



EAA 485 DEC. 2024

HOME OF THE "PANHANDLE PELICANS"

Chapter 485 Holiday Dinner

Saturday, Dec. 14th

El Patron Mexican Grill and Cantina
830 N. Navy Blvd, Pensacola

5:30 Drinks at Bar / 6:00 Dinner in large
reserved room

Pay as you go; order off menu.
Family and Friends Invited!

LET'S ENJOY SOME COMARADERIE AND
CELEBRATE
ANOTHER SAFE, SUCCESSFUL YEAR!

PLEASE TEXT RALPH, **847-736-4603**, IF YOU ARE
COMING AND HOW MANY. THANKS!

YEAR-END RAMBLINGS FROM YOUR PRESIDENT

You can all be proud of Chapter 485's accomplishments during 2024! We will attempt to recognize some of the volunteers involved this year at the January 11, 2025, chapter meeting. Our paid-up membership increased slightly. Total membership is 124. New potential pilots, active pilots, military pilots, and aircraft homebuilders joined our ranks. We continue to offer free local membership to active-duty military. And we honor fifteen folks who have contributed in special ways or over a long period of time with honorary membership. The Thatcher chapter build project continues to move along. Several individual aircraft build projects are under way. We also set a new chapter record in 2024 by awarding five total learn-to-fly scholarships to teenagers. Two of these were EAA Ray Scholarships (see Craig Spoke's summary), and three were again generously provided by an anonymous chapter donor— \$57,600 total! As I write this, one recipient is now a private pilot already working on her instrument rating, and the other four are in progress. Past scholarship winners now hold Instrument and Commercial certificates, and at least two are working on becoming CFIs. In addition to those accomplishments, three successful Young Eagle rallies were held (90 kids flown), as well as our first "Flying Start" event (See Eric Goldman's summary). This is only a partial list of our 2024 activities and accomplishments! I couldn't be prouder.

CHAPTER HOLIDAY DINNER: See details in this newsletter.

Sometime during December, we plan to self-install a new HVAC unit in the clubhouse for a quieter, more comfortable environment. Both Roscoe Field management and EAA Young Eagle funds are helping with the cost. Also, we will do some needed clubhouse maintenance. Those of you who volunteered at the November meeting will be contacted when we get this organized.

Last December, I mentioned changes were upcoming at Roscoe Field. Several happened; several were delayed. The Pensacola Air Flight School Annex was delayed, but now looks to be in operation within the next two weeks. A spring Pancake Breakfast is again planned.

Late-breaking news: For those of you considering attending Air Venture July 21-27th, 2025, the UW-Oshkosh dorm room signups opened December 4th, 1PM CST. This is a very convenient, close, reasonable place to stay. These room reservations go fast! To reserve a room, follow this path: EAA.org>AirVenture>Plan Your Trip>Camping and Lodging>Lodging>Dormitories.

Merry Christmas and Happy New Year to all!

--Ralph



Click [here](#) for dormitory options for EAA AirVenture 2025.

Ray Scholarship

The past month has been fairly quiet for the Ray Scholars. **Sophia Almond** and **Samantha Watkins** continue to work on their flight training. Samantha is working towards her Instrument rating and Sophia towards her PPL.

The application for 2025 Ray Aviation Scholarship has been submitted. We are requesting 2 matching scholarships, and these are guaranteed to be awarded. The local application window will open January 1st and close February 15th. We will hold the interviews on the first weekend in March. This will allow the scholars to start training in late March to early April.

Girls in Aviation

The Girls in Aviation event at the Naval Air Station on November 16th went very well. **Samantha Watkins, Kaydee Macdonald, Sophia Almond, and Lily Bannon** were our ambassadors for our Chapter 485 table and did an excellent job.

These four young ladies were a great representation for Chapter 485. The event was a huge success with just under 300 registered girls and an estimated 500-700 people attending. Additionally, there were sixteen more young ladies who expressed interest in our chapter's 2025 Ray Aviation Scholarship.

