The Ramp Page

EAA Chapter 323 Sherman, TX
Monthly Newsletter
Celebrating our 51st year of service!
September 2020

Email: eaa323@hotmail.com **Website: https://chapters.eaa.org/EAA323** **Like us on Facebook @eaa323**

President's Mission Brief:

By John Halterman

Hello EAA 323!

We are now getting into the busy season with fall approaching. It will be an exciting few weeks.

First, as you seen in my mailing, I had tried to get set up a Sherman HS airport visit. I really appreciate those that have volunteered their time and participation, and it's been put on hold. I will keep the chapter up to speed on that event and when it can be officially re-planned. Thank everyone for your patience and understanding.

This coming Saturday Sept 19th at 9 AM at North Texas Regional Airport at the Texoma Aero Club hangar will be a planning session for our big EAA 323 sponsored event. We will need your help and participation for the event, which will occur the following Saturday Sept 26th in the morning hours. It will consist of a fly in, pancakes, and a homebuilt competition. We will discuss proper COVID protocols to ensure we are compliant at the event--such as facemasks, gloves while cooking, to name a few. If you have a homebuilt, feel free to fly it in (or taxi it over) to be judged! Mike Plyler has offered us to set up in front of his hangar, which will be in the shade all morning. I look forward to you all this coming Saturday Sept 19th to do planning for that event.

Also, following the regular meeting, we will have a VMC Club Meeting. It will start approximately 15 minutes after the regular chapter meeting. During these unusual times with COVID, until we can return to Sherman Muni (EAA 323's home), it was agreed that the VMC Club can meet on the Saturday after the chapter meeting. When we return to our usual 3rd Thursday evening meetings at SWI, the VMC Club will meet at SWI the 1st Thursday of the month.

One of annual traditions is to participate in the Brushy Creek Fly-In. Rick Simmons will sponsor that as usual. The only requirement to participate is to bring some food for the local food pantry. It will occur on October 3. More details are in this newsletter. A Board Meeting will commence at 9 AM on Oct 3 to do 2021 agenda planning. Officers and Board are requested to attend, and all EAA 323 active members are invited to participate and contribute to the discussions.

Be aware that the Cedar Mills Sponsored Splash-In has been canceled for this year.

On a personal note, I became an ATP (Airline Transport Pilot) on August 23rd. There is a more detailed article in the newsletter, but, I thought I'd mention it. After all--I mention other's accomplishments too :)

See you soon!

John F. Halterman
EAA 323 President

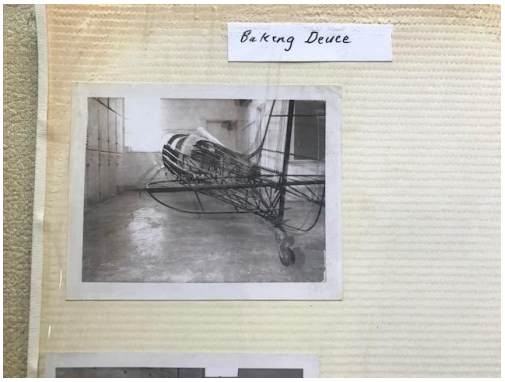
EAA 323 mourns the passing of one of our Charter members

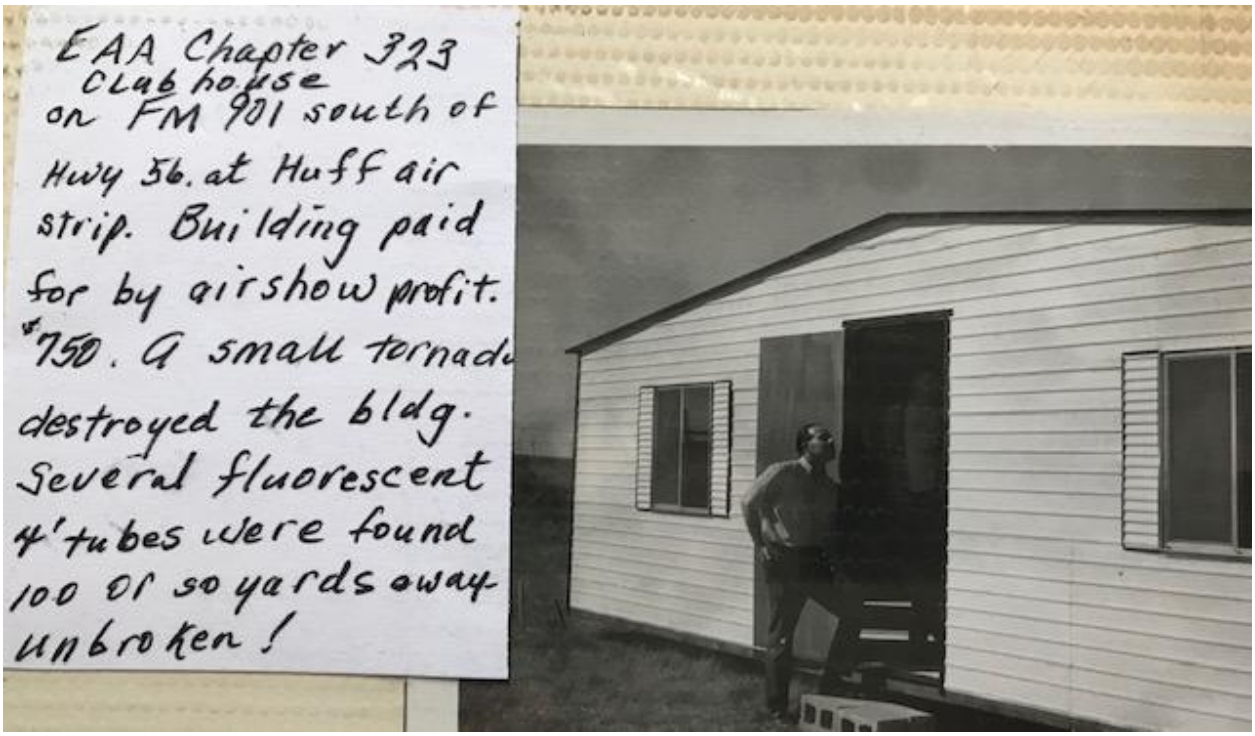
By Mike McLendon

Miles Capehart, a charter member of 323 back in 1969, passed away on Saturday, August 29, 2020. A complete obituary can be seen at https://www.legacy.com/obituaries/name/miles-capehart-obituary?pid=196725066.

