The Mooney Flyer

The Official Online Magazine for the Mooney Community

www.TheMooneyFlyer.com

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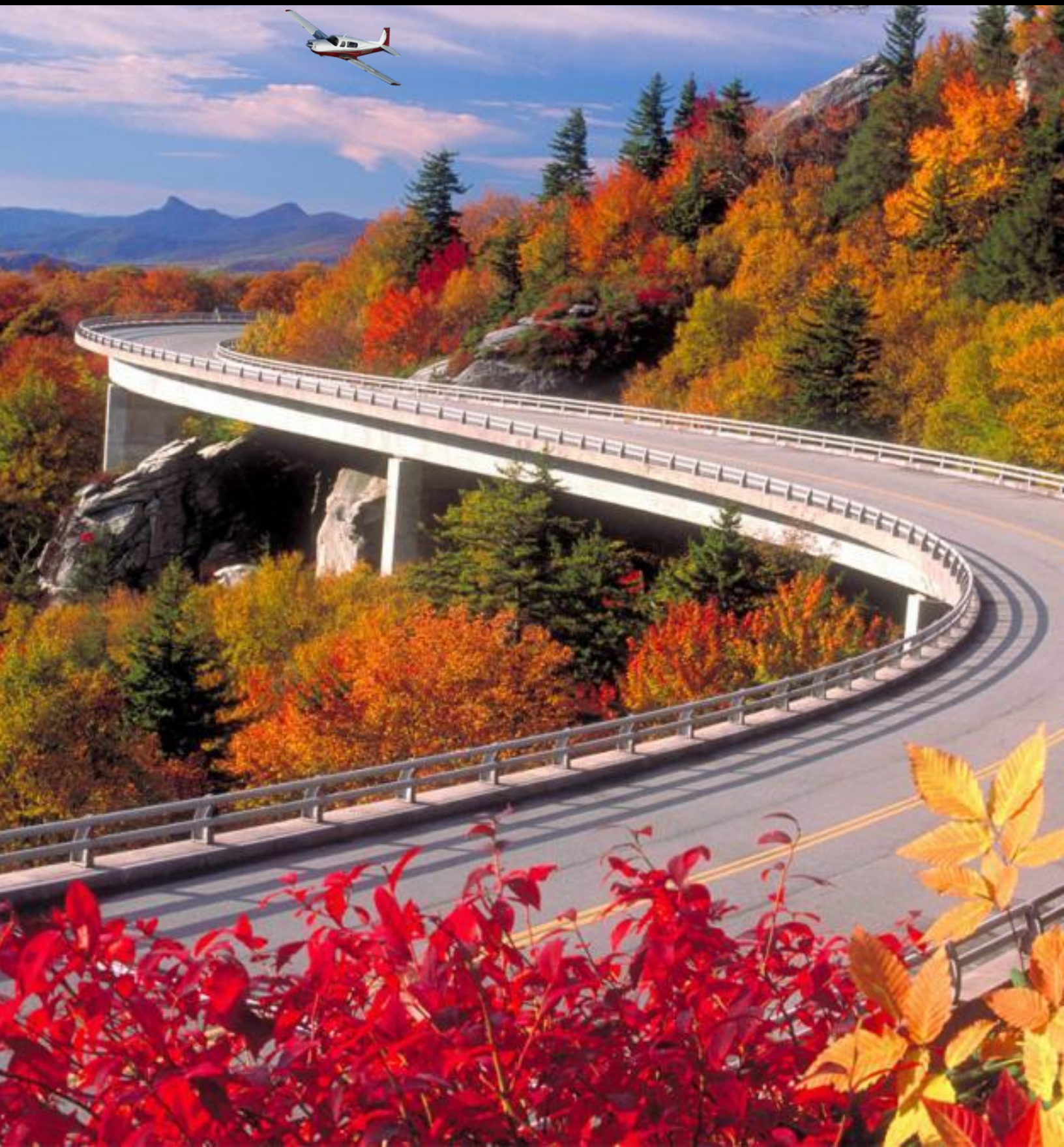

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Recurrency Training

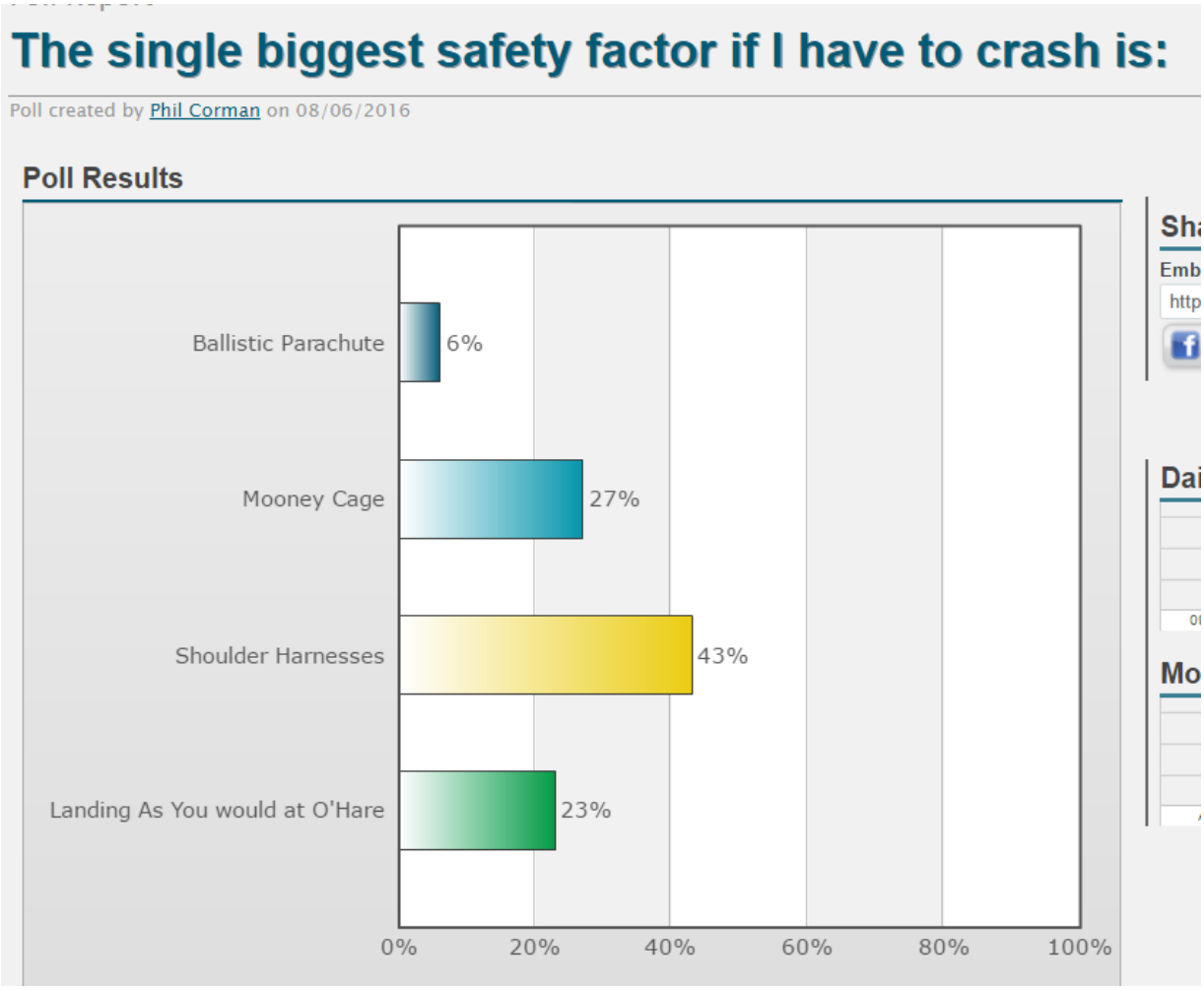
We write an awful lot about Mooney Safety, and this month, I thought it would be good to put my money where my pen is. I decided that doing a Flight Review every two years was more FAA-ish than safety minded, so I picked up the phone and called Master CFII and Mooney Jedi Don Kaye (CLICK HERE for Don's website).

