



Carb Heat

Hot Air and Flying Rumours
EAA 245 NEWSLETTER Vol 36 No. 02

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Next Meeting:

National Aviation Museum

Thursday February 16th at 8:00 PM

“Night Moves”

Hosted by Curtis Hillier

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President's Page

This seems to be one of the mildest winters I have experienced in my short 20 years in Ottawa, and hopefully a harbinger of an early spring, and return to flying activities. I have yet to enjoy a single day skating on the Rideau canal.

Winter Operations advisories

As noted last month, our un-seasonably warm winter weather has made operations on the field challenging. I received a thoughtful email from Barney de Schneider; who suggested that the culprit may be someone else on the field. Careful examination of the track width indicated a commercial size truck; possibly from elsewhere on the field, or associated with some of the ongoing construction work. If you notice anyone creating a problem, try and note the vehicle identification and report it to the airport management.

Finally, it appears that my comments may have been misinterpreted as being aimed at specific individuals; that was never the intent; and if I have inadvertently offended anyone, please accept my apologies.

Maurice Prud'homme's Annual Ski Fly-in: Saturday February 25th

Saturday Feb 25th marks Maurice Prud'homme's annual ski Fly-In / Drive-In held on the Ottawa River 8 Km NW of Aylmer on the Quebec side; near the VOR and across from Pinhey's point. Hopefully we will see a return to good winter flying conditions for this great event. **Contact Maurice at 819-682-5273 for latest conditions.** Maurice's chilli is famous, drop by and give it a try; I can vouch for the unmatched hospitality you will enjoy. **GPS Coordinates: 45° 26' 57" N; 75° 55' 48" W.** Communications 122.75 monitored. **Land at your own risk.**

Membership Renewals: March deadline approaches

John Montgomery, our membership secretary reminds us that we are approaching our March meeting deadline for membership renewal. As usual please check the information indicated in your renewal notice for accuracy, and include your EAA expiration date, and check the accuracy of your email address and other contact information.

January meeting summary:

Bernie Lecuyer provided a very well attended, and received overview of aircraft painting and fabric covering processes. The questions were many, and the answers from a master painter were well received. Bernie does beautiful work, and volunteered to help answer any questions that you may have, and of course he can be hired to do a first class job, if you so desire. Everyone I spoke to was very impressed by Bernie's knowledge, and willingness to share his expertise.

Upcoming meetings/Events:

Mar 16th	Challenges of Ultralight Flying A look at the unique challenges presented by ultralights, and the importance of proper training to ensure safety. Bill Reed, Claude Roy, and Andre Girard will lead this panel discussion. Be prepared to share any information you may have.
Apr 20th	Exploring the Dark Side of aircraft handling A look at various perverse and little known handling challenges of various designs. Bill Reed will chair a panel of members; please contact Bill if you have information to share.
May 18th	Tour of new Hanger of National Aviation Museum To be confirmed The Chief of Operations of the NAM, has offered to provide a tour of the latest addition to the NAM. TBC

Thursday February 16th 8:00 PM: Night Moves: Curtis Hillier on Night Flying

Curtis will show a short TC night flying safety video and will be supplementing it with some interesting points of view on Night Flying. Curtis promises a unique approach to the subject; so unique he won't let me know, so join us in finding out his secret.

Gary

News on the National Scene

The following Article was written by Adam Hunt, COPA Membership

At the CARAC Table

Non-Certified Aircraft Working Group Formed.

January 10th and 11th saw the first CARAC meeting of the New Year. The event was a CARAC Part V Maintenance and Manufacturing (M&M) Technical Committee meeting held in Ottawa. There were many important personal aviation issues on the agenda.

