

# *The Mooney Flyer*

The Official Online Magazine for the Mooney Community

[www.TheMooneyFlyer.com](http://www.TheMooneyFlyer.com)

April 2015



# The Mooney Flyer

## Announces

## First Mooney Flyer Summit

The Official Online Magazine for the Mooney Community

### June 12-14, 2015 at Paso Robles, CA

What could be better than Paso Robles in mid June! The weather is clear and cool and there are no crowds. It's a great time to attend the first annual Mooney Summit, June 12 through 14, sponsored by [The Mooney Flyer](#).

Plan to arrive on Friday for a [Mooney Flyer Wine Tour](#) on Friday afternoon. Your host will take you on a special wine tasting at 2-3 wineries. Even if you are not interested in wine tasting, you'll find the wineries and the scenery to be breathtaking. This will be a lovely afternoon. Friday evening, there will be a [Reception at the Estrella Warbird Museum](#), with finger food and drinks as well as a chance to mingle with our keynote speaker, seminar speakers, and sponsors from Mooney, LASAR, Top Gun and Mountain West Aviation.

Mooney will kickoff the morning with a Keynote Address. This will be followed by two [Seminar Tracks](#). **The Mooney Owners and Pilots track** will include topics such as maintenance, modifications, flying/takeoff/landing/stalling Mooney techniques, as well as a personalized session at your airplane. **The Non-Pilot track** will include topics such as Quick Companion Flying and Mooney Destinations.

**There will be a huge lunch with a lunchtime presentation from the Commander of the USN Pacific Strike Force and former Blue Angel.** After lunch, we plan to have 2 choices for attendees: Additional seminars for Owners & Pilots, and another entertaining group event. **Saturday night will be capped off with a dinner at a local winery!**

Sunday will have 2 ways to have fun. There will be a [Brunch at Hunter Ranch](#) and the [Birds of a Feather Sessions](#). These roundtable sessions will be led by the

attendees and driven by the attendees' interests.

The Mooney Summit will conclude Sunday, June 14th at 11:00 am.



Mooney International will be participating with key people, products, and the keynote speaker

#### Fun Fun Fun!

Wine Tour  
Reception Food  
Mooney Bonfire  
Hearst Castle  
Warbird Museum  
Brunch  
"Birds of a Feather"

#### Register Online before May 12th

\$100 for Pilot  
\$50 per Passenger

[CLICK HERE](#) to Register for The Mooney Flyer Summit  
You will not be billed at this time



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#### Editors

Phil Corman  
Jim Price

#### Contributing Writers

Bruce Jaeger  
Bob Kromer  
Tom Rouch  
Paul Loewen  
Geoff Lee  
Linda Corman  
Cliff Biggs  
Mike Elliott

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#### [Send in the Drones](#)

Phil Corman writes about Drones, aka UAS, and what to expect

#### [Oil and Your Engine](#)

Jim Price explains about how oil works in your engine and how your flying affects it

#### [Mooney Tales – Prescott, Arizona](#)

Most people miss Prescott, Arizona because there are so many better known places nearby such as Sedona, Flagstaff, and the Grand Canyon. Here's what you will find.

#### [Pinch Hitter](#)

CFI Geoff Lee writes about preparing your regular co-pilot with flying and landing essentials for your non-flying partner. A must read for regular Mooney flyers.

#### [Part 2: Do You Have a Plan When it Hits the Fan?](#)

Cliff Biggs completes his gripping real-life experience of a lost engine over the desert.

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Bruce Jaeger

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# From the Editor

*Phil Corman*



## The Mooney Flyer Summit UPDATE



### Mooney International Sponsoring Lunch

We received more good news this month. [Mooney International](#) will be sponsoring our lunch on Saturday at the Estrella Warbird Museum. So, the \$100 hamburger just became FREE. A HUGE THANK YOU to Mooney International for their generosity. Additionally, please don't forget that the [Estrella Warbird Museum](#) will also give all Mooney Flyer Summit attendees FREE access to the Museum.

Pre-Registration at the \$100/pilot and \$50/passenger ends on May 8<sup>th</sup>. Based on the seminars and wine tours, museum, and reception party, wine dinner, plus more that you can imagine, this is a great value.

Please [CLICK HERE](#) to register for The Mooney Flyer Summit

### Invitation to Van's Homecoming

I would like to invite all *The Mooney Flyer* subscribers to our 2015 Independence Fly-In and Van's Homecoming in Independence, OR (K7S5), August 14-16, 2015. Although this event originated as Van's Homecoming, all aircraft types are welcome. There is no charge for the fly-in, but pre-registration is required for dinners and lodging. This pre-registration link will be active, beginning April 15: [www.eaa292.org/flyin](http://www.eaa292.org/flyin)

Marcia Noell



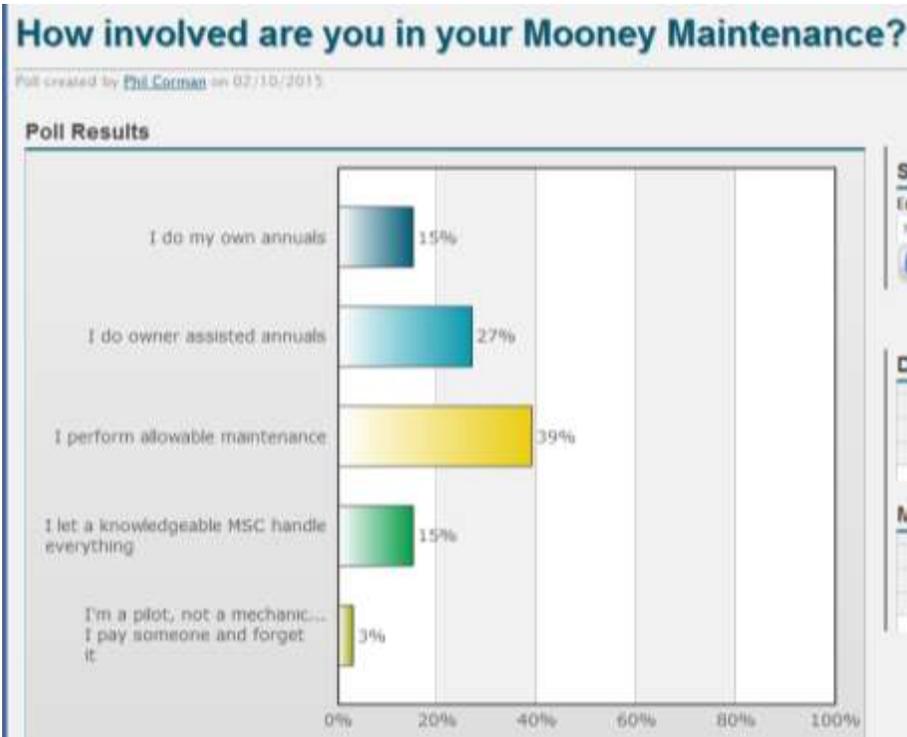
At the Independence State Airport, 7S5  
 August 14-16 2015  
 For details and registration:  
[www.eaa292.org/flyin](http://www.eaa292.org/flyin)

Featuring classic aircraft. Also, bring your Cessna, Beechcraft, GlaStar, canard, shortwing Piper or RV, and enjoy a weekend in the central Willamette Valley.

- ✓ Forums on Tube and Fabric, Van's RV12/14, Safety, Vinyl Covering, Aerial Photography, ADS-B, Fiberglass/Painting. Speakers include:
  - ✓ Vortex generators on RVs - Brian Parris
  - ✓ The Genealogy of Fabric Pipers - Clyde Smith Jr. (Also a 3-day J-3/Tripacer seminar 8/11-8/13)
  - ✓ Hints and Tips on Aeronca 7 & 11s - Paul Agalotis
- ✓ Free housing at the Independence Airpark: Preregistration required
- ✓ Tours of wineries and other local activities
- ✓ Catered meals Friday evening and all day Saturday
  - ✓ Modern day Prop Development - Craig Catto - Saturday pre-dinner speaker

Don't know about the Independence Airpark? See: <http://eaa292.org/airpark>

Pre-Registration for The Mooney Flyer Summit ends on May 8<sup>th</sup>. [CLICK HERE](#) to Register Now.

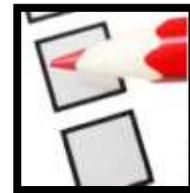


Last month’s poll asked, **“How involved are you in your Mooney’s Maintenance?”**

Of the Mooney owners who participated in our poll, only 1 in 4 participate in Owner Assisted Annuals. We feel like this is a very valuable component of owning and operating your Mooney. You can learn a lot by understanding the various components and systems of your Mooney. On the flip side, almost 4 out of 10 owners did FAA- Allowable maintenance on their Mooney.

**Next month’s poll:** Who Works on Your Mooney?

[CLICK HERE](#) to vote.



### Appraise Your Mooney’s Value

Don’t forget about our cool new **Appraise your Mooney’s Value** using Jimmy Garrison’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.

[M20C](#) [M20E](#) [M20G](#) [M20F](#) [M20J](#)



Another great issue of The Mooney Flyer, received today. Lots to read. Thanks for your work on MF. This evening, about [7pm](#) I went for a little joy ride in my M20C. Departed Salem south bound for some touch and goes. Seven miles out of Salem at 1800' MSL, I had a close brush with a drone! Flew directly over it. It was no more than 50' under my spinner. I pulled back on the yoke and turned left. I saw it pass under the tail at 140 mph. It was a dark colored quad copter that seemed to be hovering at 1,500' AGL. I radioed Salem tower immediately and continued out of the area. Back on the ground at Salem, I spoke to Salem tower and then later to

Lance Johnson at the Portland FSDO to relate my experience.