Ever since I received my Pilot Certificate in 1978, I have felt that it's simply a license to learn more about flying. I wanted to have Don fly with me to:

1) Ensure that I have not developed any "bad habits" and

2) To help me be a better pilot; to get even better at steering my Eagle.

I've followed Don's posts on the Mooney lists for years. He often takes a lot of heat for his positions. One of them is his insistence on "precision flying", especially while taking off and landing, along with his 3° approaches to landing. So, I thought the best way to resolve all of this was for Don to introduce me to it. Well, I am a devout follower. Don likes 90 knots on downwind, 80 knots on base, and 70 knots (per our weight) on final, all superimposed with a 3° glide slope. If I did it correctly, I pretty much didn't need any yoke pressure until I entered the flare. The feeling is almost as if you have the autopilot engaged. I've been following his approach and landing method for the past 40 landings, and every one has been a greaser. Can't give Don a strong enough recommendation.



Brian Lloyd ·
Managing Partner at Lloyd Aviation

You forgot: arriving parallel to the ground at as low a ground-speed as is possible

Ron Blum ·

Manager, Engineering Flight Test at Kestrel Aircraft

IF an STC were available to those that want a full-aircraft recovery system (I am not specifying a parachute), what would the cost need to be under? I am guessing that this would also be model specific.

Next month's poll: "Third Class Medical Reform is:" **CLICK HERE** to vote.

Appraise Your Mooney's Value

Don't forget about our cool new **Appraise your Mooney's Value** calculator.

M20C M20E M20F M20G M20J

The Mooney Flyer has become my #1 aviation read every time it comes out. I especially enjoyed the IFR info in this last issue.
Sincerely, **Dan L**

Oasis Aero, Inc. is pleased to announce its selection by Mooney International Corp as the newest Authorized Mooney Service Center. Oasis Aero is made up of Paul Beck whom you may know from his business Weep No More, and Eric Rudningen from Eric's Aviation Services Inc. Together Paul and Eric have over 40 years of aviation experience. Mooney specific experience ranging from fuel tank repair to aircraft maintenance and specialized flight instruction make Oasis Aero the go-to FBO for Mooney owners across the country. Contact us at 320-894-1872, 320-295-1671, or email Oasisaero@gmail.com for more information.

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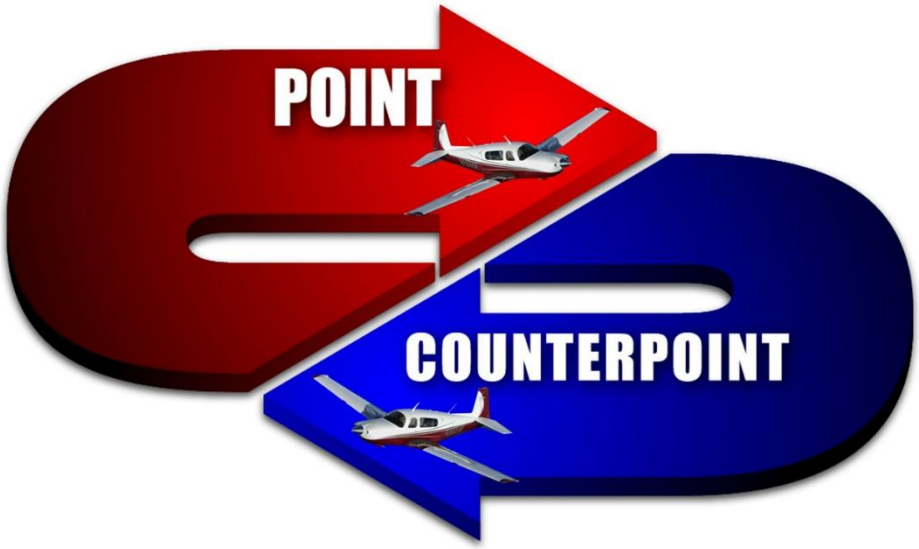
The restaurant at Lampson Field at Clear Lake is open again! You can see pictures and get all the info at www.giovannisskyroom.com. We are very hopeful that it will be successful, as our little town and airport really need it! It is closed on Tuesdays, and I think hours are noon to 9 p.m. with dinner from 5 to 9.



Point vs. Counterpoint – Raising Your Gear

Conventional wisdom indicates that you should not raise your Mooney landing gear until you do NOT have enough runway left to land upon. There is really no other safe option.

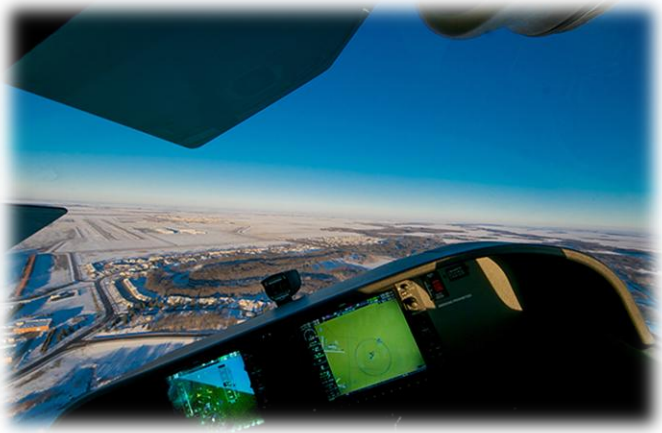
I respectfully disagree with my partner. As a pilot, there are ALWAYS options and we are tasked with selecting the best one for each situation. There is generally no guidance in our Pilot Operating Handbooks.

My reasoning is that if you experience a sudden engine stoppage, you will have your hands full with aggressively lower the nose. You don't need the extra workload of lowering the gear.

My reasoning is that our Mooneys have a ton of drag with the gear down, slowing our climb. Altitude is always your friend. You will accelerate to V_x or V_y much faster with the gear retracted. As soon as you have a positive rate of climb and out of ground effect, retract the gear

Base to Final Turning Stall

by Robert Reser



In a low indicated-airspeed, high drag configured turn, if the aircraft is overshooting the final approach, it seems to be human nature to concentrate on continuing the approach by maneuvering into a steep bank and pull the control wheel attempting to correct back to the runway extended centerline.

A steep banked attitude while inputting aft elevator control results in increasing the "g" loading with associated increase of the stalling indicated-airspeed. Added aft elevator control also increases angle-of-attack allowing more slowing.

The slow indicated-airspeed steep turning stall often is considered the result of restricting increased bank angle with aileron control while using rudder to attempt "steering" the turn. When beyond 45-degree bank, rudder input with the turn primarily causes nose-up/down steering pitch, but the control combination results in a cross-controlled condition. Pulling the elevator causes increased aerodynamic loading with increased stalling indicated-airspeed and slowing by increased angle-of-attack that is always the cause of any stall. Cross-controlling rudder input does contribute to a stall.

The high angle-of-attack required to stall is always relative to the direction of motion. The nose up attitude normally learned to be associated with approaching a stall will now be in a very different direction. The steep banked descending attitude has the direction of motion, turning and descending. There is no visual reference to indicate being pitched very high nose up. In the turn, this hides the real attitude from the pilot, especially the descending turn.

