob was meticulous with the mechanics. He had a new propeller, speed brakes, bladders and a dependable Lycoming with high 70s compressions. When this young woman came to Paso Robles, with two friends, she fell in love with N7877V at first sight. A friend of mine, Greg Jacobs, and I had washed her the day before and she shined up nicely. It was our last gift to Bob and our first gift to this new Mooney owner. I was so happy to see her fly it away.

The pilot population may be getting older and getting fewer, but on this day, one young woman joined the ranks of Mooney owners and the world seemed just fine.

Remember Density Altitude Calculations - We're in the midst of summer and it has been pretty hot across the country. In the west, that drives density altitude into the stratosphere, pretty regularly. It is not uncommon to see 10,000 DA at Big Bear which is only 6752' MSL. Even in the Midwest and east, where altitudes are generally lower, DA can wreak havoc on your performance, especially with lots of fuel and/or passengers. There are a few things that you can do about that. First, know your airplane and compute the performance of your Mooney given the airport, the weather, the temperature, and the humidity. Humidity has a lesser impact on DA, but it is still a factor. The second thing you can manage it gross weight. Consider carrying less fuel. The final consideration is to depart in the morning or the late afternoon, when the temps are generally cooler. Another thing that is a must in any high DA departure is to lean your engine. You've already been robbed of performance by the high DA, don't let a "too rich mixture" take even more performance away from you.

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. Please send corrections to us.

M20C M20E M20G M20F M20J

Keeping the Lights on at Mooney

Bob Kromer
Former Executive VP and General Manager, Mooney Aircraft Corporation

Even though it has been almost three years since the Mooney factory last produced and licensed a new airplane, there has been an ongoing and quite remarkable effort by the eleven remaining Mooney employees in Kerrville, Texas to keep the fleet supported and flying. Unfortunately, this effort has gone somewhat unnoticed and under-appreciated by Mooney owners and pilots. It's time for all of us to acknowledge their efforts and offer a collective "Thank You!" for a job very well done under very difficult circumstances.

One of the most frightening issues for an aircraft owner to experience is the permanent loss of a factory to stand behind and support his or her airplane. When this happens, the first critical issue to be affected is the availability and price of spare parts. For hundreds of unique spare parts, especially parts and major assemblies for the airframe, it is the factory that generally serves as the primary source and clearinghouse. Without these parts, the flying fleet is orphaned and eventually grounded.

Thank goodness this has not been the case for Mooney owners. Every day, most of the eleven current employees at the Mooney factory in Kerrville come to work with the distinct mission of building, inspecting, boxing and shipping critical spare parts to the service center network. This is not easy – in some cases employees must learn how to operate specialty equipment to build unique spares to tightly measured tolerances. But they get it done. And as a result, the Mooney fleet keeps flying.

Another less visible but very important function the factory provides is the continued airworthiness of the fleet. It is the factory who generally maintains the type certificates for the airplanes in service. While this function is somewhat out of sight, it is of critical importance. If a matter should ever emerge that the FAA deems critical to the continued airworthiness of the fleet, it is the factory they will turn to for answers and resolutions. Without this function provided by the factory or another organized support group, the fleet could be grounded.

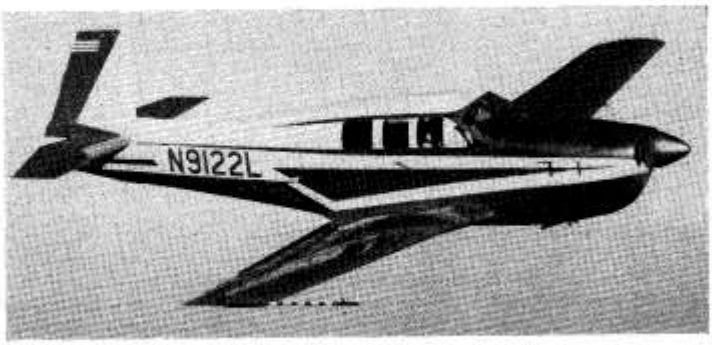
Again, this has not been then case for Mooney owners. The Mooney factory has maintained their basic function of maintaining the type certificates for the various Mooney models currently in service. Mooney owners worldwide can sleep better at night knowing that a serious issue that might develop affecting the basic airworthiness of their airplane can be handled by the current personnel at the factory. This is a huge benefit and service to those flying Mooney airplanes.

By keeping the lights on and supporting the fleet, everyone currently employed at the factory deserves our utmost gratitude and thanks. They have kept the flow of spare parts (and prices) at a reasonable level. They have monitored and maintained the airworthiness of the fleet. Working in conjunction with an excellent factory service center organization, they have maintained the value of the fleet and in the process have saved everyone flying a Mooney a lot of money.

So "Thank You!" to all at the Mooney factory in Kerrville for a job very well done. You've helped to keep everyone flying during this period of downtime and transition at the factory. You've helped to maintain the value of the Mooney fleet during this time of uncertainty. And most important, you've helped keep the Mooney brand viable and given the company the opportunity to move forward with perhaps a new direction and a new beginning. For that, we are most grateful.

MOONEY FOR '65

This all-new—all-star line-up for 1965 is making aviation history. From the fixed gear Mooney Master to the 325mph Turbo-Twin, this is one of the most exciting, most advanced lines of aircraft available in general aviation this year. The greatest single engineering and performance advancement in the '65 line is Positive Control — another aviation first for Mooney. PC adds a new dimension of pleasure and safety to everyday flying. It's standard on the Mark 21, Super 21, and the new Mooney Mustang for 1965.



New Star in the Sky

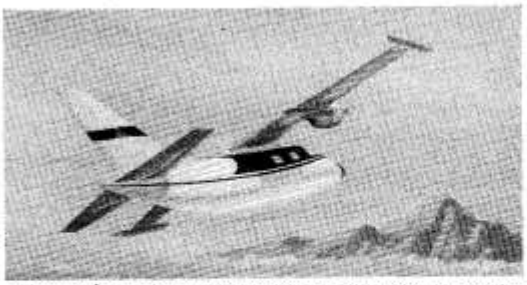
Mark 22 — Mustang

First pressurized single engine aircraft carries 5 at speeds to 250mph and altitudes to 24,000 feet. Coming mid-year!

MOONEY SUPER 21 — The convincing new Super 21 with Positive Control. 200hp with 187mph cruise. Ram air power boost adds another 10-12hp at altitude.

MOONEY MASTER — fixed gear. Two airplanes for the price of one. The versatile fixed gear that converts to retractable at owner's option.

MOONEY MARK 21 — The completely new and different Mark 21 with Positive Control plus over 16 other new features for '65 . . . the most practical buy you can fly.



MOONEY MU-2 - Mooney presents another new concept for general aviation. The MU-2 is the first high speed, high altitude business aircraft with real STOL capabilities. Speeds to 325mph, altitudes to 30,000', pressurized and air conditioned. It's coming soon!

See Your Mooney Dealer Now for Details on These All New, Trend-Setting Aircraft.

See our exhibit at the Paris Air Show!

MOONEY

MOONEY AIRCRAFT, INC. • KERRVILLE, TEXAS

CIRCLE NO. 52 ON READER SERVICE PAGE

FLYING—June 1965

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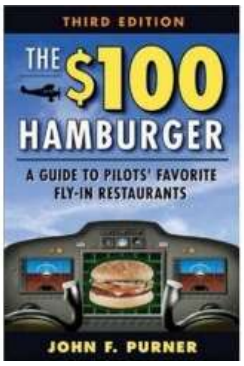
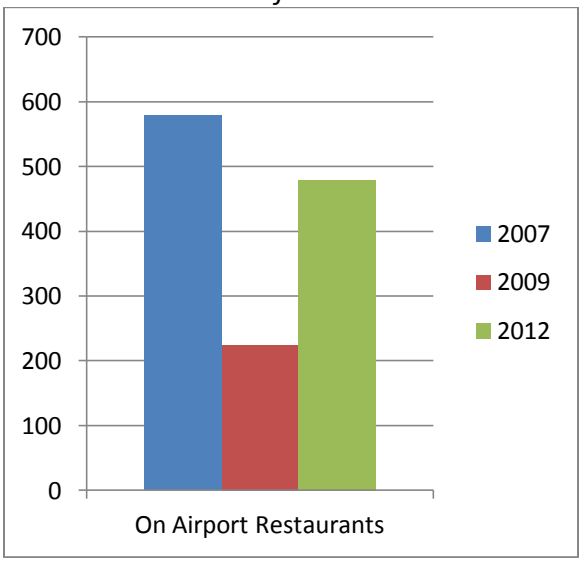
JIM PRICE ATP, CFI-I, MEI

Are Pilots Coming Out of Their Hangars?



John Purner, Author of *The $100 Hamburger*, *101 Best Aviation Attractions* and *The $500 Round of Golf*, keeps his finger on the pulse of aviation by monitoring the economic health of airport restaurants. Good news! We just may have started a climb to a smoother altitude! John Purner's *$100 Hamburger Journal* contends that, *"Business is getting better, not tons better but better. For the first time in four years the total number of restaurants on our website is growing. I am speaking now specifically of the on airport restaurants as the ebb and flow of those on our side of the fence are principally influenced by the health of our industry. We review 1,613 aviation friendly restaurants, 479 of these (30%) are on airport. That is approximately 100 short of the 2007 high-water mark but up 50 or so from the worst moments of 2009."*



In addition, it appears that more pilots are interested in searching for the perfect $100 Hamburger and supporting the airport restaurants. June www.100dollarhamburger.com/ subscriptions grew by 300% over those in May. "July is still trending up but at a more normal rate", said Purner.

A robust, pre-2008 GA economy isn't quite there as yet. Mooney's assembly line is still slumbering and a few, once vibrant aircraft manufacturers are now under foreign ownership.

Yet, there are signs that Rip VanPilot is emerging from his four year hangar hibernation. 80% of the www.100dollarhamburger members have renewed their membership and Purner sees that as a good sign – especially for him. Hopefully, pilots are indeed on the verge of burning some AvGas, to satisfy their hunger pains.