He was the shop teacher at Whitesboro HS for many years and as such had much influence on the young men in his class with aviation projects. Obviously helping him to build his aircraft seen in the pictures. He was an officer of the club in those earlier years but I'm not sure in what capacity, but he had much to do with the clubhouse located at Huff airfield. This airfield was located east of Whitesboro and north of highway 56. I think I found it one day but there are no definite signs that it was once an airfield.

Not sure how he became involved in aviation, but he was a talented shop smith and liked to build things with aircraft being just one aspect of his building expertise. I enjoyed my brief visits with him last year as we walked thru his scrapbook of aviation pictures.





EAA 323 to Host Pancake Fly-In Featuring Best in Show Award for Best Homebuilt!

By John Halterman

Mark your calendars for Saturday, September 26 as we will be hosting an "EAA 323 Pancake Fly-In, Featuring Best in Show Award for Best Homebuilt and Young Eagles event" at North Texas Regional Airport. Bring any aircraft in you want - even ultralights! We will be handing out a trophy for Best of Show, with our very own Pam, Adam, Phil, and Frank volunteering to be judges!

Eligibility requirements:

1.) Any homebuilt with an Experimental certificate is eligible to participate in the competition.

2.) You must arrive by 10am to be in the competition.

For ultralights, you can get a radio waiver. Refer to 14 CFR 103.17. The tower phone number is 903-786-3743. Also, non radio aircraft can contact tower in advance for pre-approval. If you are a Sport pilot without a class D endorsement, see one of the club flight instructors and we can get you ready in advance.

We will use appropriate protective equipment in the cooking and serving areas (strictly enforced). We will have a thorough planning session at the Saturday, Sept 19 club meeting which will be at the TAC hangar to finalize details.

Make plans to attend this event, can't wait to see you there!

Young Eagles Flight coming up:

By John Horn

There will be a Young Eagles Flight at North Texas Regional Airport (KGYI) at the Main building on September 26, at 1pm. If you know of someone who may be interested in signing up for a Young Eagle flight, please have them sign up at the following link's: (https://youngeaglesday.org/) (https://chapters.eaa.org/EAA323) where they can sign up and fill out a Waiver for the event. Keep these link's handy for future reference!

With the word getting out, more and more Young Eagles are showing up to take advantage of this opportunity! We need any and all ground-crew, pilots and, last but not least, PLANES to be present for this mission! Please get with John if you are able to support this event!

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August Special Guest Speaker: MartinUAV

By Ed Griggs

EAA 323 members were invited to Brushy Creek, home of Rick Simmons, for a presentation and demonstration of UAV's by members of MartinUAV, (https://martinuav.com/v-bat/), whose mission is to provide the world's best VTOL Unmanned Aircraft Systems (UAS) to defense, government and commercial markets. The Staff of MartinUAV gave an incredibly detailed presentation on their Unmanned Aircraft as well as an operational demonstration.

John Halterman: Texoma's Newest ATP (Airline Transport Pilot)

By John Halterman

I have been flying for 16 years, so, my journey to become an ATP (Airline Transport Pilot) multi engine land pilot is a long one. But it's been fun (and yes, a fair amount of money....)

As many of you know, I've been a CFI for several years and running my little flight school (www.halt-av.com) training Private, Instrument, CFIs, tailwheel to name a few. I also do some multiengine instructing for Southeastern in Durant. Do I have a specific need for an ATP? Maybe not now, but you never know when an opportunity may arise! However, my knowledge and instrument skills has greatly increased in the process.

The Airline Transport Pilot Certificate is the highest grade pilot certificate. It gives one privileges to fly for the airlines, corporate, turbojets, to name a few. Myself, I tend to envision myself flying corporate versus airlines if I ever pursued that, but honestly speaking, my current gig at Caterpillar isn't bad.

To be eligible, you need at least 1500 hrs, age 23, specific cross country, night, instrument requirements to name a few to have an unrestricted ATP. There is a lengthy knowledge test to take too. However, the newest requirement is the ATP-CTP course.

In December 2018 I took the ATP-CTP course at ABX Air in Wilmington, Ohio. I did it the week before Christmas (I grew up in Ohio so went home for Christmas afterwards). It was a really exciting week long course where you learned basics of high altitude aerodynamics (coffin corner), oxygen issues, and performance requirements to name a few. However there was 10 hours of sim time as part of the training. A portion of it was in a 767 sim where we did low visibility operations such as CAT IIIb operations and a DC-9 sim for various emergencies including RTO (rejected take off), V1 cuts (power plant failure at decision speed), and dual engine failures to glide to a runway. Also, high altitude stall recovery. The ATP-CTP course was mandated after the Colgan Air accident a little over 10 years ago for multi engine candidates. Also, the crew rest rules resulted from that accident (part 117 rules).

In 2019 I studied and took the knowledge test and passed.

In mid-August this year, on a whim, I said I'm going to go for it. I went to the Diamond Flight Center of Texas in Arlington and flew a DA-42. Why?

The ATP checkride is essentially a completely instrument checkride and you are expected to utilize automation when possible (some maneuvers require hand flying such as the single engine approach and single engine missed approach). It had a G1000 and was a good platform to get introduced to some of that automation. The test consisted of a series of precision and non precision approaches, stalls, engine failures, missed approaches, departure procedures, steep turns greater than 45 degrees, all in simulated instrument conditions. The instrument checkride allows deviations of 3/4 scale deflections on the CDI (course deviation indicator). It goes down to 1/4 for ATP. Preceding the flight portion was a long oral that consisted or aircraft performance, details on climb stages, high altitude aerodynamics, swept wing theory, part 117 rest rules, to name a few.

