



EAA Chapter 100 November 2024 Newsletter

<http://eaa100.org>

2024 Chapter Leaders

- President
Dwayne Hora
President@eaa100.org
- Vice President
Ken Chase
VP@eaa100.org
- Secretary
Jeff Hanson
Secretary@eaa100.org
- Treasurer
Chris Budahn
Treasure@eaa100.org
- Web Editor / Newsletter
Art Howard
Webmaster@eaa100.org
- IMC Club Director
Art Howard
IMCclub@eaa100.org
- Program Director
Art Howard
ProgramDirector@eaa100.org
- Technical Counselor
Wayne Trom
TechCounselor@eaa100.org
507-374-6245
- Flight Advisor
Dave Nelson
FlightAdvisor@eaa100.org
- Young Eagles Coordinators
Ashleigh Wempe
Richard Fugate
YoungEagles@eaa100.org
- Tool Coordinator / Hangar
Gordy Westphal
ToolCoordinator@eaa100.org
Hangar@eaa100.org

EAA Chapter 100 is a nonprofit association involved in the promotion of aviation through adult and youth education, hands-on training, building and maintenance of experimental aircraft, and through community awareness programs.

This publication by EAA Chapter 100, Inc. is for the use, education and occasional enjoyment of its members and others. No claim is made for the accuracy or applicability of information herein. Editorial content is the opinion of the contributor not necessarily the position of either EAA Chapter 100 or the Experimental Aircraft Association.

Reader submissions and comments are strongly encouraged.

November Meeting

– Dwayne Hora

The November Chapter 100 meeting will be held in Dwayne Hora's shop at 58341 280th Ave, Mantorville, Minnesota 55955.

The next EAA Chapter 100 meeting is at 7:00 pm, Friday, November 8, 2024 at Dwayne Hora's shop, 58341 280th Ave, Mantorville, MN 55955.

The chapter officer elections will be conducted at the November meeting.

President: Dwayne Hora

VP: Ken Chase

Secretary: Vacant

Treasurer: Chris Budahn

Newsletter: Art Howard

Meeting agenda as follows:

- Pledge of Allegiance
- Welcome Visitors
- Reports | As available
 - *Secretary's Report
 - *Treasurer's Report
- Committee Reports
 - *Hangar
 - *Young Eagles, Richard Fugate
- Old Business
- New Business - Chapter renewal
- Flight Advisor/Tech Counselor
- Builder Reports - Time permitting
- Adjourn

Thank you,
Dwayne Hora
EAA Chapter 100
President



A Note from the Treasurer

-- Chris Budahn

Hello EAA 100,

It's that time of year again where I have to ask for your membership dues. The dues are only \$10. Please be sure to keep your EAA national membership account current as well. This can be done at www.eaa.org. If you haven't already given me your national membership number, please submit that with your dues payment. We use a roster management tool that links to your national membership. This allows us to keep track of things you have done on the national level such as Youth Protect training or background checks that are necessary for participation in the Young Eagles program.

You can mail the payment to me, or bring it to the next chapter meeting.

Thanks,

Chris Budahn
6525 County 30 BLVD
Kenyon, MN 55946
507-438-1130



FAA Interpretation Disallows Remote Mx Supervision

-- Aviation International News

Editor: This is an update on the FAA interpretation.

By [KERRY LYNCH](#) • Editor, AIN monthly magazine

The FAA has decided to stay [a controversial legal interpretation](#) surrounding in-person supervision of maintenance activities while the agency reviews its policies.

Laura Megan-Posch, the FAA's assistant chief counsel for regulations, informed leaders at the Aeronautical Repair Station Association (ARSA), General Aviation Manufacturers Association, and Savvy Aviation of the decision this week, cautioning, "This stay does not represent a conclusion on the contents of that interpretation." But the stay will remain in effect "until the agency issues new or supplemental guidance."