-Craig Spoke

Drano's Holiday Hacks

(and Zenith update)

I have been working far too many days fussing around with fitting the plexiglass windshield, riveting the plexiglass to the doors, and fitting the plexiglass roof on my project. I can think of no way to make this overly interesting or informative so in the spirit of the holidays, I decided to give y'all a change of pace—I'm going to talk about a couple hacks. In modern, informal terms a hack basically means a technique for managing one's activities. The Internet is full of them. My hacks are for making or using nontraditional stuff on an aircraft building project. For instance, some months ago, you might remember I told you how I made a pitot tube out of an old shower chair leg as pictured below. I have not decided if I will use it, but it can be done.

The automobile industry is big on wire loom to cover and route electrical wiring bundles. The stuff is cheap and easy to use so I simply buy a bunch of it in different sizes and basically cover just about all my wiring. The black tubing you see below on the right is plastic loom on the firewall of my 750. In my experience with my RV6, if it gets brittle and breaks, it is cheap and easy to replace. It keeps everything orderly and in place.

I know a lot of builders do this but covering the sharp edge of the glare shield with a split piece of fuel hose is a perfect trim and "bumper". Pictured here on the left is just a three-inch piece to illustrate but it will go the length of the glare shield. The hose becomes both a clamp to hold the fabric in place on the deck and a trim to add a finishing, somewhat pedestrian, touch. Much cheaper than having it professionally woven on the edge or trying to glue carpet bias onto the edge.

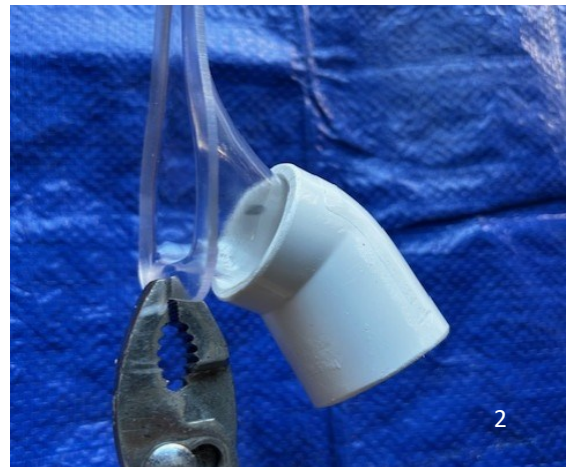


Drano's Holiday Hacks Continued

The Zenith 750 has some “hard” angles on the airframe, shapes that are geometrically stark. One of those hard edges is the top of the rudder. I decided to make a form fit, white pine rudder cap. In an ideal world, a builder would put a fiberglass cap on this structure during the build, but they don't make one for this rudder and the rudder was already built. I simply mount this into the top with long screws and nutserts. Oh, my plan is to paint it red. (1)



If you google PVC hacks, you will have a whole library of stuff you can do. Here is an idea from our own chapter member, Scott Miller. Use a PVC 45 or 90 degree fitting as an air duct on the inside/cockpit opening of a NACA duct. I did just a minimum of filing on the inside of the fitting—it simply snaps on and off and can be pointed where I want it. The duct is also easily capped off with a PVC pipe end plug. Fits perfectly. An air duct “eyeball” outlet is nice but is typically over a \$100 each. (2)



OK, you can have fun with hacks, too. Here is a picture of my gunsight sitting on my glare shield. Unfortunately, I have solved the gunsight problem before I have solved the issue of what gun to use and where to hang it. (3)

Some of the simplest ideas and hacks come out of the Pietenpol community, a community dedicated to the simplicity of flight. I once saw this in the front seat of a Pietenpol and decided to try to make one too. It is a turn coordinator. I think I will stay with the EFIS I plan to install. (4)



Drano's Holiday Hacks Continued

So to finish off this article, I will leave you with what very well may be a “Ripley’s Believe It or Not” OR my *finest* hack achievement. It is an ordinary, Feather Brand, canoe oar modified for an everyday, practical aviation application... (left)

If you cut a slot in it for the nose wheel strut, add some rubber bumpers, and put a couple cleats on it that fit over the nose wheel fork—it becomes a nose wheel steering bar. It works great. I guess if you landed in the water and the plane stayed afloat, you could also use it to attempt rowing to shore but that will remain an undetermined aspect for now. (right)

In the meantime, have a great Christmas Holiday and Happy New Year. Celebrate with family and friends, and stay Vne minus one!