On August 17th the checkride commenced with my examiner. The oral lasted for a better part of the morning. Pass. Then the flight started. We flew for about 15 minutes and had a dual ECU failure (this was not a simulation)...had to declare emergency and return to airport. Fire trucks met us. Discontinuance (not a failure...just pick it back up later).

So, I went back on August 23, and did the flight. I remember very vividly on my last approach (single engine ILS) the controller dumped me right at the final approach fixed. But I was impressed with myself...hand flew it perfectly with no automation nor flight director! Raw data only.

This time the fire trucks were not out, and I parked the plane and low and behold, I passed!

Now, I have over 2000 hours and excited to continue helping others to learn. What will I do next? Hmm.....

Improper Disinfectant Appears To Damage Two Skyhawks
Disinfecting Aircraft Requires Proper Substances, Techniques

By David Tulis August 20, 2020

The use of incorrect disinfectant sprayed on an instrument panel damaged a Cessna 172 in the Atlas Aviation fleet at Peter O. Knight Airport in Tampa, Florida. Photo courtesy of Deric Dymerski.

An aircraft renter with a distillery-produced sanitizer meant well, but improper disinfecting techniques damaged the instrument panels of two Cessna 172s at Florida's Atlas Aviation and required costly repairs.

Certain alcohol-based liquids may help disinfect hands, but they can be dangerous to airplane avionics, instrument panels, and other components of aircraft interiors, the flight school learned.

"It affected the factory paint and to fix it, we need to completely remove every radio, all avionics, the switches, and other items, and resurface the panels," said chief pilot Dave Presnell.

Atlas Aviation founder Deric Dymerski said a customer wielding a rag and an alcohol disinfectant made by a distillery might have meant well, but overspray from a control yoke wipe-down that then baked in the hot Florida sun permanently pock-marked the panels of a 2001 Skyhawk 172SP and a 2005 Skyhawk 172R.

Alcohol-based disinfectant produced by a distillery and sprayed on an Atlas Aviation Skyhawk's instrument panel damaged the panel near the power quadrant. Photo courtesy of Deric Dymerski.

The damage occurred despite cockpit and aircraft sanitizing procedures that were established (but not adhered to in this case) after consulting with other FBOs and schools before flights resumed after a monthlong coronavirus pandemic shutdown.

Prior to flights, pilots at the company's main Peter O. Knight Airport location and the satellite location at Plant City Airport, are issued a plastic bag with wipes and an approved disinfectant-cleaner for pre- and postflight wipe-downs. Additionally, line personnel sanitize the fleet of 12 rental aircraft when they're serviced so a "triple check" is in place to avoid pathogen contamination, Dymerski explained.

Altruistic owners of distilleries pivoted from making vodka, tequila, or rum and provided stopgap hand sanitizer solutions to bolster the supply chain during the early throes of the coronavirus pandemic when consumer panic cleaned out commercially available disinfectant wipes from stores.

The Centers for Disease Control and Prevention warned that while certain forms of alcohol are useful in controlling surface bacteria, the substance has "shortcomings" that can harm medical equipment, electronic devices, and other sensitive gear. Researchers cautioned that inadvertent damage to "the shellac mountings of lensed instruments" could occur, and prolonged or repeated use tends to "swell and harden rubber and certain plastic tubing" and harm other materials.

Certain alcohol-based liquids may help disinfect hands, but they can be dangerous to airplane avionics, instrument panels, and other components of aircraft interiors. Photo courtesy of Deric Dymerski.

Similar materials are found in aircraft instrument panels and other interior parts that come in contact with pilots, crew, or passengers.

Garmin's Joey Ferreyra, who helped outfit avionics for the 2019 AOPA Sweepstakes Super Cub, previously told AOPA that "using the wrong cleaner can be bad news for avionics." A service advisory informs pilots how to clean and disinfect touch screens and function knobs with specific guidance about reducing the spread of disease while preserving the integrity of the avionics devices. Disinfectant solutions of 70 percent isopropyl alcohol are acceptable and provide the "best combination of bactericidal effectiveness and equipment safety" as long as they don't contain ammonia.

MyGoFlight's Dominic "Nic" Martinez reminded pilots to also exercise caution with electronic flight bags and tablets that contain an "oleophobic layer" that reduces oils and grime and adds anti-glare protection for improved visibility.

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Presnell said he believes the aircraft damage occurred at the school's Plant City location, after one of the Skyhawks was put away for the day. "I noticed the panel looked terrible and I thought, 'Oh my gosh, it looks corroded.'" He initially presumed water leaking from a windscreen or a window might be the culprit. "A few days later I noticed another airplane was equally damaged." That led to the discovery of a spray bottle containing a mysterious chemical nestled in the aircraft.

Dymerski tested the spray on another portion of an airplane and then consulted with a local distillery. He concluded that the 80-percent ethanol solution was distilled by a vodka producer. The damage occurred after it was sprayed on—and not immediately wiped from—the painted avionics panels. He suggested that chemicals added to the solution to sanitize human skin without irritating it, along with sustained high ambient heat, were likely contributing factors to the damage. He said a lesson learned was that using sanitizing solution made from distilled spirits "will kill anything, including aircraft panels."

AOPA Associate Editor Web/ePilot David Tulis joined AOPA in 2015 and is a private pilot with single-engine land and sea ratings and a tailwheel endorsement. He is also a certificated remote pilot and co-host of the award-winning AOPA Hangar Talk podcast. David enjoys vintage aircraft and photography.

