

Carb Heat

NEWSLETTER

Hot Air and Flying Rumours Vol 33 No. 05

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MAY 2003

Inside: President's Page: by Gary Palmer

Next Meeting: Thursday, May 15, 2003 8:00 PM Canadian Aviation Museum

Portable Fuel Cans



Feature Presentation Partenavia Mystere S45

596-2172

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President's Page by Gary Palmer

Despite a miserable spring, we are finally starting to enjoy, dare I say, a few fine flying days. Let's hope I haven't jinxed the rest of the flying season, and we all get a chance to enjoy the local fly-in breakfasts over an all too short flying season.

Chapter Cleanup Day Sat May 24th 1:00 PM

The annual spring cleaning is scheduled for Saturday May 24^{th,} 1:00 PM to allow time to attend the RockCliffe fly-in breakfast in the morning. Dick Moore will heading up this project, so come prepared to do some painting and other general spruce up tasks. If you have a pressure washer that you can bring, it will help clean the hanger door of a couple of decade's accumulated grease and grime.

First Flight Awards candidates, step forward.

The annual first flight awards are a normal part of our June meeting. If you have had a first flight in the last year, or missed the cut off for last years awards, please contact me, preferably via email with your aircraft type, registration, and date of first flight so I can have a plaque ready for you by the June 14th meeting.

Carp Air show planned for August 23-24.

The Ottawa International Air Show is returning to Carp airport on the weekend of August 23 to 24, as the "Carp Flight Fest". The Snowbirds will be the featured act completed by an F18 display, plus the Great War Flying Museum WW1 replicas from Brampton. Curtis Hillier has volunteered to co ordinate our participation in this event. I am sure Curtis can count on your assistance in making this event a success for EAA.

Fly-in breakfast at RockCliffe (CYRO) Saturday May 24th.

The Aviation Museum will be holding their second annual fly-in breakfast together with the RockCliffe Flying club.

Upcoming meetings.

Looking forward we have an interesting tentative slate of speakers and topics planned including:

June	Oshkosh planning meeting Saturday June 21, 10:00 AM, Carp chapter clubhouse. Also first flight awards
July	Martin Poettcker's CH-601 Display, Saturday July 19th 10:00 AM, Carp chapter clubhouse. Martin hopes to be in the final assembly stage with a working engine installation. We plan a BBQ as well.

Thursday March 20th meeting: Martin Poettcker's Custom PSRU Design

Martin provided an illuminating presentation on the fine engineering art of designing and fabricating his own custom planetary gear reduction drive based on a Ford C6 planetary gear set. As with the Torsional Damper, the PSRU presented many unique design and fabrication challenges. Martin shared his unique solutions to each problem, and best of all showed a video showing the good, bad and ugly aspects of heat shrink fit which form a key part of his design. Martin seems to have enjoyed the PSRU project so much that he has decided to design and fabricate his own version of a POSA slide carburettor. If all goes as planned Martin will have his project on display at the chapter hanger for our Saturday July 19th meeting.

Thursday May 15th meeting @ NAM: Partenaire S45 Mystere

Our final meeting of the spring season at the NAM will feature the folks from Partenaire in Montreal presenting their sleek tandem seating **S45 Mystere** kit plane. The Mystere is a low wing tandem design with a pylon mounted Pusher engine, which offers superb visibility. You might want to check out their web site at http://partenairdesign.com/ if you can't wait for the presentation. Hopefully they will make our fly-in breakfast August 9th as well.

I look forward to seeing you at the Aviation museum, at our normal start time of 8:00 PM.

Gary

PORTABLE FUEL CANS

Editors note; this is very similar to fuel handling procedures at CYRP implemented by our very own Dick Moore operations manager.

Question for EAA Aviation Information Services:

Have there been any cautionary articles published on the risks and hazards of static electricity when fuelling homebuilt aircraft with auto gas from portable gas cans? Much is made of the cost advantages of using auto gas in GA engines and some people even have their certificated engines TSO'd for auto gas. Rotax and other engine manufacturers tell us that their engines run better on auto fuel. Yet no one mentions the practical difficulties of doing this. Not many airports have pumps for auto gas, so how is one to safely fuel a plane other than by filling it up in stages using small cans, unless one has sufficient means to buy one's own tanker truck? and even so, how is one to fuel one's plane at an en-route airport which does not have an auto gas pump? Carry additional fuel (and weight) on-board in more small cans? I don't think so.