-Drano



COLD WEATHER OPERATIONS

As residents of the Sunshine State, the majority of us won't be seeing snow this year. Still, whether you're flying into colder territory to visit family for the holidays or simply enduring a sudden drop in temperature in here North Florida, it's important to review safety measures for flying in snow and cold weather.

Importance to Members

The challenges of winter flying can be summed up in four words: cold, ice, snow, and wind. Every day's a weather day after the first snowfalls of winter arrive in colder regions. Now a whole set of conditions, accompanied by a cryptic stream of abbreviations to describe them, shows up in notams, regular and special surface weather reports, automatic terminal information service broadcasts, and verbally from the tower. After the season's first light dustings of snow give way to accumulating storms and snow-removal operations, pilots need to inform themselves continually about runway, taxiway, and ramp conditions. The information in this subject report will provide tips for successfully meeting the challenges of winter weather.

As always, feel free to call AOPA's Pilot Information Center at 800/USA-AOPA with questions.

Overview

This subject report provides information on winterizing your aircraft and operational tips for flying in cold weather. In addition, a large section is devoted to aircraft icing – everything from de-icing systems to taxiing on an icy runway to avoiding ice enroute. Many articles on the various aspects of winter flying are included in the AOPA Archives section for your review.

Winterizing Your Aircraft

"It's getting really cold in my area now; is there a certain kind of oil that I should use in the wintertime?"

"What is the proper way to heat the engine on my airplane? The temperature outside is positively frigid here now."

"What should I use to get the ice off of my airplane's wings? We've had icing conditions for more than a month here."

These are typical questions heard by the aviation technical specialists in AOPA's Pilot Information Center during the winter months. When the weather turns cold across much of the United States, flying takes on a whole different set of concerns for pilots. Following is a list of important things to consider when entering the winter months. Keep in mind that many of the procedures listed are either better done or required to be done by a certified aircraft mechanic.

COLD WEATHER OPERATIONS CONTINUED

- **Cover or Clear:** If your aircraft isn't hangared, make sure the wings and cowling are covered. Ice builds on the wings, resulting in inefficient airflow and longer takeoff runs. If you don't have covers for the wings, use a hand broom to brush off snow and ice. Cover the pitot tube and vents.
- **Control Cables:** Because of contraction and expansion caused by temperature changes, control cables should be properly adjusted to compensate for those changes. Your airframe and powerplant mechanic should check the tension and make any adjustments needed.
- **Park toward the Sun:** Park in the direction that the sun rises in the morning; it will help melt the snow and ice on the windshield.
- **Preheat:** For those who normally base their airplanes indoors, here's an inexpensive way to preheat. Wrap the cowling in heavy blankets, and place two or more mechanic's drop lights in the forward openings or stuff them into the open cowl flaps. A pair of 75-watt bulbs will keep the engine compartment 20 to 40 degrees F above ambient temperature, for very little money. Just be sure that the light isn't touching anything that might catch fire and keep the area near the lights free of fuel and oil. Prime at least three times before starting the engine (check your aircraft's manual). Have a carbon monoxide detector, especially if you have a tightly sealed airplane.
- **Wheelpants:** Take off the airplane's wheelpants (if applicable). Ice and slush can collect under the pants and cause the wheels to lock up when you land.
- **Engine Breather Tube:** One of the hazards of winter operation is that the engine breather tube may freeze shut. This tube provides a vent for normal crankcase pressures that occur during engine operation. Simply clear the breather tube before and after each flight.
- **Oil:** Don't forget to change your oil! For oil weights, reference your POH or provided aircraft manual. Winter operations usually call for less viscous oil so that oil circulates more quickly after engine start. You might also benefit from using an oil analysis kit.
- **Retime Magnetos:** Ignition timing can fall out of specifications after a few months use. Improperly timed magnetos make starting harder and can lead to engine damage.
- **Inspect cabin heat system:** In aircraft equipped with heat exchangers that surround mufflers or other parts of the exhaust system, there is a danger of carbon monoxide seeping into the cabin. Remove heater shrouds, check for cracks in the exhaust system and patch or replace questionable parts. Defective combustion heaters in twin-engine aircraft also can leak carbon monoxide into the cabin.
- **Install heat retention devices:** If recommended by the aircraft manufacturer, install baffles and oil cooler covers when temperatures drop to specified levels. Once installed, remember to observe temperature limitations for the devices. Some manufacturers allow temporary operations with the devices installed in warm weather.