The most critical issue was the formation of a working group to study non-certified aircraft. Canada currently has five categories of non-certified aircraft: basic ultralights, advanced ultralights, amateur-built, owner-maintenance and limited class. There are many overlaps in these classes and in some cases an identical aircraft can be put in three or four of the five possible categories, with totally different rules for equipment, maintenance and operational limitations, including passengers. A lot of the resulting rules (some can carry passengers and some can't, some require helmets to be worn and some don't) are due to historical reasons and don't necessarily make a lot of sense today.

More recently three new categories have been proposed for Canada to allow aircraft currently being produced that can't be flown in Canada to be owned and flown by Canadians. These include US Light Sport Aircraft, the Light Aircraft Manufacturers Association of Canada (LAMAC) proposed 4000 lb, six seat, non-certified, manufactured "personal aircraft" and some new turbine, pressurized, six seat amateur-built kits, like the Epic LT, which weighs 7040 lbs and does not fit into the current Canadian amateur-built category.

In these days of shrinking staff, TC didn't want to administer another three categories of aircraft and instead formed the working group with the aviation industry to look at the possibility of combining some or all the existing and proposed categories, plus forecast future aircraft.

The task will be complex and the reporting timeline is short, but the working group does have a great advantage. It has 14 members who are some of the best minds in the country in the area of personal aviation. The group includes representatives of EAA-Canadian Council, RAA, UPAC, The Canadian Federation of AME Associations, LAMAC, Epic Aircraft, Transport Canada (M&M, Aircraft Certification and Recreational Aviation and Special Flight Operations Directorates). The working group will be co-chaired by TC's Brian Whitehead and COPA's Adam Hunt. This working group will start meeting in February 2006 and will aim to present a final report with recommendations to the Technical Committee by October 2006. It will be a very busy 2006 for those involved in this task!

The Technical Committee also dealt with many other issues during the two day meeting. The highlights included TC introducing a new Commercial Small Operator Maintenance Control Manual as a ready-made and approved manual. This will become part of CAR standard 726.08.

This new manual will allow commercial operators who have three or fewer, small, non-turbine powered aircraft used for air taxi, aerial work or flight training to just adopt the pro-forma manual and not have to write one from scratch for their operation. This should make life easier for these operators and flying schools. The advantages to flying schools should be good for personal aviation.

TC also introduced a proposed CAR amendment that will compel all aircraft that are flown in airspace where transponders are required to have their altimeters calibrated every two years. Currently the calibration of altimeters is only required if aircraft are flown IFR or in Class "B" airspace. COPA initially opposed this requirement as an unjustified expense to our members. During the long debate in the meeting it came to light that CAR Standard 571 Appendix F requires all aircraft that have mode "C" altitude encoders must have them calibrated to match the aircraft altimeter. This ensures that the altitude the pilot sees is the same as that seen on radar by ATC. The problem is that unless these aircraft are flown IFR or in Class "B" airspace they are never required to have the altimeter calibrated. This would mean that an accurate encoder could be adjusted to match an un-calibrated and possibly very inaccurate altimeter. The end result is that both the encoder and altimeter would be equally inaccurate. When the aircraft was flown at an ATC assigned altitude the pilot and controller would both think that the aircraft was at the right altitude – only opposite direction traffic would discover that it wasn't. In light of this problem in the regulations COPA withdrew its objections. Once the new standard becomes law all aircraft that are flown in transponder airspace will require altimeter calibrations every two years along with the existing requirement to have Mode "C" encoders calibrated.

At the end of the meeting the Executive Director, Don Sherritt, announced that TCHQ has had recent staff reductions and is undergoing reorganization. The M&M policy office has lost one third of their staff and these positions have been eliminated. At the same time, Sherritt has been given additional responsibilities as Executive Director of Part

VII Commercial Air Services. This all adds up to more work and fewer staff to do it. Sherritt announced that TC would not attempt to “do more with less” as this just leads to poorer quality work and staff burnout. Instead, they will do “less with less” and this will result in fewer CARAC meetings and fewer changes to the CARs in the future.