In the September 3 letter of interpretation, the FAA deemed that the use of "in person" in Part 43 maintenance forbids the use of remote supervision of aircraft maintenance: "The Office of the Chief Counsel finds that the phrase 'in person' explicitly requires physical presence. Virtual presence, through a live video feed or other technological means, cannot replace the physical presence of a supervising mechanic."

This generated significant opposition, with the maintenance community saying it means a supervising mechanic must watch every move of a non-licensed individual performing maintenance.

ARSA maintained that the interpretation "reversed years of well-established policy and contravened recognized legal precedent to require certificated individuals to be physically present while supervising others." ARSA and GAMA were among 16 industry organizations that signed onto a coalition letter requesting reconsideration. Savvy Aviation also had petitioned the FAA on the issue.

Editor: This article is from: <https://www.ainonline.com/aviation-news/air-transport/2024-10-17/faa-reverses-course-mx-supervision-interpretation>

Secretary Comments

-- Jeff Hanson

No minutes from the October meeting:

Editor: Jeff was out of town last meeting. Jeff has also stated that he is not running for Secretary in the next EAA Chapter 100 election.

Respectfully submitted,

Jeff Hanson

Chapter Secretary

Flying In Winter Weather: A Discussion On Temperature

-- American Flyers

By: Steven Daun, National Chief Pilot

Winter is here and with it comes significant variation in the weather. It is important to note that when we discuss "winter weather" we are not just speaking about it being cold outside. Winter weather encompasses many different topics. For this article, we are going to focus on temperature. Rather than looking at the temperature as just how cold it is outside, we need to consider the current temperature as well as the temperature range that comes before and after the current weather. Is it getting warmer or colder along our route of flight? Do we have a standard or close-to-standard temperature at our altitudes or do we have an inversion? If it rains or if there is moisture in the air, what conditions can we expect? Most importantly, what effect will the temperature have on my airplane and me?

How do we know if it is getting warmer or colder along our route of flight?

As with any flight, you should begin with a standard weather briefing from Flight Service. Yes, call Flight Service for your weather briefing. When you speak with a briefer they will not only review your route of flight and

weather with you, but they will also discuss and provide you some education based on their background and experience. This information is at times more important than the briefing and you will miss out on their knowledge if you try to self-brief the weather. Using Post-it notes or writing the en-route temperatures directly on your chart could be an easy way to compare what is forecasted versus actual. Once en route you should remain in contact with Flight Service for weather and temperature updates along your route of flight.

How do we determine standard temperature along our route of flight?

In aviation, standard temperature is defined as 15 °C (59 °F) at sea level. Standard temperature decreases by 2 °C for every 1,000 feet of altitude. Based on the weather briefing you receive, you should calculate what your standard temperature should be at key points in your flight. Then compare your estimate to the actual. This will enable you to identify significant changes in the weather before they become a surprise. You should also use this time to determine if there are any temperature inversions along your route. Yes, sometimes we do have to climb to get to warmer temperatures.

What is the effect of temperature when there is moisture in the air?

There are several effects. The most simple and easiest to understand is that water freezes at 32 °F regardless of whether it is in or on your aircraft.

While it may seem obvious, it is still important to discuss the effects of air moisture as they pertain to temperature. Having a clear understanding of this interaction will enable you to determine things such as icing susceptibility, hail, freezing rain, visibility, and runway conditions at airports along your route and at your destination. Once you have gone through this process, ideally you should develop contingency plans to deal with each situation.

If the air moisture remains constant and the temperature drops, the relative humidity will increase. Likewise, if the moisture remains constant and the temperature increases, your relative humidity will decrease. Why is all of this important? When air rises, it cools. At some

(Continued on page 4)

(Continued from page 3) - Flying in Winter Weather: A Discussion on Temperature

altitude, the air temperature will equal the dew point, which means that the air will be fully saturated. If the air mass continues to rise, condensation will occur. This is accompanied by a release of latent heat into the rising air, which results in slower cooling as the air mass continues to rise. This phenomenon is what is represented in the adiabatic lapse rate.