There must be a practiced and drilled discipline for pilots to always be aware, and know how to make this turn safely. If you have to pull the elevator control in a slow indicated-airspeed steep turn, it may be time to abort the approach.

What is really happening?

We know a stall occurs when exceeding the wing critical angle-of-attack. The FAA handbook and tests say exceeding the wing critical angle-of-attack CAUSES the aircraft to stall. I have quizzed many professional Flight Instructors and Airline Pilots and all gave the FAA test answer; exceeding the critical angle-of-attack as the CAUSE of stall.

I have adapted a series of questions for these people.

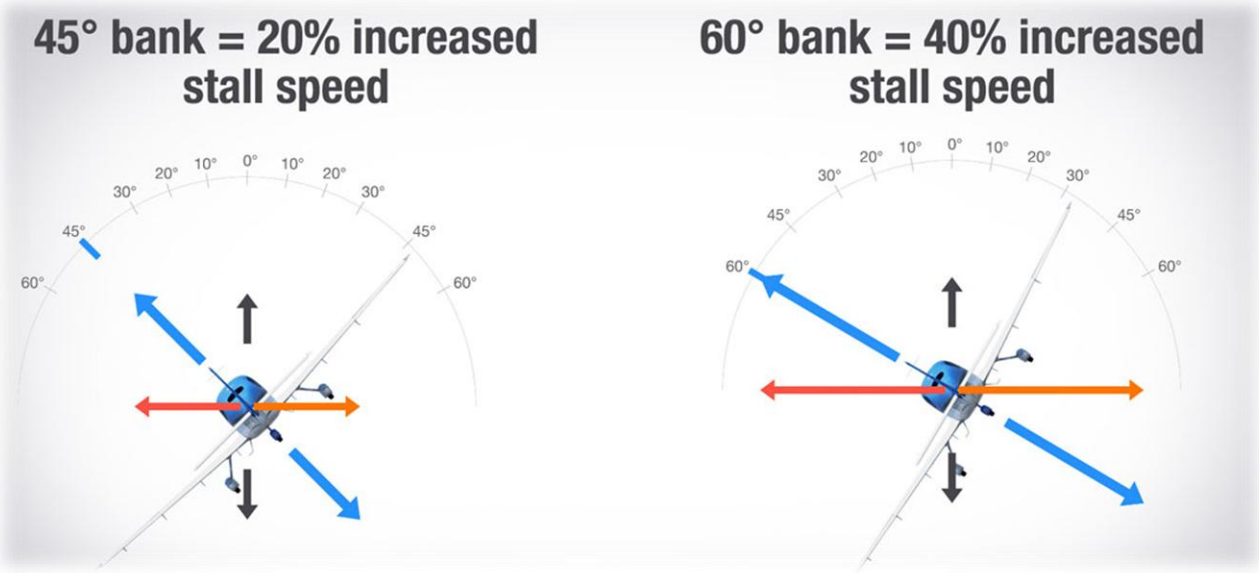
Exceeding the wing critical angle-of-attack is not the CAUSE, but is WHEN the stall occurs. What then CAUSES the aircraft to attain this extreme angle?

Everyone agrees, pitching the aircraft up. What CAUSES the aircraft to pitch up? Pulling the control wheel.

What pulls the control wheel? The pilot!

Is there any other way to stall an aircraft? No!

The pilot must input aft elevator control to CAUSE a stall. In any maneuver, reducing aft elevator input is required for stall recovery. Upset from wake turbulence or extreme autopilot input to the elevator is all the maneuvering the pilot has done or allowed, but only with excessive aft control input during recovery will there be an actual stall. En-route complacency, allowing the autopilot to do something dangerous, is not an excuse. The pilot is responsible at all times for the conduct of the flight. Pilot input controls the pitch, but not just with elevator input. "The engine power setting also contributes to pitch".



I have found no text that describes the part that the engine thrust plays in aircraft pitch control, but aircraft in slower flight have considerable nose-up pitched attitude above the direction of motion. Vy flight will have at least six to ten degrees wing angle-of-attack and any slower flight begins approaching the wing critical angle-of-attack. For most wings, this will be 16-20 degrees pitch above the direction of motion.

These pitched up attitudes direct the engine thrust at some angle above that direction of motion and result in an added thrust-component vector of lift, acting at the engine attachment along with the associated large sustaining thrust-component in the direction of motion.

Sine of six-degrees is one-tenth (.1). At Vy, one-tenth or more of the level flight sustaining thrust for constant indicated-airspeed is lifting at the engine attachment and acting over the fuselage as the moment arm to the center of pressure.

The sustained level flight engine lifting also contributes to the longitudinal balancing along with the elevator aerodynamic loading or lifting at the tail. The engine lifting allows less nose-up elevator trim for setting angle-of-attack when coordinating at a desired indicated-airspeed.

Adding excess thrust, from a trimmed indicated-airspeed, increases the engine lifting causing pitching up to a climb angle and changed direction of motion with increasing altitude at that same indicated-airspeed. There is merely more lift at the engine attachment and the added excess thrust component in the direction of motion sustains the climb.

Descent with its reduction of power, reduces the engine lifting contributing to the current angle-of-attack. This reduction of the angle-of-attack allows some initial acceleration when beginning the descent.

Now, all throughout the descent, being below the level flight sustaining thrust setting, to maintain a constant indicated-airspeed, it requires continuous coordination of elevator trim to compensate for the related thrust-component lifting that is caused by power changes.

So, you are in a landing configuration, a descending turn trimmed for the slowed approach indicated-airspeed. If over-shooting the turn, aft elevator input and increased bank considered necessary to cause turn results in additional slowing toward a stall. There is no visual reference of extreme nose-up attitude in this turn.

The stall warning horn sounds and you add lots of power. You instantaneously add those few degrees of the nose up trim effect from engine thrust-component lifting related to the newly trimmed slower indicated-airspeed from manual elevator aft input with its increased "g" loading.

You were already at a slowed indicated-airspeed set with elevator trim and with the additional angle-of-attack from increased aft elevator input, the power input instantaneously caused you to exceed the wing critical angle-of-attack with an immediate low altitude approach stall, and you will never know why.

We tend to rely on the FAA for guidance, but it is up to the Training Schools to teach instructors and pilots the correct concepts.

It may seem counterintuitive that thrust component-lift is a basic flight control and with increased power, it can actually contribute to causing a stall. Yet, is also required to recover from a high indicated-airspeed stall. However, this is indeed the case if you don't exercise proper elevator control.

Editor's Note:

When I am making by Base-to-Final turn, I have to apply some opposite rudder (i.e., right rudder in a left turn) in order to maintain a coordinated turn.

Donald E Kaye, an 8-time Master and *SAFE* member, recently renewed his Master CFI accreditation through MI LLC's MICEP program *https://MICEP.FluidReview.com/* **Specializing in avionics, instrument, recurrency, and complex aircraft training (*http://www.DonKaye.com/*), Don is an independent San Francisco Bay area flight and ground instructor. Additionally, he serves as a FAASTeam representative in the FAA's San Jose FSDO area.** ***(Photo: MCFI Don Kaye of Santa Clara, CA)***

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Master Instructors LLC takes great pride in announcing a significant aviation accomplishment on the part of Donald E Kaye, a San Francisco Bay area flight instructor and resident of Santa Clara, California. Recently, Don's accreditation as a Master CFI *(Certificated Flight Instructor)* was renewed by Master Instructors LLC, the international accrediting authority for the Master Instructor designation as well as the FAA-approved "Master Instructor Continuing Education Programä." He first earned this national professional accreditation in 2002, has held it continuously since then, and is one of only 10 worldwide to earn the credential eight (8) times.

