



# EAA Chapter 100 February 2024 Newsletter

<http://eaa100.org>

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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.

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Reader submissions and comments are strongly encouraged.

## February Meeting

– Dwayne Hora

February 9th meeting will be held at KTOB, no host.

Agenda to be generic standard:

- Pledge of Allegiance
- Welcome Visitors
- Reports | As available
- Secretary's Report
- Treasurer's Report
- Committee Reports
  - Hangar
  - Breakfast
- Flight Advisor/ Tech Counselor
- Old Business
- Young Eagles
- New Business
- Builder reports
- Adjourn

The next EAA Chapter 100 meeting is at 7:00 pm on Friday evening, February 9, 2024.

The meeting location is at the Dodge Center Airport Admin Building (KTOB)



Thank you,  
Dwayne Hora  
EAA Chapter 100  
President

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## Winter Flying Tips

-- FAASafety.gov

### En Route

### Weather

Weather conditions vary considerably in cold climates. In the more remote sections of the world weather reporting stations are generally few and far

(Continued on page 2)

# 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](http://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

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(Continued from page 1) - Winter Flying Tips

between and reliance must be placed on pilot reports. However, don't be lured into adverse weather by a good pilot report. Winter weather is often very changeable; one pilot may give a good report and five or ten minutes later VFR may not be possible. Remember, mountain flying and bad weather don't mix. Set personal limits and stick to them. Snow showers are, of course, quite prevalent in colder climates. When penetration is made of a snow shower, the pilot may suddenly find himself without visibility and in IFR conditions. Snow showers will often start with light snow and build. Another hazard which has claimed as its victims some very competent pilots is the "whiteout." This condition is one where within the pilot's visibility range there are no contrasting ground features. Obviously the smaller the visibility range the more chance there is of a whiteout; however, whiteout can occur in good visibility conditions. A whiteout condition calls for an immediate shift to instrument flight. The pilot should be prepared for this both from the standpoint of training and aircraft equipment.

## Carburetor Ice

Three categories of carburetor ice are:

**Impact ice** - Formed by impact of moist air at temperatures between 15 and 32 degrees F on air-scoops, throttle plates, heat valves, etc. Usually forms when visible moisture such as rain, snow, sleet, or clouds are present. Most rapid accumulation can be anticipated at 25 degrees F.

**Fuel ice** - Forms at and downstream of the point where fuel is introduced, and occurs when the moisture content of the air freezes as a result of the cooling caused by vaporization. It generally occurs between 40 and 80 degrees F, but may occur at even higher temperatures. It can occur whenever the relative humidity is more than 50 percent.

**Throttle ice** - Forms at or near a partly closed throttle valve. The water vapor in the induction air condenses and freezes due to the venturi effect cooling as the air passes the throttle valve. Since

(Continued on page 3)

## Secretary Comments

-- Jeff Hanson

Nothing to report this month for meeting minutes as the January meeting was canceled due to weather.

Respectfully submitted,

Jeff Hanson

Chapter Secretary

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(Continued from page 2) - Winter Flying Tips

the temperature drop is usually around 5 degrees F, the best temperatures for forming throttle ice would be 32 to 37 degrees F although a combination of fuel and throttle ice could occur at higher ambient temperatures.

In general, carburetor ice will form in temperatures between 32 and 50 degrees F when the relative humidity is 50 percent or more. If visible moisture is present, it will form at temperatures between 15 and 32 degrees F. A carburetor air temperature (CAT) gauge is extremely helpful to keep the temperatures within the carburetor in the proper range. Partial carburetor heat is not recommended if a CAT gauge is not installed. Partial throttle (cruise or letdown) is the most critical time for carburetor ice. The recommended practice is to apply carburetor heat before reducing power and to use partial power during letdown to prevent icing and overcooling the engine.