Mooney Mail

Regarding the **Engine Failure over the Nevada Desert** in the July issue -- I was young and adventurous (stupid) when I bought my first Mooney in 1984. I was 25 years old and doing field service for Raytheon Data Systems out of Denver. I bought a 67 M20F and ended up flying it about 450 hours a year. I would fly to Rapid City SD about three times a week. After a while the trips got boring so I started flying them at lower altitudes (not recommended). While zooming along trying to miss telephone poles , power lines and keep legal separation from people, vehicles and buildings (horizontally). It occurred to me that if I had an engine failure at that altitude I would be in pretty bad shape. I wondered if there would be advantages to zooming up to rapidly get to best glide speed rather than just maintaining altitude. I couldn't find any guidance in any of the flying books I had, so I decided to do an experiment. I went out about 30 miles east of the Denver VOR at 6500 feet and normal cruse speed, tracking to the VOR, when I passed exactly 30DME I would pull the throttle to idle, maintain altitude until reaching best glide speed then note the DME distance when I descended to 6000 feet. Next I did the same thing except when I closed the throttle I started a genital pull up till I got to best glide speed. I climbed about 500 feet and extended my glide distance about ½ mile. Next I did the same thing except I pulled up aggressively to get to best glide speed as soon as possible. This time I climbed about 800 feet and extended the glide almost a mile. In conclusion, if your engine fails, don't maintain altitude, immediately climb to best glide speed, you will go further! If anybody else is dumb enough to do cross country flight at very low altitude, another advantage is that you can see a lot more landing sites at 800 feet than 50 feet.

Richard Jones

Editors Note: We have not verified Richard's data, but we can verify that there are a few things you can do to extend your glide. One is definitely getting to Best Glide quickly. A second is to pull the Prop control all the way out (Low RPM) to reduce drag. And third, all things equal, glide with the wind.

Congrats for consistently turning out a great newsletter with relevant and useful info! It doesn't look like Mooney will start building new airplanes anytime soon so maybe the factory will view Bob Kromer's idea about refurbishing the existing fleet more favorably. I remember talking to the Mooney VP of marketing around 2002 at OSH (I think his name was David Copeland) and I suggested Mooney offer airframe overhauls for the existing fleet. I thought it would be good business for the company and a great service to existing owners. Since the only focus on those days was on selling new airplanes, needless to say my suggestion didn't go anywhere. I hope the factory will be more receptive to Bob.

Dave Eneboe, M20E N1279X

By the way, regarding Jim Price's article stating "The M20J POH says to lock the door before flying," the manual for my 1983 M20J says to latch (not lock) the baggage door.

Roy Roberts

Another great issue. Thank you for sending it. Keep Up The Great Work. Hmm, guess I'll have to stop saying " with you " and " roger that ". I know I'm no astronaut, but I did get the biggest kick for being able to say " roger that " from time to time. I was 9 when Neil Armstrong and Buzz Aldrin walked on the moon. They're still my heroes. I never said it in lieu of a reply that was needed to confirm a controller instruction.
Best Regards,

Glenn Swiatek N56338

This is perhaps the best newsletter I've seen on GA... Topics like "Engine Trouble", ADS-B and general info on landing gears and other maintenance issues makes up for a great read. Very impressive.
Tailwinds,
Ruhil Austin

Your Newsletter looks great. You're cranking as much useful information into your Newsletter as the established print magazines are each month. Regarding your text box on Oil,
"Mineral oil suspends particles and seals better than synthetic." I believe this statement is wrong. First off, there are no longer any purely synthetic aircraft oils on the market. Mobil marketed Mobil Av 1, a purely synthetic aircraft oil in the early 1990s. Supposed to last 100 hours, yada yada yada. Only one problem, it didn't scavenge lead salts, which is a problem since these salts collected to produce a sludge-like muck. They got sued and gained a very nasty reputation by making everyone who had suffered losses jump through a many gated obstacle course to be made good. Since that day there hasn't been a purely synthetic aircraft oil on the market. That doesn't mean some of today's well regarded aircraft oils don't contain a synthetic component—Aeroshell 20W-50 has more synthetic content (PAO) than other oils on the market. For more information on this subject Click Here. In conclusion, the statement is technically correct, but it's sort of a trick question and doesn't really belong with the other questions which are more helpful to the average owner operator.
Steve Els
Editor's Note: Click Here for a great article from Continental on Oil Analysis

Guys, this is the best newsletter I have seen in a long, long time - haven't flown in a while but I am truly inspired with great bits of info, fun commentary - all on the subject of Mooney Airplanes. I hope I see you at the next fly ins and gush about this flyer in person :)
Lori Elinsky

For the factory to return, it's 1) crawl, 2) walk, 3) run. Crawl is spurring spare parts sales to $250,000 in net profits annually. Walk are the refurbishment programs with the goal of one airplane delivered per week with a net profit of 10% per airplane delivered (about $30K). Run is developing a new version of the M20 series airframe (still with four forward facing seats) that is turboprop powered and pressurized, selling for $1.25-$1.35M equipped. But for the next owner, it it critical that these three steps be done in order. And only when the goal of each phase has been met should the company move on to the next phase.
Bob Kromer

Nobody asked me…

But do you ever wonder why people who ride in Porsches don't complain about the size of the compartment? But non-Mooney pilots constantly complain about the size of our cockpit?

Everything You Wanted to Know about Tires

Aircraft tires leak air. You really should check them regularly, at least every two weeks.

Why? Under-inflated tires wear more quickly. Also the "traction wave" gets amplified by under nflation.

What type of tube is recommended? AirStop or LeakGuard, which are butyl tubes.

Wear Patterns – If your tires are underinflated, the outer edges wear more. Over inflation causes wear in the center of the tire.

When are tires no longer serviceable? They are serviceable until fabric shows.

A slightly overinflated tire is better than a slightly underinflated tire.

For those trivia nuts – Tires pressure increases 1% for every 5^{o} F.

MOONEYS --- BUILT LIKE A FIGHTER

first submitted to Aviation Consumer

The strong structural design of the all metal Mooney is a credit to Ralph Harmon, who did the re-engineering in 1960. The basic Al Mooney design from the wood wing has carried through to the present models. You could probably find a few parts from an early 1954 model that would be common on today's "Acclaim". We have been known to do a major rebuild on a 1977 "201" with a tailcone from a 1965 M20C.

The main cabin structure loads are carried by strong welded "chromemoly" steel tubing including "roll bar" type support behind the windshield and cabin overhead. To this structure is bolted the "one piece" wing, the semimonocoque tailcone, the engine mount and the nose gear.

The wing is attached with more than 2 dozen bolts, some as large as 1/2" diameter. The engine mount is attached with 4 small 1/4" " bolts. The engine attach bolts at the Lord mounts are 7/16" and the prop attached to the crankshaft with big 1/2" bolts. When you don't think about it, this seems backwards. But is the prop bolted on to the airplane?? Or is the airplane bolted on to the prop??

On the other end of the airplane, the unique fully articulating empenage assembly is bolted on to the tailcone with two 1/4" pivot bolts and stabilized with piano type hinges and a jackscrew for adjusting the whole tail for pitch trim.

All this hardware is quite adequate, in fact, Bill Wheat, a long time engineer at Mooney, tells he once test flew a Mooney with small 3/16" pivot bolts in place of the 1/4" bolts to prove to the FAA, a lot of wear and slop would not affect its flying characteristics. There was a heart throbbing surprise when, pulling out of the test dive, the nose tucked under as the tail shifted in its very sloppy attachment. The plane, pilot, and even the small bolts survived the test to prove that the airplane was well engineered. The Mooney Factory may have gone broke a few times, but they have never lost their tail. ☺

There are documented cases where in flight a part of a prop blade was lost and the resultant severe shaking did serious damage, but the loosened engine was retained by the strong cowling that allowed for a controlled landing.

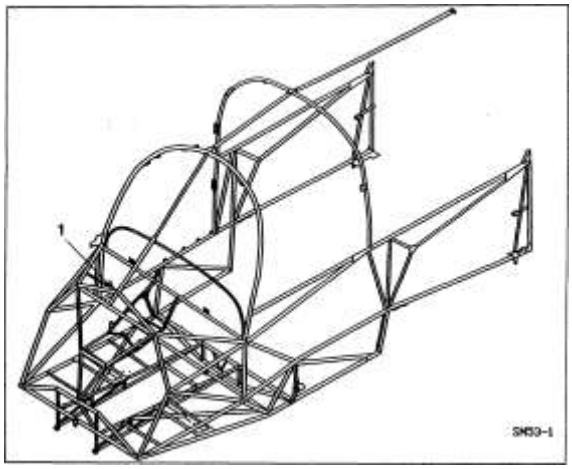
I've witnessed the results of a "overstressed" wing caused by "clear air turbulence" that caused a temporary out-of-control situation that resulted in a 8 or 9 "G" pull out. The wing was eventually scrapped, but only after it had been flown once more to another airport for repairs.

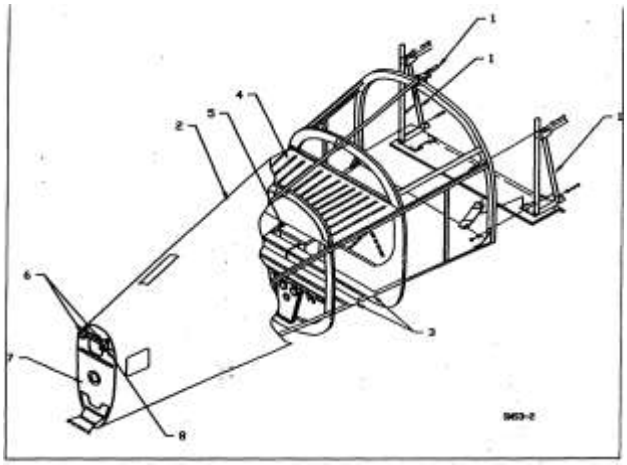
Part of our business at Lake Aero Styling thrives on the repairs and reconstruction of Mooneys that have had serious impact with the ground. Some of our mechanics have had a part in building military fighters in the past, such as P38's and P51's, and they marvel at the similarity of construction and strengths in the Mooney design. Usually the main structure of these salvaged airplanes has survived and can be rebuilt to fly again.