To help put these achievements in their proper perspective, there are approximately 101,000 CFIs in the United States. Fewer than 800 aviation educators worldwide have achieved one or more of the Master accreditations thus far. Twenty-two (22) of the last National Flight Instructors of the Year, National FAASTeam Representatives of the Year, or National AMTs of the Year were Masters *(see: http://www.GeneralAviationAwards.org/)* while Don is one of only 56 California aviation educators to earn one or more of these prestigious "Master" titles.

In the words of former FAA Administrator Marion Blakey, "*The Master Instructor accreditation singles out the best that the right seat has to offer.*"

The Master Instructor designation is a national accreditation recognized by the FAA. Candidates must demonstrate an ongoing commitment to excellence, professional growth, and service to the aviation community, and must pass a rigorous evaluation by a peer Board of Review. The process parallels the continuing education regimen used by other professionals to enhance their knowledge base while increasing their professionalism. Designees are recognized as outstanding aviation educators for not only their excellence in teaching, but for their engagement in the continuous process of learning -- both their own, and their students'. The designation must be renewed biennially and significantly surpasses the FAA requirements for renewal of the candidate's flight instructor certificate.
Please feel free to disseminate this information widely. Questions regarding the Master Instructor Programä may be directed to 303-485-8136 **or MasterInstrs@aol.com For more information about the Master Instructor Programä and to locate other Masters, please visit the "Find a Master Instructor" section of www.MasterInstructors.org To learn more about the Society of Aviation and Flight Educators (*SAFE*), visit http://SafePilots.org/**

Although this unfortunate accident happened to a Cessna 172 owner/pilot, there are two things that all Mooney pilots can learn.

Sunday, August 17, 2014 in Natchitoches, LA

Before departure for the flight, the private pilot and owner of the Cessna 172 conducted the preflight and run-up and noted the airplane was operating normally. During takeoff, he rotated about 70 knots and the climb out was normal. About 300 feet above ground level, the engine suddenly lost power and shook violently.

The pilot scanned for potential emergency landing areas and decided to attempt to land in a soybean field near Natchitoches, La., that was about 135° degrees to his left.

The airplane overflew the soybean field and hit a line of trees at the end of the field, resulting in one fatality.

The post-accident examination of the engine revealed that the No. 1 cylinder exhaust valve rocker retaining stud was backed out of the cylinder head threads by about 5 threads, or about ¼ inch, and both the valve rocker and pushrod were loose.

The clearance between the valve rocker and the valve stem was too great to allow the exhaust valve to open as the engine rotated.

The last engine overhaul was conducted on May 26, 1990, and had 958.1 hours of operation since the overhaul [about 40 hours per year].

The engine manufacturer [Continental] recommends that engines which have not accumulated the recommended hourly time between overhauls be overhauled during the 12th year after the last overhaul. In this case, it had been over 24 years since the last overhaul.

A post-accident examination also revealed that the flaps were in the up position and that the flap handle, flap indicator, and the flap actuator were in the up position.

1 Had the pilot lowered the flaps, flown S-turns, or slipped the airplane, he most likely would have been able to land the airplane in the soybean field, avoiding impact with trees at the end of the field.

The NTSB determined the probable cause as the partial loss of engine power was due to the exhaust valve rocker retaining stud backing out of the cylinder head, which resulted in the exhaust valve being stuck in the closed position. Now here's the kick in the teeth:

2 Contributing to the accident was the pilot's failure to configure the airplane and fly it in a manner that would allow him to make the emergency landing in the field rather than overfly it, and the pilot's failure to have the engine overhauled according to the recommended overhaul interval.

How many of us follow the recommended overhaul interval? When we don't and an accident occurs, the NTSB invariably points the finger at the owner.

NTSB Identification: CEN14FA435

This August 2014 accident report is provided by the National Transportation Safety Board. Published as an educational tool, it is intended to help pilots learn from the misfortunes of others.

Oasis Aero Chosen to be New FBO at Willmar Airport (BDH)

WILLMAR, MINNESOTA —While a contract still needs to be negotiated, signed and approved, the Willmar City Council chose Eric Rudningen and Paul Beck of Oasis Aero Inc. to become the new fixed-base operator at the Willmar Municipal Airport.

"For me it was a pretty big deal. We were high fiving on the way home," said Beck in an interview with the Tribune on Thursday. Beck, who owns *Weep No More*, an aircraft fuel tank repair business, and Rudningen, owner of Eric's Aviation Services and also the current airport operations supervisor, formed Oasis Aero earlier this year as a way to provide more services to the pilots who come to Beck for repairs. "The two of us could do more together," Beck said.

The airport has been without a fixed-base operator since early June when the city of Willmar terminated its contract with Brian Negen and Maximum Cruise Aviation.

Beck and Rudningen submitted one of two proposals the city received when it sought a new fixed-base operator.

“The company already has its insurance and licensure in place”, Beck said.

Contingent on an approved contract, Beck and Rudningen will provide pilots with many services, including airplane repair, flight instruction, ramp service, rental aircraft, charter service and courtesy services, which include a courtesy car as well assistance with catering and lodging.

Oasis Aero's fixed-base operator proposal said while the company would welcome the opportunity to sell fuel at the airport, it is willing to allow the city to continue retailing fuel while Oasis Aero will assist pilots with fueling, provide full-service fuel when requested, monitor tank levels, help the city with billing and perform daily inspections of the fuel system for $0.35 per gallon.

Beck said he hopes Oasis Aero and the airport will continue to grow, which will mean hiring additional staff to meet those needs. Both Beck and Rudningen worked for Jaeger's Willmar Air Service, the fixed-base operator at the Willmar Airport for many years.

While Rudningen and Beck now have their own businesses, they still look to Bruce Jaeger for inspiration and mentoring. There were great relationships not only between those who worked at Willmar Air Service, but also with local pilots, Beck said.

"I had tremendous pride working with Bruce. It was like a family and we're trying to put the family back together," Beck said. The fixed-base operator interview committee and the city's Community Development Committee both recommended the city negotiate a contract with Oasis Aero.

The other proposal came from a group made up of Ron Buchanan, Dan O'Meara, Brian Frost and William Fry. Airport Manager Megan DeSchepper said at the Sept. 1st Community Development Committee meeting that there was a lengthy discussion of both proposals before a recommendation was made. The reasons for choosing Oasis Aero included the duo's experience, agency contacts at all levels, existing relationships and the ability to begin immediately.

Bruce Peterson, Willmar Planning and Development Services director, said Beck and Rudningen will also be very accessible when pilots need assistance, answering calls within 15 minutes.

In the proposal for FBO services that Beck and Rudningen submitted, they said there would be staff at the airport seven days a week for at least 8 hours a day.

"They'll bring a whole new level of commitment to their jobs and to the airport. And they will be very accessible. I don't think you can do better than that," he said.

Peterson said both proposals met the requirements laid out in the city's request for proposals for the fixed-base operator contract, which included minimum services each business would provide.

"The other group brought great skills to the table too, no question about it," Peterson said.

Councilman Andrew Plowman, who acts as the council's liaison to the Airport Commission, has been impressed with the whole hiring process.

"Nice and clear cut," Plowman said.