Feature Article

This is a reprint of FAA pamphlet P-8740-24. I have only included the first half of the pamphlet. The second half will appear in the next Carb heat in March. If you would like to read the rest of the article before next month go the following url and you will find it there with many more Safety Tips http://www.paragonair.com/public/docs/Safety_Pamphlets/P8740-24.html

Tips on Winter Flying

Most pilots are familiar with winter conditions in their particular area; however, often a distance of a few miles may change the environment enough to present new problems to an inexperienced pilot. There are certain precautions that are significant to winter flying. Flight planning during winter months will require special knowledge in order to protect the aircraft as well as the pilot. Extra precautions should be used. Often roads that are well traveled during the summer months will be abandoned in the winter. To be forced down far from civilization may create a serious problem of survival. With today's extensive highway system, most flights in small aircraft would not be extended more than a few minutes if a well-traveled route were followed. Even the vehicles on the road can give valuable information. You may see cars and trucks coming toward you with fresh snow adhering to the front of the vehicles. In most cases, you may as well start making a 180-degree turn due to reduced visibility ahead.

Of course, file a flight plan. A flight plan, in conjunction with an ELT, and a little knowledge on winter survival may save your life. Experience has shown that the advice of operators who are located in the area where the operation is contemplated is invaluable, since they are in a position to judge requirements and limitations for operation in their particular area.

In making business appointments, always give yourself an out by informing your contact that you intend to fly and will arrive at a certain time, *unless the weather conditions are unfavorable*. You, the pilot, have complete responsibility for the GO, NO-GO decision based on the best information available. Do not let compulsion take the place of good judgment.

AIRCRAFT PREPARATION

If your home base is located in a warm climate area, you may not have familiarized yourself with the aircraft manufacturer's recommendations for winterizing your aircraft. Most mechanical equipment, including aircraft and their components, are designed by manufacturers to operate within certain temperature extremes. Manufacturers generally can predict their product's performance in temperature extremes and outline precautions to be taken to prevent premature failures.

Baffling and winter covers-Baffles are recommended by some manufacturers to be used in augments tubes. Winter fronts and oil cooler covers are also added to some engine installations. FAA approval is required for installation of these unless the aircraft manufacturer has provided the approval. When baffles are installed on an aircraft, a cylinder head temperature gauge is recommended, particularly if wide temperature differences are to be encountered.

Engine Oil-The oil is extremely important in low temperatures. Check your aircraft manual for proper weight oil to be used in low temperature ranges.

Oil Breather-The crankcase breather deserves special consideration in cold weather preparation. A number of engine failures have resulted from a frozen crankcase breather line which caused pressure to build up, sometimes blowing the oil filler cap off or rupturing a case seal, which caused the loss of the oil supply. The water, which causes the breather line to freeze, is a natural byproduct of heating and cooling of engine parts.

When the crankcase vapour cools, it condenses in the breather line subsequently freezing it closed. Special care is recommended during the preflight to assure that the breather system is free of ice. If a modification of the system is necessary, be certain that it is an approved change so as to eliminate a possible fire hazard.

Hose Clamps, Hoses, Hydraulic Fittings and Seals-An important phase of cold weather preparation is inspection of all hose lines, flexible tubing, and seals for deterioration. After replacing all doubtful components, be certain that all clamps and fittings are properly torqued to the manufacturer's specifications for cold weather.

Cabin Heater-Many aircraft are equipped with cabin heater shrouds which enclose the muffler or portions of the exhaust system. It is imperative that a thorough inspection of the heater system be made to eliminate the possibility of carbon monoxide entering the cockpit or cabin area. Each year accident investigations have revealed that carbon monoxide has been a probable cause in accidents that have occurred in cold weather operations.

Control Cables-Because of contraction and expansion caused by temperature changes, control cables should be properly adjusted to compensate for the temperature changes encountered.