COLD WEATHER OPERATIONS CONTINUED

- **Check insulation:** Inspect insulation of all oil lines and hoses. Also check insulation of tanks in a dry sump system (external reservoir).
- **Inspect hoses, hose clamps, hydraulic fittings, and seals:** Check all hose lines, flexible tubing and seals for deterioration. Non-airframe and powerplant mechanics can replace prefabricated fuel lines and any hose connection except for hydraulic connections. Retorque all damp and fittings to cold weather specifications.
- **Add air to tires and struts:** Cold temperatures cause pressure in tires and struts to decrease. If the seal in the oleo strut is deteriorated, the strut will not hold air pressure. The seal must be replaced by a mechanic.
- **Test, clean and charge battery:** Use a hydrometer to determine the battery's specific gravity, which is a measure of its state of charge. A fully charged battery should have a specific gravity of about 1.265 and can stand temperatures as low as -60 degrees F without danger of freezing. A healthy battery should need charging only after several weeks of disuse. Most automotive battery chargers can be used to charge an aircraft battery. Use low amperage over a long period of time. During the winter, perform the hydrometer test once a month and keep an eye on fluid levels. If the battery is two or more years old, it will probably need to be replaced.
- **Inspect deicing equipment:** Cycle the boot system once a week to prevent stiffening of the rubber, which can shorten boot life. Check deicing boots for cracks and cuts. BFGoodrich, which makes rubber boot deicing systems, recommends semiannual applications of a compound called Agemaster Number 1 to boots to slow the aging process of the rubber. Regular applications of a Goodrich product called Icxex will enhance ice shedding by reducing the ability of ice to adhere to the boots
- **Clothe Carefully:** Dress warmly; pack a snack bar for fuel; keep a well-stocked survival equipment kit.

Many special aircraft operating procedures should be observed when flying in cold conditions. These procedures will help to increase safety, reliability, performance, and best of all, help decrease engine wear.

- **Block the Skis:** If you're flying on skis, put something such as a plastic garbage bag or blocks between the skis and the snow when the airplane is parked.
- **Warming Up:** Warm up the engine at 1,000 to 1,200 rpm unless it's necessary to reduce rpm to keep from exceeding the oil pressure redline. As the oil warms up, the rpm can be increased. Allow plenty of time for the engine to warm up. Don't consider taking off until the oil temperature has stabilized at least at the bottom of the green. Don't try to expedite the warming of the engine by closing the cowl flaps, either; airflow over the cylinders during ground operation is not sufficient that way, and you'll only end up with lukewarm oil and hot heads.

