

# Carb Heat

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### July 2004

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Feature Presentation
English Wheel Demo
By
Martin Poettcker
Tractor Pusher/Pull
By
Curtis Hillier

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Carb Heat EAA 245 Newsletter February 2004

### President's Page by Gary Palmer

#### **Tailwind First Flight Accident**

The first flight of John Richard's immaculate Whittman Tailwind unfortunately ended in a farmer's field adjacent to the departure end of runway 28 due to an engine stoppage during climb out. While the aircraft suffered severe damage, **Serge Maule**, the test pilot, walked away with a few minor scrapes and bruises. While we can only imagine John's initial fears for Serge's safety, and subsequent sense of loss for a labour of love, it is appropriate to reflect on what we can learn from any accident.

First flights are inherently dangerous, and apparently fuel system related problems top the list of causes for first flight accidents. Consequently when I first inspected the wreckage, I was looking for any sign of problems in the fuel system. The Tailwind uses gravity-feed fuel system with a fuselage mounted tank, which is a configuration that results in a minimal head, necessitating careful consideration and testing.

Checking the Tony Bingelis books I found that gravity feed systems are simple and reliable as long as there is enough pressure head to ensure an adequate flow of fuel in a climb attitude. The purpose of the mandatory fuel flow test is to prove that the flow is adequate. While two of the earlier Bingelis books contained excellent diagrams, they did not provide any specific guidance on a minimum head, but did note that there was a significant difference of opinion amongst experienced AME's and builders. The fourth book in the series finally provided a **17" minimum head** recommendation, which is only 0.5 psi. A quick check of the Tailwind system, which is built strictly to plan, indicated that this could not be achieved and that at best, with a full tank and a moderate climb angle, a head of less than 6" would be achieved. To complicate matters, with a 6 cyl O-300, the carburettor is mounted higher and further forward than most 4-cylinder engines. In a climb angle, the loss of head will be greater than in many other 4 cylinder Tailwinds.

Serge reported that he had increased his climb angle a few seconds before the engine quit, and John noted that the tank was half full; apparently this combination was just enough to lead to engine stoppage. At first Serge was convinced the problem was mechanical because the prop stopped abruptly, but initial inspection of the engine indicates that there were no mechanical failures, which leaves the fuel system as the primary culprit.

John had considered adding a backup electrical fuel pump, and in hindsight this would probably have resulted in a happy ending. It is scenarios such as this which emphasises the importance of very careful first flight planning, in particular being prepared for a sudden power loss; what fields are available, what is the terrain like off the end of the runway, etc.? It is also important to critically review fuel systems from a reliability perspective, by asking ourselves how could this system fail? We need to share information better and learn from other's mistakes if we are to improve our safety record; unfortunately it seems like the Tailwind community let John down, costing him an airplane.

#### Upcoming meetings/Events.

| August<br>7-8     | EAA 245 Fly-in breakfast. <b>Curtis Hillier</b> will be leading his usual band of willing volunteers in hosting our annual fly-in breakfast. I trust Curtis will receive lots of volunteer help. Set aside Saturday Aug 7 <sup>th</sup> morning for the set-up, and Sunday August 8 <sup>th</sup> for the breakfast. |
|-------------------|--|
| August<br>28-29   | The second annual <b>Carp Air Fest</b> will be held August 28-29. If you are interested in volunteering to help protect our chapter aircraft, and promote EAA to the public, you should contact Curtis Hillier at 831-6352, or via Email at the_hilliers@yahoo.com.  |
| Monday<br>Sept 20 | Start of new third Monday of the month for 8:00 PM meetings at the <b>NAM</b> . This is a planned change that will be confirmed in the September Newsletter.   |

#### Saturday July 17<sup>th</sup> 10:00 AM: English Wheel demo by Martin Poettcker.

Now that Martin has completed the inspection on his CH-601 and is anxiously awaiting his flight test permit, he has agreed to give a demo on his home-made English Wheel of the metal forming procedures he used to create his beautiful aluminium cowl. If all goes well, we may also be able to congratulate Martin on a successful first flight. I hope to see you there.

\*\*Gary\*\*

#### Flight Fest Update

Hello everyone, I wanted to send out a reminder and call for volunteers for this year's flight fest.

As was the case last year the organisers are looking for several key volunteers:

- 1) general grounds volunteers
- 2) security volunteers
- 3) air traffic volunteers

Here is a brief description of what is going on with each:

- 1) The general grounds volunteers are assigned to the show and get placed all over and on a rotational basis. Our association did not provided any of these persons.
- 2) The security volunteers would normally get placed and rotated as needed as well however I have an arrangement with the organisers that allow us to place our security persons in our area to protect our aircraft and accompany any interested parties for tours around the aircraft. Last year we had three volunteers and toured many spectators to and from the Davis and the Chinook plus 2.
- 3) The air traffic volunteers to placed directly with the traffic group and are directed by them during the show. We had several volunteers for this group

Lastly, Only for those who have aircraft tied down or hangered near the EAA hanger, please advise me if you will want access for flights in or out of the airfield during the show hours. As was the case last year the site security must see your wristband to allow you access and this is due to the liability insurance issues. Please send me an E-Mail. Getting last minute (more) wristbands is not always easy!