Answer:

The possibility of static discharge when using portable fuel containers is well known, and has been documented in both aviation and automotive publications. Persons using portable fuel containers should always take precautions to reduce if not eliminate the possibility of static spark. Hear are some suggestions that will help reduce the hazard:

Always place fuel containers on the ground when filling them at the pump. NEVER fill the containers while they are in your car trunk or truck bed! Also, always keep the fuel nozzle in contact with the container while fuel is flowing, and for a couple of seconds after the fuel flow is stopped. This will minimize the static electricity build up and offer a path to drain the static charge away, either to the ground or through the fuel pump hose (which is grounded to protect against static build up).

When transferring the fuel from the portable container into your airplane, boat, lawn mower, or whatever, the very best practice is to ground both the can and the vehicle/implement. If you have a metal portable container, this is not difficult to do. If you have a plastic container, grounding is a bit more difficult, but a minor modification of the container will help. Here's one method:

To properly ground the plastic fuel can, you'll need to add a conductor of some sort. There are a couple of ways to do this, but my favorite is to get a length of "grounding strap" (a flat, woven metal strap) from the local auto parts store (or from an aviation supply house). This length of grounding strap must be long enough to run down the inside of the can from the filler neck to the bottom, and then all the way along the length of the bottom of the can (inside the can). You'll also need a brass screw, a couple of large diameter washers and an appropriate nut. The screw should be long enough to pass through the can, the grounding strap, the two washers and the nut and still have enough length left to clip a ground wire to it.

Drill a hole in the can, just below the filler neck opening. This hole should be JUST big enough to get the brass screw through, and should be in a location where you can touch it by reaching down through the filler neck with your fingers. Also drill a hole in the grounding strap for the screw to pass through. Feed the grounding strap down through the filler neck so that it runs down from the filler neck and across the bottom of the can. Then put a large diameter washer on the screw, pass the screw through the grounding strap and then through the hole you made in the can.

You'll need some kind of fuel-proof sealer to put around the screw where it passes through the plastic can. Again, your auto parts store will be the best source for this. Put some sealer on the screw where it comes out of the can, then put another large diameter washer on and secure with the nut. Now you've provided a path for the static to get from the can to the aircraft, through the screw and a short "jumper" wire that you'll clip to the screw and to the filler neck of the aircraft. Of course, this will only work properly if you then ground the aircraft itself to a good ground source. A well pipe or a copper rod driven into the ground will work well for this, so you'll have to make a ground wire to go from the chosen grounding source to the aircraft itself. Even better, you can also run a ground wire from the grounding source to your fuel can. That way, the static electricity will have multiple paths to use to get to ground.

This method can also be used when transferring fuel to your lawn mower, boat, or whatever unit you have that needs to be refuelled from a portable container. If there's no method available for grounding the fuel container, at least always be sure to keep the outlet nozzle of the container in contact with the fuel filler neck on the vehicle/implement at all times while fuel is flowing. Also, whenever possible, keep the end of the nozzle below the level of the fuel in the tank being filled. All this will help minimize static build up.

Never carry fuel in portable containers in the cabin of the aircraft. If you feel you need to carry a portable can, so as to go off-airport to get auto fuel at an en-route stop, you should carry appropriate grounding wires along as well. This way, you can properly ground your container and your aircraft while you transfer fuel. From a safety standpoint, rather than carrying a fuel container in the aircraft with you, it's probably a better idea just to use aviation fuel if auto fuel isn't available on the airport.

The Pee Pak

The following is an infomercial from one of our very own. Please fly relieved!!!

Pilots and their passengers can find themselves uncomfortable because they need to void their bladder, yet it is still some time before landing where sanitary facilities are available. This problem is usually exacerbated in men as age progresses.

Aviation suppliers carry a variety of portable hard plastic urinals (e.g. "Little John"), with adapters that allow their use by females. In my view, they have the following disadvantages:

- relatively expensive (\$10 to \$25 US)
- must be sanitized following use, and rinsing in sink not healthy
- must be stored and secured both before and after use
- prone to leaking and therefore odours
- require different inlets for males and females due to rigid design
- unsightly (for modest people) after use

I have assembled an alternative that I call the PeePak that has the following advantages:

- inexpensive (\$2.50 CDN) per use
- sanitary and easily disposable
- can be easily stored in a shirt pocket
- light weight (approx. 2 ounces)
- need not be stored or secured
- does not leak and therefore odourless
- is unisex in design and conforms to all anatomical shapes
- does not look like urine following use Principle of Operation

The PeePak kit contains a non-toxic, odourless, and non-volatile powder in a small tearable packet approximating the size of a handy wipe packet. The original purpose of the powder is intended as a gag item whereby it makes large amounts of liquid immediately turn into hard jelly. The directions call for the white powder (resembling approximately one teaspoon of table salt) to be put into a water glass, and the glass then filled with liquid. When the liquid comes in contact with the powder, the immediate result is a hard jellied consistency that does not pour nor leak from the glass if it is turned onto its side.