**Vincent D**

Regarding “**Do You Have a Plan When it Hits the Fan?**” – I love Cliff Biggs articles because they are not hypothetical... They are real and they are first hand! I love books and book knowledge, but Cliff’s articles teach me something from a real world perspective. Keep up the great writing Cliff. This article has a second Part, and I am not happy that you left me waiting until next month for the ending. That is a cheap “*Cliff Hanger*”!

**Phil T**

I wanted The Mooney Flyer readers to be aware of a new FAA Medical Policy regarding Sleep Apnea. On March 2, the FAA published its latest [guidelines](#) on obstructive sleep apnea (OSA). AOPA also has the [new information updated here](#). The FAA has stratified OSA pathology into six groups. You can [CLICK HERE](#) for more details.

**Larry P**

I am constantly amazed at the energy and commitment that Jim Price and Phil Corman make to the Mooney Community. The Mooney Flyer is by far the best Mooney magazine available and maybe one of the best GA magazines. Now they are going to have a Summit in June. Where do you guys find all of this energy and time? Wanted you to know that it sure is appreciated.

**Tom M**

Geoff Lee contributed yet another very good article. As a new Mooney owner, I will admit that I am more challenged to land it than my old Cherokee. I guess good landings really do begin with good approaches. Mooneys definitely make you a better pilot!

**George S**

 The advertisement features a photograph of a white and maroon Mooney aircraft in flight against a blue sky. The text is as follows:
 

*Mike Elliott*  
 Master Flight Instructor, CFII, FAAsteam Rep, Mooney specialist

Mike@aviating.com  
 317-371-4164

1334 Riverside Dr.  
 Tarpon Springs, FL  
 34689

Quality instrument and commercial instruction, transition training, ownership assistance, plane ferrying

 There are two logos in the bottom right corner: one for 'SAFE' (Safety and Flight Awareness) and another for 'AOPA' (Aircraft Owners and Pilots Association).



## PreFlight Starts and Stops With You

by Bruce Jaeger

An uneasy feeling creeps upon you when an engine hesitation gets your attention. You are relieved when smoothness returns. Rather than assume all is good, you make the wise decision for a precautionary landing to check your fuel sumps. Shocked to discover a dramatic amount of water, you resolve to change your ways.

So what is the worst emergency? In four simple words, "One that you created." We have all faced uncomfortable flying situations and I have had my share. Forty-five years as a pilot, I cannot quickly recall details of the fouled spark plugs, failed magnetos, unusual vibrations, unsafe landing gear or a variety of other mechanicals. Somehow these were handled and forgotten. The times I remember vividly are when I was not prepared or made a decision or assumption that put others at risk.

You think, no one has to know that you are not current, your annual inspection expired, static system is out of date or reasons for that nagging lack of performance are on your mind. Think again.

You are set up for a very difficult and disappointing experience. We can't control everything, but there is much we **can** do.

- Preflight starts with you. What could be learned from your logbook?
- Your Mooney is a fantastic yet complicated machine that needs care. Does your service instill confidence or create questions?
- Preflight your Mooney as if you had never seen it before. This will take a bit of your time.
- You think, I have enough fuel, but are you sure?
- A Mooney will not haul whatever fits through the door
- Icing is much more than an inconvenience

Hoping you will never be the center of an investigation is not very comforting.

Just like you remember the day you first soloed or passed your check ride, you would not forget an emergency created by poor planning or decision making. Truly enjoying your Mooney requires being prepared. Do not fall short.

Fly Safe, Bruce Jaeger



# JIM PRICE

ATP,  
CFI-I,  
MEI



## Oil & Your Engine

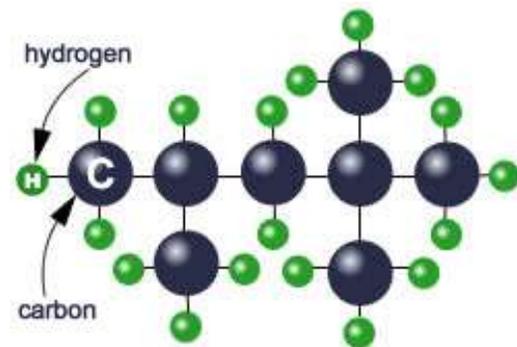
*In March, 2013, a pilot flying a Mooney experienced an engine failure and landed in rough terrain near Wikieup, Arizona. The engine log reflected that it had been over two hundred hours since the oil and filter had been changed.*



Aircraft owners need to accept absolute responsibility and final authority for maintenance and airworthiness. That's why we change our oil every 50 hours and every 33 hours if we're flying a turbo charged Mooney.

Why do we need to change

the oil and filter so often? The answer starts with the fuel. 100LL is made of the molecules Carbon and Hydrogen (C<sub>8</sub>H<sub>18</sub>). Next, you introduce the C<sub>8</sub>H<sub>18</sub> (100LL) to the right amount of oxygen (O<sub>2</sub>).



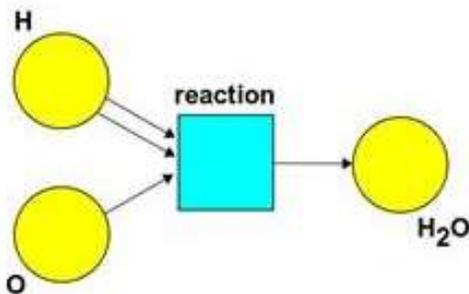
typical gasoline - C<sub>8</sub>H<sub>18</sub>



Hydrogen and oxygen are highly attracted to each other. So much so, that when they get together, there are fireworks – actually an explosion. So, the elements that combine to make H<sub>2</sub>O (water), actually become volatile as they madly rush to meet up with one another.

We then light up the Hydrogen and Oxygen. The combustion that takes place doesn't destroy the Hydrogen and Oxygen elements. It simply rearranges them and leaves Carbon and Dihydrogen Oxide, or H<sub>2</sub>O.

If you burn 10 gallons of 100LL per hour, in that hour, you also send about a gallon of water out your exhaust.



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You've all seen water coming out of a car's exhaust pipe, so you know I'm not making this stuff up.



## **Six Things That Oil does for Your Engine**

# The BIG 6

### **1 - Oil Reduces Friction**

Oil is slick, slimy and difficult to remove from your hands, tools and clothing. Like the obnoxious drunk that you can't shake at a party, oil clings to everything that it touches. That's the reason it's so good for your engine.

It coats the outside and inside of the bearings, push rods, rockers, and just about every other surface inside the engine. It even gets where you don't want it, like all over your Mooney's belly.



Because it's so slick, things move easier. Oil is also a buffer, preventing moving metal from coming in contact with other metal parts. Instead, things slide around on a thin film of oil.

### **2 - Oil Seals, Softens and Cushions**

If there's rain on your windshield, unless the wipers are worn out, they should work quietly and efficiently. What happens when you pull into the garage and leave the wipers on? The wipers begin to squeak because there's no water to "lubricate" them and help them seal to the window.

Imagine what would happen if your windshield wipers had steel blades. Without water on the windshield to help them seal to the window, they would screech! Imagine this happening inside your cylinder without oil.



Piston rings are similar to windshield wipers. They create a seal between the piston and the inside cylinder wall. Oil helps this seal to form and allows the piston ring to slide back and forth without the screeching. Oil on the cylinder wall creates a nice smooth surface that lets the piston ring create an air tight seal. It's that great seal that you're hoping for when you do a compression test. The oil also provides lubrication, allowing the piston ring to slide with minimal metal-on-metal wear.

When a push rod hits a rocker or when a cam shaft contacts a lifter, oil helps cushion the metal-on-metal contact.

### **3– Oil Removes Heat**



If you have ever taken a bite out of a piping hot slice of pizza, and then immediately tried to cool everything down by pouring a cold drink down your throat, you've displaced the heat into the cold liquid.

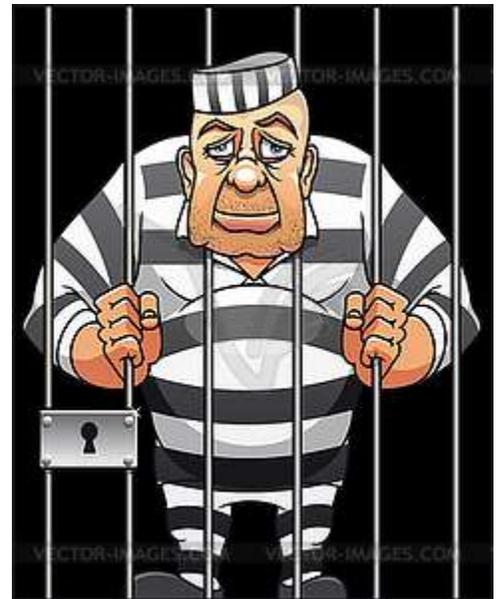
Your Mooney's engine gets hot – really hot. Those cylinder fins are not going to cool things off all by themselves. So, oil is used to displace the heat. Oil is sprayed on the back of the piston, taking the heat with it as it goes to the sump. It's then

sent through the oil cooler, where it gets a nice blast of cold air before it's squirted onto the piston again.