NOTE: EAA member who are tied down or hangered near WestAir will be contacted by another party/volunteer.

Another topic associated with the Flight Fest is the display that EAA245 has had and been allowed to promote our experimental end of the aviation business. E had many visitors around John banging away at his 601 parts. John is going to lead the team again this year and is looking for volunteers to do tours, bang metal, shape metal etc. and certainly if you have ideas that would promote experimental aviation and our mandate, (not to mention maybe get some work done!), contact John Montgomery right away.

Thanks,
Curtis Hillier
613-831-6352
the\_hilliers@yahoo.com

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Do you have a favourite web aviation sight? Would you like to share it with other chapter members? If so please forward it to your newsletter editor via email and I will assemble them into a report in a future newsletter.

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#### Pancake Breakfast Reminder

Hello everyone, just a short reminder that we are seriously short of signed-up volunteers for this year's clean up / set up and Pancake Breakfast August  $7^{th}$  and  $8^{th}$  2004.

We have a few returning volunteers but would like to see some of our new members get involved in any way they can. We are always looking to make the set up day go smoothly with as many people as possible.

Likewise, we need more signups for the actual breakfast day, it is just too nerve-racking to go into this thing with out committed people and hoping for last minute people who show up and offer to help out. When we do it this way, there is always stress and uncertainty, so please call Jennifer (613-831-6352 or email at <a href="mailto:jennifermhillier@yahoo.ca">jennifermhillier@yahoo.ca</a>) and commit to helping out. Thanks!

Curtis

Or

Contact Russ Robinson russ.robinson@ec.gc.ca (613)-831-2485.

We hope you will mark down the date in your up and coming things to do this summer calendar and help this event the best yet!

Thanks!

Jennifer, Russ and Curtis

#### **Tractor / Pusher Pull**

This year, as some of you may be aware, we are planning a special July meeting at the Carp EAA245 hanger.

I have been doing some static thrust testing with a strain gauge and my PC. My Davis has been tested as was Phil Johnson's Cozy and Martin Poettcker's 601. I will have the equipment at the July 17<sup>th</sup> 2004 meeting if you would like to fly in or taxi over and have your aircraft thrust tested. It has been interesting to see what effect a degree of propeller change has in thrust. It is also interesting to see the various thrusts of different engine propeller configurations.

While we are not sure exactly what good the data is, it does create a bench mark thrust, is a lot of fun to do and makes for interesting pilot conversations / comparisons.

Feel free to come out fly out and have your aircraft hooked up and run. We typicality hook up to either your main gear or rear tail hook / tie down. Please be sure you know that your tail will not be damaged by 400 or so pounds of thrust, and of course it is important to realise that the risk is yours. We will expect you to tell us where to make the connection.

See you there,

Cheers,

Curtis

To obtain a transponder code:

#### No Flight Plan:

Contact the Montreal ACC at 866-VFR-CODE (866-837-2633) to provide ATC with information pertaining to your flight to obtain your transponder code prior to a flight into Ottawa Class C and terminal Class D airspace.

#### Flight Plan:

When the Flight Plan is filed the Flight Information Centre will issue the code, making a second call to 866-VFR-Code unnecessary.

#### Flight procedure:

- 1. Set the transponder to the assigned code just before takeoff (Ottawa area airports) or prior to the first communication with ATC.
- 2. Contact ATC at least 5NM prior to entering Ottawa Class C or terminal Class D airspace.

This years EAA 245 Annual Pancake Breakfast will be on Sunday August 8th 2004 from 8 AM to 11:30 AM at the Carp Airport CYRP.

Visit: <a href="http://eaa245.dhs.org/FlyIn.html">http://eaa245.dhs.org/FlyIn.html</a> for more links to the airport. We are hoping for great weather for both flyin and drive in visitors.