The PeePak uses this product for urine collection in conjunction with a Medium sized (18mm X 20mm) Ziploc freezer bag. A napkin, a sanitary wipe, and an elastic band completes the kit. The Ziploc freezer bag is relatively durable and tear resistant. It also seals tightly, yet is sufficiently pliable to conform to different anatomical shapes. However, avoiding aerobatics during use is recommended.

Testing

To prove the viability of this concept, my lady Debbie agreed to pee for the cause of science. Since we plan a lot of cross country flying together, she also realized future benefits. In a small 1991 Honda Civic (not unlike my cockpit space), she used the PeePak with success. It was necessary for her to move forward to the front edge of the seat, but the rest of the experiment went as planned. I later measured the quantity of the resulting jelly and found it to be approximately eight fluid ounces. This quantity corresponded to "I really have to go and cannot wait anymore". Unused white powder remained, indicating additional evacuation was possible. I have since put up to one litre of liquid into the PeePak before it became runny and exceeded the capacity of the powder.

Medium Ziploc freezer bag	To obtain your PeePaks, contact Tom as follows:
Paper table napkin	Tom Birtch
Stiffy Stuff (the active ingredient)	Tel: 613-254-7455
Moist Towelette	Email: <u>glastar@magma.ca</u>
Total \$3.00 each or 2 for \$5.00 (shipping extra)	Note: EAA 245 members can pay in cash, cheque, money order, promise of future payment, and gold.

PeePak Components, Pricing and Availability

Effective 2003, COPA has placed their "Flight Annual" on line. Even non members can access it through the internet.

go to http://www.copanational.org/non-members/index.htm click on the COPA Flight Annual tab on the left side.

COPA feels that it will be more useful because it will be more current.since they can update the information any time.

The OSHKOSH NOTAM is now available from the EAA web sight. It is available May 1, 2003 in FAA printed form

FLY IN DE TROIS-RIVIERES / AIR SHOW DE TROIS-RIVIERES

(Trois-Rivieres, Quebec, Canada)

MAY 22 - 25, 2003

Trois-Rivieres airport (YRQ)

www.geocities.com/flyin3r

It is a pleasure for me to invite you to our very first "fly in de Trois-Rivières". Our fly in will be held in conjunction with the AIR SHOW de TROIS-RIVIÈRES.

Dany Bergeron Fly in coordinator 819.370.4555 fax 819.370.4557 danybergeron@cgocable.ca Place your ads by phone with Rodney Stead @ 836-1410 or e-mail to <u>stitstmp@sympatico.ca</u> Deadline is first of the month. Ads will run for three months with a renewal option of two more months.

For Sale: Cessna 150M, 1007 SMOH, 220 STOH, 8524TT. Well maintained All covers Wheel pants, Skylights, EGTCHTCarb temp, Oil filter, Comm Mode C\$30.000

04/03 613-828-7493 cbgregoire@sympatico.ca

For Sale: Hanger at CYRP Single detached 40 x 32 woodsheet metal Bi-fold door and skylight Paved winter access\$20,000613-828-7493 cbgregoire@sympatico.ca

For Sale: RV6A project 90-95% complete, no engine			
\$35,000 or offers	Jim Robinson @ 613-830-4317		
04/03	Russ Robinson @ 613-831-2485		

Test Propeller needed--65 in with 58 in pitch for engine testing on a C-085 Spring 2003 04/03 Curtis @ 613-831-6352, the_hilliers@yahoo.com

ICOM A20 VHF air band Transceive	r \$295.00	
ICOM HS-20SB PTT Switch box	\$25.00	
ICOM CM-12G Battery case	\$25.00	
12 Volt adapter	\$25.00	
Telex ProAir 2000E Headsets-2	\$195.00 ea.	
Sigtronics Transcom 11 Intercom	\$175.00	
E6B computer	half price	
Sportplane Construction Techniques, The Sportplane Builder, Firewall Forward \$25.00		
Bingilis on Engines (new)	\$30.00	
email; <u>a</u>	douma@rogers.com	
03/03 Call And	y @ 613-591-7622	

New engine mount, suitable for 0-540, I 0-540 Lycoming Engines Set up for tail dragger, also has tabs and reinforcement for a nose gear config. Priced to sell quickly.

02/03 <u>Stan.ironstone@sympatico.ca</u> 613-258-2660

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

a
e-man

stitstmp@sympatico.ca



Make cheque payable to: EAA Chapter 245 (Ottawa) Mail to - P.O. Box 24149, Hazeldean R.P.O., Kanata, Ontario, K2M 2C3