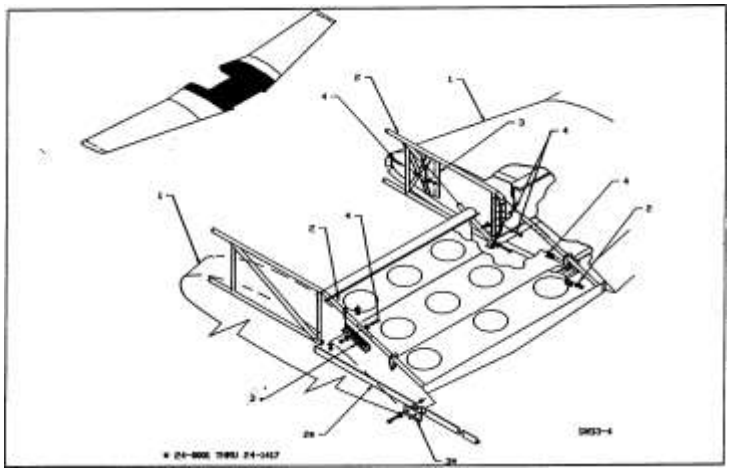
In 1969, I heard it said that the man hours required to build a Mooney airframe is approximately 1500 hours compared to an equivalent Piper at 700 hours. The difference, of course, is the number of individual parts and the more complex design of the Mooney structure. With these differences in manufacturing costs, it's amazing to think that the Mooney and the Piper Arrow once competed at the same prices in 1969. It's no wonder

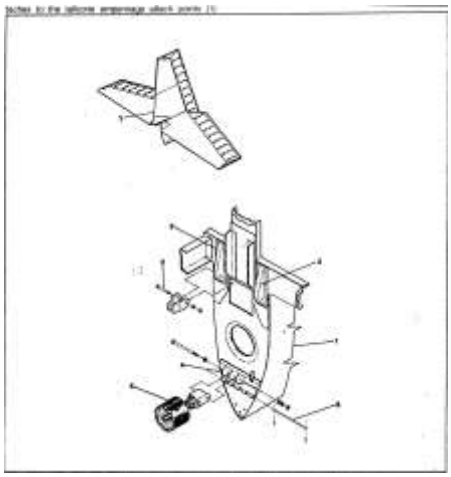
Mooney was broke by 1971. The last time Mooney was in production, the man hours required exceeded 4,000 hours, but it's a more complex airplane today.

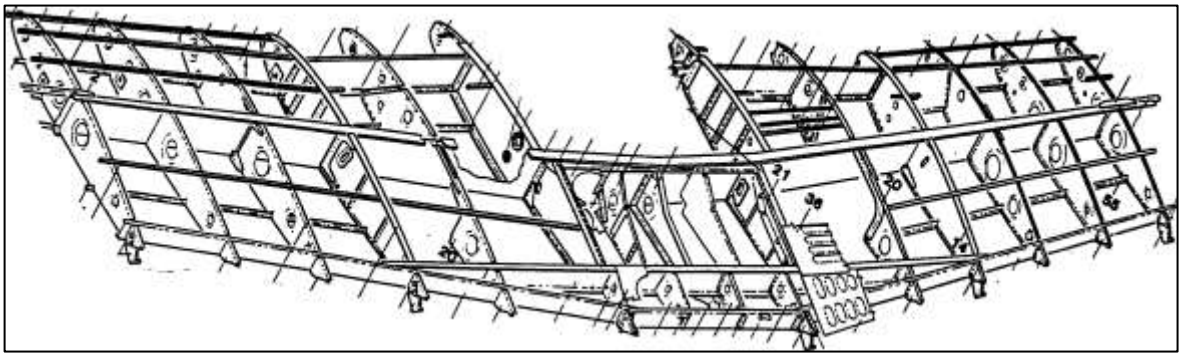
I have been in the Mooney service business for 46 years now and have owned and loved more than 20 personal Mooneys during those years. The reassuring strong design, neat-to-fly feel, the fuel efficiency, and speed make up a truly remarkable airplane. All the models are great!!











Using the Checklist – A Sign of Strength

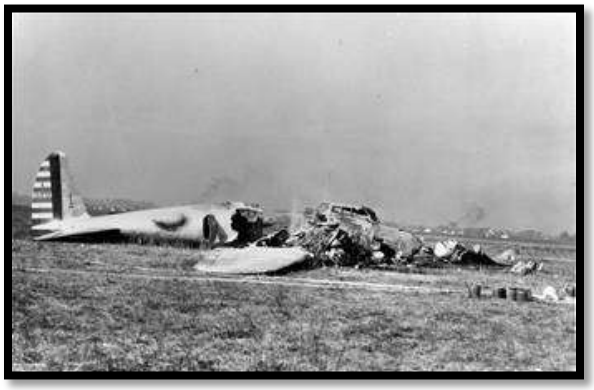
by Jim Price

The checklist in our aircraft is something that can be looked at in many different ways. Some pilots would never think of flying without a checklist. Others think that using one would indicate a sign of weakness. Most pilots are somewhere between both extremes.

I'll now do my Cliff Claven impersonation and explain (whether or not you'd like to know about this stuff), how the checklist was "born" and how it saved Boeing from bankruptcy.

In 1935, the U.S. Army Air Corps held a flight competition for airplane manufacturers vying to build its next-generation long-range bomber.

Martin submitted a stubby little twin engine called the Model 146 (shown at left); Douglas submitted the DB-1 (also a twin); and Boeing submitted their Model 299. On October 30, 1935, at Wright Air Field in Dayton, Ohio, a small crowd of Army brass and manufacturing executives watched as the Model 299 test plane taxied onto the runway. It was sleek and impressive, with a hundred-and-three-foot wingspan and four engines jutting out from the wings, rather than the usual two. The five man crew was led by Major Ployer (Pete) P. Hill. The co-pilot was, Boeing employee, Les Tower,. The plane roared down the tarmac, lifted off smoothly and climbed sharply to three hundred feet. then stalled, and crashed in a fiery explosion. Three of the five survived, but Les Tower and Major Pete Hill died. (Hill AFB near Ogden, Utah is named after him).



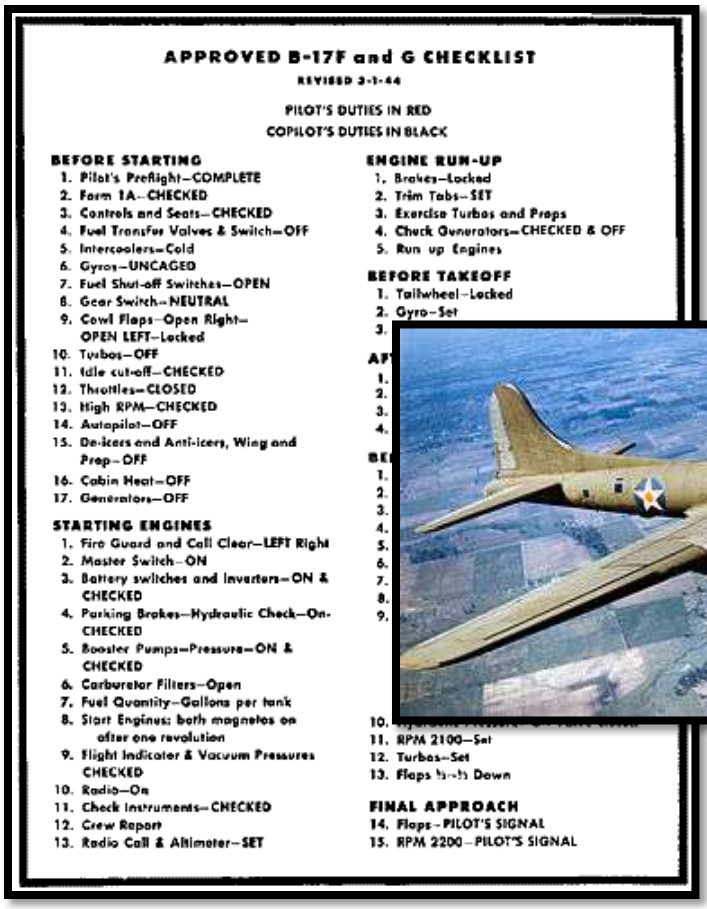
Substantially more complex than previous aircraft, the Boeing bomber required the pilot to attend to four engines, a retractable landing gear, new wing flaps, electric trim tabs that needed adjustment as airspeeds changed, and constant-speed propellers that used hydraulic controls to change pitch. This was a very complex aircraft!

While managing this complex aircraft, Hill had forgotten to release a new locking mechanism on the elevator and rudder controls. The Boeing Model 299 was deemed, as a newspaper put it, "too much airplane for one man to fly."

The Army Air Corps declared Douglas' stubby little DB-1 the winner. They called it the B-18 Bolo, and Boeing nearly went bankrupt.

A group of test pilots got together and considered what to do.

B-18 Bolo



APPROVED B-17F and G CHECKLIST

REVISED 3-1-44

PILOT'S DUTIES IN RED

COPILOT'S DUTIES IN BLACK

BEFORE STARTING

1. Pilot's Preflight—COMPLETE
2. Form 1A—CHECKED
3. Controls and Seats—CHECKED
4. Fuel Transfer Valves & Switch—OFF
5. Intercoolers—Cold
6. Gyros—UNCAGED
7. Fuel Shut-off Switches—OPEN
8. Gear Switch—NEUTRAL
9. Cowl Flaps—Open Right—OPEN LEFT—Locked
10. Turbos—OFF
11. Idle cut-off—CHECKED
12. Throttles—CLOSED
13. High RPM—CHECKED
14. Autopilot—OFF
15. De-icers and Anti-icers, Wing and Prop—OFF
16. Cabin Heat—OFF
17. Generators—OFF

STARTING ENGINES

1. Fire Guard and Call Clear—LEFT Right
2. Master Switch—ON
3. Battery switches and Inverters—ON & CHECKED
4. Parking Brakes—Hydraulic Check—On-CHECKED
5. Booster Pumps—Pressure—ON & CHECKED
6. Carburetor Filters—Open
7. Fuel Quantity—Gallons per tank
8. Start Engines: both magnetos on after one revolution
9. Flight Indicator & Vacuum Pressures CHECKED
10. Radio—On
11. Check Instruments—CHECKED
12. Crew Report
13. Radio Call & Altimeter—SET

ENGINE RUN-UP

1. Brakes—Locked
2. Trim Tabs—SET
3. Exercise Turbos and Props
4. Check Generators—CHECKED & OFF
5. Run up Engines

BEFORE TAKEOFF

1. Tailwheel—Locked
2. Gyro—Set
3.

10.
11. RPM 2100—Set
12. Turbos—Set
13. Flaps [illegible] Down

FINAL APPROACH

14. Flaps—PILOT'S SIGNAL
15. RPM 2200—PILOT'S SIGNAL

They knew that Major Hill was the U.S. Army Air Corps' Chief of Flight Testing, so requiring more training for Model 299 pilots wasn't the answer. Instead, these ingenious test pilots came up with a simple approach. They created a **pilot's checklist**, with step-by-step checks for takeoff, flight, landing, and taxiing.