Oil Pressure Controlled Propellers-Propeller control difficulties can be encountered due to congealed oil. The installation of a recirculating oil system for the propeller and feathering system has proved helpful in the extremely cold climates. Caution should be taken when intentionally feathering propellers for training purposes to assure that the propeller is unfeathered before the oil in the system becomes congealed.

Care of Batteries-Wet cell batteries require some special consideration during cold weather. It is recommended that they be kept fully charged or removed from the aircraft when parked outside to prevent loss of power caused by cold temperatures and the possibility of freezing.

Wheel Wells and Wheel Pants-During thawing conditions, mud and slush can be thrown into wheel wells during taxiing and takeoff. If frozen during flight, this mud and slush could create landing gear problems. The practice of recycling the gear after a takeoff in this condition should be used as an emergency procedure only. The safest method is to avoid these conditions with retractable gear aircraft. It is recommended that wheel pants installed on fixed gear aircraft be removed to prevent the possibility of frozen substances locking the wheels or brakes.

OPERATION OF AIRCRAFT

The thoroughness of a preflight inspection is important in temperature extremes. It is natural to hurry over the preflight of the aircraft and equipment, particularly when the aircraft is outside in the cold. However, this is the time you should do your best preflight inspection.

Fuel Contamination-Fuel contamination is always a possibility in cold climates. Modern fuel pumping facilities are generally equipped with good filtration equipment, and the oil companies attempt to deliver pure fuel to your aircraft. However, even with the best of fuel and precautions, if your aircraft has been warm and then is parked with half empty tanks in the cold, the possibility of condensation of water in the tanks exists.

Fueling Facilities-Another hazard in cold climates is the danger of fueling from makeshift fueling facilities. Fuel drums or "case gas," even if refinery sealed, can contain rust and-somehow contaminants can find their way into the fuel. Cases are on record of fuel being delivered from unidentified containers which was not aviation fuel. As a precaution, we suggest:

1. Where possible, fuel from modern fueling facilities; fill your tanks as soon as possible after landing, and drain fuel sumps to remove any water which may have been introduced.
2. Be sure the fuel being delivered is, in fact, aviation fuel and is the correct grade (octane) for your engine.
3. If a fuel source other than #1 is used, be sure to filter the fuel as it goes into your tanks. NOTE: A funnel with a dirty worn out chamois skin is not a filter, nor will a new, clean chamois filter out water after the chamois is saturated with water. Many filters are available which are more effective than the old chamois. Most imitation chamois will not filter water.

4. Special precautions and filtering are necessary with kerosene and other turbine fuels. Manufacturers can supply full details on handling these fuels.

Aircraft Fuel Filters and Sumps-Fuel filters and sumps (including each tank sump) should be equipped with quick drains. Sufficient fuel should be drawn off into a transparent container to see if the fuel is free of contaminants. Experienced operators place the aircraft in level flight position, and the fuel is allowed to settle before sumps and filters are drained. All fuel sumps on the aircraft are drained including individual tank sumps. Extra care should be taken during changes in temperature, particularly when it nears the freezing level. Ice may be in the tanks which may turn to water when the temperature rises, and may filter down into the carburetor causing engine failure. During freeze-up in the fall, water can freeze in lines and filters causing stoppage. If fuel does not drain freely from sumps, this would indicate a line or sump is obstructed by sediment or ice. There are approved anti-ice additives that may be used. When aircraft fuel tanks do not have quick drains installed, it is advisable to drain a substantial amount (1 quart or more) of fuel from the gascolator; then change the selector valve and allow the fuel to drain from the other tank. Advisory Circular (AC) 20-43C, entitled "Aircraft Fuel Control," contains excellent information on fuel contamination. Paragraphs 10 and 11 are especially pertinent to many light aircraft and include a recommendation for periodic flushing of the carburetor bowl. Copies of AC 20-43C can be obtained by writing to the U.S. Department of Transportation, Utilization and Storage Section, M443.2, Washington, D.C. 20590.