When we consider the stability of an air mass, we need to take into consideration the temperature and the temperature of the air surrounding the area. If the temperature at our current position is cooler than that of the surrounding air mass, then the air is denser and will sink. This means that we will have stable air resulting in a smooth ride for our flight. Conversely, if the temperature at our current position is warmer than that of the surrounding air mass, the air is less dense and will rise. As we know from our student pilot days, rising air is unstable air. We will have better visibility but a much bumpier ride. It is imperative that when flying with outside air temperatures lower than 32 °F, you understand the moisture level of the air that you are in as well as the air above and below your position.

What effect will temperature have on my airplane?

Oil – If we look at the Cessna 172R POH, it tells us that if we operate in temperatures below 12 °C (10 °F), we need to use 30 or 20W-30 oil. However, the POH also tells us that we can use 15W-50 or 20W-50 for all temperatures. Contrary to popular belief, the “W” does not stand for weight, the “W” stands for “winter.” This means that the oil has a specific maximum flow or viscosity at low temperatures. In other words, the lower the “W” number, the better performance we will get out of the oil in cold temperatures and when starting the engine in colder temperatures.

Fuel – 100LL or Avgas will freeze at -58 °C (-72 °F). While the majority of light GA aircraft and pilots will not fly in these conditions, some will fly an aircraft that uses 100LL and has a pressurization system. In this case, you should be aware of this. The concern is not necessarily the condition of fuel in your tanks but the fuel in your fuel lines. You may be asking why we are discuss-

ing freezing fuel if we are not going to be flying anywhere near these conditions. It is because there are many aircraft in use today with diesel engines. These aircraft use jet fuel that can begin to freeze at -43 °C (-45 °F). Regardless of which type of aircraft you fly, you want to ensure that any and all water has been removed from the fuel tanks during your preflight inspection. Remember, it is highly unlikely that your fuel will freeze, but if there is water in your fuel, it could begin to freeze at 0 °C (32 °F).

Engine – Many aircraft will have specific instructions on starting an aircraft during low temperatures. The POH for the Cessna 172R, as an example, states that if temperatures are below -6 °C (20 °F), it is recommended that an external engine preheater and external power source are used. This is done to reduce wear on the electrical system and to ensure that any congealed oil in the oil cooler will thaw prior to engine start. Many aircraft like the Cessna 172R have available winterization kits. You should find out if the aircraft that you are flying has a winterization kit installed, so you will understand what the effects of that kit are on your engine. If you do have a winterization kit installed on your aircraft, you also need to understand the limitations. An example would be taking off in the Northeast when it is 5 °F with a winterization kit installed. Your destination is Florida where it is 80 °F. The limitation on the winterization kit says that it should not be used at temperatures over 20 °F. Do you remove it before your flight? Do you remove it en route? You can speak with your mechanic to make the proper decision. If you are flying an aircraft that has a carburetor, you will need to be alert to the susceptibility of carburetor ice. This goes hand in hand with the earlier discussion in this column on the moisture content of the air that you are flying through.

Electrical wires and plastic connectors – Cold weather can also affect your electrical wires and plastic connectors. When pre-flying an aircraft in extremely cold conditions, you should take care not to flex or move any wires or connectors. Extremely cold temperatures can make these brittle and weak to the point where they can easily break.

(Continued on page 5)

(Continued from page 4) - *Flying in Winter Weather: A Discussion on Temperature*

What effect will temperature have on me?

The last major consideration is the effect of temperature on you and your passengers. Are you prepared to deal with a scenario in which your cabin heater stops working? It may be a good idea to have a spare sweater or two onboard for each person, especially if there is a good distance between airports. Does the heater in your aircraft use fuel and a combustion chamber? If so, do you have a carbon monoxide detector in your aircraft? What actions will you take if you detect carbon monoxide in your cabin?