### **4– Oil Cleans the Inside of the Engine**

Compared with automotive engines, our piston aircraft engines permit a far greater quantity of combustion byproducts to leak past the piston rings and contaminate the crankcase. This "blow-by", contains carbon, sulfur, oxides of nitrogen, raw fuel, partially burned fuel, plus massive quantities of the corrosive solvent dihydrogen monoxide (DHMO). These are quite corrosive and harmful when they build up in the oil and come in contact with expensive engine parts like crankshafts, camshafts, lifters and gears. To make matters worse, AvGas is heavily laced with the octane improver tetraethyl lead (TEL), which also does nasty things when it blows by the rings and gets into the crankcase. The oil catches the "blow-by" and contains these impurities with the help of the oil additives. Small amounts of metal particles in your oil are normal. The oil collects these particles and leaves them either deposited in the oil filter or at the bottom of the oil pan.



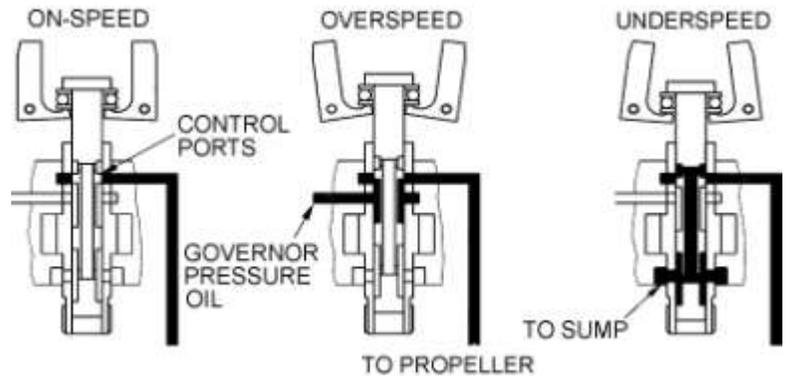
### **5– Oil Protects Against Corrosion/Rust**

The water created by combustion escapes past the piston rings and mixes in the oil. It's then sprayed all over the inside of the engine. Water's boiling point is 212° F, so every once in a while, you want your oil to heat up so that the water in the oil is boiled out. According to TCM Continental Motors, flying the aircraft and engine long enough to develop an oil temperature of **at least 160° F for 30 to 40 minutes** will remove almost all corrosive elements that build up in the oil during non-use and exposure to the atmosphere. The water vapors are then sucked out the breather and shot down the belly of your Mooney. Rust is the number one reason that

engines fail to make manufacturer's recommended TBO, so eliminating the moisture and preventing rust is extremely important.

### **6 – Oil Performs Hydraulic Actuation**

The constant speed propeller is hydraulically actuated needs your engine's oil. Also, many horizontally opposed engines have hydraulic valve lifters.



### **Oil and Your Flying Habits**

There are lots of oil types with various weights and viscosities. The multi-viscosity types are thinner when the engine is cold, so lubrication can occur faster. It can also thicken up as it gets warmer. Multi-viscosity oils are great for owners that fly their aircraft more than five hours a week – charters, rentals, flight schools, flying clubs, etc. One oil's job is to coat the inside of the engine and prevent the water and acid byproducts from bonding to the engine's metal surfaces. When these impurities bond to the metal, that's when corrosion happens. If your airplane is idle for long periods, you don't want a thin engine oil. That's because it will just run off and expose the metal to harsh chemical deposits.



Those who fly less than five hours a week need a thicker oil. This will give a longer inside protection, but eventually, gravity will get the best of a thicker oil and it will find its way into the sump. Owner-flown aircraft are at high risk for rust damage. Almost without exception, the engine builders recommend that you are better off using a thick, single-weight oil (such as AeroShell W100 or W100 Plus). Avoid the Multigrade oils except when absolutely necessary due to cold-weather operations. In sub-freezing temperatures, a single-grade oil may be too thick to provide adequate lubrication during the first minute or two of engine operation. It's absolutely OK to switch between Multigrade in the winter and a thicker oil in the spring, summer and fall.



### **Change Every Four Months**

You should change your oil every four months, even if you've flown only a few hours during that time. Your oil may still look clean, but its additive package is probably no longer effective.

### **Before You Drain, Get it Hot**

Fly the airplane first because this will get the oil to operating temperature and agitate any contaminants. Drain the oil as quickly as possible after the completion of this warm-up flight. This ensures that you drain out all of the bad stuff. About half way through the draining process, catch an oil sample and send it to a lab for spectrographic oil analysis. Don't have a lab? Try [Blackstone Labs](#). In addition to lab analysis, it is especially important to cut open the old filter and inspect the element for metal.



**Mike Busch, Founder of “The Savvy Aviator” & “AvWeb” writes:**

“For the past 40 years, I've used nothing but single-weight Aeroshell W100 in my aircraft, and have enjoyed engine longevity that is nothing short of phenomenal.”



**Oil Additives**

Adding an additive like *CamGuard* to your oil can be a smart investment. Additives help contain the nasty byproducts of combustion. They also do something that oil alone cannot do. That is, they create an impregnable surface on the inside of the engine.

**Your Abused Oil**

Your oil tries to protect your investment, but after being boiled, frozen, and polluted, it eventually loses the battle and begins to break down. It then starts to work against its own environment, thinning and eventually failing to protect the engine from corrosion. It also won't have any room for all the junk caused by the combustion process.

**What Manufacturers Have Learned**

After lots of research, engine manufacturers have learned that after 50 hours, the oil **and filter** have performed their duty and it's time to make a change before the oil becomes ineffective. Your investment is a hefty one, so protect it.

*Fly Safe*

*Jim*



1 Want to extend the life of your battery? Plug it into a desulphating battery charger for aircraft batteries when not flying your Mooney. ts



# *Pinch Hitting*



**Geoff Lee.**  
**CFII**

*It is a prudent endeavor for aging pilots to provide a modicum of survival knowledge to their constant, but non-flying partners, in the form of how to get the plane back down on the earth in the event of pilot incapacitation.*



The AOPA “Pinch Hitter’ course is a familiar possibility, but it is not always convenient or amenable to the significant other. In the foregoing situation, one may have to surreptitiously sneak up on the situation. This document is not **offered as a treatise on how to fly an aircraft**, but simply a method to commence a process for providing a few preservation guidelines to your regular flying companion, just in case. I would suggest guidance in small increments.

Provide a **very** simple checklist card, such as:

1. If you have an autopilot: Turn the Autopilot on (“altitude” and “heading” hold indications)
2. If you don’t have an autopilot: Keep the wings (yoke) level, and hold the altitude the best that you can.
3. Dial 121.5 on the radio and 7700 into transponder, (“N number, “emergency, pilot sick!”)
4. Listen carefully and follow the instructions; *speaking slowly and deliberately.*

## OBSERVING

Only you can know the intellectual and physical capability levels of your flight companion, so the following suggestions should be modified accordingly.

A good place to begin any instruction is by observing the **eye level of your companion** relative to your own. If it is lower than yours, he or she might need to fly with a cushion.

## RADIOS and TRANSPONDER

Carefully educate your companion regarding the method for frequency tuning of the radio and the transponder. A non-threatening way to introduce radio operations is to once in a while, ask them to help you tune a frequency. This will plant the idea that occasionally, you may require some small assistance. The card with the frequencies must be clearly displayed at all times. Stick it on the sun visor or the panel with double back tape.

When you are on the ground, you should explain that communicating on 121.5 connects one with all ground FAA facilities within range and line of sight, like towers and flight service stations. In addition, all commercial aircraft in the vicinity (monitoring the frequency) will hear the call. Someone will rapidly provide guidance and assistance. Explain that the transponder is a "beacon" that lights up on any aviation ground radar screen (within range) and shows your exact location to potential helpers.



## PLANTING SEEDS OF SURVIVAL

Some non-flying companions have mentally committed themselves to the thought that, "if we go, we go together". When you plant survival seeds in their minds, this might encourage a desire to learn a little more. Returning to solid ground in a reasonably safe and minimally frenetic manner might suddenly seem possible.

## STEERING, AIRSPEED AND DESCENT CONTROL

Allow the right seat person to hold the plane straight and level occasionally, while you look at a map or review your iPad route. Point out that if the yoke is kept straight across the cockpit, the aircraft should remain level. (*They probably have already figured that out*). Show them the trim wheel and allow them to use it. If you have any type of autopilot, demonstrate how to turn it on and enter useful functions like "altitude hold" and "heading". Point out that holding altitude and wings level, with or without an autopilot would be the first task to focus on, prior to tuning and communicating on the radio.

While on the ground, familiarize your partner with the airspeed indicator and the VSI and demonstrate these in the air. It is **not always easy to see the critical areas of the airspeed indicator from the right seat**, so using "clock" positions for the critical gear and approach speeds can be useful. For instance, "During the approach descent, keep the airspeed needle between two thirty and three o'clock". During the descent, "Keep the airspeed needle between 3 and 4 o'clock".

While descending on approach, demonstrate how to control the airspeed needle with pitch and the VSI with power. Relax the feet on the rudder pedals.





The yellow shaded areas on the instruments reflect the very approximate “clock” positions referred to on ASI and VSI location. These will perhaps be slightly different on older aircraft and older instruments.

### FINDING A LANDING SITE

This may require the companion to communicate on 121.5 and ask where to point the airplane. Therefore, a little instruction on the use of the compass may be required. One can accomplish this task incrementally on each flight, as you try to include your partner in the planning process. Demonstrating shallow turns (*standard rate max*) and challenging the person to turn to cardinal headings would be a useful exercise to combine with altitude holding in the turn. Of course, an

autopilot with at least a heading bug on the DG, would be a prime choice for use in an emergency. Additionally, after your partner is in radar contact and communicating on the emergency frequency, ground personnel can give “start turn - “stop turn” guidance. You should demonstrate that the aircraft will turn if the wings are not level and what that turning does to the compass.