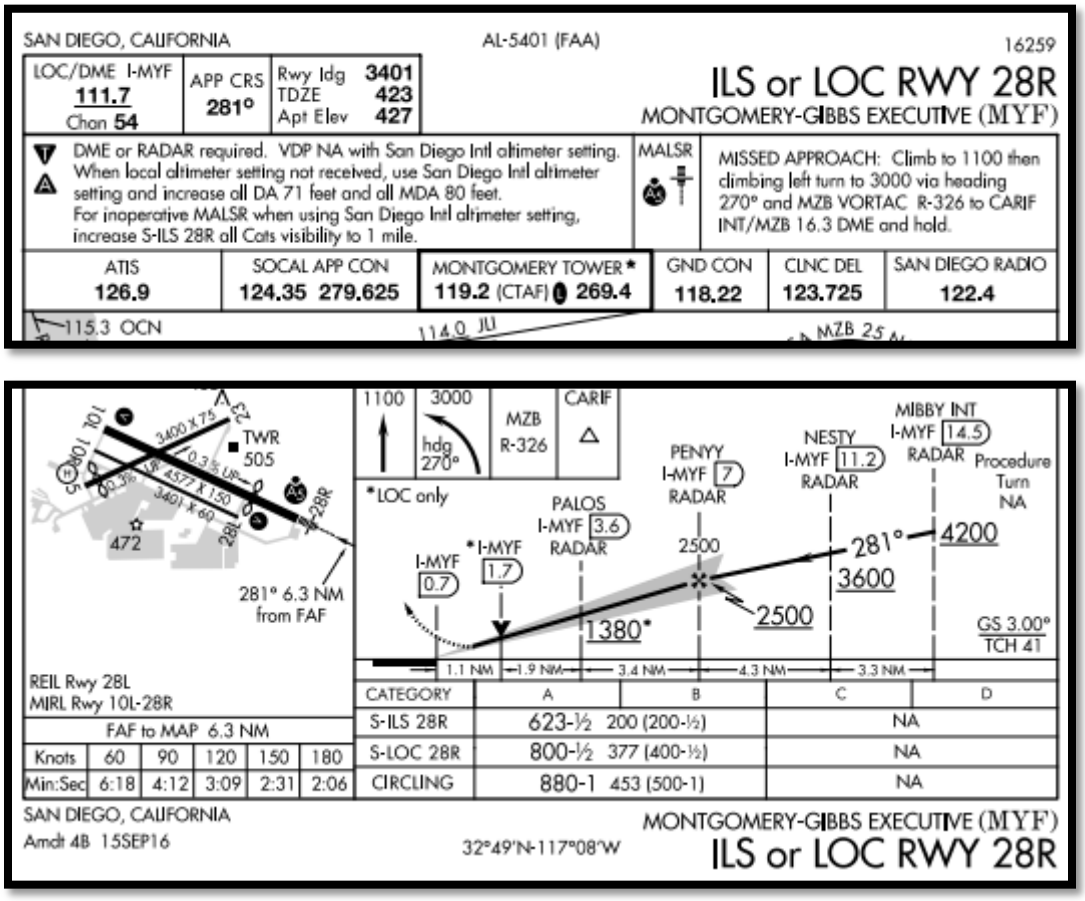
The Willmar City Council accepted the recommendation Sept. 6 and approved a motion to begin negotiations with Oasis Aero.

"We're looking forward to providing good service again at the Willmar Airport," Beck said.

Quick QUIZ Lights and Weather

All pilots, whether Instrument qualified or not, can learn a lot from the instrument approach plate.

1 (Instrument Pilots) - If the Montgomery (MYF) altimeter setting is not available, but San Diego's altimeter setting is available, how will this affect your approach?



Select all the correct answers.

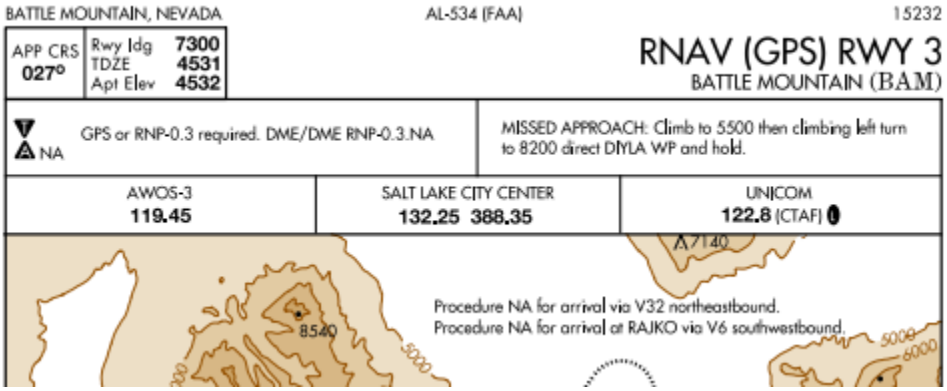
A. You must increase the ILS (S-ILS 28R) Decision Altitude (DA) by 71 feet

B. You must increase the Localizer approach (S-LOC 28R) Minimum Descent Altitude (MDA) by 71 feet

C. When flying the S-LOC 28R approach, you cannot use the Visual Descent Point (VDP).

The answer is both A and C. The San Diego altimeter setting would invalidate the calculations that were made when the approach was designed. So, some restrictions may apply.

2 – (All Pilots) When you tune in 119.45 at Battle Mountain (BAM), what type of weather information should you expect to receive? Select all the correct answers.



A. Visibility
B. Wind
C. Temperature/Dew Point
D. Cloud Ceiling
E. The type of precipitation
F. Freezing Rain

The answer includes A, B, C, and D. That's because AWOS 3 does not report the type of precipitation or the presence of freezing rain.

AWOS systems are generally located at non-towered airports. They report the "one minute weather" via a dedicated frequency and telephone landline.
There are five types of AWOS. They are A, 1, 2, 3, and 4

AWOS A: measures and reports altimeter – that's it.
AWOS 1: measures and reports wind (speed, direction, and gusts), temperature, dew point, altimeter and density altitude.
AWOS 2: measures and reports AWOS 1 + visibility
AWOS 3: measures and reports AWOS 2 + precipitation accumulation (rain gauge) and cloud height. AWOS 3 can, if additional optional sensors are added, report precipitation type/intensity, and or thunderstorm/lightning. The designation would change to **AWOS 3P** (precipitation type/intensity) or **AWOS 3T** (thunderstorm/lightning)
AWOS 4: measures and reports all the AWOS 3 P/T, plus freezing rain and the runway surface condition.

At tower controlled airports, an ASOS is the source for the ATIS information. ASOS reports all the parameters of the AWOS 3, while also reporting the present weather, icing, lightning, sea level pressure and precipitation accumulation.

3 - (All Pilots) When you hear the winds reported on the ASOS, AWOS or ATIS frequency, is the wind direction different or the same as if you were reading the wind information in a METAR?

A. They are different. ASOS reports wind in degrees magnetic and METARs report the wind in degrees true.

B. They are different. ASOS reports wind direction in degrees True, while METARs report wind direction in degrees Magnetic

C. They are the same. Both ASOS and METAR winds are reported in degrees Magnetic.

The answer is A. ASOS, AWOS and ATIS broadcasts report the wind direction in degrees magnetic. METARs report the wind direction in degrees true. A good way to remember this is by the axiom, "If it's Text, it's True." Text examples are METARs, Winds Aloft Forecasts, and TAFs. If it's heard on the radio, it's Magnetic.

4 - How do you convert a True wind direction to Magnetic?