Persons requiring more information can contact Curtis Hillier at 613-831-6352 or send an email to the hilliers@yahoo.com

#### **Bonnechere Airport Destruction!!**

Some of you may be familiar with the Bonnechere airport, but for those who are not, Bonnechere is a 6600 ft excellent concrete runway approx. 82 sm NW of Carp and 22 sm SW of Pembroke. Several local owners based their aircraft there, and I parked mine there during the summer months since 1971. Officially this airport has been abandoned for perhaps 15 years, no maintenance has been done for 30 years and, left alone, it will probably be in the same condition in another 30. Appearently the Department of Transport realized recently that they still owned this facility and sent notices to the aircraft owners who parked there to remove their aircraft or be charged with trespassing, and a request for a quote has gone to contractors to demolish the runway. The local population is very much against that move, and a petition is being organized to stop the destruction. It is felt that input from pilots is especially important. If any of you have any opinion on this and want to add your name to this petition please send me an e-mail and I will forward it to the person collecting the names. Time is of the essence, and a quick reply would be appreciated.

#### Thank you all

Manfred Ficker 5 Thomas Fuller Dr. Kanata, ON K2W 1A4

Tel: 613-839-2292

Email: Manfredandjoanne@aol.com

#### **FOR SALE**

Two Volkswagen 1600cc "Beetle" engines. one completely rebuilt - \$1,000, one partially rebuilt - \$275

Larger (6-cyl) Continental Oil Cooler (8"x9") - \$50

Lycoming accessory case dual take-off adapter (ie hydraulic and vaccuum pump - \$150

Piston Ring Set for E-185/0-470 Continental series - \$100.00

Continental C-85/0-200 ring set and rocker pins

Lycoming dynafocal engine mount - \$75.

Two shoulder harness inertia reels \$10.00 each

Four seat belts metal to metal like new - \$20.00 each

Lunkenheimer Primer - \$20.00

Two fuel pumps, hand-operated (wobble-type) - \$20 ea

Two Scott parking brake valves (new value \$150 U.S.)

Pair Goodyear 600x6 wheels and brakes - \$150

Pair wheel pants for amateur-built a/c - \$50.

Vista (cockpit fresh air) Vent - \$15.

Lightweight automotive starter and bracket for Lycoming - \$150

Miscellaneous older instruments, gascolator

Piper trim wheel and cables - \$15.

Garry Fancy (613) 836-282

Place your ads by phone with Rodney Stead @ 613-836-1410 or e-mail to <a href="mailto:stitstmp@sympatico.ca">stitstmp@sympatico.ca</a>
Deadline is first of the month. Ads will run for three months. You may request a two-month extension.

For Sale: Rotax 582 with 2.62:1 C drive. With 150 hr inspection, complete including starter relay and voltage regulator and an exhaust system. Plus many extra parts. Price is \$4000. Engine mount for a Rotax 503 (inverted) price \$100. Engine mount for a Rotax 582 (upright) price \$200. Rotax 582 exhaust for Pelican \$150, moulded composite cowl for the Pelican \$350. Aluminium float kit Easy Lift #1150 capacity original price was \$3500 selling for \$2500

06/04 Grantley Este 613-832-1797 este@compmore.net

For Sale: 1993 Hatz biplane, TTSN 240 hrs, Engine lyc 0290-d2 135hp SMOH 415. king radio, elt ,Recent refurbish, asking \$49000.

06/06 rick rickards 905-765-6403 rickr@mountaincable.net

For Sale: Cleveland Brake assembly. 500 x 5 version 199-196 hi performance (good for 2500lbs). Utilises metallic brake pads and insulated pistons. Braking capacity rated at 289,000 ft/lbs. Only used 45 hours. Complete with a set of spare pads. New price US\$865.00 Asking Cdn \$750.00

05/04 email <u>Stan.ironstone@sympatico.ca</u>

For Sale: Garmin 90 GPS with yoke mount bracket and power cable. \$100 OBO.

05/04 Call Keh @ 613-825-6171, email keh@canada.com



## **EAA Chapter 245 Membership Application**

| NEW: RENEWAL: DATE://_  |
|---|
| EAA NUMBER:   |
| EXP Date://   |
| NAME:   |
| ADDRESS:  |
| CITY/TOWN:  |
| PROV:PC:  |
| PHONE:()  |
| EMAIL:  |
| DISTRIBUTION Preference: email post   |
| AIRCRAFT &  |
| REGISTRATION:   |
| REGISTRATION  |
|   |
| OTHER AVIATION AFFILIATIONS:  |
| COPA: RAAC:   |
|   |
| OTHER:  |
|   |
| Annual Dues: January 1st to December 31st. (porated after March31st         |
| for new members/subscribers).   |
| Associate Member: \$30.00 Newsletter plus Chapter facilities                |
| Full Member:: \$55.00 Newsletter, hangar, workshop,                         |
| tiedowns. (Note: there is a one time \$200 initiation fee when you become a |
| Full Member)  |
| Newsletter subscriber: \$30.00 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)

Mail to - P.O. Box 24149, Hazeldean R.P.O., Kanata, Ontario, K2M 2C3

#### **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

e-mail stitstmp@sympatico.ca