### LANDING

Ah! The descent and subsequent arrival back on mother earth in walking and talking condition. This is a prime concern in the minds of all non-flyers. An important item to point out is the “picture” presented in the windshield whenever the aircraft is on the final approach path. I instruct any pilot that the aircraft is going directly toward whatever is appearing in the **center of their half of the windshield**, so just fly and reference that half. (*A small piece of tape on the center of the windshield half helps*). The chosen touchdown point should remain in the same relative position, in the center of your partner’s windshield half, throughout the final approach. I suggest that the base of the windshield be used as a reference point and the touch down target should be kept at approximately the same location relative to that baseline. Simply stated, keep the target at the same height above the windshield base. It is important that the touchdown point (target) be kept in sight throughout the final approach. If the nose starts to cover up the target, then something is not correct and needs to be done with either power, pitch or both.

When to start descending toward the runway at an angle of 3-5 degrees, can be contrived by observing the distance between the aircraft and a chosen runway. In an emergency, the controller can provide the right seat flyer with knowledge regarding where to look or how to get GPS information from your panel or handheld equipment. This information should not be too difficult to acquire, given a little insight. With GPS information, showing your partner how distance and heading to any geographic point is found should be simple.

Attendant upon the distance from landing point is the altitude from which a descent must commence. Actions such as power setting and landing gear configuration must be triggered, at the latest, at a 5 mile or prior point. The aircraft should be in an approximate alignment with the intended runway selected. On most **over 200HP** Mooney models, a descent rate of **500-700 fpm** at about **80-90 kts**, gear down would place the aircraft in an acceptable landing configuration in sight of the runway. For **200Hp** and under Mooney aircraft, **80-90 MPH** would be the speed. These numbers are obviously “broad brush” and the instructing pilot would need to spend time refining the approach technique, relative to specific aircraft, with the partner. Also important, is **the point at which to remove all power from the aircraft.**

**The use of flaps would be discretionary and depend upon the knowledge and sophistication of the right seat passenger.**

This is how I describe the remaining actions to the pinch hitter, subsequent to the round out and prior to alighting on the runway: ***“Power off, get the aircraft parallel to the ground with constant back pressure on the yoke. Next, get the nose pitched up enough to clear the nose wheel and keep a smooth, slow, steadily moving pull on the yoke until the plane has stopped moving. Never push forward or relax back pressure on the yoke in close proximity to the runway”.***

There are, of course, many variations of the foregoing related to the model and age of the aircraft and the specific individuals involved, but the idea here is to begin providing a little survival knowledge to your partner and perhaps create more interest, confidence and mental comfort during those flying forays.

**IT CAN BE DONE!**

In 2012, an 80 year old, with little flying experience, successfully managed to land a twin-engine Cessna after her husband passed out at the controls. She landed their aircraft at Wisconsin’s Door County Cherryland Airport. [CLICK HERE](#) for the YouTube report.





Willmar, MN

Willmar Municipal (KBDH)



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Your Fuel Tank Repair Specialist



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**More than 15 years experience**  
**Let us show you what we can do**

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## Send in the Drones

Drones, Drones, Drones... That's all we seem to read about in the General Aviation news and magazines. To most of us, in the past, these were called RC Models (Radio Controlled). But these Drones, more commonly referred to as Unmanned Aircraft Systems (UAS), are more sophisticated; the most common type being called a QuadCopter due to its four (4) rotor blades. The FAA defines a UAS as follows: "The unmanned aircraft (UA) and all of the associated support equipment, control station, data links, telemetry, communications and navigation equipment, etc., necessary to operate the unmanned aircraft."

It's very common to find a digital camera mounted on the UAS. Finally, most UAS have a significant amount of on-board automation. This computing controls the flight, the camera, etc., and many are controlled by a smart phone. A typical feature would include the ability to pre-program a flight path, then sit back and watch the UAS fly it. Ditto for the camera. Most cameras have the ability to be controlled by a proprietary unit or your smart phone. You can aim the camera, zoom in or out, start and stop the recording. So these UAS are not your father's Oldsmobile.

The FAA classifies UAS into three (3) categories: 1) Public Operations, 2) Civil Operations and 3) Model Aircraft. [Public Aircraft Operations](#) are limited by federal statute to certain government operations within U.S. airspace. Title 49 U.S.C. § 40102(a)(41) provides the definition of "Public Aircraft" and § 40125 provides the qualifications for public aircraft status. The category is determined on a flight-by-flight basis, under the terms of the statute. The considerations when making this determination are aircraft ownership, the operator, the purpose of the flight, and the persons on board the aircraft. Civil Operations are essentially categorized as Non-Governmental. There are two methods of gaining FAA authorization; 1) [Section 333 Exemption](#) or 2) [Special Airworthiness Certificate](#). The last category, Model Aircraft are intended for hobby or recreational purposes only.

These UAS are encouraged to:

- Fly below 400 feet and remain clear of surrounding obstacles
- Keep the aircraft within visual line of sight at all times
- Remain well clear of and do not interfere with manned aircraft operations
- Not fly within 5 miles of an airport, unless the operator contacts the airport and control tower before flying
- Not fly near people or stadiums
- Not fly an aircraft that weighs more than 55 lbs

You can't be careless or reckless with your unmanned aircraft – you could be fined for endangering people or other aircraft



The statutory parameters of a model aircraft operation are outlined in Section 336 of Public Law 112-95 (the [FAA Modernization and Reform Act of 2012](#)). This class of operation has received a lot of attention by pilots claiming close calls. The incidents of close encounters by pilots with UAS is increasing. We even received a letter from one of our readers indicating an encounter within 50'. He notified ATC and subsequently the local FSDO. You need no authorization from the FAA for recreational use, but do

need it for business use. The real issue here is safety. On February 15, the DOT and FAA issued a Press Release indicating a Proposed Framework of Regulations regarding UAS. [CLICK HERE](#) to read the Release. We will have a 60 day period to comment on the proposed regulations. It is an unusual step for the FAA, as it tries to balance technological innovation with safety in the air. For example, The proposed rule would require an operator to maintain visual line of sight of a small UAS. The rule would allow, but not require, an operator to work with a visual observer who would maintain constant visual contact with the aircraft. The operator would still need to be able to see the UAS with unaided vision (except for glasses). The FAA is asking for comments on whether the rules should permit operations beyond line of sight, and if so, what the appropriate limits should be. Under the proposed rule, the person actually flying a small UAS would be an "operator." An operator would have to be at least 17 years old, pass an aeronautical knowledge test and obtain an FAA UAS operator certificate. To maintain certification, the operator would have to pass the FAA knowledge tests every 24 months. A small UAS operator would not need any further private pilot certifications (i.e., a private pilot license or medical rating). Finally, the new rule also proposes operating limitations designed to minimize risks to other aircraft and people and property on the ground:

- A small UAS operator must always see and avoid manned aircraft. If there is a risk of collision, the UAS operator must be the first to maneuver away.
- The operator must discontinue the flight when continuing would pose a hazard to other aircraft, people or property.
- A small UAS operator must assess weather conditions, airspace restrictions and the location of people to lessen risks if he or she loses control of the UAS.
- A small UAS may not fly over people, except those directly involved with the flight.
- Flights should be limited to 500 feet altitude and no faster than 100 mph.
- Operators must stay out of airport flight paths and restricted airspace areas, and obey any FAA Temporary Flight Restrictions (TFRs).

The proposed rule maintains the existing prohibition against operating in a careless or reckless manner. It also would bar an operator from allowing any object to be dropped from the UAS.

UAS will be big business in the US and worldwide. Companies like Amazon and Google are making business plans based on UAs. For instance, Amazon envisions using UAs to deliver packages.

## What Can You Do?

First of all, if you own a drone, operate it responsibly. If you know someone who operates a drone, advise them on safe operation, at least in the vicinity of full scale airports and flying airplanes near airports. More importantly, when you're flying, report all UAS that invade your Mooney Space.



Call ATC and report it immediately. Give your current altitude, direction, and GPS location, if able.

Probably the most important step you can take is to comment on the Proposed Rule Making when it becomes available. Nothing is better than informed pilots making suggestions, especially in an area that is new to aviation, namely UAS.

The coming UAS boon will be significant, as you can see from the graphic illustration above. Like all new technology, it can (and probably will be) an exciting new stage in aviation. Therefore, it's imperative that we get the rules of operation correct so that this new industry can blossom and we can all be safe in the skies above.

What's the difference between recreational drones and radio-controlled aircraft anyway?