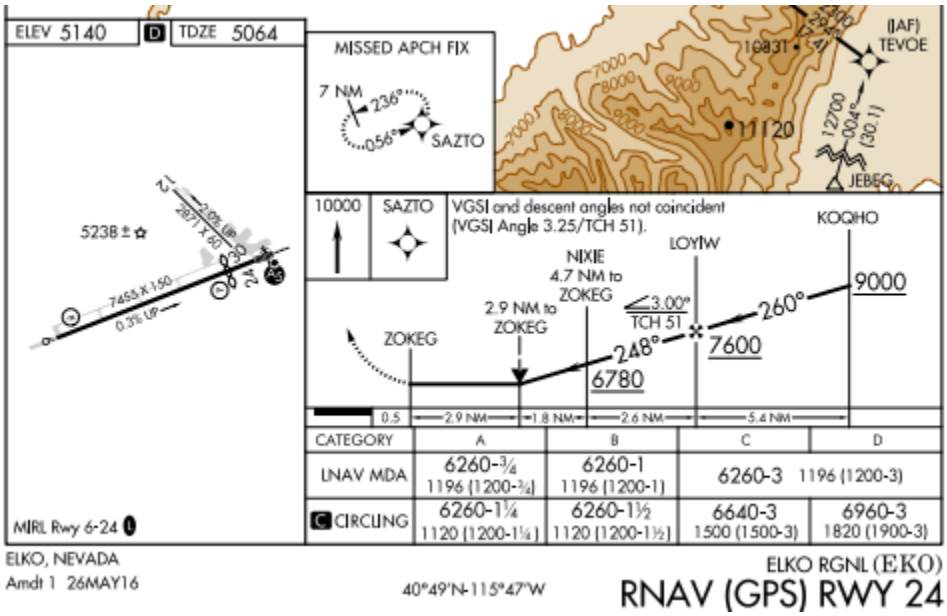
A. If the local magnetic variation is East, add that variation to the True wind. If the local magnetic variation is West, subtract that variation from the True wind direction.

B. If the local magnetic variation is East, subtract that variation from the True wind. If the local magnetic variation is West, add that variation to the True wind direction.

The answer is B. "East is least" (subtract the variation/declination to find magnetic) and "West is best" (add the variation/declination to find magnetic).

An Air Force pilot or navigator training class (class 73-05), fearing that they would forget whether to add of subtract declination, put the axiom on their class patch.

5 – (All Pilots) At Elko Regional (EKO), which of the following lighting systems are pilot controlled? Select all that apply.



A. Runway 6 and 24 edge lights
B. Runway 12 and 30 edge lights
C. Runway 6 and 24 PAPI
D. Runway 24 approach lights

Both A and D are correct. On the airport diagram, the acronym "MIRL" (Medium Intensity Runway Lights), runways 6 and 24, is followed by the **inverse colored** **L**.
This denotes the MIRL is Pilot Controlled Lighting (PCL).

Runway 24's **A5** (MEDIUM INTENSITY APPROACH LIGHTING SYSTEM) symbol is also shown in **inverse coloring**. This means the approach lighting is also pilot controlled.

The black dot at the top of the A5 symbol indicates sequence flasher lights (the rabbit).
Note that the PAPI symbols adjacent to runways 6 and 24 are not inversely colored, meaning that they are not pilot controlled.

To read more about approach lighting CLICK HERE

6 – (All Pilots) Refering to Elko's runway sketch, what does the inversely colored letter **D** indicate?

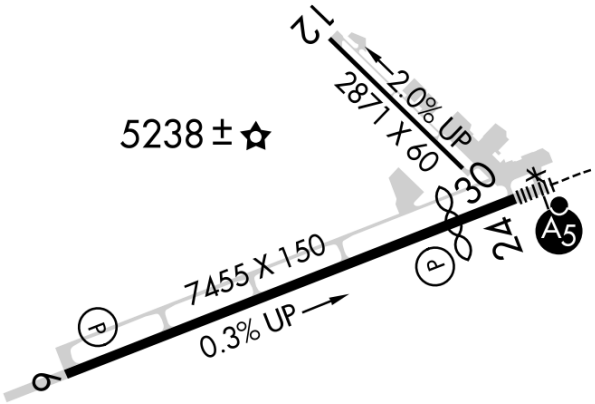
A. Illuminated distance remaining markers are installed on the side of the runway.
B. Runway Declared Distance Information is available.
C. In case of a power failure, the Lighting System is powered by D Cell batteries.

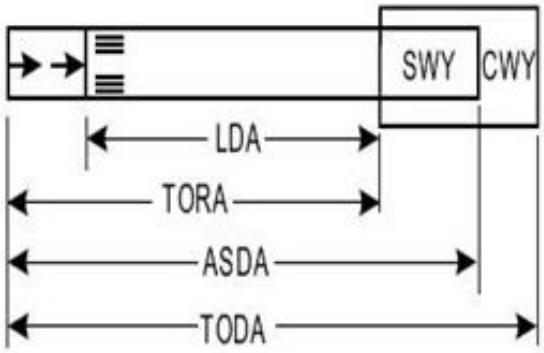
The answer is B, Runway Declared Distance Information is available. "Available" means that you need to "dig" for the information. It's in the AF/D, depicted below.

RUNWAY DECLARED DISTANCE INFORMATION

RWY 06:	TORA–7217	TODA–7217	ASDA–7217	LDA–7217
RWY 12:	TORA–3012	TODA–3012	ASDA–3012	LDA–3012
RWY 24:	TORA–7457	TODA–8457	ASDA–7457	LDA–6419
RWY 30:	TORA–3012	TODA–3012	ASDA–3012	LDA–2871

TORA: Takeoff Run Available
TODA: Takeoff Distance Available
ASDA: Accelerate Stop Distance available
LDA: Landing Distance Available
SWY: Stopway
CWY: Clearway



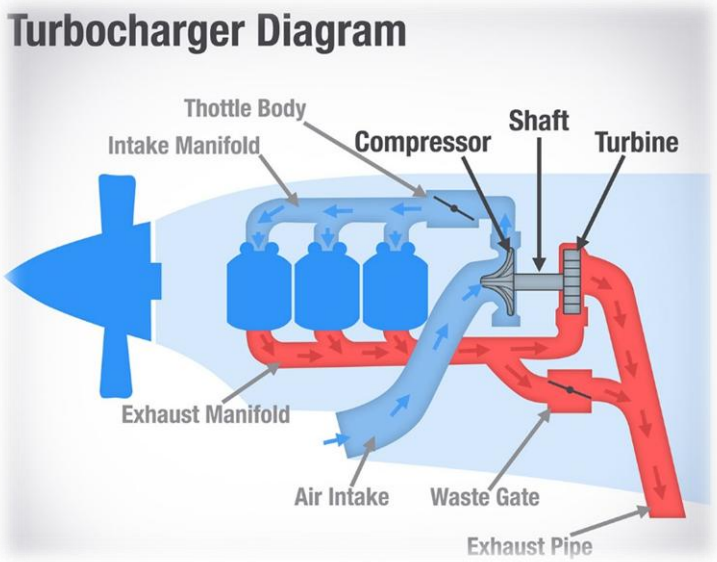


Runway 24's takeoff distance available (TODA), is much greater than the length of the physical runway because there is either a stopway, a clearway, or both.

Runway 24 has a displaced threshold, so the landing distance available (LDA) is much less than the accelerate stop distance available (ASDA).

Send your questions for Tom to TheMooneyFlyer@gmail.com

Question: Regarding Turbo Chargers: What are the most common failures? What kind of periodic maintenance would you suggest? Is there anything a pilot can do to increase its useful life?



Answer:

Turbochargers are very reliable and will last the life of the engine with just reasonable care.