The Army eventually ordered thousands of the Boeing aircraft, which became known as the B-17 Flying Fortress.

As an instructor and evaluator in the Air Force and the airlines, I have noticed that pilots usually very diligent with when it comes to checklists. However, sometimes pilots will read a step, do it, and then return to the check list, but skip a line or two because they have forgotten where they were. This is very painful to watch. I've learned that to use a checklist using the "to-do" method, one must keep a finger on the checklist to keep one's place.

A Better Way – "Do Then Verify"

In 1986, my checklist philosophy changed when Northwest Airlines purchased Republic Airlines and they introduced the Republic pilots to their **flow pattern - checklist method**. From memory, one follows a logical flow across the controls and switches, checking, testing and correcting. Then, pilots use the check list to verify their work – to insure nothing has been missed. Today, most airlines and professional pilots use this method. I use this method in my Mooney. After doing a simple flow pattern before start, I back it up with the check list. During approach and landing, I might use a quick G-U-M-P-S check as my flow pattern, but I always back it up with the checklist. If there is anything I don't want to miss, it's the landing gear.

When we use the Emergency checklist, it's not so familiar and we have no choice but to use the "to-do" method. Just remember to book mark your place with a finger.

Checklist Tech

You might want to consider an iPhone app. Foreflight has a free one, *Checklist Lite*, and their *Checklist Pro* costs about $20. Check them out at http://blog.foreflight.com/category/foreflight-checklist/

In Summary

Now you know the story behind the checklist. It's just a piece of paper, but it's written in the blood of Les Tower and Major Pete Hill. I hope you'll find a way to conveniently check everything in a flow and then verify with the checklist. Using it is not a sign of weakness, but a sign of strength and professionalism! It saved Boeing and the B-17, and it's saving lives – every day.

Send your questions for Tom to TheMooneyFlyer@gmail.com

How often do expert shops see twisted flight control surfaces (aileron and flaps) and what do they do to solve the problem?

I have seen many damaged, dented, cut in half, trailing edges bent too much, dented by hail, but can't remember one "twisted". As far as flaps, we have re-skinned them and you could technically patch one, since they are not a primary flight control. We usually have a repaired flap on hand that we re-skinned after replacing one from an accident. The flaps usually get damaged on the inboard end when the flaps are down during a gear up landing.

Ailerons are a different ballgame. Because of the structure, only four ribs, it is difficult to re-skin and keep in alignment. I am not saying you can't do it and some shops have had success, but without a jig it is very hard to keep "flat". I remember one that we tried and put it on a plane and it caused a roll which we could not correct, so we junked the aileron, so we lost a lot on the aileron.. .I would re-skin only if I could not get a new one or serviceable used.

For info, rudders and elevators are easy to rebuild, again because of the design.
Remember, you cannot patch flight controls but can replace major parts, i.e. skins, ribs, etc.

When installing a new or factory reman engine, what other items should I replace at that time?

We just replaced a couple of factory engines and one was a TSIO-520-NB on a 1979 231. I picked this as an example since it is one of the most intense and difficult engines to change on all our Mooney's.

This change came about because of a prop strike and the engine was high time. The prop had to be overhauled before the plane could be ferried to us, so we didn't need to check the prop.

The following is a comprehensive list and none of the items are mandatory but can be judged on condition, however, when the engine cost is north of $40,000, I believe it is prudent to want the attached items to last a long time and also, changing these items with the engine off eliminates almost all future labor costs if change needed in the future.

1) Engine lord mounts
2) Remove engine mount assembly, strip, inspect and repaint.
3) If governor has high time, send for overhaul.
4) Replace all firewall fuel and oil hoses.(we have them made fresh)
5) If a non-turbo engine, determine if exhaust system needs repair/overhaul.
6) Replace repair baffling. Both metal and flexible,
7) We scrub the firewall since it is the only chance for a good cleaning since the last engine change.
8) This is also a good chance to replace engine controls, throttle, mixture, and prop.
9) All controls are available with about two weeks lead time.

We also just changed an IO-360-A3B6 on a J model and installed an electronic ignition control in place of the right magneto. Point is to consider mods you may want to save labor when the engine is off. (That mod is labor intensive).

One last comment: It is prudent to complete a fresh Annual Inspection at this time. We deduct time from the standard Annual cost and treat the engine change as a separate item. Obviously there are many variables based on age and model and the above list is probably the most comprehensive list you will see.

I highly suggest you go over all the items in detail with your maintenance shop so there are no big "surprises" after the engine is off.

Note: We do not sell engines here but they are owner provided, my shop is in California.

Instruction When Transitioning to a Mooney

I recently sold an M20C to a new Mooney owner. Previous to the C, she flew a Piper. This was a big step up from a docile fixed pitch, fixed gear, lots of flaps, things happen in slow motion kind of plane to a complex and swift Mooney. Everyone was telling her that she should find a Mooney-specific instructor. This is common folklore among Mooney owners and I had been drinking the same Kool-Aid. There's no doubt that a pilot transitioning from a non-complex, non high performance plane to a Mooney needs complex/high performance training. I think everyone agrees with that including the FAA and your insurance company. I also think that all factors being equal, finding a CFI with extensive Mooney experience is clearly advantageous. But I got to wondering. What specifics does a Mooney-specific instructor teach that a good/competent complex/high performance CFI does not teach? Let's define each. A Mooney-specific instructor claims special expertise in Mooney M20 models. A complex/high performance CFI claims experience in those category airplanes such as Mooney, Lancair, Cessna 400, Bonanzas, etc. What we found was a little surprising. There seems to be remarkably little difference. Here's what we found.

From Parker Woodruff -- *If the student has no Mooney experience, I try to focus on Mooney systems and really hammer out some stuff in the POH prior to flying. There's important stuff that needs to be explained, such as the latch on the emergency gear system, V-speeds, and other items.*

From Paul Sanchez -- *A competent trainer would discuss the wing-loading and power-loading of a Mooney C (or other Mooney product) versus the previous aircraft. Discuss the accident history (especially the non-fatal landing mishaps) and why they are occurring. Discuss why there are limits on landing gear and flaps operation. Discuss the avionics installed especially flight control equipment such as autopilots.*

From Don Kaye -- *Checking out in a Mooney really should be no different than checking out in any other single engine airplane. I check people out in other airplanes in the same manner that I check them out in a Mooney. The issue with the Mooney is that airspeed control is more important, and that control should also be exercised with all single engine airplanes. Because of the lack of oleo struts, I will discuss the landing gear system and discuss and practice bounced and porpoised landings to a greater extent than I might with other airplanes. I will also show my landing video during the checkout.*

Most pilots we talked to who were strongly in favor of transitioning to a Mooney with a Mooney-specific instructor did it for non-tangible reasons. A typical response would be "I want someone familiar with a Mooney". Most instructors we talked to (including those above) agreed that the big transition is from a non-complex or non-high performance aircraft to a Mooney. All M20 models are complex and the K's and later, are high performance. The FAA's definition of high performance is simply "variable pitch prop, retractable gear, and greater than 200hp". For this article, we define high performance as also including a "laminar flow wing", which is a signficant factor in how all the M20s fly.

To be sure, high performance aircraft are harder to slow down and require more precise flying (i.e., on the numbers when landing). After flying a Mooney for a year or so, I had a BFR in a Cessna 172 since my Mooney was in annual. Because of my precise flying in a Mooney, I was used to flying the numbers in the pattern. The instructor asked me for a normal landing. Well, I landed in about 400-500 feet. He said, "Well I guess that covers short field landings as well". But honestly, I just flew that 172 on its numbers. Until I learned precise flying, it was easy in a garden variety Cessna/Piper to be a little sloppy, because their flaps have more authority than Mooney flaps, and can correct a fast or high approach, which Mooney flaps do not. But again, this is not unique to Mooneys, but very typical in high performance aircraft.

Many Mooney instructors emphasized that they reiterate a lot of what is written in the POH. These include setting of cowl flaps, V-speeds, Johnson bars, fuel selector location, airspeed management, engine cooling and shock cooling avoidance, etc. All of this is good to "reinforce", but it's all in the POH which any PIC should be extremely familiar with before turning the ignition key. Don Kaye requires his students to read the POH several times before the first lesson. New Mooney pilots should have identified all of the key differences between their Mooney and previously flown aircraft. They should come to the first flight with a few questions and the transition training should only serve to reinforce what the new Mooney owner learned from the POH.

So what do new Mooney pilots really get when they pick a Mooney-specific instructor for transition training over a qualified complex/high performance CFI? Mostly, it's intangibles. Most of our research indicated that new Mooney owners have three areas of concerns: 1) The Stall, 2) Slowing Down in the pattern, and 3) Landing. Honestly, a qualified high performance CFI can teach all of these. A Mooney should not be cross-controlled during a stall due to its laminar wing. And some Mooneys break harder in the stall than other aircraft. However, a centered ball and standard stall recovery techniques ensures a direct recovery. As to slowing down, again pilots in garden variety Cessnas and Pipers weren't going fast to being with and these airplanes could be slowed down easily without much skill. A Mooney does require precise attitude and speed management. But to slow it down requires pulling the power and after awhile, raising the nose. As soon as you reach gear down speeds, the issue is usually resolved, as the gear presents a lot of drag. And as for landing a Mooney, well it's precise flying again. A Mooney will land like a baby if you fly the pattern on the numbers. If you're a few knots fast in the rollout or flare, you will float float float… Never force a Mooney onto the runway because it'll most likely porpoise. Due to the low prop/ground clearance, you are mostly assured of a prop strike on the 3rd bounce, if not by the second bounce. If you find in a porpoise, go-around and log another 5 minutes of flight time. Picking a Mooney-specific instructor gets you some intangibles and experience stories.