## Cliff's Notes

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

### ***Part 2: “Do You Have a Plan When It Hits The Fan?”***

*Where were we? Oh yes.*

***Captain Harold “Hoppy” Hopkins, was flying a fully loaded DC-3 from Long Beach, CA to Hawthorne, NV and “it” hit the fan! At night, with no engines, no instrumentation lights, and no landing lights, he was trying to dead stick the airplane to a safe landing on a dry lake bed in the desert called Mud Lake, 15 miles south of the Tonopah, NV airport. The ship was coming down fast while the copilot shined a flashlight on Hoppy’s instruments. As dried up Mud Lake rushed up, and with only the weak moon to light the way, Hoppy could see the aircraft’s shadow on the ground, so he pulled back on the wheel.***

A 10-20 degree nose down attitude and a 2,000 FPM rate of descent was necessary to maintain 110 knots. As the shadow came up and the Captain tried to flare. However, with no engine power to cushion the landing, the DC-3 impacted the lake bed with the force of 20 Gs. Both of the main gear collapsed, and the props and engines dug in, tearing them off their mounts. Then, the left wing tore off at the parting joint just outside the engine nacelle. The passengers were flooded with a cacophony of sounds as metal was bent and broken, luggage was falling and loose items were thrown around the cabin. Like a train coming down the tracks, the sounds were loud but unrecognizable. As it slid along the ground, it rotated around its nose while the right wing tip and tail slammed to the ground. The airplane was then

upside down, favoring the Captain’s side of the cockpit. The copilot was thrown face first into the throttle quadrant. As the plane skidded to a stop, over the next 100 yards, the cockpit wall under the Captain, was ground away and Hoppy’s left arm slid between the airplane wall and the lake bed.

Finally, everything came to a stop. Silence engulfed the airplane. For the first few moments, nobody moved. No one made a sound; it was dead silent. Dust floated around the cabin, but it was unseen in the darkness. Only the smell of the dust was noticeable. Was anyone alive? Slowly, someone moved and then another. Others started to moan. All were hanging upside down in their seat belts. As their thoughts now turned to the possibility of a fire, people started to drop from their seats and began to help others get loose and escape the cabin.





Up in the cockpit, both pilots were still alive. After impacting the throttle quadrant, the copilot was badly cut up about his head and face. The Captain was alive, but trapped upside down in the wreckage.

It took 2 hours before any help could arrive. The first one on the scene was the nearby airport manager who knew Hoppy. Looking through the broken cockpit windshield, he could see that the Captain was awake, but in very critical condition. Since access was impossible through the normal cockpit/cabin door, they had to dig a hole under the cockpit so they could extract Captain Hopkins. At first they couldn't free his left arm and a doctor on the scene offered to cut it. The co-pilot said, "No way!" Finally, they were able to extract him from the cockpit with both arms still attached to his body. Miraculously, all 32 passengers and the stewardess escaped; most with minor injuries.

Captain Hopkins and his copilot were the only ones

seriously injured in the crash. The copilot's facial lacerations would take several weeks to heal and Hoppy's arm, though almost amputated, was saved and would eventually heal after 10 months time. Unfortunately, his arm would never be the same again. Captain Hopkins would receive a Demonstrated Waiver on his arm and return to flying four years later.

As the title of this article asks: ***"Do you have a plan? Because when it hits the fan it can really hit the fan."*** The Captain was faced with numerous decisions, in a short period of time, as he tried to save 32 passengers and his stewardess. Could he have planned ahead for all this to happen? Hardly. But by having a plan for the first couple of links in the chain he mitigated his decision tree for later in the flight.



As we all know, nearly every accident is a chain of events. If a link is broken anywhere along the line, the accident won't happen.

Many maintenance items, all unknown to the crew, were stacked against this flight before it left the ground. **Let's take a look at the chain:**

- The left engine had a cylinder failure the day before the flight and it had been replaced overnight.
- The right engine had a crack in a cylinder between the head and the cylinder wall.
- The battery had been written up 3 times as "boiling over" and each time it was signed off as "serviced".

**Let's look deeper at the Federal Investigation findings:**

- Had the mechanic that changed the cylinder on the left engine the night before held a "Powerplant" rating instead of just an "Airframe" rating, he might have known to look into the crankcase sump and remove the pieces of broken rings and piston that were later pumped around the oil system to mark the failure of the master rod bearing.

- Had he had a “Powerplant” rating, he might have known that the oil screen could be installed upside down, thereby crushing the screen so that it would not filter the ring pieces and piston debris from the oil system.
- The left engine would have failed before they ever got to their destination, even if the right one did not, because of these “oversights”.
- Had a mechanic taken a closer look at the right engine, he might have seen the telltale stains of an imminent cylinder failure.

## THEN THERES THE ELECTRICAL SYSTEM

The electrical system had one 12 volt battery installed. This should have provided enough electrical power to feather both engines and give lighting for the landing. **BUT**, as it turns out, installed on each engine was a 28 VOLT generator. Yes, a 28 volt generator going to a 12 volt battery and a 12 volt aircraft system. The maintenance company had cranked both of the carbon pile voltage regulators down as far as they would go in an effort to supply the correct voltage. Unfortunately, they could only reduce it to 18 volts. How well do you think the 12 volt battery would function while being charged with 18 volts? Do you think it might boil over? Servicing the battery was a classic example of treating the symptom, but failing to look for a cure.

## WHAT COULD HAVE BROKEN THE CHAIN OF EVENTS?

- If the left engine sump was cleaned out, it wouldn't have failed. No accident
- If the screen had been put in correctly, it would have filtered the broken rings. No accident
- If the generators had been 12 volt, the battery would have been in good shape. No accident
- If the “cause” of the battery boiling over had been investigated properly. No accident.

Any one of these would have broken the chain.



What's the point of this story, other than entertainment? **Many questions can be asked:**

- How well do you plan ahead?
- How well do you really understand your airplane and its functions?
- How well do you understand the emergency procedures for your airplane?
- When was the last time you reviewed your flight manual?
- Have you thought ahead on every flight as to what you would do if you had an engine failure, electrical failure, vacuum failure, or landing gear failure?
- Have you thought out the “what ifs” of each one of the above failures?
- What other items are affected by the failure and how can you work around those issues?
- When was the last time you went through a manual gear extension while up on jacks?
- Do you know how to download your electrical system in a hurry if you lose your alternator, especially at night or IMC?
- How much capacity is left in your “old” battery if you need it?
- If your autopilot fails, are you current and “competent” to fly IMC?

- How closely do you follow the maintenance on your airplane? Do you just drop it off at the shop and pick it up when it is done, or do you ask questions and very carefully look things over?
- How good is your preflight inspection and weather planning, especially if going IMC?
- And one more thing! How many items are not working correctly on your airplane right now?

The questions can go on and on, but it all boils down to being prepared for any eventuality. Don't back yourself into a corner with no way out. One only has to read some accident reports to see that some pilots were not prepared for the flight at hand.

Don't be one of those accident reports!

***Be prepared, because "When it hits the fan, it can really hit the fan!"***



Captain Harold Hoppy  
Hopkins

July 12, 1926 - February 11, 2015  
Woodland Hills, California



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Pre-Registration for The Mooney Flyer Summit ends on May 8<sup>th</sup>. [CLICK HERE](#) to Register Now.



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FEATURE	MOONEY MASTER	BEECH MUSKETEER	PIPER CHEROKEE
Horsepower	180 hp	160 hp	180 hp
Cruise (75% Power)	141 mph	135 mph	141 mph
Climb	780 fpm	710 fpm	720 fpm
Useful Load	1100 lbs.	1000 lbs.	1135 lbs.
Take-off Roll	890 ft.	890 ft.	775 ft.
Landing Roll	550 ft.	595 ft.	600 ft.
Stall Speed	57	62	57
Range (75% Power)	680 miles (48 gal.)	792 miles (60 gal.)	695 miles (50 gal.)
Propeller	Constant Speed Controllable	Fixed Pitch	Fixed Pitch
Cowl Flaps	Standard	None	None
Flaps	Hydraulic 60° to 33°	3 Position	3 Position
Controls	Dual (Standard)	Dual (Extra)	Dual (Standard)
Cyl. Head Temp. Gauge	Standard	None	None
Brakes	Individual Toe (Standard)	Individual Toe (Standard)	One Hand Brake
Generator	50 Amp	35 Amp	35 Amp Alternator
Super Sound Proofing	Standard	-----	-----
Manifold Pressure Gauge	Standard	-----	-----
Retractable Entrance Step	Standard	None	None
Steerable Nose Wheel	Standard	None	Standard
Tinted Glass	Standard	None	None

From Manufacturer's published figures.

**MOONEY**  
FLYING—January 1963

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## Prescott, Arizona

by Linda Corman

We, in the western USA, have been experiencing the mildest winter in a long time and because it was so lovely, we decided to fly to Prescott, Arizona. They also had a mild and warm winter, so the flight

there and back to California was spectacular. I personally knew nothing about Prescott or the surrounding area, so everything there was a nice surprise. One thing I found interesting was that Prescott was the capitol of Arizona while it was a territory in 1867, then it moved to Tucson. Later, it was returned to Prescott, then moved to Phoenix. I guess it was hard to decide which area was best for Arizona. Prescott is rich in western folklore. Virgil Earp, Wyatt Earp's older brother, lived there in 1879 until he was told about the Boomtown of Tombstone. Another more recent event happened in 1964 when from the steps of Prescott's Yavapai County Courthouse, Barry Goldwater announced his run for the White House. While Prescott is known for its western and cowboy feel, it is also the home of Embry-Riddle Aeronautical University. This university is the world's largest, fully accredited university specializing in aviation and aerospace. As we approached the airport, we were aware that it was a busy place, with new pilots doing touch and goes and helicopters circling about.