To prevent carb ice:

Use carb heat ground check

Use heat in the icing range

Use heat on approach and descent

Warning signs of carb ice include:

Loss of rpm (fixed pitch)

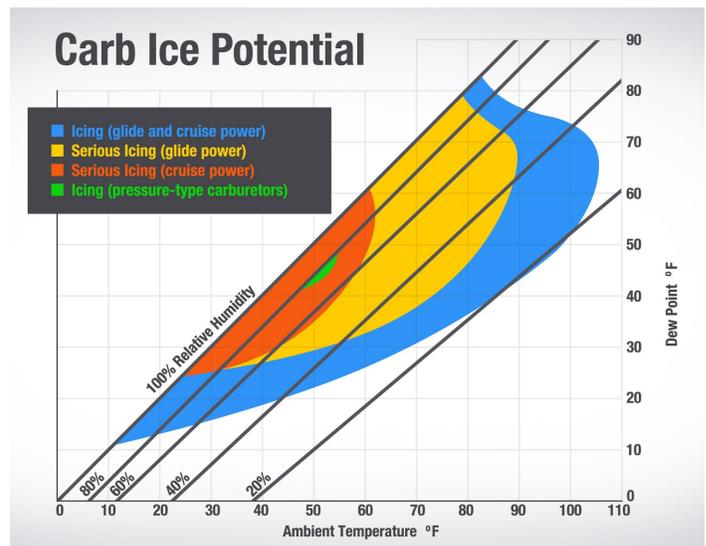
Drop in manifold pressure (constant speed);

rough running

Pilot response to warning signs should be:

Apply full carb heat immediately (may run rough initially for short time while ice melts)

In the chart below, the curves encompass conditions known to be favorable for carburetor icing. The severity of this problem varies with different types, but these curves are a guide for the typical light aircraft. Light icing over a prolonged period may become serious. When you receive a weather briefing, note the temperature and dewpoint and consult this chart.



**Editor:** The full article is available at URL: <https://www.faa.gov/files/events/GL/GL09/2018/GL0985130/P-8740-24.pdf>

The icing chart above is from [Bold Method](#). I could not copy the icing chart from the FAA pdf.

Note: Seems a little strange to be publishing winter flying safety when we have been having all this warm weather. Beware, winter is not over!

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## Spring Flying

-- General Aviation News

How to get your airplane ready for spring flying

By Ben Visser · March 11, 2020 ·

(Continued on page 4)

(Continued from page 3) - Spring Flying

Up here in the Midwest, it looks like spring may be here.



There's a few things you need to do before you pull your plane out of the hangar for spring flying.

With the return of warm weather, many pilots will be thinking of getting their airplanes out of the hangar and going for a \$100 hamburger or to their first fly-in of the season. This brings up the question: What should a pilot do before flying an aircraft that has been sitting for a while?

Looking at it from a fuels and lubricants angle, the most important item is the crankcase oil. Crankcase oil should be changed *before* you put the plane away for the winter.

And while crankcase oil does not wear out, it becomes contaminated with very small particles of dirt and metal, as well as with unburned fuel and the acid that can form while the plane is sitting.

Whenever an engine is started, raw fuel is pumped into the inlet of the engine in order to have a rich enough mixture to start. Some of this raw fuel gets into the cylinders and, on start up, is not completely burned. This

is usually on the cylinder walls and it subsequently ends up in the crankcase, where the sulphur in the fuel combines with the moisture from condensate to form acid.

Over time, this acid will attack the cam and lifters and other wear surfaces to form rust. This rust on startup will act as a rubbing compound to start wear on critical surfaces.

That's why changing the oil before winter storage is critical. Coating all of the engine parts with fresh clean oil is the most important maintenance item before you put your plane away for the winter.

So if you changed the oil before putting your plane in storage, it should be good to go — maybe.

During those months in storage, your engine draws in warm moist air. Then at night, it will cool down and moisture will drop out. This means there will be moisture in the oil when you start it in the spring.

When you start flying your aircraft again in the spring, your engine oil temperature needs to be in the 180° F range to ensure that you boil off the water in the oil during flight. As oil passes through an engine, it will normally pick up 50° F at the warmest spots. You need to take steps to ensure your oil temperatures hits the 180° mark during cruise conditions.