Summary

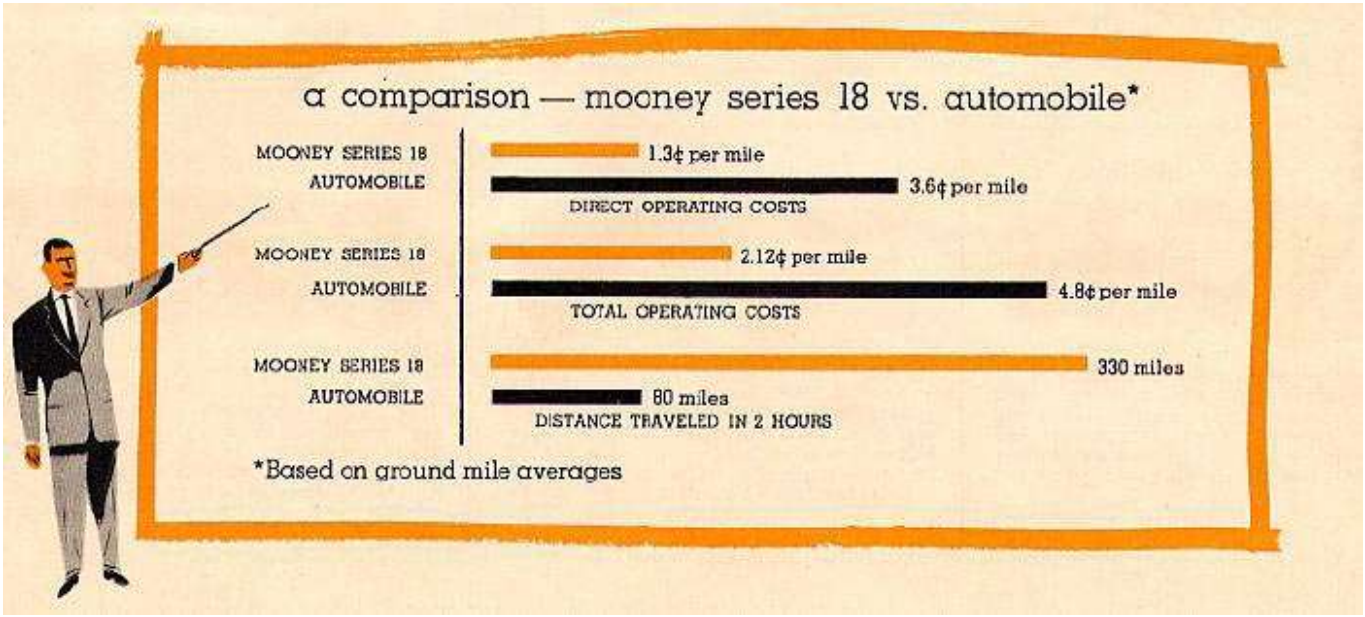
All things equal in CFIs, it is advantageous to select the CFI with more Mooney experience/focus because you will get some intangible information that is only gleaned from that experience. But both pilots and Mooney instructors alike told us that there really aren't measurable differences in their transition training syllabus. Most instructors told us that teaching "precise flying" is far more critical to transitioning to a Mooney. Some instructors emphasize that this is one of the most important skills to

learn when transitioning to a Mooney. Precise flying is more critical in Mooneys than other aircraft, especially in takeoff/landing, stalls, and minimum controlled or region of reverse command. Don includes techniques such as performing a combined soft/short field takeoff. The pilot will probably not utilize this in the real world, as Mooneys are not known for their soft field performance, but they will understant the great precision required to do it properly.

We believe that finding the best instructor, who knows and has experience with complex and high performance aircraft like Mooneys, or similar to Mooneys such as Lancairs, Cirrus, Cessna 400, etc. trumps other attributes. We also believe that instructors who emphasize "precise flying techniques" also trump the other attributes pilots look for when seeking an instructor.

Key Things to Look for in CFI

1. Precise Flying Techniques – Fly by the Numbers
2. Hi Performance/Laminar Wing Experience
3. Minimum Controlled (Reverse Command) Flying
4. Mooney experience



Send your questions for the Controller to TheMooneyFlyer@gmail.com

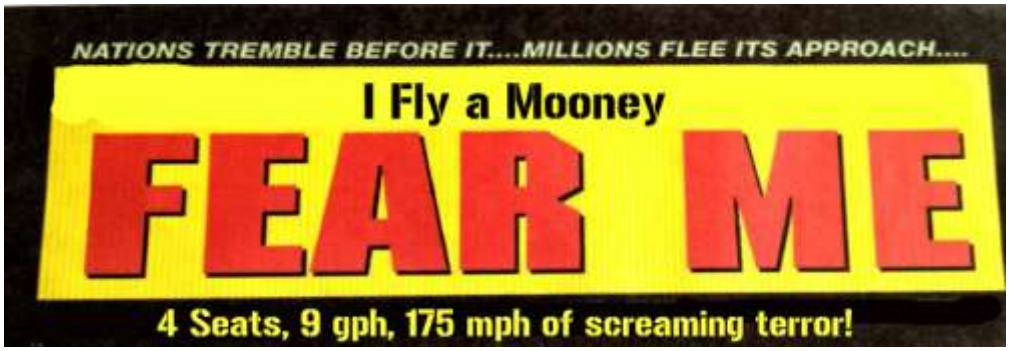
What are some of the things that VFR pilots do that irks controllers?

Not listening before keying the mike. The main tool a controller has is "air time" - a pilot steals that when they don't listen before interrupting. A close second is not keeping your message short and to the point. Think about what you're going to say before keying the mike. Don't try to sound like Joe Cool; use proper phraseology. A SE pilot trying to copy an airline pilot is like a 65 YO coming on to a hot 21 YO with the line, "So, what's your sign?"

Some of us pilots think ATC is just out to get us pilots. What are controllers really trying to do?

Controllers are just trying to do their job: separating planes. If you cause them to spend an inordinate amount of time with you when they're busy, then you are keeping them from doing their primary job.

Pilots fear violations, but controllers can be held accountable far easier than a pilot. If a controller loses separation, violates another controller's airspace, or any other issue, he gets retrained. Any major approach control or center has a "Quality Assurance" office. The QA office looks for errors. After a few of these, you'll be looking for another place to work. If a pilot flies 200 feet too low VFR, busts an altitude by 200 feet, or is 30 degrees off his heading, how does the FAA prove that he violated an FAR? Most pilots will state that they were at 1000 feet over the city or that they are level and that the mode C must be in error.



California Avgas Suit Fuels Surcharge. *(AvWeb, July 16, 2012).*

Some California FBOs are imposing a nickel-per-gallon surcharge on 100LL fuel sales to fund a legal defense and a counter lawsuit filed against an environmental group that's trying to restrict leaded avgas from the California market. Read More . . .

Subscription Free Weather from Garmin. *(AOPA).* Garmin's GDL39 ADS-B receiver is essentially a Wi-Fi station in your cockpit for iPad, and any Garmin Portable. Read More . . .

Avidyne Aims at Garmin With New Drop-in Mapcomm. (AvWeb, July 9, 2012). The Mapcomm is a drop-in replacement competitor for Garmin's popular GNS430. The new IFD440 is a descendent of a larger model Avidyne introduced last year, the IFD540, a drop in box to replace Garmin's GNS530. Read More . . .

Report: Lights Help Prevent Bird Strikes. *(AvWeb, July 17, 2012).* Aircraft lights make it easier for birds to see and avoid aircraft, possibly helping to reduce the risk of bird strikes, according to a report recently published in the Journal of Applied Ecology. Read More . . . & See also . . .

More ADS-B boxes from Dynon & FreeFlight. *(AvWeb, July 18, 2012).* Read More . . .

Garmin(R) Leads the Way to ADS-B Future, Introduces Comprehensive Lineup of Certified and Portable ADS-B Solutions. *(The Wall Street Journal's Market Watch (July 16, 2012).*

Garmin unveils the first dual-link ADS-B solution for certified aircraft.

New certification for the GTX 330/33 ES meets ADS-B compliance standards.
Get data link traffic and subscription-free weather with the dual-link portable GDL 39. Read More . . . .
Buy Marv Golden $799

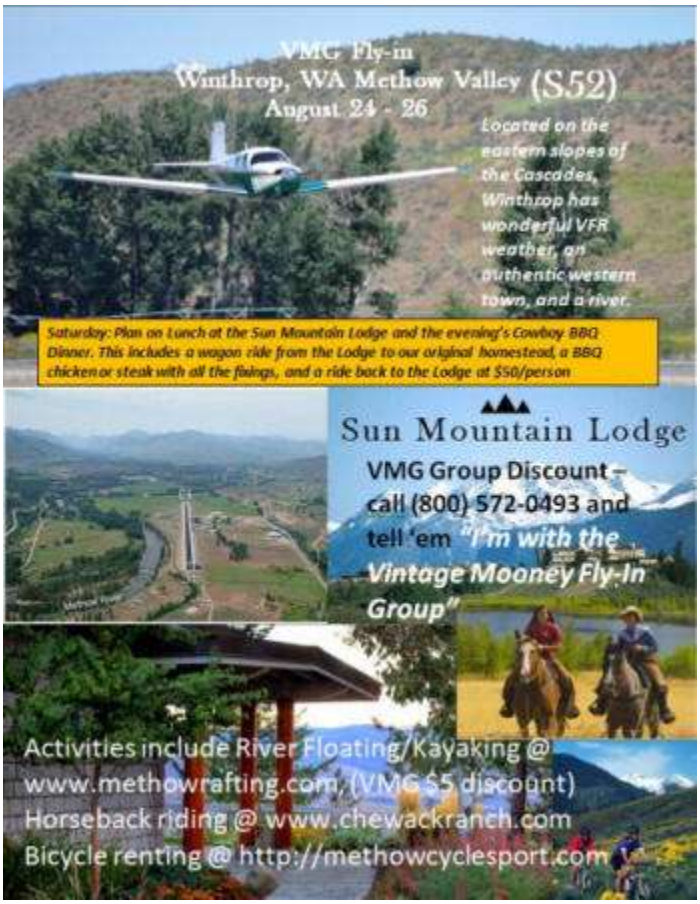
Garmin Introduces New Portable GPS Device for Tablets and Smart Phones *(AvWeb, July 12, 2012).* Garmin GLO, is a new self-contained GPS receiver that links to Android and iPad tablets via Bluetooth, receiving position information from both the GPS and GLONASS satellite constellations. Read More . . . Buy Marv Golden $129

Contract Towers - 1/3 the operating cost of an FAA Tower. *(AOPA Online, July 18, 2012)*, AOPA said in testimony before a House subcommittee , that Congress should fully fund the program that operates 250 contract control towers in 46 states. Read More . . .

ForeFlight earns FAA QICP certification. *(ForeFlight.com, July 18, 2012).* QICP – Qualified Internet Communication Provider. [Foreflight] received the FAA approval letter July 16. Part 121 and 135 operators may now list ForeFlight as their approved QICP and as an official source for weather information. Read More . . .
Can you, (Part 91 guy), use a QCIP like ForeFlight for a weather briefing, too. You bet! See this DOT FAA AC. The list of QICPs includes DTC DUAT, CSC DUATS, FltPlan.com, AviationWeather.gov and more.