As we approached the airport, off to our right we saw what looked like a lovely lake. Later, we learned that it's Watson Lake. We decided then and there to do some hiking around the lake after we were situated in town. We were happy to see such a diverse area. Prescott is considered part of North Central Arizona. We considered the geography to be mountainous high desert. Its elevation is more than 5,000' MSL. It lies just south of the Granite Dells and Granite Creek flows generally north from the Bradshaw Mountains through the city and Chino Valley to the Verde River. From just about

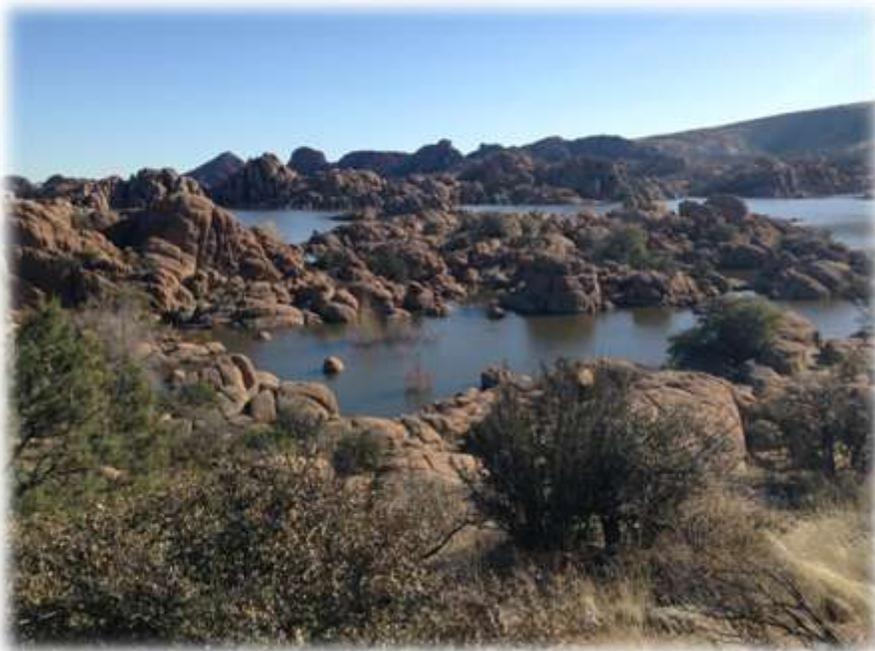
everywhere  
in Prescott

you can see Granite Mountains and an interesting formation called Thumb Butte. The airport is situated on a large flat plain of dry high desert. However, as you drive into the town the area becomes more mountainous with forests. I was told that they do get an occasional light dusting of snow.

We drove to our hotel which is located on East Gurley Street and it was another happy surprise. The [Hassayampa Inn](#) is a gem. It's on the lists of Historic Hotels of America and the National Trust for Historic Preservation. This four story brick building was built in 1927 and was described as a haven for sophisticated travelers seeking a



sense of pampered well being. That was in the 1920s and 30s. It has the cute feel of that era and the rooms have changed very little. The rooms are very tight and the bathrooms are not for larger people. I could barely turn around in it. But, if you like historic and haunted places, this inn has both. I was told shortly after the inn opened in 1927, a newly married couple checked in and never checked out. The husband went for a walk and never returned and the new bride was so distraught that she hung herself in their suite. They say her ghost wanders the building, turning lights on and off and knocking things off tables. I, of course didn't get the honor of seeing or hearing the resident ghost. We did enjoy the inn's happy hour, between 4pm and 6pm. They have a large dining room where we had our last breakfast in Prescott, and we were delighted with the service and the food. Speaking of food, we did happen on a restaurant that was right across the street from the inn called [Prescott Station Grill and Bar](#). The food was wonderful. It was so good, we went back a couple of times. As for breakfast, we were directed to a place called Lone Spur Café, which was just down the street from the inn. The atmosphere is definitely western, with large omelets.



Getting back to [Watson Lake](#), we made it there on our first full day and hiked a few miles around it. This is an ideal lake for kayaking and a leisurely stroll, as there are no real elevation changes. The town of Prescott built what they call the Prescott Circle Trail, with 52 miles on a non-motorized trail system that encompasses the city. So for those hikers in the family, it is a hiking haven. For the shopper in the family, Prescott has a nice mall called the Gateway Mall, just out of town with all the usual stores. For the whiskey drinker in the family, or the cocktail drinker, there is Whiskey Row. Whiskey Row is located on South Montezuma Street, and has acquired the Whiskey name because of the

numerous saloons that once lined the street. There are fewer saloons now, but it is still an interesting place to visit and have a look at the historic hotels and restaurants.

Again, Prescott is a place we might not have visited except for our Mooney. After going there, we are glad we were able to travel to a some of the old west, in quick, Mooney comfort.

**Prescott Love Field ([KPRC](#))**

Located at 5,044' MSL, the airport is easy in and out. It's situated in a huge valley with mountains to the southwest. Embry-Riddle Aeronautical University has training operations on the field as well as a helicopter training facility. We used [Legend Aviation](#) at the southeast corner of the field. Great service for us and our Mooney. They called Enterprise to pick us up and fueled our plane before departure. Great folks.

**What to Do & Where to Stay**

For local & historic flavor downtown, we stayed at the [Hassayampa Inn](#). The rooms had a B&B feel. There is a bar with Happy Hour and a full service Restaurant.

Hike or Mountain Bike around [Lake Watson](#) among the granite boulders or rent a kayak and paddle the lake. [Manzanita Outfitters](#) has kayaks

# Upcoming Fly-Ins



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- May 9**, Winter Haven (GIF)
- June 13**, Williston (X60)
- July 11**, Sebring (SEF)
- August 8**, St. Augustine (SGJ)
- September 12**, Lakeland (LAL)



- Santa Maria, CA **April 24 -26, 2015**
- Chattanooga, TN **June 5-7, 2015**
- Atlantic City, NJ **September 11-13, 2015**
- Fort Worth, TX **October 23-25, 2015**

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**Q1: Which modifications yield the best speed improvements?**

This is difficult unless you pick a specific model. However, I will say that from the M20J and up there is little you can do except for the Eagle and Ovation. With different prop and governor combinations, you can increase the RPM from as low as 2400 up to 2700, with a significant increase in climb and top speed. From the earliest models, through the F model, there are many speed mods, but if I had to pick one to install, it would be the M20J windshield. This will give you a TAS increase of 7-9 MPH. Less expensive, but with the same speed results, is the nose cowl mod. Installed on any of the earlier models, this will give your cowl inlet the appearance of a 201. Installing composite props, like an MT, increases climb performance on any model.

**Q2: (From a potential buyer) In your opinion, what are the top 3 M20 models, based on price & performance?**

M20E, M20J, and the Encore with the M20R very close to those three.



Saw this converted C-123 in a tropical jungle in Costa Rica!

Don't crank your starter continuously for more than 15 seconds or so. If your engine doesn't start after a few of these, let the starter cool down.

## PRESS RELEASE

Lake Aero Styling & Repair

707 263-0412 ... [www.lasar.com](http://www.lasar.com)

March 20, 2015



Lake Aero Styling & Repair “LASAR”, a Mooney Service Center, located in Lakeport, CA is happy to welcome Chris Stephens to our business. Chris comes to us from Tennessee, and has his A&P and IA ratings. He is also working on his private pilot license.

Chris received his education at Cleveland State Community College in Cleveland, TN, with an Associate of Science degree in Electronics Technology. He then went on to the School of Missionary Aviation Technology in Ionia, MI and received his A&P. Most recently, he received his IA from Baker School of Aeronautics in Lebanon, TN.

LASAR is very excited to have Chris with us. He will be working with Kyle Kennedy, our “relatively new” Service Manager. Both Chris and Kyle have expertise with Mooney Airplanes, as well as other general aviation single and twin engine airplanes.

Besides expert service, LASAR Parts Department supplies replacement parts, worldwide. Our inventory includes serviceable parts from dismantled Mooney airframes, and we offer rebuilt control surfaces and landing gear components, as well as new and other used parts.

The owner of LASAR, Paul Loewen, is proud to have owned a Mooney Service Center for 40 years now. We look forward to growing our Mooney expertise in Service and Repairs, now that Kyle and Chris have joining the rest of our LASAR crew.



A&P's and IA's: Service Manager, Kyle Kennedy, owner, Paul Loewen, and mechanic/inspector, Chris Stephens



## ***McMurdo debuts Kannad ELT bundle***

McMurdo Group has introduced the Kannad Integra Smart Pack, an aviation Emergency Locator Transmitter (ELT) bundle with both GPS and antenna redundancy. The Kannad Integra Smart Pack includes:

- The Kannad Integra ELT – one of the smallest and lightest ELTs on the market with a built-in antenna and embedded GPS receiver.
- The new Kannad Integra e-NAV NMEA – an NMEA-standard interface cable that connects the Integra ELT to the aircraft GPS. The latest known aircraft GPS position is continually updated and stored on the interface cable to provide an additional level of redundancy over the embedded Integra ELT GPS data. [READ MORE](#)