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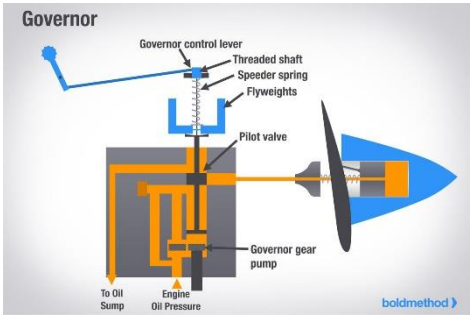
CFI Corner:

By Adam Yavner

MAD PROPS!

Becoming familiar with the concepts and operating characteristics of a Constant Speed propeller is a requirement for operation of a complex plane, as well as for CPL checkride – plus, it's cool to be able to choose the most efficient setting for all phases of flight. Here's a handy diagram (courtesy of Boldmethod) illustrating what goes on behind the blue knob. Go to boldmethod.com for an animated version:



The purpose of a constant-speed propeller is to keep the blade angle adjusted for maximum efficiency for most conditions of flight. Think of it like shifting gears in your car or 10-speed. First, I think some definitions would be useful here.

- Manifold pressure – a measure of air pressure in the intake manifold between the engine and the throttle; a measure of torque. (Torque x rpm)/5252 = power
- RPM – revolutions per minute of the engine.
- Pitch (not your nose) – angle between propeller chord line and vertical plane
- Governor - The governor moves oil back and forth through the propeller hub to make sure the prop is at the pitch and speed that you want.
- Flyweight – spinning weights, which move up and down according to engine speed (centrifugal force), to regulate oil flow to the hub through the pilot valve
- Speeder spring – increases or decreases tension, controlled through the control lever, to move the flyweights up or down
- Hub – mechanism in front where blades are attached, as well as an oil-filled dome and piston to move the blade angle via a linkage, according to oil pressure
- Control lever (blue knob) – manually controls the RPM by adjusting blade angle.

So, broadly, the propeller control allows the pilot to keep the engine running at a constant RPM, adjusting itself to compensate for the effects of increased airspeed over the propeller (nose up or down). Engine speed determines the amount of oil the governor allows to flow to the hub which in turn pushes a piston back or forth to change the blade angle (self-correcting). This allows the blades to take a bigger or smaller "bite" out of the air. A small "bite" will allow the engine to rotate faster, giving more power for takeoffs or go-arounds. A large "bite" allows for a slower engine speed but more air moved per rotation, so the engine is operating more efficiently and economically. A loss of oil pressure will cause the hub piston to move back to the default low-pitch setting, usually by means of a spring.

Important – when wanting to DECREASE power, move MP (throttle) first, RPM (prop) second. When wanting to INCREASE power, move RPM (prop) first, and MP (throttle) second. This is to avoid damaging excessive manifold pressure, which can lead to detonations and stress on the engine (and your wallet).

So putting it all together…

1. Runup – on a cold start, you need to cycle the propeller pitch a few times to make sure of no leaks and that oil is sufficiently flowing through the mechanism. Set run-up MP and RPM (see POH), then pull the prop control slowly back then forward again quickly, about 3 times. See POH or checklist for airplane-specific values
2. Takeoff – prop control will already be full-forward (low-pitch). Increase throttle as normal for takeoff.
3. Cruise climb – see POH for values, but will reduce MP and RPM so the engine is not working as hard.
4. Level off – see POH for values, this will depend on altitude and desired speed/range/fuel flow.
5. Pattern entry/landing – see POH or checklist, but adjust for appropriate pattern speed. You will eventually push prop full-forward during GUMPS checks, after which you will just be controlling the descent via throttle as you did in a fixed-pitch plane. This is so in case of a go-around you will already have the prop where you need it (but do you want to if you are likely to lose engine oil??).

So there you have it, the "P" in GUMPS unveiled! More information can be found in the Airplane Flying Handbook (FAA-H-8083-3B) Chapter 11.

As always, if you have any questions shoot me a message and I'll do my best to get you an answer!

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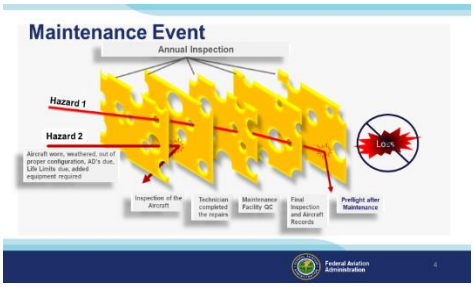
FAA Safety Team- Topic of the Month: Pre-flight After Maintenance

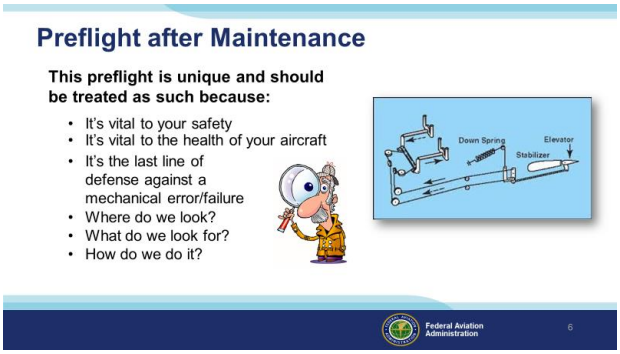
By Daniel Hileman

Hi Everyone, Sorry I have missed a few months worth of articles, however we have just moved to Oklahoma and have been trying to get settled in. Glad to be back and honored to bring you this month's FAASTeam Topic of, "Pre-flight After Maintenance!

When I was a new (and young) Aviator, I thought that right after maintenance was the "safest" the airplane was and that Pre-flight should be a breeze, however, after years of flying experience I have learned that that's just not true, and of course a careful Pre-flight is always important, perhaps even more so after maintenance has been completed. Lets dive in to this!



In this picture you can see the "swiss cheese model." "During any maintenance event on your aircraft, there are hazards to safe flight that appear (as noted by the red arrows), these usually include the reason for the maintenance and then the maintenance action itself. There are defenses to the hazard as noted along the bottom of the illustration. Aircraft loss and personal loss can be averted along any one of the barriers, but notice that the last barrier of defense is your Preflight after Maintenance."