Upcoming Fly-Ins

Catalina Island (KAVX), CA (Aug 18)



Winthrop (Methow Valley S52), WA Aug 24-26

Next time, get a seaplane rating!

Join us on the weekend of **August 24-26** for our first fly-in to beautiful Methow Valley, S52 (Winthrop, WA). Located on the eastern slopes of the Cascades, Winthrop has wonderful VFR weather, an authentic western town, not too touristy, and a river. We plan to have a lunch on Saturday and a dinner on Saturday night at the Sun Mountain Lodge. For the **VMG discount rate**, call 800-572-0493 and say you are with the Vintage Mooney Fly-In group.

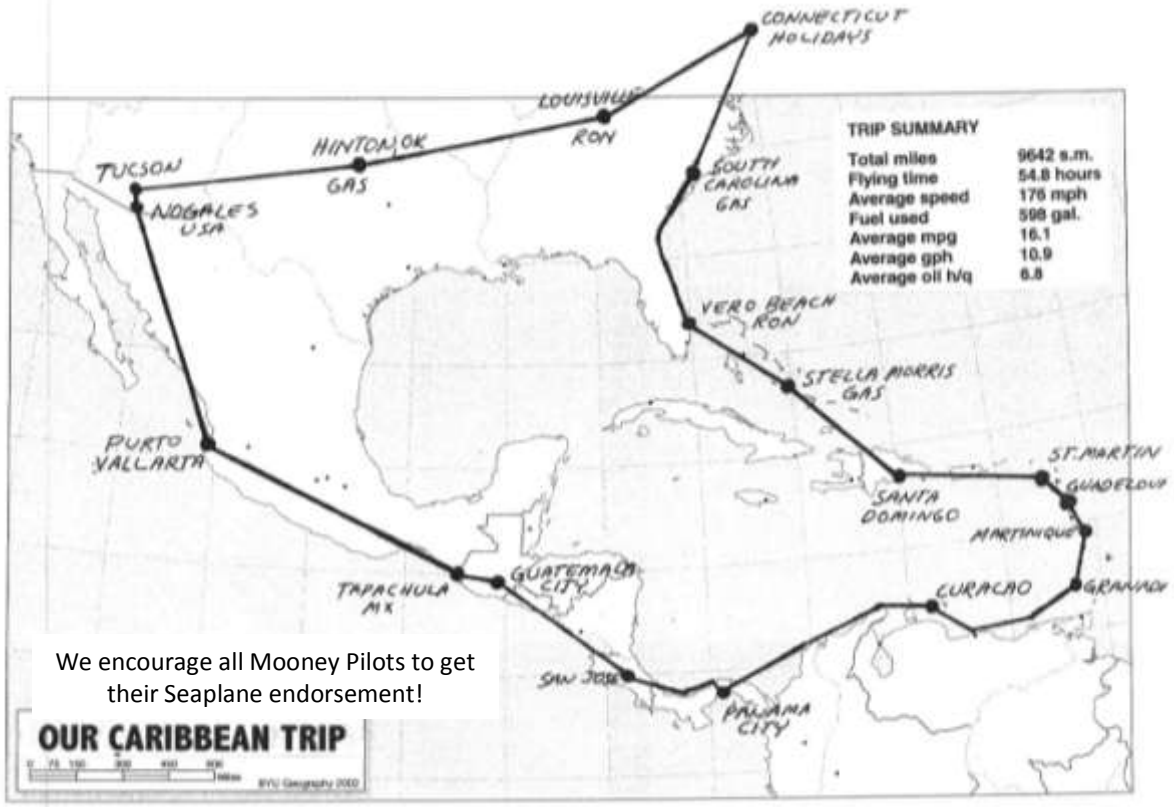
Saturday Evening: The Cowboy BBQ Dinner includes a wagon ride from the Lodge to our original homestead, a dinner of BBQ'd chicken or steak along with all the fixings, and a ride back up to the Lodge at $50/person.

Our Great Circle Trip around the Caribbean – January 2012

By Ozzie Kaufmann, Tucson, AZ

Several months ago, my wife Jo and I decided that we would like to take another flying trip around the Caribbean Islands. We previously had flown the Caribbean in 2006 in our '82 Mooney 201. This time, we would visit different islands.

This was my 60th trip from Tucson to the East Coast over the last 33 years. Since we were flying east to Connecticut for the Christmas holidays, we decided to start our Great Circle Trip from Connecticut, then head south to Florida where we would pick up our two passengers, Barney and Sharon Brenner of Tucson, AZ. There we also planned to meet up with VMG Mooney pilot Walt Bell (Colorado), and Bonanza pilot Jack Juraco and his wife Pam (Tucson, AZ). Walt's Mooney would also host Al and Bonnie Bianco from Tucson and the Bonanza's passenger list would include Wally and Liz Lewis, from San Miguel del Allende, Mexico. We would have eleven people on this trip.



Trip East to Connecticut - December 17, 2011, 13 hours, 2300sm

From Tucson, our first stop was Hinton, OK (2O8), known for their low $4.30 per gallon fuel. We borrowed their recently retired police cruiser courtesy car to have lunch at the Casino.

The next leg was to Louisville, KY (KSDF) for a RON (Rest Overnight). We arrived after dark and the only FBO open for business was Atlantic Aviation. A mistake – we got bagged $70 for overnight parking on the ramp. You live and learn; I'll never return to Atlantic Aviation. I was so mad we did not even gas up at $7.15/gallon.

Heading South to Vero Beach (KVRB) – January 7th, 2012, 7.1 hours, 1111sm

We had all agreed to meet in Vero Beach where our passengers, Barney and Sharon, had been visiting family.

When flying a long trip, out of the country, like this, you must take a substantial amount of U.S. dollars with you, plus a couple of credit cards. You can easily carry the credit cards in your wallet. The dollars is another matter. For people who like to carry their money on their person, it makes lumps where you don't have any. We did find the ideal place for it and will tell it to you in person if you would like to know more. And no, it was not in the wheel wells.

Gas prices ranged from $7.76/gallon in Santo Domingo to $4.10 in Curaçao, with most fuel outside the United States tending towards the higher number. In almost all cases, cash is required for fuel, and payment is made directly to the fuel vender. Plan on taking a pretty good stack of cash, of various face values, when you go (dollars accepted in all places).

With beautiful flying weather we left Connecticut and flew right over JFK at 8500 feet. Flying down the east coast is always one of my favorite flights. AirNav selected the location for our mid-flight fuel stop in South Carolina. We borrowed the airport car to go to the local southern-fried chicken restaurant.

The next leg to Vero Beach was not as pleasant. When we got up to our cruising altitude, my newly installed Alpine HSI, my wheel mounted dual GPS's and EGT went dead. The engine was running fine and I was navigating by sectionals. It reminded me of how I had flown forty years ago. I guess the practice is beneficial every once in a while.

We arrived in Vero Beach late on Saturday afternoon, convinced we would not be leaving the next day. The other planes were supposed to be flying in from Tucson, but they made excellent time and decided to go directly to our next stop, Stella Maris in the Bahamas. We were grounded in Vero Beach until at least Monday, the soonest we could get anyone to troubleshoot the electrical system problem. We certainly didn't want to fly 6000 miles around the Caribbean without a full panel of working instruments.

This gave us the opportunity to rent a car on Sunday and visit the Kennedy Space Center, about 60 miles north. Mooney pilots know how to make lemonade out of lemons. Since I was in aerospace during the 60's, I had followed the Saturn rocket developments and launchings pretty closely. However, seeing a full size Saturn staggered my imagination. The assembly of all the stages was over 350 feet long.

Sometimes things turn out best but you don't know it at the time. The other planes that went directly to Stella Maris (MYLS) said it was not a good visit. The bugs ate them alive, the beach and swimming was poor and the hotel/food was over-priced. They were sorry they made this as a planned stop. We were thrilled to visit the Space Center. I guess we made out better after all.

On Monday morning, the local repair shop put our plane first in line for servicing. A quick review of the problem with the mechanic got him started. He removed the circuit breaker panel and tightened one screw and we were good to go. The loose screw was probably forgotten during our new Aspen panel installation. We were ready to go by 10 am.

Flying to the Dominican Republic, January 9th, 6 hours, 928sm

We filed our VFR flight plan and EAPIS manifest and departed towards Stella Maris for fuel. Since I expected good flying weather at this time of the year, I always choose to file VFR so I do not have to listen to the constant chatter on the IFR frequencies. Our Mooney's stereo is much nicer to listen to.

We had planned our entire trip from Vero Beach back to Tucson to take about 23 days. With the number of stops we wanted to make, this allowed about 2 days for each stop with adjustments for bad weather.

Since we were two days behind the other planes, we decided to stop at Stella Maris for fuel and then go to Santa Domingo to catch up with the others. This leg was about 900 miles and would be easy to do in spite of our late departure.

Because we only refueled, we were not charged fees of any kind at Stella Maris. The flying weather was perfect and we had a little tail wind.

We flew over Great Inagua Island's Matthew Town Airport (MYIG), the last gas stop in the Bahamas. We had stayed there on our last Caribbean trip and experienced a wonderful un-touristy type of visit. If you are ever flying in the area, I would recommend a two-day stop, but only for 2 days. It has 1200 inhabitants, no restaurants or hotels, and we had a ball.

Flying long distances over water turned out to be a non-event and the clear weather was helpful. We could see land, but 30 or 40 miles away, which would not have been useful in case of engine problems. With 4000 hours+ on my Mooney, I did not think it would be right for the engine to give me a problem during the next 25 hours. I am the eternal optimist.

As we approached the Dominican Republic, we could see the clouds building up over the mountains. Since we were VFR, I decided to do some scud running to get to the south side of the island. This worked fine and the approach and landing at the main airport, De Las Americas International (MDSD) was uneventful.

We did not have reservations but we negotiated a good rate at a nearby hotel. We had read the reviews, which said that the best GA place to land was at the main airport, MDSD. Walt Bell and Jack Juraco landed at Herrera (MDHE), which was much closer to town and cheaper too. Oh well, next time maybe.

Santo Domingo is the oldest city in the Caribbean, and the old part of the city is wonderful to visit. We taxied downtown on Tuesday, and hired a guide for a walking tour of the local sights. Much history is associated with the city and our English-speaking guide made it more memorable. The Old Colonial section has buildings 300 and even 400 years old. The first cathedral built in the Americas is there and well worth visiting. As with other old cities in

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the Caribbean, its harbor fort was impressive.