COLD WEATHER OPERATIONS CONTINUED

- **Icing:** Icing is a large topic, and will be discussed later in this subject report, but major operational considerations will be listed here. When taxiing be aware of patches of ice. When flying enroute avoid icing conditions by all means, and, if you pick up ice unexpectedly, exit icing conditions as soon as possible.
- **Carb Heat:** Some carbureted engines, like the O-470 in the Cessna 180 and 182, run markedly better if partial carburetor heat is applied during cruise flight in cold weather. A carburetor temperature gauge is necessary to practice this art, which consists of adding carb heat to maintain a 10-degree C. /50-degree F. carb throat temperature.
- **Brake Easy:** Planning should include minimum brake usage when landing and when taxiing through snow since warm brakes melt any snow upon stopping. Then the snow re-freezes, locking the plane in position.
- **Weather:** Always get a complete weather briefing and perhaps an update before your proposed flight. Sounds like a no-brainer, but many pilots find themselves surprised by weather conditions they were not expecting. If you have trouble interpreting a text-based report, don't hesitate to call a flight briefer at 800/WX-BRIEF (800/992-7433).
- **File a Flight Plan:** This is one of the most reliable, easiest, and cheapest means of insurance any time of year. Just file a flight plan when you check the weather.
- **Fuel:** Bring lots of it – more fuel equals more options. Be it climbing above clouds, or steering around a storm, you'll be glad to have it.
- **Cell:** Bring a cell phone.

Cross Wind: A competent pilot will know and adjust his or her cross wind approach to final to the current conditions. A commonly used rule of thumb is cut your max crosswind component in half for a snowy runway, and cut it by 75% for ice landings. This will help prevent the aircraft from weathervaning into the wind.

Icing

We will start this section by discussing the different types of de-ice systems available. TKS (aka the weeping wing) works by secreting a controlled amount of de-ice fluid on different parts of the aircraft. Heated boots are typically used by larger aircraft and use engine bleed air or electricity to heat parts of the airframe to melt ice. Finally, the pneumatic boots use engine bleed air to inflate bladders on various aircraft surfaces, thereby breaking off the ice. All of these systems serve a similar purpose – to keep the airframe ice-free – but each one does it differently. Some icing systems are certified for Flight into Known Icing (FIKI) while others are not.

A pilot should also be aware that there are two different types of icing – rime and clear. Rime icing is characterized by small super cooled water droplets and develops as a thin white cover on leading edges.

COLD WEATHER OPERATIONS CONTINUED

Clear ice, as the name implies, is clear. The super cooled droplets of clear icing are larger and typically found in cumulus clouds. Keep in mind that these two icing types can mix to form what we call “mixed icing.”

The bottom line on icing is don't fly into known icing conditions, even if your aircraft is certified for it. There have been cases of aircraft that are certified for FIKI that crashed when icing exceeded the capability of their system. In-flight icing is an extreme circumstance that must be dealt with quickly in any aircraft, small or large. At the FIRST sign of icing descend to an altitude with an above freezing air temperature or expedite a 180-degree turn. If icing is serious, or if you are unsure of your ability to properly handle the situation, contact ATC immediately. They can provide you with vectors and altitude changes.

When taxiing, look out for ice. Check the brakes before you do your run-up to be sure you can keep the aircraft from moving. Attempting to perform a run-up on ice can result in sliding out of control. Additionally, be sure to hold proper aileron deflection throughout your taxi. This will help prevent the tendency for your aircraft to weathervane into the wind.

The following is a list of precautions to help make your icy landing a safe one.

- If you encounter icing on approach to landing start by turning off the autopilot. Autopilots can mask abnormal control feel and prevent you from detecting the onset of a stall or handling problem.
- Make sure all your ice-protection equipment is on. If you have deice boots, inflate them at the final approach fix (instrument approach) or key position (VFR approach), and then again on final — if ice is still building.
- Avoid abrupt control movements. Make small pitch corrections and keep your bank angles very shallow. This gives you a greater margin against the stall. Remember, iced-up airplanes stall at higher-than-published stall speeds.
- Fly the approach at a higher-than-normal airspeed.
- Don't extend flaps. Extending flaps can allow ice to form aft of the leading edges and blanket the airflow over the horizontal stabilizer or stabilator.
- Be prepared for a stall or abrupt loss of lift. A conventional wing stall calls for adding power and lowering the nose.