Be sure to learn all you can about the work done on your aircraft. Is the trim backwards? Do you know which way it should move when you adjust it?

Paperwork? No… I'm a pilot! Yeah right, don't we wish? Be sure to review all maintenance entries and make sure the work has been signed off. If you aren't sure, try to find an experienced pilot friend, maintenance personnel, or Flight Instructor to review it with you. Don't be afraid to admit you are not completely sure what you are looking at. Make sure you understand what work has been done. Remember, Annual/100 Hour inspections require the aircraft to be completely opened up! So, extra caution should be used after these. I asked my instructor once, how do I know if something is normal? He said, "A deviation from the normal is trouble." How do you know what's normal? Experience with that aircraft over time, or by taking someone with the experience to help you learn that. : "Use your senses, and a notepad, to write down ANYTHING you sense is not right. LISTEN to the airplane (not just the engine!). Do you SMELL anything abnormal? Fuel? Oil? Does it vibrate more than usual (FEEL)? Do you TASTE (or smell for that matter) any of that acrid smoke that comes with burning electrical items? Does anything LOOK out of place?"

"You should say to yourself during the preflight:
We're fault finders. We don't just look for things to be right, we look for something wrong, don't we?
For example: Is the 'B' nut loose? Is safety wire loose or backward?? Are there any rags laying around?
To put yourself in the right mindset, you need to (graciously) assume that there is something wrong, even if you used the best mechanic in the universe. mindset. If you assume that all is right, you'll miss the mistakes, worn items, miss-rigging or whatever else might be wrong.
Remember, it's your life and well-being in the aircraft."

FLIGHT CONTROLS

Inspect all control fasteners for missing cotter pins. A missing cotter pin can cause the nut to loosen and fall off. Once the bolt falls out the control surface or trim tab can move without pilot input or it can flutter sometimes causing catastrophic results Castle nuts require a pin.

CASE STUDY

"WPR18LA250, August 27, 2018 About 37 minutes into the flight, the pilot noticed that the engine manifold pressure was dropping, along with the airplane's airspeed, consistent with a partial loss of engine power. The engine then experienced a total loss of power while he was maneuvering for an emergency landing to a nearby airport.

Post accident examination of the engine revealed that the throttle linkage had detached from the throttle arm of the fuel injection servo. The rod end bearing for the linkage and the throttle arm were intact and undamaged, but the connecting bolt and its associated washers, castellated nut, and cotter pin were missing. It is likely that the bolt securing the linkage had not been sufficiently tightened and secured with a cotter pin during the installation."

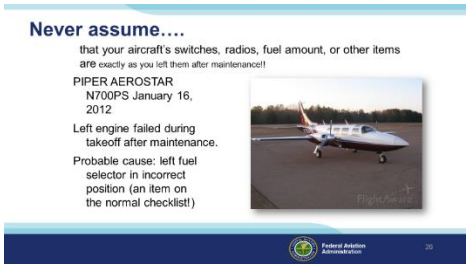
CHECK THE FUEL YOU SAY?

They didn't work on my fuel system you say, so why might that be an issue? Why indeed:

"Let's say your aircraft went into maintenance for a faulty radio issue. Parts had to be ordered and shop space was needed for another job so your aircraft was towed to the ramp and tied down until the parts arrive. After a week of sitting outside and weathering a few downpours the work was completed on your aircraft and you picked it up at the maintenance facility. The POH states in the preflight section that you should do the following:

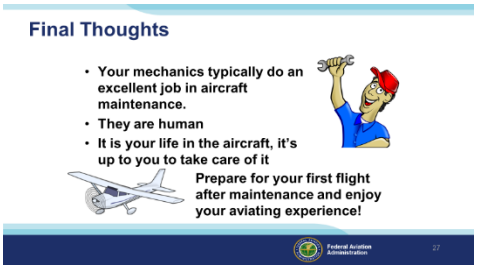
Before the first flight of the day and after each refueling, use sampler cup and drain small quantity of fuel from fuel tank sump quick drain valve to check for water, sediment and proper fuel grade.

This is a very important task that never be overlooked prior to flight. Especially after the aircraft has been in the weather."



A QUICK WORD ON E-ARROW-C

Depending on the type of maintenance or inspections that were performed on your aircraft it may have been necessary to remove the airworthiness certificate and registration to validate that those documents are current and accurate. Always ensure you have the correct documents on board. In this case the Airworthiness Certificate is for a different aircraft (You are looking in a Cessna 172, the Airworthiness Certificate is for a Christian Ind. Pitts-S-2B). This can happen in a busy maintenance facility servicing several aircraft of the same make and model.



FINAL THOUGHTS

Even though your Mechanics are amazing people and usually do a fantastic job, they ARE human. Mistakes can be made, and it's YOUR (And your passengers) life. So, do your due diligence and take the extra time to make sure all is well!

Thanks for reading!

Daniel Hileman
FAA Safety Team Representative
ATP-CFI-CFII-MEI, Former Airline Pilot
And NOW, 8th Grade Science Teacher
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Quiz: Do You Know These 6 Rules-of-Thumb?

By Colin Cutler • 08/28/2020 https://www.boldmethod.com/blog/quizzes/2020/08/do-you-know-these-6-flying-rules-of-thumb/

If you have a 100 knot groundspeed on final approach, how fast do you need to descend for a 3 degree glideslope?

- 400 FPM
- 450 FPM
- 500 FPM
- 550 FPM

True airspeed increases about _____ per 1,000' of density altitude.

- 1%
- 2%
- 5%
- 10%

At a 1 degree descent angle, for every mile you fly, you'll descend _____ feet.

- 50
- 100
- 250
- 1,000

You're tracking a VOR. You're at 30 DME, and you're off course 1 degree. How far off track are you?