Aircraft Preheat-Low temperatures can change the viscosity of engine oil, batteries can lose a high percentage of their effectiveness, instruments can stick, and warning lights, when "pushed to test," can stick in the pushed position. Because of the above, preheat of engines as well as cockpit before starting is considered advisable in low temperatures.

Extreme caution should be used in the preheat process to avoid fire. The following precautions are recommended:

1. Preheat the aircraft by storing in a heated hangar, if possible.
2. Use only heaters that are in good condition and do not fuel the heater while it is running.
3. During the heating process, do not leave the aircraft unattended. Keep a fire extinguisher handy for the attendant.
4. Do not place heat ducting so it will blow hot air directly on parts of the aircraft; such as, upholstery, canvas engine covers, flexible fuel, oil and hydraulic lines or other items that may cause fires.

Be sure to follow the manufacturer's procedures.

Paragon Air Adventures, LLC

Mark your Calendars:

Some items have been copied from the COPA Flight and the EAA website.

February 11, Westport, ON: Rideau Lakes Flying Club in Westport (CRL2) is having a Ski Fly-in with chilli and a bun from 10 a.m. to 2 p.m. Transport from the Aerodrome/downtown available. Located at N44 40.012, W076 23.799 using 123.2 for communication. Subject to runway conditions. Contact Tel.: 613-273-5282.

February 19, Cobden, ON: COPA Flight 124/Champlain Flying Club's Annual ski only fly-in at CPF4. Chilli, beans and refreshments from 10:00 to 14:00 hrs. Runways marked with pine boughs. For more information, contact Larry Buchanan at E-mail: lbuchan@nrteo.net.

February 25th 2006 Aylmer: Maurice Prud'homme Annual Fly-in: Saturday February 25, 2006 Moe's 16th annual February Fly-in from 10 AM. On the west of the Ottawa River 8km from Aylmer, Quebec near the YOW VOR - across from Pinhey's Point N 45 26 57 W075 55 48

Important note: landing on skis, weather permitting. Ice runway will be ploughed - LAND AT YOUR OWN RISK.

For more information, including last minute weather and runway surface conditions, contact Maurice Prud'homme on 122.75 or call 819-682-5273

Mar 4th 2006 Kars: Kars March Fly-in at the Kars Airport/Rideau Valley Airdrome N45 06 W075 38 3s declination 14 degrees W, elevation 286'. Same good food as in past years. For more information contact Harvey Rule, activities coordinator at Tel.: 613-739-5562. Please leave message with name and number or E-mail: harvey.rule@sympatico.ca.

March 11, Maniwaki, QUE: Rendez-vous Aerien a 10 hre a 4 hre, au Chalets Jean-Paul (Haute-Gatineau) 46-02-98N 75-55-17W. Lac Heney a 10 milles au sud de l'aeroport de Maniwaki. Remis au 12 de mars, si la temperature n'est pas favorable. Possibilite de coucher sure reservation. Amenagee pour avion sur roues. Pour plus d'informations et conditions meteorologique, contactez Carol ou Marie-Paule au numero sans frais 866-463-2531 ou cell: 819-344-2531.

March 15, North York, ON: Severe weather flying. Transport Canada System Safety is pleased to welcome back guest speaker Nick Czernkovich, who returns to provide a thorough understanding of thunderstorms, downdrafts, gust fronts and other weather phenomena we may encounter but definitely would like to avoid while flying. For more information contact Transport Canada System Safety at 416-952-0175 or visit www.tc.gc.ca/OntarioRegion/civilaviation/system/seminars.htm

FOR SALE

Place your ads by phone with Bill Reed 613-831-8762 or e-mail to [bill at ncf dot ca](mailto:bill@ncf dot ca)
Deadline is first of the month. Ads will run for three months. You may request a two-month extension. Please let me know if any of the articles have been sold.