A tailplane stall, however, or stall of the elevator or stabilator, calls for a completely different recovery procedure. Most often preceded by a lightening of pitch feel, pitch oscillations, or an uncommanded lowering of the nose, tailplane stalls require that you pull aft on the control yoke and reduce power. That's because horizontal stabilizers and stabilators generate negative lifts, which acts in a direction opposite to the wings' lift. High power settings, high airspeeds, and extended flaps all increase a tailplane's angle of attack. Raising the nose lowers the tailplane angle of attack and breaks the stall.

EAA and Local Chapter Sites

[EAA 485](#)

[EAA HDQTRS](#)

[Interesting Links](#)

[Blue Angel 360 Way cool](#)

[Making the First Airbus 220 Time Lapse](#)

[Jetman Unleashed in Dubai](#)

[Boeing 737 Time Lapse Build](#)

[F-18 Low Level](#)

[High Speed Carrier Maneuvering](#)

[Miscellaneous](#)

[1800wxbrief.com](#)

[FAA Notams](#)

[Barnstormers](#)

[Skyvector.com](#) Flight Planning, Charts

[AirNav.com](#) Airport info, Fuel Prices

[EAA 1265](#)

[EAA 108](#)

2024 Officers and Committee Chairmen

President: [Ralph Moser](#)
(847) 736-4603

Vice President: [Mark Rogers](#)
Tech Counselor (251) 228-0356

Flight Advisor:
Secretary: [Jacob Abston](#)
(251)424-5004

Treasurer/Membership: [Scott Swanson](#)
(309)267-9710
711 Marlinspike Dr.
Pensacola, FL 32507

Ray Scholarship Coordinator: [Craig Spoke](#)
(251) 550-5795

Young Eagles Coordinator: [Eric Goldman](#)
(317) 910-2513

Webmaster: [Doug Francisco](#)
(850) 453-5501

Normally meetings will be held at [Roscoe Field Airport \(82J\) \(Uni 122.8\)](#) on the **Second Saturday of each month at 10:00 AM unless otherwise posted. If flying in, check NAS Pensacola (KNPA) NOTAMS for possible TFRs and the Roscoe Field Airport website under the Arrivals tab for important arrival and departure information.**

Driving: From Hwy 98 go past the main airport entrance and take the next left. Go thru the gate and make a left on the gravel road. Make a right past the T hangars you'll see our building down on the left side. Anyone interested in sharing general aviation, aircraft building, maintaining and restoring is welcome.

For more info contact:

[Ralph Moser](#) (847) 736-4603



Upcoming Events

(CHAPTER EVENTS IN CAPS):

December 14th, HOLIDAY SOCIAL

January 11, MONTHLY CHAPTER MEET-INGS + PNS Tracon Tour

February 8, VMC/IMC Meeting, then Museum of Naval Aviation/Flight Academy Tour/ Lunch

March 8, MONTHLY CHAPTER MEET-INGS + Paradigm Parachutes Factory Tour

April 1-7, Sun'nFun, Lakeland, FL (LAL)

April 19th, SPRING YOUNG EAGLES RALLY (Tentative)

*Santa's
Pre-
Christmas
flight
check:*

Santa Claus, like all pilots, gets regular visits from the Federal Aviation Administration, and the FAA examiner arrived last week for the pre-Christmas flight check.

In preparation, Santa had the elves wash the sled and bathe all the reindeer. Santa got his logbook out and made sure all his paperwork was in order. He knew they would examine all his equipment and truly put Santa's flying skills to the test..

The examiner walked slowly around the sled. He checked the reindeer harnesses, the landing gear, and Rudolph's nose. He painstakingly reviewed Santa's weight and balance calculations for the sled's enormous payload.

Finally, they were ready for the checkride. Santa got in and fastened his seatbelt and shoulder harness and checked the compass. Then the examiner hopped in carrying, to Santa's surprise, a shotgun.

"What's that for?!?" asked Santa incredulously.

The examiner winked and said, "I'm not supposed to tell you this ahead of time," as he leaned over to whisper in Santa's ear, "but you're gonna lose an engine on takeoff."