We were not able to catch up with the other planes here. They had landed at a different airport and had in-town reservations. We did communicate with e-mails and agreed on a departure time to arrive at St Martin at about the same time.

On to Grand Case Airport, St Martin (TFFG), Wednesday the 11th, 2.7 hours, 403sm

Leaving Santo Domingo was easy and they go out of their way to make you feel comfortable. It was just expensive. They even charged us $2 for use of the airport landing lights. Oh well, if you can't afford it you shouldn't be flying your own plane here.

Our next port of call was St Martin's Grand Case Airport (TFFG). We filed VFR again at 7500 feet. Our path was right over Puerto Rico which we had visited on our 2006 trip. The flying distance was only about 400sm so an intermediate fuel stop was not necessary.

This island is half Dutch and half French. We were advised to land at Grand Case Airport on the French side of the island called St Martin. The Dutch side is called St Maarten. This was the easiest entry of all the stops we made. We deposited a copy of our General Declarations in each of the three boxes at the terminal building and were good to go. Of course they get you for the fees when you leave. All planes arrived at about the same time, just as planned.

The French side of the island is known for its fine dining. Since it was about mid-afternoon when we finally got on the road to our hotels, we were hungry and the main road to town is right through the French dining district. We had rented three cars and parked them where we could. Then the eleven of us started walking the street deciding where we should eat. The menus were posted with prices making the restaurant selection easier. Since our 8-hour bottle to throttle time frame was not in effect at this time, it was time to really enjoy a good three hour French meal, with good wine. We were right under the approach path to the airport and were surprised how many general aviation planes were coming in.

All good things must come to an end I guess, so we departed the restaurant to our respective hotels on the other side of the island in St Maarten.

We took the day off from touring and just hung out at the hotel relaxing on Thursday. The others went to the approach end of Princess Juliana Airport to watch the commercial planes land just a few feet above the crowds on the beach. When planes take off, the engine exhaust will blow the beach crowd right off their feet. This is a great spectator sport to watch. You-tube shows it happening all the time.

St Maarten seemed to be more Americanized then we wanted. Tour boats and tourist jets make it a major industry for the locals. After 2 nights we were all rested up and ready to head out to our next island stop Guadeloupe.

Off to Guadeloupe's Pointe-A-Pitre Le Raizet Airport (TFFR), January 13th, 1.1 hours, 201sm

Guadeloupe is definitely French. The flight here was short, but is a whole world away from the tourist atmosphere at St Maarten. TFFR is not set up to handle GA planes and they did not know what to do with us. We sat around for an hour while they figured it out. We didn't see any other GA planes on the field. We had reservations at a charming old rum plantation mansion in the country. Why they were not in the sugar cane business we do not know but the island is awash with rum. It's the major business after tourists. The old world charm of our hosts was enjoyable. Since we had a car, we decided to take a long drive around the island to get the flavor of the smaller towns. We chanced upon a town park, which was full of locals selling rum and handicrafts to tourists. Naturally the biggest item was the local rum. Lots of handicrafts were also displayed for the tourists. The only difficulty was the language barrier. Very little English is spoken, and the language barrier was a slight problem. However, the common language of U.S. dollars overcame all of the difficulties.

Our meals were at the plantation house were excellent. And with wine to finish off the meals we were very satisfied. All in all, this was a good stop.

Leaving from the main airport was painful. They were just not set up to handle general aviation planes. We had to do a lot of walking which took a long time.

Next was Martinique's Aimé Césaire Airport (TFFF) January 15th, 0.8 hours, 125sm

Martinique was our next port of call, spending our first night in a resort hotel that never lived up to our tour book guide review. It was on a hill side where you had an excellent view of the ocean, but it was about a third of a mile away from the beach. Our room was only 10 feet wide and no inside chairs. The restaurant was bad and the bed was awful.

We relocated for the second night to down town Fort de France, a charming city. After walking the city, we took a boat ride across the bay to cool off. A huge stone fort is in the harbor but inaccessible since it is still occupied by the military. It's a nice old city worth visiting.

To Grenada's Maurice Bishop International (TGPY) January 17th, 1.1 hours, 177sm

Grenada is a jumping off island where you either head south towards South America, or west towards Aruba, Bonaire, Curacao and Panama. Since we were heading west, it seemed prudent to load up on gas for our longest overwater leg of 550 miles.

Known as the Spice Island, a hurricane destroyed over 90% of the trees about 8 years ago. Times have been tough on the island because this was their best cash flow crop. New growths of trees are now starting to mature bringing new hope to the residents.

What a wonderful island to visit. Our group had reservations at the Grand Beach Resort, a high end destination for many tourists. We rented vans with tour guides to explore the island. We traveled the single winding road around this mountainous island. The devastation caused by the hurricane is still obvious. Cocoa beans were being harvested again and we stopped at a processing plant to see how it is done.

We visited the capital St. George, and it was like most of the other big cities we had been in. Much evidence exists of the former British rule including the people's English accent and driving on the left side of the road. We were glad we were not driving.

Willemstad, **Curaçao (TNCC) January 18th, 3.1 hours, 550sm**

Heading west towards Curacao is an odd feeling. Not a single island was visible, the expected "auto rough" engine just did not happen. By now we were accustomed to legs over water and this one was just longer than the others. In addition to life vests, one of the other planes had a raft aboard which made everyone aboard that plane feel better. After about 300 miles, we passed over a couple of deserted islands which did give us some comfort.

Curaçao is one of the Dutch ABC islands - Aruba, Bonaire and Curaçao, off the coast of Venezuela. We had been to Aruba on our last trip and decided to visit Curacao, and this turned out to be a good decision. We landed at Willemstad's Hato International Airport (TNCC. The city architecture, language and people makes you feel like you're in Amsterdam. Our scuba diving friends were in heaven. They had lugged their equipment all the way from Tucson and finally had a chance to use it.

The most unusual sight we saw was the floating bridge, crossing a waterway. When a boat wants to pass through, the bridge unhooks at one end and pivoted on the other end. It's the only one like it in the world. Some of our group got caught on it and waited an hour or so for it to return so they could get off. At least it did not rain on them.

We scheduled 3 days here and were glad we did because it was by far the best stop on the whole trip. We had great accommodations in houses converted into hotels that backed up to the ocean. The staff, including the waiters dressed casually in bathing suits. You can't help but loving this place.

Airport charges were the highest here. For the four of us it came out to over $300 including parking. This was softened somewhat by the low cost of avgas at $4.30 per gallon. It's refined on the island. We understood that car gas is about $1.00 US per gallon.

Heading to Marcos Gelabert Intl (MPMG) Panama, January 21d, 4.4 hours, 704sm

We enjoyed perfect flying weather and followed air routes. We were mostly over water, and the route kept us near the coast of Columbia. We wanted to visit Cartagena but the cost of airplane insurance was too high.

Marcos Gelabert Intl (MPMG) is a great downtown airport that is convenient to everything. It was pretty busy with general aviation planes. They handle customs and immigration like it was a common thing. Our airport had the most general aviation planes that we had seen so far.

There are more skyscrapers in Panama City than any other city we have been to. Some of them are spectacular. We did the tourist tour of the old city and its ruins, the new city, and of course the Canal. We had grandstand seats to watch the ships rising in the locks. If you have never seen a lock in operation, it's fascinating. The ships are big and have only about 6 inches clearance on a side. The container ships carry about 2500 boxes on them.

All of the former American Army bases are intact but most without much activity. This is a great destination city if you are traveling from the U.S. and don't want to travel around the Caribbean. New wider locks are now under construction and are due to open in 2014, the 100 year anniversary of the opening of the original Panama Canal.

San Jose, Costa Rica's Juan Santamaria Intl (MROC), January 23rd, 2.1 hours, 356sm

Leaving Panama City, we asked if we could fly over the Canal to the Atlantic end at Colon. The controllers agreed, but wanted us at 3,000 feet. The first time we visited here they let us fly at 2,000 feet, and the second time it was 2,500 feet. It's a good view and you get an idea of the size of it this way. There were a lot of ships in the lake waiting to take their turn in the canal.

We followed the coast north with a buildup of clouds giving us some problems. We got high enough to manage them but with our passenger load and full fuel, it was slow going.

San Jose has a nice reliever airport that is much closer to down town. We were able to get rooms at the Grand Hotel right in the center of the city. We toured the Gold Museum and the opera building after a cab tour of the outlying districts. The city is very clean and keeping it clean is a top priority. Many of the streets are closed to traffic so walking around is enjoyable.

Taking off was a surprise. Before San Jose, which is 5,000 feet MSL, we had operated from sea level airports. It was warm, too, and I had not accounted for density altitude and our heavy load. Late in the takeoff, I realized that our acceleration was pretty slow and we were past the no go mark and we broke ground with the stall warning blaring. It was an uncomfortable feeling till we got up to speed and could climb decently.

Guatemala City's La Aurora Intl (MGGT), January 25th, 3 hours, 552 sm

This was the only city that asked us for our visa authorization to land. We had sent in the request

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but never got an answer so I just gave them a copy of the request and they were satisfied. We were going to the old city of Antigua, about 35 miles away. Taking a cab there was an experience, and sadly the city was the dirtiest we had ever seen. The truck and bus exhaust was black and visibility was IFR.

Antigua is almost 500 years old and a tourist destination. An earthquake just about destroyed the city in 1717. One can still marvel at a good number of preserved church ruins. The cobblestone streets look nice but walking or riding on them wears thin after a couple of blocks. The smoking volcano just outside of town is somewhat intimidating but it doesn't seem to bother the residents. It is a pleasant city to visit with many nice small hotels and restaurants. We were glad we visited there.

Mexico and Tapachula Intl (MMTP), January 27th, 0.8 hours, 127sm

Entering Mexico from the south is now limited to only two airports: Cancun, on the Yucatan Peninsula and Tapachula on the west coast. Evidently, because of the drug trafficking, the military now interviews you first before going to the main terminal for normal paperwork. This added a little time to customs and immigration.

Puerto Vallarta (MMPR), January 27th, 6 hours, 1015 sm

Since we visit Mexico frequently, we did not plan any tourist activities. We had about 1800 miles to go to the U.S. and now just wanted to be home. We topped off the tanks and optimistically filed for Mazatlan, about a 1200sm leg. We figured if we had a tail wind we could make it, but it was not to be. We had to make our next RON in Puerto Vallarta, a 6 hour, 1015sm leg.