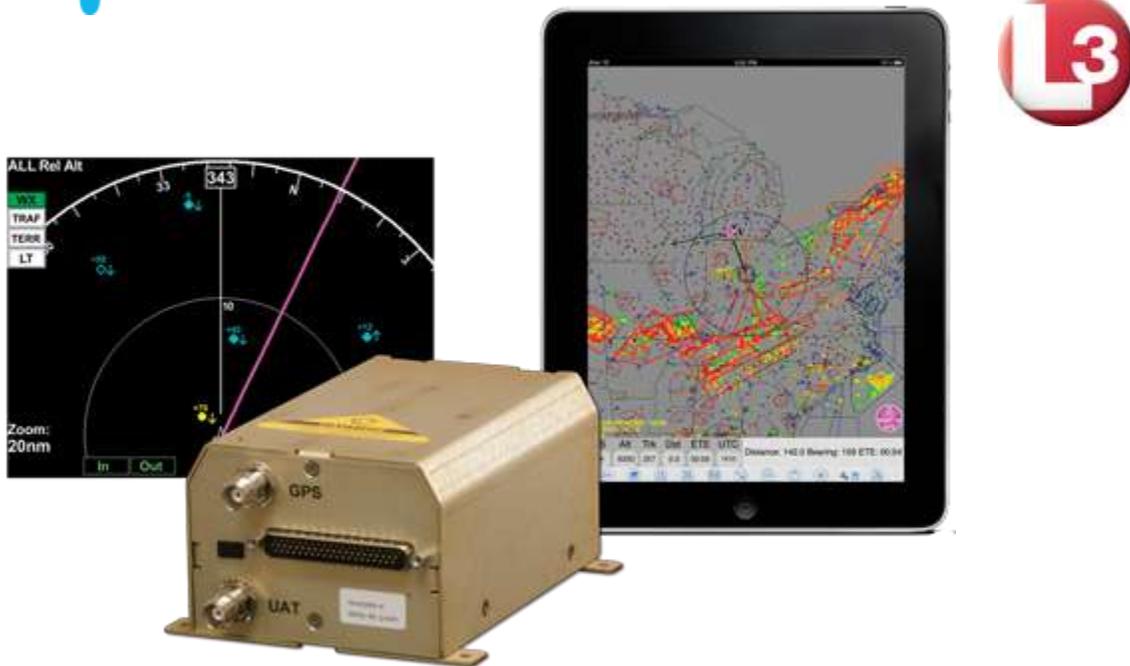


## L3 Lynx Introduces Affordable UATs for ADS-B



These UATs are available at a variety of prices and are fully compliant with the FAA’s 2020 rules mandate. Every model includes a WAAS GPS. Units range **from the low end, NGT-1000 (\$2,500), the mid range NGT-2000 (\$3,600), and the NGT-2500 (\$3,900), shown below.** SEE THE MODELS [HERE](#).

FIND A DEALER/SHOP [HERE](#).



## L3 Lynx offers ADS-B “In” and “Out” 1090 MHz transponders.

For pilots who want to fly above FL180 and or Internationally, these transponders will meet the 2020 mandate. All four provide weather and traffic on the transponder’s screen and feature an internal WAAS GPS. L3 has four models, ranging **from \$8,250 to \$13,400.** SEE THE MODELS [HERE](#). FIND A DEALER/SHOP [HERE](#).



## ***FAA recommends replacing Velcro-style ELT fasteners***



On March 10<sup>th</sup>, the FAA encouraged aircraft owners and operators with emergency locator transmitters secured by hook-and-loop fasteners (the type sold under the brand name Velcro) to switch voluntarily to a metal strap-type restraint. Investigations into some recent aircraft accidents found that ELTs mounted with hook-and-loop fasteners did not transmit an emergency signal because they were dislodged from their mounting trays on impact, severing the antenna connection.

The FAA evaluated five courses of action to mitigate safety concerns, but decided against mandates that it deemed would place an undue burden on aircraft owners. [CLICK HERE](#) to read more.

## ***FreeFlight launches ADS-B Out solution under \$2,000***

FreeFlight Systems will offer Automatic Dependent Surveillance-Broadcast (ADS-B) Out equipment priced below \$2,000 for light general aviation aircraft that provides compliance with the FAA's Jan. 1, 2020, mandate. FreeFlight's FDL-978-TXL lists for **\$1,995, including antennas and an installation kit**—everything but the labor required for installation.



The ADS-B Out-only unit is half of FreeFlight's Equip-It 2020 program. It also announced the FDL-978-XVRL, priced at \$3,695, which adds optional ADS-B In capabilities that allow in-cockpit display of traffic and free weather information. Both have WAAS-enabled GPS receivers built in, to meet position accuracy requirements, and are fully TSO compliant. Customers who choose to equip with the low-cost TXL system and later wish to receive ADS-B In weather and traffic data will be able to upgrade to the XVRL version.

FreeFlight said it will build 10,000 of these systems in an effort to reduce ADS-B compliance costs for the GA community. [READ MORE](#)



## ***Faster, Better Auto-router Now Available and DUATS service deprecated***

On March 19<sup>th</sup>, ForeFlight released an update to their airway routing suggestion in "Route Advisor" by replacing their previous route provider, DUATS, with their integration partner **Lockheed Martin**. This enhancement brings quicker response times and more accurate and direct routing for user-provided origin and destination pairs.



Lockheed Martin provides proper entries and exits onto and off of the airways so that clicking on the suggested route and loading it as a flight plan should be a seamless process. Previously this was not always the case with DUATS and some routes failed to load properly.

ForeFlight also deprecating their support for DUATs based services in favor of the modernized web services technologies provided by Lockheed Martin. For those customers who still have DUATS credentials configured in ForeFlight Mobile, ForeFlight recommends removing those credentials to take full advantage of the more advanced capabilities.

To remove those credentials:

1. Tap More > Accounts.
2. Tap on the "CSC DUATS" field.
3. Tap the red "Sign Out" button on the next page.



## ***FlyQ now works with Status for ADS-B "In"***

Seattle Avionics Software today announced that FlyQ EFB version 1.5 for the iPad is now available from the Apple App Store. New version 1.5 adds support for 3 new ADS-B receivers: Stratus<sup>+</sup>, Freeflight, and NavWorx, bringing the total to 15 supported ADS-B receivers. In addition, this release offers dozens of other enhancements. [CLICK HERE](#) for more information





## ***Flight Service Program Changes***

### **NEW FLIGHT WATCH FREQUENCY**

On October 1, 2015, the FAA will consolidate Flight Watch services into routine flight services inflight frequencies to eliminate unnecessary duplication of service and provide greater convenience for pilots. These services provide inflight weather information to pilots. After that date, these services will be available on the same frequencies that pilots use to open and close flight plans and to receive updates on NOTAMs or Temporary Flight Restrictions (TFRs). Dedicated Flight Watch frequencies will be decommissioned.

### **PHASING OUT REMOTE AIRPORT ADVISORY SERVICE**

The FAA is proposing to phase out legacy Remote Airport Advisory Service. Seven of the airports do not meet the Agency's criteria for receiving advisory service. Flight Service is collaborating with our user groups on possible impacts and will be posting the proposed change in the Federal Register for public comment.

### **ICAO FLIGHT PLANS WILL BE THE NORM**

Beginning on October 1, 2015, the FAA will implement flight plan filing for civil aircraft exclusively under the format used by the International Civil Aviation Organization (ICAO). Flight plans contain specific information relating to the proposed flight of an aircraft and controllers use them to provide air traffic services. Today, pilots file flight plans in the U.S. under either the domestic or ICAO format. The use of one format will simplify the process and align U.S. flight plans within ICAO standards.

FOR MORE INFORMATION, [CLICK HERE](#)

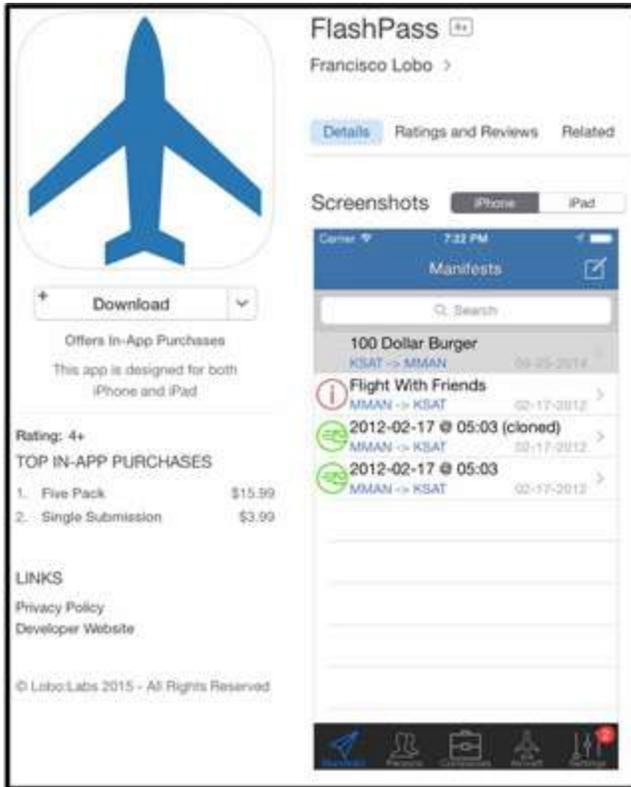
[CLICK HERE](#) TO SEND YOUR COMMENT AND SUGGESTIONS TO THE FAA



## Lobo:Labs Launches FlashPass eAPIS app

[Lobo:Labs](#) has released its new [FlashPass 2.1 app](#) for iOS 7 and 8 devices. The new app integrates U.S. Customs and Border Protection's Electronic Advance Passenger Information System (eAPIS) and Mexican APIS to make it "simple for pilots to comply with both requirements," Arturo Guerra of Lobo:Labs told AOPA in an email. It also includes links to the company's Twitter and Facebook pages where it offers updates on the status of CBP airports. Current FlashPass subscribers' information will automatically pull into the free app, making it seamless for them to use on their iPhone or iPad.