- 1/4 mile
- 1/2 mile
- 1 mile
- 2 miles

Add _____ the gust factor to your windy-day landings.

- 1/4
- 1/2
- 2 times
- 4 times

You're descending from 3,000' MSL to 1,000' MSL at 500 FPM. You're flying 120 knots groundspeed. How far will you travel by the time you reach 1,000' MSL?

- 6 miles
- 8 miles
- 10 miles
- 12 miles

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Aircraft of the Month: Waco UPF–7

http://www.aviation-history.com/waco/upf-7.and html https://en.wikipedia.org/wiki/Waco_F_series

The Waco UPF-7 is an unusual airplane. This is not due to any outstanding technical features but to timing. A relatively obsolete design, it was built in quantity at a time when the open cockpit biplane trainer for civilian use was virtually extinct. Even then, it slipped into service unnoticed since it had no significant new features to arouse the interest of the contemporary aviation press.

Production of commercial biplane trainers virtually ended in Depression years of the early 1930s, and new low-powered monoplanes rapidly took their place in the schools and in private aviation. Only the Army and Navy were principal customers for biplane trainers in succeeding years. While Waco did not have a share of this market, it was one of the few firms that continued to supply open cockpit biplanes to private owners of the mid-1930s, a group comprising what could be considered a custom trade. Yet the UPF-7, introduced in the late twilight of the biplane era, was built in greater quantity than any single Waco model that preceded it. Approximately 600 came out of the Troy, Ohio factory between 1937 and 1942.

Waco UPF-7s, Boeing School of Aeronautics, Oakland Airport, California. September 23, 1941.

The reason for the volume production was inherent in the times. The imminence of World War II had shaken the government into expansion of the armed forces, including their air arms. While more cadets were trained by the services, and more biplane trainers were produced, Waco still did not obtain any significant military trainer business

The UPF-7 was a continuation of the Waco "F" series which had been introduced with Model INF of 1930, a three-seater powered with a 100 hp Kinner K-5 engine. Other Fs in the series used a variety of engines up to 220 hp. The UPF-7 standardized on the 220 hp Continental W-670-6A, civil equivalent of Continental's R-670 military engine.

Waco F series

Data from Green, 1965, p. 307

General characteristics

Crew: 1

Capacity: 1 trainee or passenger

Length: 23 ft 1 in (7.04 m)

Wingspan: 30 ft 0 in (9.14 m)

Height: 8 ft 5 in (2.57 m)

Wing area: 244 sq ft (22.67 m2)

Empty weight: 1,870 lb (848.22 kg)

Gross weight: 2,650 lb (1,202.02 kg)

Powerplant: 1 × Continental W-670-6A seven cylinder radial , 220 hp (161.81 kW)

Performance

Maximum speed: 128 mph (207 km/h, 111 kn)

Cruise speed: 114 mph (185 km/h, 99 kn)

Range: 400 mi (644 km, 350 nmi)

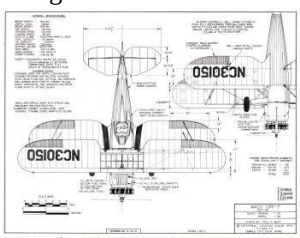
Service ceiling: 14,800 ft (4,511 m)

Its designation reflected the principal design characteristics of the airplane - - the letter "U" identified the engine as the W-670, the "P" identified the wing and fuselage design, the "F" identified the model type or series. Details like landing gear and tail shape varied greatly through the series.

Waco UPF-7 CPTP war machine, December 23, 1941. Large US and red center star were added shortly after December 7 to enable these planes to continue flying in the war zone.

While the UPF-7 was built in the largest numbers, there were limited other versions also built, mostly for special customers. These were known as LPF, VPF, YPF, and ZPF models. The only difference being the installation of different engines.

Essentially a state-of-the-art refinement of the 1930 model, the UPF-7 retained its major features, particularly the heavily staggered wings with the strut-connected ailerons in upper and lower panels. The earlier Fs were all built as three-seaters, with two passengers seated side-by-side in the front cockpit. The UPF-7 was intended to be a dual-control trainer, but when the stick was removed, the front seat was wide enough to accommodate two passengers.



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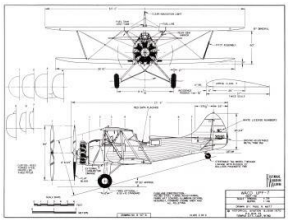

The Waco XPT-14, s/n 39-702, was only slightly altered from standard UPF-7 for Army trainer competition. Narrow tread landing gear was principal recognition feature along with out-of-proportion national insignia.

The XPT-14 was somewhat modified from UPF-7 standards to meet military requirements. It had a direct-cranking starter and civil instruments, but was most notable for its considerably narrower landing gear and a full-NACA engine cowling. The YPT-14s, with military instruments and hand-inertia starters, were virtually stock UPF-7 airframes with wide landing gear and cowled engines.

The XPT-14, s/n 39-702, was lost in a freak accident on October 11, 1939.

Waco sent a replacement to Wright Field to carry on where the XPT-14 left off. This was a standard UPF-7 carrying civil registration NC20907, c/n 4659. The plane was overall silver in color and had an uncowled engine. No military markings were ever applied.

At least 34 UPF-7s were obtained by the CAA direct from the factory finished in the standard FAA orange and black lettering. These had varied registration numbers, NC152 through NC185. Standard factory colors for UPF-7s were the same orange yellow wings and tail with trainer blue fuselage used by the Army trainers at the time.

Waco UPF-7 modified with Lycoming R-680-13.

Significant private ownership of UPF-7s did not occur until late in WWII, when some of the training schools were phased out. The government bought a number of the unemployed UPF-7s for the surviving schools, but others found new civil owners, particularly crop dusters that were hungry for replacement airplanes in a nation geared to military production. After the war, the UPF-7s did not have any particular appeal to non-commercial owners; they were just cheap old airplanes, good for time building by pilots who flew them for little more than the cost of fuel. More then ended up in the dusting business, which at the time operated almost exclusively with obsolete airplanes. A few, thanks to their low cost and good cooling of the radial engine, found homes in glider clubs where they made fine tow-planes. Although used for aerobatics training, the UPF-7 could not match the Stearman/Boeing "Kaydet" at air show work and so did not find a new career in that field.