The main point to remember about turbos is they run very hot. In the dark they glow cherry red. It's almost scary when you see one at night. Temperatures vary, but usually they run in the 1500 to 1700 Fahrenheit range. Heat is the enemy of the turbo, so the pilot has total control over the turbo. The two ways to help control the temp is good oil. I recommend a good multi-grade. The main control of heat is how you lean the engine. The airplanes operating manual will give the proper procedures and it is very important to follow the manual. Some engines require rich of peak, while others run best at lean of peak. An accurate TIT gage (turbine inlet temperature) is a must. This temp is controlled by the mixture control. There is a lot of discussion about running lean of peak, but my answer is to refer to the engine manufacturer's recommendations.

The turbo is oiled by the engine oil. The turbo and is usually trouble free unless a leak develops in the oil lines or if something happens to the turbo bearings. I am a firm believer in "spooling" down the turbo after landing for at least five minutes. Turbos run at 50,000 RPM or higher and at high temps, so when you touch down on landing, if you wait five minutes before you shut the engine down, it gives time to wind down and cool the turbo. I believe that shutting down when its at a high temp can lead to "coking" of the oil around the turbo bearings and restrict oil flow. There is no ongoing maintenance of a turbo other than inspecting it for exhaust leaks or damage to the compressor blades due to ice or FOD.

Temperature control is the answer to trouble free life of the turbo.

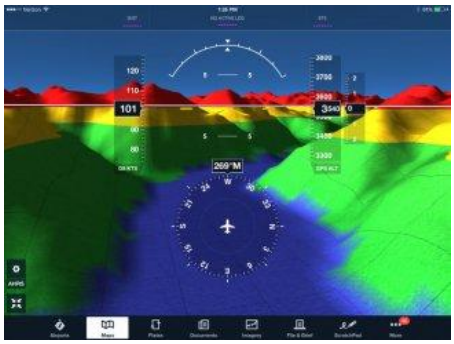
SiriusXM Inflight Weather Now Available on ForeFlight

ForeFlight and SiriusXM have unveiled the SXAR1, a portable satellite data receiver that enables display of SiriusXM Aviation weather information inflight on the ForeFlight Mobile app.

Pilots using the latest Verison 8.1 of the ForeFlight app with the SXAR1 portable receiver can access SiriusXM's aviation weather tools, including Nexrad storm imagery, lightning strikes, high-resolution composite radar plus high-resolution base reflectivity radar and more.

The portable unit is an alternative to ADS-B In avionics that provide inflight access to free weather from the FAA, which currently offers fewer features than SiriusXM's subscription service.

The SXAR1 portable receiver is available now at Sporty's Pilot Shop and through**siriusxm.com**. The price for the unit through Sporty's is $499, but SiriusXM is currently offering a $200 savings to pilots who buy the SXAR1 and activate the ForeFlight subscription package. The subscription price to SiriusXM aviation weather for SXAR1 users is $40 per month. READ MORE



ForeFlight Ending Support For Old Devices

ForeFlight is warning subscribers that it will discontinue support for old iPads and iPhones on Jan. 3, 2017. The company, which offers the most widely used mobile navigation and aviation data app, said in its notice that iPhone 4 and first generation iPad 1 devices will cease to function with the app on the first business day of the new year. "We strongly encourage you to make sure your primary device is at least an iPad Air, iPad mini 2, or iPhone 5," the letter said. The iPhone 4s models will continue to be supported.

ForeFlight recently launched version 8, which incorporates improved chart functions. The app is pretty hungry for storage so the list of iPad options favored by ForeFlight (Christmas is coming) defaults to the devices with at least 128 GB drives. The app itself uses at least 15.5 GB of storage and Canadian users need another 11 GB. Tablets with cellular service can use the moving map functions while Wi-Fi-only devices need external GPS receivers, some of which add other capabilities via ADS-B.

FAA ADS-B Rebate Program is "alive"

As of Sept 19th, the FAA is issuing 20,000 rebates on a first-come, first-served basis for one year or until all 20,000 rebates are claimed, whichever comes first. The rebate is available only to owners of U.S.-registered, fixed-wing, single-engine piston aircraft that were first registered before Jan. 1, 2016.

The FAA will not provide rebates for software upgrades on already equipped aircraft, or for aircraft for which the FAA has paid or committed to upgrade. The FAA estimates that 160,000 aircraft need to be equipped by the deadline.

Owners are only eligible for the rebate if they install the avionics after Sept. 19, 2016, and within 90 days of the rebate reservation date.

Aircraft owners will have 60 days after the scheduled installation date to validate their equipage by flying their aircraft, and will then be able to claim the rebate.

The reservation system will require an N number, installation date, and the planned ADS-B equipment being installed. The reservation system is available at the ADS-B Rebate website.
http://www.faa.gov/nextgen/equipadsb/rebate/

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MAPA Safety Foundation
MooneySafety.com Mooney Pilot Proficiency Program

October 7 – 9, Mansfield, OH
CLICK HERE to register

Florida Mooney Lunch Group

Contact Dave at daveanruth@aol.com or (352) 343-3196, before coming to the restaurant, so the group can have an accurate count.
October 8: Ft Lauderdael Executive (**KFXE**). Premier will be hosting us in their hangar.
November 12: Vero Beach (**KVRB**)
December 10: Punta Gorda (**KPGD**)

MAPA Homecoming Convention

The Inn of the Hills, Kerrville, TX. **Oct 19 – 23, 2016. Click Here to Register.**

TMF PRODUCT REVIEW

Sirius XM on Foreflight

Now you can have either FIS-B with ADS-B or Sirius XM Weather on Foreflight. With ADS-B, you must be within sight of an ADS-B Tower to get the weather. Usually, this means that you need to be airborne. With Sirius XM, you get the weather nationwide whenever you are powered up and can see the satellite, which is most of the time.

The compact SXAR1 receiver connects to your iPad or iPhone via Bluetooth to provide US and Canadian radar, lightning strike location, METARs, TAFs, AIR/SIGMETs, TFRs, GPS data and more to the ForeFlight Mobile app.

The SXAR1 is rechargeable, which eliminates the need for wires in flight, and supports multiple legs of flying when fully charged. The receiver's small size makes it easy to mount on the glare shield, or anywhere else that provides a line-of-sight view for its built-in antennas to receive SiriusXM satellite and GPS signals.

The SXAR1 is priced at $499 (regularly $699) for a limited time when you buy from Sporty's or from SiriusXM. The subscription for Sirius XM is $39.99/month.

CLICK HERE for more details.

SXAR1 XM Receiver

GARMIN

AVIATION SERVICE DOCUMENT NOTIFICATION

TO: Registered Garmin GTN 6XX/7XX Owner and Operators
DATE: September 19, 2016
SUBJECT: GTN 6XX/7XX Software Upgrade to Main Software Version 6.21, Touch Software Version 2.10, WAAS Software Version 5.2 and GMA 35 Audio Software Version 4.20A/4.21C
CERTIFICATION APPROVAL: TSO Authorization

COMPLIANCE
Optional.

PURPOSE
GTN 6XX/7XX Main Software Version 6.21, Touch Software Version 2.10, and WAAS Software Version 5.2 contain the following changes from Main Software Version 6.11, Touch Software Version 2.0, and WAAS Software Version 5.0:

- Changed to a new Navigation database format that includes support for Visual Reporting Points (VRPs) in some regions. All cataloged flight plans will need to be previewed and approved before activation following the software update.

NOTE

Following the software update, it will be required to update the Navigation database.

- Added support for Flight Stream 510 including Database Concierge wireless database updates, flight plan transfers, and weather and traffic forwarding.
- Added support for database SYNC for transferring databases between Garmin displays. Database SYNC also supports streaming charts to another Garmin display before the entire database has transferred.

NOTE

Chart streaming must be enabled on the System Setup page. Database SYNC must be configured as enabled on the GTN and capability must be enabled for the aircraft on fly.garmin.com.

- Enabled COM and NAV radio controls, GDL 88 control panel, audio panel controls, and transponder controls earlier following the initial "Garmin" splash screen instead of after database verification.
- Added support for pinch-to-zoom on map pages.
- Added support for new Telligence™ Voice Commands with a GMA 35/35c or GMA 350/350c.

NOTE

Refer to the GTN 6XX/7XX Telligence Voice Command Guide, P/N 190-01007-50, for more information. Telligence Voice Command requires a push-to-command switch to be wired for the pilot and (optionally) copilot and the feature must be enabled on the Audio configuration page.

- Added support for controlling text and voice services enabled by a GSR 56 datalink from Garmin Pilot using a Flight Stream 510 (software version 2.10 or later) or Flight Stream 210 (software version 2.50 or later).

NOTE

The GSR 56 does not need to be connected to the Flight Stream 210 for this functionality as the GTN will forward the data between the GSR 56 and the Flight Stream.

- Added support for selecting SafeTaxi Hot Spots the main map page. Once selected, touch the **Hot Spot Info** button to view more information.
- Added controls for clearing the flight plan catalog of all flight plans or flight plans pending preview.
- Added controls for deleting all user waypoints.
- Added support for displaying a track vector on the main map depicting the current GPS track and groundspeed.
- Improved touch screen performance.
- Added Advanced COM RX Squelch configuration to allow the COM radio sensitivity settings to be adjusted independently for low, mid, and high frequencies in both 8.33 kHz and 25 kHz channel spacing modes.
- Added "Internal" COM sidetone configuration to improve the audio quality of the COM sidetone.
- Fixed issue where the GTN would provide an incorrect message regarding the HSI course setting.

GMA 35 Software versions listed in Table 1 and Table 2 contain the following changes from the previous software versions identified in Table 1:

- Expanded Telligence™ Voice Command features.
- Added support for Bluetooth® audio to be used with phone/tablet applications such as Siri on Apple devices and the Google app on Android™ devices (GMA 35c).
- Improved robustness of Bluetooth music streaming (GMA 35c)
- Reduced start-up time.

Table 1 GMA 35 P/N 011-02299-0( ) Software Versions

Software	Version	Previous Version
GMA Bootblock Code	4.20A	4.10A
GMA System Code	4.20A	4.10A
Audio Configuration	4.20A	4.10A
GMA Region List	3.10	3.10
GMA AUX Bootblock Code	4.10A	4.10A
GMA AUX System Code	4.20A	4.10A
GMA AUX Region List	4.10	4.10
GMA AUX Audio Data	4.10	4.10
GMA Voice Command Grammars	4.20	4.10A
GMA Voice Command Language	2.00	2.00
GMA Voice Command DDG2P	2.00	2.00
GMA TTS Audio Data	4.10	N/A
GMA TTS Grammar	4.10	N/A

Table 2 GMA 35 P/N 011-02299-2( ) and GMA 35c P/N 011-02299-4( ) Software Versions

Software	Version	Previous Version
GMA Bootblock Code	4.20C	4.10C
GMA System Code	4.21C	4.10C
Audio Configuration	4.21C	4.10C
GMA Region List	4.10C	4.10C
GMA AUX Bootblock Code	4.20C	4.10C
GMA AUX System Code	4.21C	4.11C
GMA AUX Region List	4.10C	4.10C
GMA AUX Audio Data	4.20C	4.00C
GMA Voice Command Grammars	4.20	2.20
GMA Voice Command Language	2.00	2.00
GMA Voice Command DDG2P	2.00	2.00
GMA TTS Audio Data	4.10	4.10
GMA TTS Grammar	4.10	4.10

Mooney Instructors Around the Country

Arizona

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

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

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

California

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

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

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

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

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

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

Mike Jesch, Fullerton, CA. (714) 588-9346 (e-mail is best), mcjesch@pacbell.net. Total: 20,000
Instruction: 1500, FAASTeam Lead Representative, Specialites: Airspace, Garmin 430/530, Proficiency flying; Wings Program, VP Pilot's Asso. Master CFI for ASME, IA.

Colorado

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

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

Connecticut

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

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

Florida

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

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

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

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

Georgia

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

Kansas

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

Maryland

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

Massachusetts

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

New Jersey

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

New York

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

North and South Dakota

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

Ohio

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

Tennessee

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

Texas

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

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

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

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

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

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

Vermont

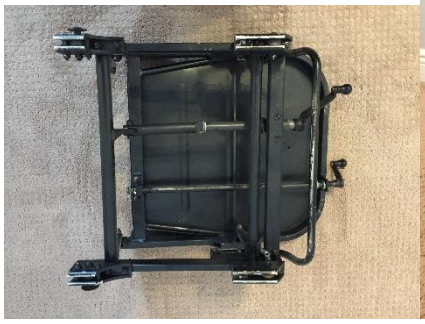
Ted Corsones, Rutland. 813-435-8464, tedc@corsones.com. Total: 7500, Mooney: 4500, Instruction: 2000+. ATP & MCFI for MEL, MES, SEL, SES, Instrument Airplane & Glider. **Master Instructor Emeritus. He serves with the MAPA Safety Foundation as an instructor, treasurer, and chief financial officer.**

Virginia

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

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

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



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

Parts for Sale

I have several Mooney parts for sale from a 1969 G model. Brand new voltage regulator (never used). Instrument light rheostat controller, cowling plugs and like new fuselage/cockpit and tail feather covers. G model POH. Contact me at Wilson Brown, located in Georgia, 678-469-6182

Mooney Cover

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

FOR SALE

1965 Mooney M20E Super 21

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

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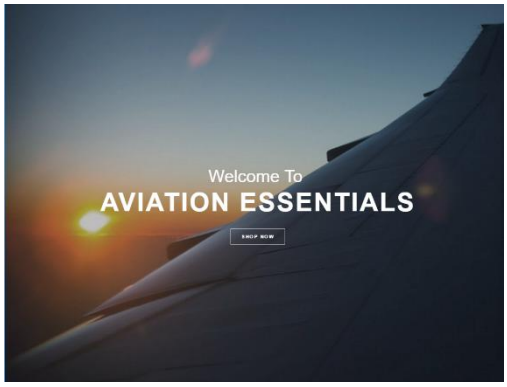

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mbmaksymdc10@aol.com
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Lycoming IO-360-A3B6D

TIMES
AIRFRAME TOTAL: 5256

ENGINE TSMO: 878

Engine overhauled BY LYCOMING FACTORY INSTALLED 01/16/2004

Propeller governor INSTALLED 01/16/2004
OVERHAULED PRO - PROP
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CORROSION TREATMENT each annual

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FOUR PLACE AUDIO I/C
ASPEN 1000 PRO
AVIDYNE TAS-600 traffic
STAND BY VACUUM GYRO
STORM SCOPE WX1000 PLUS
ENGINE EDM 700 4C A6 WITH FUEL FLOW
KFC 200 AUTOPILOT with altitude hold AND CONNECT TO ASPEN
1 COLLINS VHF 251ACOMM
1 COLLINS VIR351 WITH TO /FROM AIRTEX 345 406 February 2016
COLLINS TRANSPONDER TDR-950 UP DATED 03/2011
DAVTRON MODEL 811BDIGITAL CLOCK
NEW ENGINE TACK CABLE AND OVERHAULED TACH

GENERAL INFORMATION
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ELECTRIC TRIM
ELECTRIC FLAPS
Control wheel steering
Navigation annunciation
System annuncator
ROSEN SUN VISORS
Mooney shoulder harness installed
Wing tip strobes
External power receptacle
Copilots brakes