An exception to these suggestions is if you filled your crankcase with a preservative oil before storage for the winter. Preservative oil is based on straight mineral oil, so I would recommend changing to an ashless dispersant or AD oil for your more active flying periods.

### What about the fuel system?

There is not too much that needs to be done to the fuel system prior to the start of your spring flying.

If your aircraft was stored in a hangar, there may be a small amount of condensate in the tanks. If your aircraft was tied down out in the elements, there is a greater chance of water in the fuel tanks.

If you sump your tanks a few times and rock the plane in between, you should get most of the water out.

An exception here is if you have a bladder tank in which

(Continued on page 5)

## Newsletter Editor

-- Art Howard

(Continued from page 4) - Spring Flying

Yes, I know, this Newsletter is not at the normal time. At least I got it out before the next Chapter meeting!

I have been putting in long days at the Indiantown Marina working on Samana, my Challenger 35 Ketch. Three weeks spent in the work yard cleaning and prepping the decks. Then a coat of paint applied using a brush. That certainly improved the looks.

We launched last Monday, February 5, in the afternoon. Now there is work on a fresh battery bank installation and then on to the electronics. Another busy week. If all goes well, should be able to get underway next week. However, it is a boat and new things can crop up easily.

In the same ways, just like an airplane, new problems can present themselves. All is flying well, equipment is working, and then issues crop up. The difference is maintenance on a boat can be owner performed. Airplanes, depending on if you built it or purchased it. If it is a certified factory build aircraft, you need an A&P (Aircraft Maintenance Technician for Aircraft and Power Plant) or AI (A&P with an Inspection Authorization) to do the work. Yes, you can work under the supervision of an A&P or AI under Part 91. On the boat, I can do the work and inspections myself. However, one should know what they are doing to ensure the boat is safe to take out on the water! For an aircraft, that final inspection is by the AI for the annual inspection. No annual inspection required for a boat. Good prudence implies one should be doing annual preventive maintenance on a boat. Hum, same thing for an airplane whether home-built or factory built.

Anyway, if all goes well the rest of this week, the boat may get underway next week. Stay tuned for further boating adventures from your EAA Newsletter Editor.

See you around the patch.

I need more articles from the membership. Please send your articles and pictures to [alhowar@attglobal.net](mailto:alhowar@attglobal.net).

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the bottom has rippled. Then you may need to take some extra measures to ensure that all of the water is removed.

In some tests conducted years ago, they found more than a quart of water could be trapped in those ripples that would not drain out with normal sumping.

The 100LL in your tank should still be good and on spec after the winter. It will usually store for over a year without forming gum. If you are using mogas, it should be good for at least six months. But if you have fuel containing ethanol in your plane, you are on your own.

### Grease is the word

The other thing to check is grease.

Everything should be fine here, especially if your aircraft was stored inside.

If your aircraft is tied down out in the elements, you need to carefully check all control surfaces and their movement points. Rain and snow can get into them and freeze. This could cause binding or improper drag, so check and lubricate as necessary.

If your plane is in the elements, water also can enter the wheel bearings and lead to problems. Carefully inspect and re-pack the wheel bearings if needed.

There are a lot of other things on the airframe that need to be checked, like baffles and seals. So, take your time and do a complete inspection before heading out.

#### ABOUT BEN VISSER

Ben Visser is an aviation fuels and lubricants expert who spent 33 years with Shell Oil. He has been a private pilot since 1985.



## 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](mailto:alhowar@attglobal.net)

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“Courage is the price that Life exacts for granting peace. The soul that knows it not, knows no release From little things: Knows not the livid loneliness of fear, Nor mountain heights where bitter joy can hear The sound of wings.”

*Amelia Earhart, written circa 1928. Published in Amelia, My Courageous Sister: Biography of Amelia Earhart, 1987.*

Editor: From URL: <https://www.aviationquotations.com/poetry.html>

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## 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](http://EAA.org/YouthProtection).

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

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