When body temperature falls below 97.7°F we run the risk of entering the early stages of hypothermia. The first sign that hypothermia is setting in is that we begin to shiver. Your heart rate and blood pressure will begin to rise. If ignored, your mental judgment and decision-making ability will become affected. You will then enter the moderate stages of hypothermia when the shaking becomes more violent and your motor skills start to slow down. This is when fingernails and lips begin to turn blue (do not mix this up with carbon monoxide poisoning). If your body temperature falls below 86°F, you risk falling into the severe stages of hypothermia where you could become incapacitated and even at risk for death. If you are aware of the signs and you take the appropriate steps necessary to prepare contingency plans, you will be fine.

Some of the best flying in the world is during winter-time. From bare trees to snow-covered mountains, the views are endless and intoxicating. When fully prepared, winter flying is quite safe and pleasurable for both pilots and passengers. However, flying in very cold weather becomes dangerous when you are not aware of your surroundings (meteorologically and geographically) and you do not have ample contingency plans established.

Editor: The above article is from American Flyers: <https://americanflyers.com/flying-in-winter-weather-a-discussion-on-temperature/>

Newsletter Editor

The fall weather this year has been very nice to folks who are flying. Sunny and warm days with an occasional windy day. What a nice fall!

However, it looks like that is changing. The forecast seems to have a lot of rain going forward. Rain which will turn to frozen stuff. I think they call that snow in the winter time!

This means that if you are going to fly, whether locally or on a cross country, you need to really understand the current and forecast weather. None of us wants to get caught in freezing rain, low visibility in VFR, or icing in the clouds (IFR). If you are doing your own weather briefing, make sure you understand what it is you are looking at. If in doubt, call FSS, (800) 432-4716. You can brief in Foreflight for icing conditions and at <https://www.1800wxbrief.com/Website/weatherGraphics?conus=0>.

1800wxbrief.com is a Flight Service website that is free. If you are a member of AOPA, you can use <https://aopa.org/weather/> for current weather and forecasts. Always obtain a weather briefing before each flight. That way you reduce the risk of in flight weather surprises. Your safety depends on it.

Another topic is to think about your proficiency. The FARs are just the minimums. You can increase your safety margin by participating in the Wings program. I recently completed a 3 hour flight with a CFII and now have a Wings Certificate of Proficiency at the Master Phase 8 level. There are three reasons I do this. Number one is to insure I am proficient in my flying. Number two is as an aging pilot, I am now 83 soon to be 84 years old, I want another CFI to observe my flying skills. And number three, I get a reduction in my annual insurance for my aircraft.

See you around the patch.

I need more articles from the membership. Please send your articles and pictures to alhowar@attglobal.net.

Fly-in Event Websites

The following are websites to use to look for fly-in activities:

<https://www.dot.state.mn.us/aero/events/flyins-and-events.html>

<https://wisconsindot.gov/Pages/doing-bus/aeronautics/trng-evnts/flyins.aspx>

<http://www.moonlightflight.com/>

<https://www.socialflight.com/search.php>

If you know of any others, please send the link to me at:

alhowar@attglobal.net



EAA Young Eagles Pilot Requirements

-- EAA

Editor: This is from the EAA Young Eagles Pilot Guidelines brochure: **Pilot Requirements**

The Young Eagles pilot requirements are basic, but **MUST** be followed.

- ◆ Be a current EAA® member and hold an appropriate airman's certificate (sport pilot or greater)
- ◆ Possess a current medical certificate (if applicable)
- ◆ Be current to carry passengers in the aircraft you plan to use
- ◆ Have a current flight review
- ◆ Complete the Young Eagles registration form before the flight, including parent or legal guardian signature, and pilot signature
- ◆ Conduct flights in an aircraft that is in airworthy condition
- ◆ Have aircraft passenger liability insurance for the aircraft used (owned, rented, or borrowed)
- ◆ Adhere to all applicable Federal Air Rules (FARs)
- ◆ Complete both the online training and basic background check as a part of EAA's Youth Protection Policy. For more information, visit EAA.org/YouthProtection.

Editor: Make sure you are current to fly Young Eagles at the EAA Chapter 100 Young Eagles events.

FL 600