[Lobo:Labs](#) built the FlashPass Web interface initially to make their own eAPIS experience easier and then launched the South Texas business after pilots became interested in the service, Guerra said. So far, 2,900 pilots regularly use the FlashPass online service and have submitted 54,285 manifests, he said. [READ MORE](#)



## TKM Avionics offers new, replacement NavComs

[TKM Avionics](#) announced that it is reintroducing a series of navigation/communications radios that owners can install to replace King and Narco radios.

Ken Beckemeyer, CEO of the Scottsdale, Arizona-based company, said the IFR technical standard order (TSO) nav/coms are built new and "replace legacy radios that are no longer supported. All TKM comm or nav/com radios are built to slide into precisely fit legacy racks and connectors, virtually eliminating installation costs for most owners." (An owner can install it and sign it off in the logbook).

According to the company's March 27 news release, the TKM nav/coms replace a variety of radios including Narco's Comm11 series and KX-170/175 nav/coms offer "better channel stability and audio quality than the 40-year old units they replace."

TKM's \$2,650 MX170 nav/com and \$1,450 MX-11 com "make it possible for owners to install a new radio in minutes. TKM units replicate the functions of legacy nav/coms and drive existing VOR/ILS heads with the same output." [READ MORE](#)



# TME PRODUCT REVIEW



We think we have found the ideal product. My spinner is 15 years old and I have done my best to keep it shiny and oxidation free. I bought this Purple Metal Polish and an accompanying product called Step 1 Aluminum Deoxidizer. The result: My spinner shines like it is brand new. I can literally shave off the shine of my spinner, though I would only do this when Mooney camping.

If that isn't good enough, neither product requires any elbow grease. You simply apply the oxidizer, then apply the Purple Metal Polish. Now, grab a cloth and wipe it off. That's it!

It works on all sorts of other surfaces as well. It is excellent for removing light scratches on windshields, plastic bug guards and landing light covers. It can be applied on hot or cold metal.

[CLICK HERE](#) for the entire product description from California Custom.

## Purple Metal Polish From California Custom

We are always in search of a better way to polish our Mooneys, especially those shiny aluminum spinners.



## 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](http://www.JDPriceCFI.com)

*Boris Vasilev* (CFI, CFII, MEI, AGI), Phoenix Are, Tel: 602-791-9637, email: [boris@atieuhosting.com](mailto:boris@atieuhosting.com), Time in M20C through M20R models. Private commercial and instrument training, BFR's IPC's FAAWings

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*Winslow Bud Johnson*, [smgemail@aol.com](mailto:smgemail@aol.com), 203-348-2356

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*Don Kaye* (Maser CFI) located in Palo Alto, CA, (408)-249-7626, Website: [www.DonKaye.com](http://www.DonKaye.com)

*Chuck McGill* (Master CFI) located in San Diego, CA 858-451-2742, Master CFI, MAPA PPP Instructor, M20M, M20R, M20TN, Website: [Click Here](#)

*Rodrigo Von Contra*, Oakland, (510) 541-7283, [Rodrigo@vonconta.com](mailto:Rodrigo@vonconta.com)

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

### Colorado

*Ben Kaufman* (CFI/CFII) – Fort Collins (KFNL) - (801)-319-3218 - [bkaufman.mba@gmail.com](mailto:bkaufman.mba@gmail.com)

### Florida

*Mike Elliott* (CFII) Master CFI located in Tarpon Springs, FL, Contact 317-371-4161, Email [mike@aviating.com](mailto:mike@aviating.com), Quality instrument & commercial instruction, transition training, ownership assistance, plane ferrying

*Robert McGuire*, Hawthorne, (203) 645-2222, (Dec – Feb), [rmcguire007@hotmail.com](mailto:rmcguire007@hotmail.com)

### Georgia

*Jim Stevens*, USAF, Col, (ret), CFII. Atlanta, GA area. 404-277-4123. Instrument, commercial, IPC, BFR, transition training. 20 year owner of 1968 M20F.

### Kansas

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

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[AustinWalden@gmail.com](mailto:AustinWalden@gmail.com)

PhD, Specializing in Models C thru J, [www.WaldenAviation.com](http://www.WaldenAviation.com)

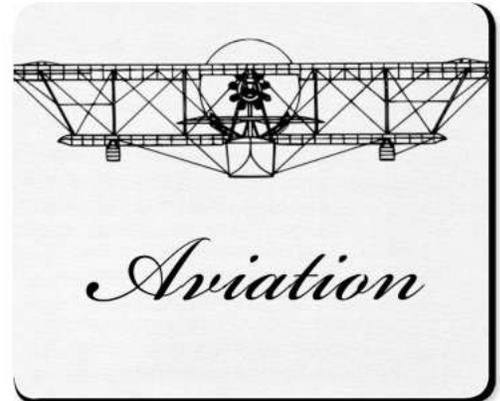
Brian Lloyd, Kestrel Airpark (1T7), 210-802-8FLY, [Brian@Lloyd.aero](mailto:Brian@Lloyd.aero)

Mark Johnson, [mjohnsonf16@hotmail.com](mailto:mjohnsonf16@hotmail.com), 832-773-4409

Jerry Johnson, [mooney9281V@hotmail.com](mailto:mooney9281V@hotmail.com), 817-454-2426

**Vermont**

Ted Corsones, [tedc@corsones.com](mailto:tedc@corsones.com), 813 435 8464





**For Sale** - Mooney 201 j 1978 aspens with extended warranty, avidyne traffic ,storm scope ,very good paint 8 interior a7 King 200 autopilot coupled to 430 garmin and aspen Factor engine with 850 hours \$ 88,000 - [mbmaksymdc10@aol.com](mailto:mbmaksymdc10@aol.com)

Mooney M20J/201, N9269N, S/N 24-0751

TTSM 961/TTSN 3189

Engine time 961 SMOH by Triad

Propeller HC-C3YR-1RF 3-Blade 961 TTSN

Annual due 3/31/2016

Useful Load 1024

Avionics: GNS 430 w/ GI-106SCDI (cable wired for WAAS)

KX-155 Nav/Com w/KI-208

KMA-28 Audio Panel

KR-85ADF w/KR-225 Indicator

KT-76A Transponder Mode C

JPI-700 Engine Monitor w/Fuel Flow (monitored to GPS)

Century 11B Autopilot w/ Heading Bug

Other: Yoke Mounted Electric Trim and Map Light

Vertical Card Compass

Davtron Digital Timer

Sigtronics 4-Place Intercom

Electric Gear, Trim and Flaps

True Airspeed Indicator

Overhauled Magneto w/New harness

New Landing Gear Donuts, New Muffler, New Engine Lord Mounts

New Concord Sealed Battery

New Engine Vacuum Pump

LASAR Mod Enclosed Strobe Wing Tips

Wing Root Fairings

Clam Shell Nose Gear Door, Panel Overlay

New Leather Interior Seats



Contact Eddie Smith @ 803 684-3425 or [easeddie@aol.com](mailto:easeddie@aol.com). More views at <http://www.heraldonline.com/news/business/biz-columns-blogs/don-worthington/article12303545.html>. Appraised at \$85,750.00, asking \$78,500.00 or best reasonable offer. I have owned for fourteen years; selling for medical reason.

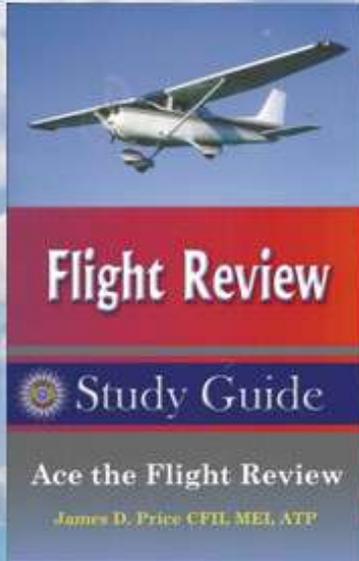


## **LASAR'S Free Site**

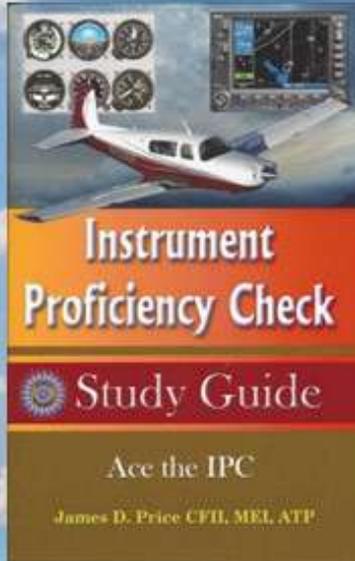
Check out Lake Aero Styling & Repair's "LASAR" Web Site: [www.lasar.com](http://www.lasar.com) : New under Mooneys for Sale, "List your Mooney for free" and "Mooney Instructors." Also check out Parts, Mods, and Services! LASAR, est. 1975 (707) 263-0412 e-mail: [parts-mods@lasar.com](mailto:parts-mods@lasar.com)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



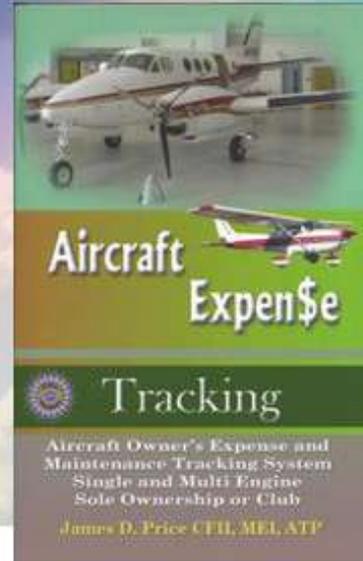
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