The birth of the antique airplane boom in the 1950s gave the venerable Waco UPF-7 a new lease on life. Many worn-out hulks that had been out of license for years, plus a good number of junked "basket cases" were rescued from their positions in the weeds behind the hangar, lovingly restored, and put back in the air by new owners. Others became available to the antiquers when new designed-for-the-purpose monoplane dusters forced more and more of the old biplane conversions out of the agricultural fleet. These were relatively easy to convert back to "two-holers" for the helmet-and-goggles set.

In addition to the current nostalgic hobby activities, some UPF-7s are back in commercial operation at schools that teach aerobatics while others, thanks to two-seat front cockpits, hop paying passengers at air shows. Some are used for barnstorming in search of passengers.

As is customary with hobby airplanes, many of the UPF-7s have undergone considerable modification at the hands of the antiquers. However, they stay within the limitations of their standard licenses. While Waco was famous for the high quality finish on some of its custom models of the 1930s, no UPF-7 ever left the factory with the quality of finish applied by some of the antiquers of today - - 24 coat hand-rubbed dope jobs, chromed metal parts, arty paint jobs and metallic tape striping and lettering. The most common modification is the addition of a full cowling around the engine, as used by the PT-14s and the use of wheel pants.

An oddity of the antique boom was the popularity of the colorful pre-WWII Army paint job and markings for those airplane models that could have used them. Thanks to a few PT-14s, the UPF-7 qualifies for these legitimately.

Of course, many of these have minor goofs in the placement of proportions of the markings, but the spirit is there. The most common error is to make the vertical blue rudder strip too narrow (it should be one-third the maximum chord of the rudder), No one has carried marking accuracy so far, however, as to reproduce a major error committed in the Waco paint shop. The wing stars on all PT-14s were way out of proportion, an error Waco repeated on its prototype Army gliders, the XCG-3 and XCG-4.

From the original 600, the total of Waco UPF-7s has decreased steadily. Today there are more than 150 registered.

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Builder's Corner Updates

By Ed Griggs

If you are currently building an aircraft or doing any restoration work and want to be included in Builders Corner, we would like to hear from you. Email your updates and pics to Ed Griggs at a_model_guy@ymail.com. Thanks!!

An online EAA Builder's Log that is free for all EAA members to use to document their projects and demonstrate compliance with the FAA's 51 percent rule. If you're a homebuilder who hasn't yet utilized the FREE online EAA Builders Log, you're missing out! Go to https://eaabuilderslog.org/?blhome and setup your free Builders log today!!

Aviation Words — Mayday

By Ian Brown, Editor

This might be one of those words you already know – especially if you know any French. Pan-pan, pan-pan, pan-pan is used to indicate an urgent situation but mayday, mayday, mayday is used in pilot communications to indicate a life-threatening situation.

Both are used internationally, and both originate in international radiotelephony and have been in use since the 1920s.

Pan-pan derives from the French word panne, which means a breakdown of some sort.

Mayday comes from the French m'aider or help me.

Although SOS had already been adopted in telegraphy somewhat earlier, it was decided that mayday was less ambiguous. SOS can sound like FOF for example. As an aside, that's why niner is used by air traffic controllers: Nine can sound a lot like five.

Hopefully these are phrases you will never need to use

Answers to the Quiz on Page 11

The rule of thumb is "5 times your ground speed". 100 knots X 5 = 500 FPM descent required to maintain a 3 degree glideslope.

True airspeed increases 2% per thousand feet. If you're flying at 10,000' DA, your true airspeed is 20% faster than sea level!

A 1 degree descent gives you a 100 foot descent over 1NM.

For a VOR, at 60 miles, 1 degree of track error is 1 mile off course. So if you're half the distance, you're half the track error.

You should add half the gust factor to protect yourself from windshear and a possible stall on final. If the winds are 10 knots gusting to 20, you have a 10 knot gust factor. Add 5 knots to your final approach speed.

If you need to descend 2,000', and you're descending at 500 FPM, it will take you 4 minutes to get to your target altitude. At 120 knots groundspeed, you're traveling 2 miles per minute. If you fly 2 miles per minute for 4 minutes, you'll fly 8 miles.

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FAA Designated Airworthiness Inspector
Specializing in Amateur-Built and Light-Sport Aircraft
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*A & P Mechanic
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Supporting Our Community, Shop Local, Shop Texoma:

By Todd Bass

With the pandemic being extended even longer than what was originally expected, now more than ever, we need to support our local businesses (especially our Local Restaurants and Shops). Local businesses are being forced to give curbside Service and, in the case of Restaurants, Takeout only!

You can go to Texoma Curbside Restaurants on Facebook as a tool to show you what restaurants are still open and what items they are offering!

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EAA Webinars Schedule

https://www.eaa.org/eaa/news-and-publications/eaa-webinars

These live multimedia presentations are informative and interactive, allowing the presenter to use slides and audio, while audience members can ask questions and be polled for their opinion. Pre-registration is recommended since space is limited to the first 1,000 registrants.

9/22/20 @ 7 p.m. **Subject: So You Think You Can Make a 180 Back on Takeoff? An In-Depth Look at Engine Failure Options**
Presenter: Charlie Precourt, Chris Glaeser, Rick Marshall, and Terry Lutz Qualifies for FAA WINGS credit.

Test pilots and EAA safety committee members Charlie Precourt, Chris Glaeser, and Terry Lutz will provide instruction on the use of the EAA Flight Test Manual test cards for climb and glide that will enable you to determine your own aircraft's capabilities should you find yourself in an engine failure scenario on takeoff. This presentation expands on the work of Rick Marshall published in the May edition of EAA Sport Aviation.