Nogales, AZ (KOLS) and Tucson, January 28

We left the next morning for our non-stop flight to Nogales, Arizona. This leg was only 830sm and took us 4.8 hours. Going through U.S. Customs here is about as easy and quick as it could be. It didn't take more than about 5 minutes for all four of us. A quick lunch at the airport and we were on the last 95 mile leg to Marana, our home airport.

Summary

A trip like this sounds more complicated than it really is. Planes don't care if they fly over water or not, but people do. Most of our trip was within sight of land, which was comforting. After a while, you stop thinking about it and start to

enjoy island hopping.

The people we met were, without exception, enjoyable. That includes the airports' government employees. They know we bring tourist dollars, which is a big slice of the Caribbean islands' income. Going by private airplane does set you apart from the mobs, and you do get extra services. There is not a single stop I would not recommend to anyone, but we did like Curaçao the best.

For more information on how to make this type of trip, here are two great references.

1. Bahama & Caribbean Pilots Guide
2. http://www.caribbeanflyingadventures.com
   If you are a member, this website gives you detailed info and fees for every Caribbean country, plus Arrival and Departure procedures. It removes the guesswork!

You do need to become acclimated to the paperwork necessary to get into and leave a country. You can never do it in less than an hour, and combined with getting fuel, a simple stop you could take two hours. Airplane inspections were not a problem. Once or twice we did have to bring our bags into a terminal for routine inspections but usually we had assistance from ground crews.

We did not take good notes on the cost of our trip. One of the other pilots did and he said it was about $6,000 for him and his wife. I suspect that was close to what Jo and I spent for the trip too. That's not bad considering we were traveling for over 3 weeks in a private plane going where and when we wanted to. But that's what owning a plane is all about, isn't it.

Our plane ran well even with the four passengers and their baggage. The sea level airports helped with density altitude in take offs and landings. Flying weather was as expected – perfect for the three weeks. We had no IFR weather the entire trip. This was our second trip around the Caribbean and probably our last. I think Alaska would be a good trip next year.

Trip Summary

Total miles	9640sm
Flying time	56.5 hours
Average speed	171 mph
Fuel used	598 gallons
Average gph	10.6
Average oil - h/qt	6.8

Mooney Camping

MOONEY ACCIDENTS 2012 What can we learn?

By Jim Price, CFI-I, MEI, ATP

On Monday, July 9, at about 9:30 am MST, a Mooney M20L, N137MP, was substantially damaged when it experienced a hard landing, followed by a loss of aircraft control at the Scottsdale Airport (KSDL), Scottsdale, Arizona. Scottsdale, AZ

The flight instructor, Scottsdale City Councilman, Bob Littlefield, was seriously injured, and the pilot, who was receiving instruction, received minor injuries. Weather was VMC.

The Mooney owner stated that he had performed several touch-and-go landings. During this last landing flare, the airplane didn't feel right, and the instructor took control of the airplane. The airplane landed hard and veered off the runway. The outer 4 feet of both wings were bent up approximately 45 degrees. Injuries: 1 Serious & 1 Minor. This accident is still under investigation. We wish Bob and the Mooney owner speedy recoveries. Reference AZCentral.com

Since January, 2012, there have been 13 accidents in the US involving Mooneys. Two of those accidents claimed the pilots and two passengers. There have been four engine failures/forced landings so far this year. They occurred in Hooker, OK, Ozark, AR, Amisville, VA and Lewiston, CA. These appeared to NOT have been caused by fuel starvation.

Teaching Events

Three accidents this year have graduated from "Preliminary" to "Probable Cause" reports. They are excellent "teaching events."

1. GEAR UP LNDG: The pilot became ***preoccupied*** while locating another airplane during the downwind leg of the traffic pattern and **forgot to lower the landing gear**.
2. GEAR UP LNDG: The Student pilot **forgot** to lower the landing gear. He heard the landing gear warning but he **thought it was the stall warning**.
3. FUEL STARVATION: The Mooney lost power after takeoff and the pilot landed in a nearby field. Both wings collided with fence posts. The pilot reported that the left fuel tank was about 1/4-full, and the **right fuel tank was empty**. He had the left fuel tank selected on start up and taxi and during the pre-takeoff check, he switched fuel tanks **per his normal procedure**. He did not return the selector valve to the left tank prior to departure.

We can all work on:

- Keeping our head in the game and not allowing ourselves to be preoccupied
- Remembering Before Landing Checklist details

When we're operating our Mooneys, we need to double check ourselves. It's vital that we stay alert and never lower our guard.

XM Weather NEXRAD & Latency

By Jim Price

Many who have a portable Garmin GPS also subscribe to XM Weather. I thought it would be interesting to explore the NEXRAD display.

Who Collects the Weather?

Baron Services' *WxWorx on Wings* provides the weather displays and XM Satellite Weather transmits the image to our cockpit. Images are collected at their headquarters in Huntsville, Alabama, and inside the National Climatic Data Center (NCDC) in Asheville, North Carolina. *WxWorx* really likes redundancy.

How fast is it collected?

As soon as WxWorx receives the information the data stream is automatically sent to XM over a dedicated line and two internet connections. (This redundancy protects against transmission failure). It then goes to XM Satellite Weather's operation center and is inserted into its uplink to both of its satellites and it's also broadcast over of the relay stations on the surface of the earth.

Latency (age indicator) and its faults

Although getting the data from *WxWorx* to the cockpit takes place in the blink of an eye, the data is not "real time."

Every five minutes a composite image is uplinked to the satellite. The image combines the most recent weather with the weather that was received five minutes earlier. Somewhere on your Garmin's screen, you'll see "Wx –"followed by a time. That's the "Age" or "Latency" indicator.

For example, "Wx – 00:08" should mean that the current NEXRAD image was updated eight minutes ago. However, on June 20th, 2012, the NTSB issued a Safety Alert, warning pilots who use FIS-B and Satellite Weather Displays. It seems that the NEXRAD age indicator can be as much as 20 minutes older than indicated. The depiction you see is like a patch quilt, and each patch was sewn into the quilt at different times. The time notice on our display could read "Wx – 00:08", but it pertains to the **total** picture. Some images or patches in the total picture could be 20 or more minutes old. So, if a storm is moving at 20 miles per hour but the patch you're interested in happens to be 20 minutes old, it's really about 40 miles away from where you think it is.

Can you pick your way through an area of weather?

Reference this weather in Florida, would you: #1) Deviate west? #2) Follow the flight plan because the weather doesn't look too bad? #3) Deviate east? Ans. #1 & #2: You could follow the flight plan and pick your way through the weather, but should you be fortunate enough to live through your adventure, you'll never do it again. NEXRAD displays were never designed for weather penetration. The display age/latency problems greatly reduce NEXRAD's penetration usefulness. **ALWAYS** go around an area of weather and if possible, use your eyes. Ans. #3: Animated weather can show you which way the weather is moving. If the weather is moving eastward, as it usually does, a deviation to the east would not be one of your brightest decisions.

Emerging Lifesaving Technologies ELT406GPS Product Review

by Phil Corman

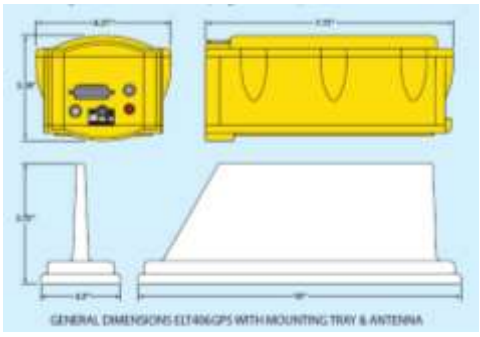
We came across a 406Mhz ELT that caught our eye and thought we would pass this brief product review onto our readers. As you know, 406 Mhz ELTs are replacing the old 121.5 Mhz ELTs found in most of our airplanes.

ELTs were the first emergency beacons developed and most U.S. civil aircraft are required to carry them. ELTs were intended for use on the 121.5 MHz frequency to alert aircraft flying overhead. Obviously, a major limitation to these is that another aircraft must be within range and listening to 121.5 MHz to receive the signal. One of the reasons the Cospas-Sarsat system was developed was to provide a better receiving source for these signals. Another reason was to provide location data for each activation(something that overflying aircraft are unable to do).

Different types of ELTs are currently in use. There are approximately 170,000 of the older generation 121.5 MHz ELTs in service. Unfortunately, these have proven to be highly ineffective. They have a 97% false alarm rate, activate properly in only 12% of crashes, and provide no identification data. The satellites stopped monitoring 121.5 Mhz ELTs back in February of 2009, leaving only other airplanes to monitor that frequency. In order to fix this problem 406 MHz ELTs were developed to work specifically with the Cospas-Sarsat system. These ELTs dramatically reduce the false alert impact on SAR resources, have a higher accident survivability rate, and decrease the time required to reach accident victims by an average of 6 hours.

Presently, most aircraft operators are mandated to carry an ELT and have the option to choose between either a 121.5 MHz ELT or a 406 MHz ELT. The Federal Aviation Administration has studied the issue of mandating carriage of 406 MHz ELTs. The study indicates that 134 extra lives and millions of dollars in SAR resources could be saved per year. The only problem is that 406 MHz ELTs currently cost twice as much as 121.5 MHz ELTs. It's easy to see one reason for the cost differential when you look at the numbers. However, no one can argue the importance of 406 MHz ELTs and the significant advantages they hold.

This is the first 406Mhz ELT that we have seen that has an embedded GPS in the unit. This reduces the complexity of the installation since you will not need to install an interface to your existing GPS. In flight, the GPS unit automatically updates your present position every 15 seconds. Upon activation, a 5 watt signal bursts every 50 seconds to the Global Satellite System. The unit broadcasts to both low orbit and geo-stationary satellites which is a real advantage since they are always available to receive. Your location, within 25 meters, will then be transmitted to search and rescue in less than one minute. It incorporates a very nice dual purpose blade antenna (406 Mhz broadcast & passive GPS).



We hope to get a reader review of this unit in the near future.

http://www.elt406.net/.

1959 M20A

I have a 1959 M20A, fair paint, nice original seats, headliner needs help. But it has less than 50 hours on the prop and 0360A1A is around 1650 SMOH. Old Narco Radios and a nicer than original panel, handheld GPS. Has water damage to starboard wing needs recover on right side as well. The prop was also balanced at Sullivan , This is one smooth and true flying M20A. Sadly we must part . No reasonable offer refused. Asking $9,000.00 or b/o redodge@yahoo.com

Our Favorite Caption

"My instructor suggested that we just hang out for awhile to get a better feel for the airplane."
Jerry Miel, Tucson, AZ