For Sale

Amy Staples has a number of aircraft items still available for sale from **Les Staples** extensive collection.

All reasonable offers welcome to facilitate a quick sale.

- Subaru EJ25 165 HP auto engine conversion complete with new Reductions Inc belt drive.
- Warp Drive 3 blade 74" dia. left hand rotation Standard propeller with nickel leading edge protection. Brand new.
- Various 2-1/4" engine instruments including EGT/CHT, Oil Temp, Oil Pressure, Water Temp, etc.
- Grand Rapids Technologies EIS Engine monitor with a couple of CHT sensors
- 3-1/8" Turn & Bank, used condition
- Several aircraft wheels with mounted tires, including RV-6A/Grumman style nose wheel.
- 2.5" and 3" SCAT tubing
- Handeld Sporty's aircraft receiver only.
- 2 Cessna seats on rails
- ELT Dorn and Margdin 121.5 and 243 MHZ.
- 2 Sigtronics S-20 Headsets
- Several wing struts.
- 3 External Venturi for vacuum instruments
- Rivet spacing tool (pantograph fan style)
- Set of cylinder base wrenches

- Mechanical style fuel gauge for high wing root mounting
- Robert Avery long arm rivet station
- 2 sets of 5 point harnesses
- 6" wheel hubs with drum brakes
- Dual yoke controls for a Cessna with chain drive
- Various other aircraft related items too numerous to list.
- Hanger just west of chapter hanger for sale. Requires some finishing work.

01/06 Contact **Amy Staples** at **831-9079** for more information.

For Sale

Bose Headset, like new

\$800.

01/06 Bill W 613-259-2605

For Rent

HANGAR to rent CYRP Immediate occupancy

01/06 Bill W 613-259-2605

Wanted

Drawings/Plans for a Piel Emeraude. A friend wants to build one.
I believe the old ones I had may still be somewhere within the Chapter.

01/06 Contact **Terry Peters** – 613-745-7466

Articles wanted

I am always interested in receiving submissions for this, your Newsletter. You may bring articles to the monthly meetings, or mail information to the post office box, or email [bill at ncf dot ca](mailto:bill@ncf.ca)

Newsletter Deadlines

Deadlines for articles and for sale/wanted ads will normally be 3 weeks before the next meeting. A short example follows:

- Meeting – 2006 Newsletter deadlines
- March 16th – Feb 24th
- April 20th – Mar 31st
- May 18th – Apr 28th
- June 17th – May 26th
- July 15th – Jun 24th
- August – No newsletter
- September 21st – August 31st
- October 19th – September 28th
- November 16th – October 26th
- December – Jan (December shifted to January 2007)
- Meeting date – 2007 Newsletter deadlines
- January 18th – Jan 4th
- February 15th – Feb 1st



EAA Chapter 245 Membership Application

NEW:___ RENEWAL:___ DATE:___/___/___
 EAA NUMBER:.....
 EXP Date:___/___/___
 NAME:.....
 ADDRESS:.....
 CITY/TOWN:.....
 PROV:.....PC:.....
 PHONE:(.....).....H (.....).....W
 EMAIL:.....
 DISTRIBUTION Preference: email..... post.....
 AIRCRAFT & REGISTRATION:.....

OTHER AVIATION AFFILIATIONS:

COPA:___ RAA:___
 OTHER:_____

Annual Dues: January 1st to December 31st. (prorated after March 31st for new members/subscribers).
 Associate Member ___: \$35.00 Newsletter plus Chapter facilities
 Full Member: ___: \$70.00 Newsletter, hangar, workshop, tiedowns.
 (Note: there is a one time \$200 initiation fee when you become a Full Member)
 Newsletter subscriber ___: \$35.00 Newsletter
 Note Associate and full members must also be members of EAA's parent body in Oshkosh WI, USA

Make cheque payable to:
 EAA Chapter 245 (Ottawa)
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