9/23/20 @ 7 p.m. **Subject: Founder's Innovation Prize Grand Championship Preview**
Presenter: Terry Lutz

Several Founder's Innovation Prize Grand Championship contestants will share the latest on their solutions that will ultimately reduce the number of fatal amateur-built accidents caused by loss of control. This event will revisit some of the strongest entries from the previous four years, and you will get a sneak peek into next year's postponed Grand Championship event.

9/24/20 @ 7 p.m. **Subject: EAA Young Eagles Workshops: Day Camp Program for Chapters**
Presenter: John Egan and Megan Hart

Chapters staff John Egan and Megan Hart introduce a new offering for chapters: EAA Young Eagles Workshops that will provide a turnkey day camp program for chapters that want to take their youth engagement to the next level. They will discuss the goal of the program and how chapters can get involved.

10/6/20 @ 7 p.m. **Subject: $500 HUD HOMEBUILDERS WEBINAR SERIES**
Presenter: John Muzzoli

This is a presentation on a $500 Head Up Display that is legal to use in any airplane. It is a free and open-source system that builds on the data available from ADS-B receivers.

10/7/20 @ 7 p.m. **Subject: The Looming Mechanic Shortage**
Presenter: Mike Busch Qualifies for FAA WINGS and AMT credit.

What if your airplane breaks and there's no one to fix it? Many maintenance shops have gone out of business, not because of lack of demand, but because they can't find enough qualified mechanics. In this webinar, maintenance expert Mike Busch A&P/IA relates the experiences of a number of his colleagues who own and operate maintenance shops, and the difficulties they have had with staffing. Mike discusses why the continuing deterioration of the maintenance infrastructure for piston GA airplanes should be of concern to every aircraft owner.

10/14/20 @ 7 p.m. **Subject: Strategies for Limiting, and Protecting Yourself from, Liability as an Aircraft Owner or Renter**
Presenter: Jack Harrington, Paul Herbers, Alan Farkas, and Jim Anderson

This webinar will cover contractual liability that may affect an aircraft owner or renter through hangar leases, airport use agreements, and agreements with FBOs or other entities. It will also reference aviation-related waivers that might either limit or increase an airman's exposure to potential liabilities. The session will provide specific examples of common injury and property damage claims that arise in aircraft operations. The presenters will comment on effective utilization of aviation releases and their legal effect. The webinar will also address the realities of aviation insurance coverage in this day of increasing premiums and limited liability coverages. Finally, council members will explain the relationship between the aircraft owner's or renter's insurance coverage, and the coverage provided by EAA for Young Eagles flights.

EAA Webinars sponsored by

Upcoming Events

Saturday, Sep 19	Monthly Gathering at Texoma Aero Club hangar, North Texas Regional Airport (KGYI), 9:00am Subject: Brats and hot dogs / Flyin' planning with Rick Simmons VMC Club Gathering at Texoma Aero Club hangar, North Texas Regional Airport (KGYI), immediately following the Regular Chapter meeting Subject: Pilot Workshop Online Scenarios
Saturday, Sep 26	Homebuilt Fly-in at North Texas Regional Airport (KGYI), 9:00am Young Eagles at North Texas Regional Airport (KGYI), 9:00am
Saturday, Oct 03	Brushy Creek Fly in and 2020 Planning
Saturday, Oct 10	Antique Fly-in, Gainesville Municipal Airport (KGLE)
~~Fri, Sat, Sun, Oct 16–18~~	~~Cedar Mills Safety Seminar~~ Cancelled
Saturday, Oct 17	Monthly Gathering at Texoma Aero Club hangar, North Texas Regional Airport (KGYI), 7:00pm Subject: How to get started in a homebuilt with Jim Smisek VMC Club Monthly Gathering at Texoma Aero Club hangar, North Texas Regional Airport (KGYI), immediately following the Regular Chapter meeting Subject: Pilot Workshop Online Scenarios Movie at the Hangar Night, Texoma Aero Club, 6:00pm

Officers/Board of Directors/Key Coordinators

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General Email: EAA323@hotmail.com **Website: https://chapters.eaa.org/eaa323**

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High Flight

Oh, I have slipped the surly bonds of earth
And danced the skies on laughter-silvered wings;
Sunward I've climbed, and joined the tumbling mirth
Of sun-split clouds . . . and done a hundred things
You have not dreamed of . . . wheeled and soared and swung
High in the sunlit silence. Hov'ring there,
I've chased the shouting wind along, and flung
My eager craft through footless halls of air.
Up, up the long, delirious, burning blue
I've topped the windswept heights with easy grace
Where never lark, or even eagle flew.
And, while the silent, lifting mind I've trod
The high untrespassed sanctity of space
Put out my hand, and touched the face of God.

John Gillespie Magee Jr., R.C.A.F.
(killed in in WWII)

EAA SHERMAN CHAPTER 323 MEMBERSHIP APPLICATION AND RENEWAL FORM

☐ New Member
☐ Renewal
☐ Info Change

Membership dues for EAA Chapter 323 are $30/year.

Make checks payable to
EAA Chapter 323

Mail application to:
Ross Richardson
2115 Turtle Creek Circle
Sherman, TX 75092

National EAA offices:
Experimental Aircraft Association
EAA Aviation Center
PO Box 3086
Oshkosh, WI 54903-3086

National EAA Membership:
(800) JOIN EAA (564-6322)
Phone (920) 426-4800
Fax: (920) 426-6761

Name_____

Copilot (spouse, friend, other)_____

Address_____

_____

City_____ State_____ Zip_____

Phone Home:_____ Mobile:_____

Email address_____

EAA #_____ Exp date:_____
(Chapter 323 membership requires National EAA membership)

Pilot/A&P Ratings _____

I am interested in helping with:

Fly-Ins

Programs

Newsletter

Young Eagles

Officer

Plane, Projects (%complete) and Interests: