

# CARB HEAT

Newsletter of the Experimental Aircraft Association Chapter 245  
Ottawa (Carp CYRP), Ontario, Canada  
Volume 52 No. 2 June 2022

## Our Next Meeting

**SPEAKER TOPIC: TBD**

**PRESENTER(s): TBD**

**WHEN: Thursday, July 21<sup>st</sup>, 2022**

**WHERE: Zoom meeting or alternate details to come**

*Check your email in-box for a meeting invitation to be sent by our Chapter President.*

(it's not hard at all to join a Zoom meeting – try it, if you're having trouble, contact one of the execs who will help you out)

## Important Chapter News

Unfortunately, COVID-19 is still with us in the form of new variants (Omicron BA.1 and now, BA.2) and these remain cause for concern. However, our Chapter hangar remains open and summer meetings may be held in the hangar. Please stay tuned for updated guidance from our President and Operations Manager as the situation evolves.



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# EXECUTIVE ROUNDUP

## Editor's Comments

Peter Whittaker – EAA Chapter 245 Newsletter Editor



Hello EAA 245,

This edition of the newsletter has some great coverage on the Chapter's very successful Young Eagles Day. There are also the usual updates from the Executive team, although summer activities have made for some omissions.

Once again, if anyone has any photos or articles of interest from trips, flights, or projects I will be happy to add them to Carb Heat. I had to come up with something, so in this issue you will be forced to read about making Avex/Avdel rivets shorter for use in tight spaces.

There is also abundant space available for listing items for sale. You will see the Chapter 245 Zenith Cruzer project listed for sale in this issue and also my Zenair 601 HDS.

Keep on Building and Flying,

Peter W

# President's Message

Mark Richardson – EAA Chapter 245 President



Hey Everyone,

By the time you read this it will be summer (I think) so...Happy Summer!!

As I write this, we are a little over two weeks since our highly successful Young Eagles event. Instead of blathering on about that here, I have blathered an entire article later in the newsletter, so you aren't getting off that easily. But there are some pictures, so it isn't that bad.

As you probably know, we finally received our AED unit although we haven't been successful in herding all the cats to get training arranged yet. The unit itself literally talks you through how to use it, so the training will mostly be CPR certification, a great thing to have. We are going to try again in the fall so stay tuned. The good thing is we have it wall mounted in the workshop at the hangar just inside the door from the lounge. It needs to be in a heated space during the winter and this is the only space (other than the toilet) that is heated.

AirVenture is rapidly approaching, and I know there are a bunch of us going. My wife and I are flying in our Maule, and we will be camping in the North 40. However, Phil is arranging the usual Chapter camp site in Camp Scholler. If you are interested in grabbing one of the available spots (which, by the way is MUCH closer to the action than way out by the interstate) contact him. I hope to see you there.

That's about all from me for now. Hopefully I will have seen some of you at the Chapter BBQ meeting on the 18<sup>th</sup>.

Check six

Mark

# Vice-President

Mark Briggs – EAA Chapter 245 Vice-President



Hi All,

Summer - it's FINALLY here! After a cold, wet spring it seems the flying season is ON! Ok, I'll admit I'm making this assessment based on the flight operations tempo of our local mosquito squadron. Judging from their constant take offs and landings and multi-ship formation flights I'd say they are making up for time lost to spring's rainy weather. They are fattening their logbooks at an alarming rate.

Our EAA chapter continues to be a haven for the aviation minded. I've recently met new members at the chapter and have been invigorated by our conversations. It's wonderful to see new expertise, new energy, new enthusiasm coming into our chapter. At the same time, it's also inspiring to see some of our most senior chapter members out and about, scratching their life-long "aviation itch". How fortunate are we who are able to enjoy this incredible hobby and to share it with so many equally incredible enthusiasts? Our EAA chapter provides a wonderful gathering place for those of like mind.



Recently I had an opportunity to help a fellow chapter member by ferrying him to pick up his aircraft at an airport near Quebec City where the annual inspection of his aircraft had been completed. This trip proved a terrific opportunity to enjoy some excellent blue-sky aviating while engaging in stimulating conversation, all against the stunning backdrop of the Laurentians. The views were spectacular, the air smooth, and the tailwind a nice bonus! Before we knew it our destination was in sight, followed by a smooth landing on a beautiful grass strip and a warm welcome at the maintenance facility.

Oddly enough, flying home solo a little later in the day also provided a slight tailwind for a portion of the trip. I can't remember the last time I experienced a tailwind on both outbound and return legs of a flight. What a red letter day! Since this was essentially a pleasure flight, I pulled the power back to a very efficient cruise setting. As luck would have it my selected west-bound altitude put me just above the tops of the clouds. The odd cumulus

cloud had grown above my altitude, necessitating a slightly scalloping path around these gorgeous white ramparts. What an idyllic setting to inspire contemplation of the beauty of the world around us and the incredibly good fortune we as aviators have to see that beauty from on high. I landed at Carp feeling refreshed, relaxed and on the kind of "high" that can only be obtained through the magic of flight.

Here's wishing you a similarly invigorating flight in the very near future!

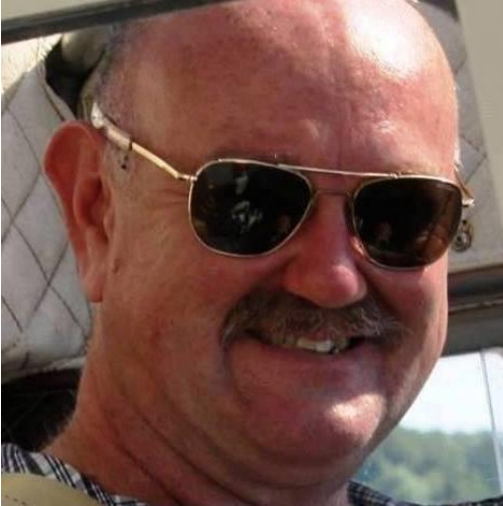


*Blue Skies*

Mark

# Treasurer and Marketing Manager

Ken Potter – EAA Chapter 245 Treasurer & Marketing Manager



Hello Everyone,

I've not much to report this month. We've reached mid-year and our finances are in good shape thanks to Phil's membership renewal efforts and relatively lower expenditures. One exception of course is the new AED which was purchased for the Chapter hangar. It is now installed in the workshop just inside the door. With that in mind, we have raised approximately \$ 1400 towards the total \$ 2500 cost; so, any donations to reach our goal can be sent to [treasurer@eaa245.org](mailto:treasurer@eaa245.org).

At this point, the Fly-In Breakfast is a go for Sunday September 18<sup>th</sup> so fingers crossed for both weather and the continual waning of the pandemic.

Cheers,  
Ken



# Secretary

Mark Cianfaglione – EAA Chapter 245 Secretary



Hello Everyone,

Ah! The beautiful season of summer. The mornings are cool and now that the mosquito squadrons are abating, we are no longer just meals.

Earlier I managed to put the ailerons on and so now all my flight surfaces are waving properly. I have the propeller on at least temporarily. The bolts I have are 0.25" too short. Nothing that buying new ones can't solve. I've been busy for a while now doing wiring and the panel. There's a lot of things that go on before you see any progress but it's getting there. I've added my secondary flight instrument ( Flybox OBLO) and I've got a GNSS receiver coming soon as well. I'm still working on the exhaust system. Lots to learn there. Stay tuned.

***Mark C.***



# Operations

John Montgomery – EAA Chapter 245 Operations



Hi All,

See you at the hangar during the summer.

*John M.*

# Membership and Webmaster

Phillip Johnson – EAA Chapter 245 Membership Coordinator & Webmaster



Hello Everyone,

Membership is in the 100 range; I can be contacted at the email address below for any membership related questions or chapter web site questions.

## Webmaster Report (Chapter 245 (eaa.org))

Remember, this is your website so if anyone has additional requests on what is needed from a chapter website, please contact me at [Membership@eaa245.org](mailto:Membership@eaa245.org).

*Phillip Johnson*

# Young Eagles

Andrew Henry – EAA Chapter 245 Young Eagles Coordinator



Hello Members!

Mark has already given a great summary of our Young Eagles Rally that we held on May 20th so there's no need to add more except one point; Thank You to all those who contributed so much of your precious time, great energy, and liquid gold (aka fuel) to make this event such a success.

This being the first YE Rally that I had a hand in was a good experience and I am very grateful to those who have come before and made it such an easy process. Thank you to the membership of EAA245 and the Board for entrusting me with this.

We have another scheduled for September 10th and hopefully this time we won't need to reschedule to our rain date of September 11th like we did this last time. I encourage everyone who loves to witness smiles on kids' faces to consider playing a part. I guarantee that it is a great way to spend a day.

Thanks,

Andrew Henry  
Young Eagles Co-Ordinator  
EAA 24

# MEMBER ARTICLES

## Young Eagles Day May 29<sup>th</sup>, 2022 – Mark Richardson



EAA Chapter 245 held its first Young Eagles event of 2022 on May 29<sup>th</sup> and it was a HUGE success. Even though we had to reschedule from the day before due to weather, we still had 43 kids show up and have their aviation dreams, well, if not fulfilled, then at least encouraged. Flying 43 kids is a record for our chapter, and it was only possible because of the efforts of our ground and pilot volunteers lead by our Young Eagles coordinator, Andrew Henry.

Some statistics of the day:

- 50 signed up in advance (some had to cancel due to being sick)
- 43 kids flown
  - 17 girls
  - 26 boys
- 8 pilots, 8 aircraft
- 16 ground volunteers
- Started 8am - finished 3pm





We had a couple of our aircraft go down with maintenance issues in the morning, but the rest of the pilots soldiered on making sure no kid was left on the ground. We even had some kids show up without pre-booking on the Young Eagles website but we still managed to get the paperwork filled out and signatures collected to get them in the air.



In addition to the flying bit, we had a few other things happening on the ground. In the chapter hangar we had hands on metal bashing and riveting happening for the kids. This was really popular and hopefully has set the hook for some future homebuilders. In addition, one of our members had his Davis DA-2 out and was giving a talk on airplanes and what to expect in the air. I even had one passenger say "oh yeah, they told us about that on the ground" when I explained why the air was getting rough late in the morning.



Feedback from the local community on social media (primarily Facebook) has been incredible, which mirrors what I heard on the field during the day. As one of the pilots, I had an absolutely great time flying nine kids. The one that stands out for me was a young girl about 10 or 11. She was so nervous heading to the plane she could barely walk, At around the 300' AGL mark she transformed into a future pilot with a huge grin saying over and over "This is so cool". She even did a great job flying my Maule for a leg of the trip! As our own VP Mark Briggs says "That is why we do this..."



I want to thank everyone who was involved that made this day such a success.

Ground operations: Andrew Henry, John Montgomery, Curtis Hillier, Glenn McGee, Scott Miller, Martin Poettcker, Yvon Mayo, Chris Hepburn, Paul Groulx , Bill Reid, Chase Reimer, John Weir, Myriam Guirguis and son, Judy Potter, Marian Mason, Caroline Fortin, Rick Holloway.

Pilots: Mike Ayling (RV-8), Mark Briggs (Glastar Sportsman), Matt Pearson (Cirrus SR-22), David Pettersson (Piper Archer), Phil Johnston (Cozy IV), Ken Potter (Grumman Cheetah), myself (Mark Richardson – Maule M5-235C).

Are we doing it again this year? Funny you should ask; Why yes, yes we are. September 10<sup>th</sup> (rain date September 11), Can't wait....



## Shorter Rivets Needed? Peter Whittaker

This article describes a method for shortening an Avex or Avdel type “pop” rivet for use in tight spaces. During the scratch building of my Zenair CH601-HDS I encountered a few places where there was insufficient depth clearance to insert the full length of the rivet. Those involved were all A4 rivets. The result was that the rivet heads did not roll over completely when pulled and sit tight against the sheet metal. The grip was just passable and the seated rivet head simply did not look good nor did it fill one with confidence. After internet searching and Zenith forum cruising the resulting method outlined here became a fitting solution. Photos outline the procedure.

The offending rivets were all at the leading edge of the forward fuselage top skin where it overlaps and rivets to the fluted top flange of the firewall. All but 7 rivets had seated properly, the “nasty” ones had gaps under the head from fingernail thickness to about 0.5mm. The complicating issue is that in the 601 HDS, the top of the header fuel tank sits up against the firewall flange with only a strip of cork in between, when drilling out a rivet you do not want to drill too far!

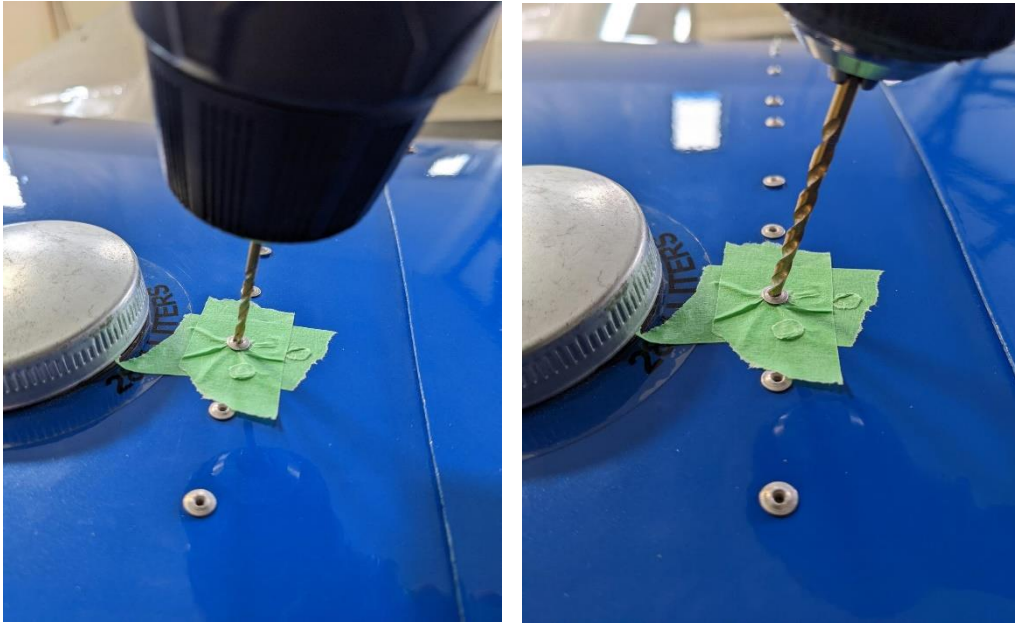
The tools used for rivet removal are shown below. Two drill bits were used, the first was a 3/32” bit and the final bit was 1/8”. A pair of blunt nosed pliers (not shown) were used to grip the rivet and a small hammer was used to lightly tap out the rivet stem (curved pliers shown incorporate a light hammer). Punches were used to knock down the rivet stem and tail after the rivet head was removed. In addition, rivet trimming was done with a Dremel tool and abrasive cut-off wheel.



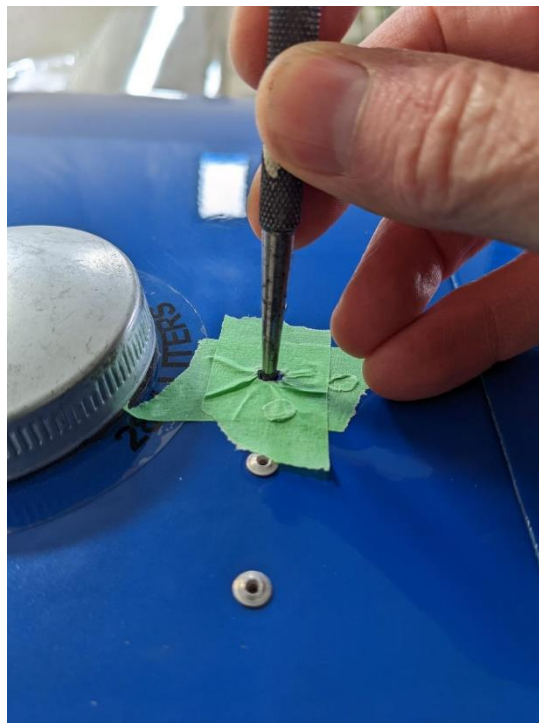


The following photos illustrate the steps involved in drilling out the old rivet, shortening an Avex A4 rivet and the result after the shortened rivet was set. The painted forward fuselage top skin was protected by placing masking tape over each rivet.

1. A pilot hole was drilled (left photo) down the rivet center with a 3/32" bit until the steel stem was hit, this keeps the 1/8" drill bit centred (right photo). The 1/8" bit is used to remove the rivet head – no more drilling after this since the header tank is just below!!



2. The final step in rivet removal was to punch out the stem and tail, this took a light tap.



3. Rivet shortening started with knocking out the rivet stem using rapid but, light hammer taps. The rivet was lightly gripped in pliers that rested on a vise, this arrangement gives the stem somewhere to drop.

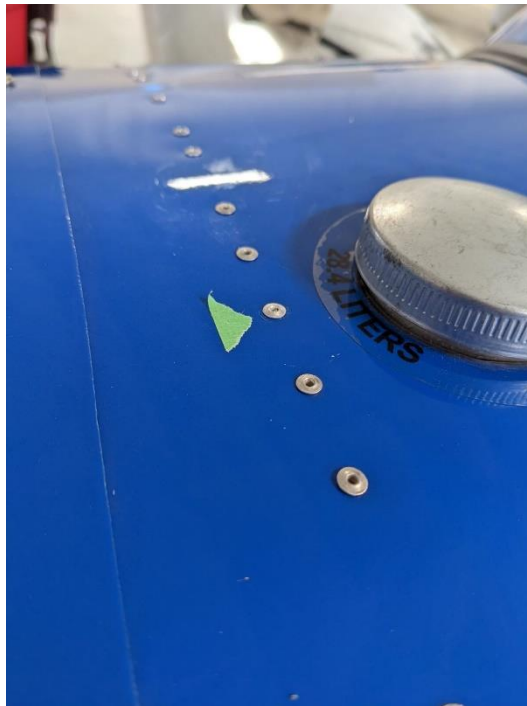
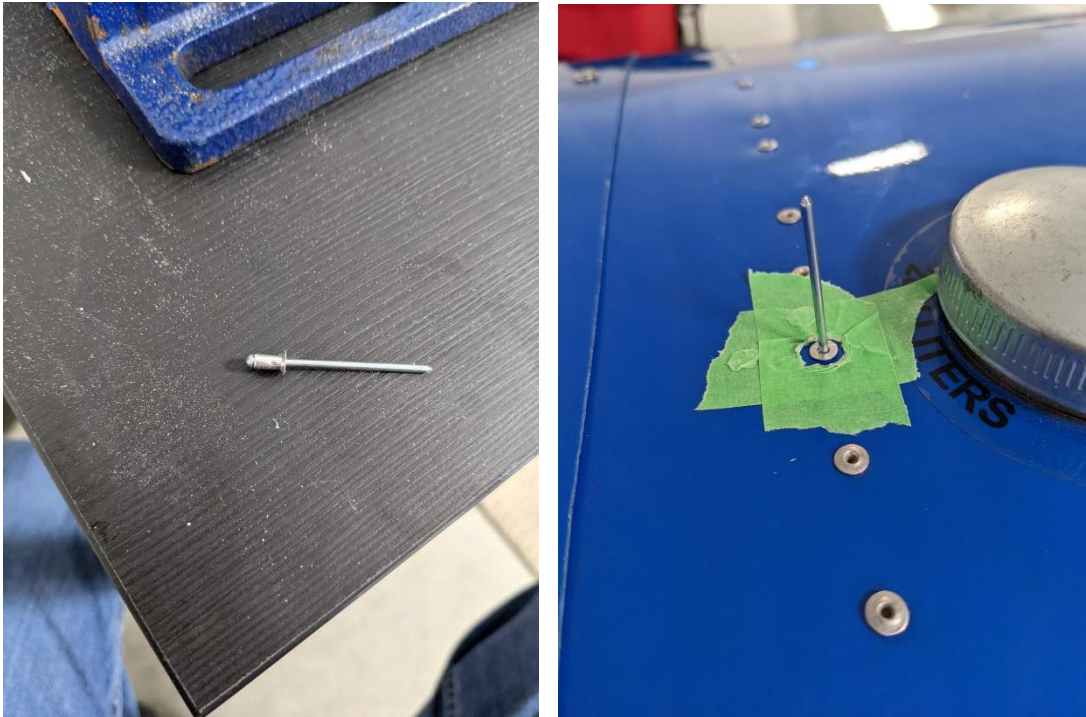


4. A Dremel tool and an abrasive cutting wheel were used to trim about 1/3 of the rivet off while the rivet is snugly gripped in a vise. The stem is then tapped back into the rivet while it straddles a gap in the jaws of the vise (keep stem bulb end up!).





5. Set the shortened rivet and this time there should be sufficient clearance.



The piece of tape indicates the shortened rivet after setting. Next are the two rivets in the foreground – repeat the process while having lots of fun. Happy riveting to all.

## Peter Whittaker – Zenith 750 Cruiser Project Update

The 750 Cruiser panel was traced full size onto Bristol board, and this was then used, together with instrument hole cut-out templates, to plan various panel layouts. A “semi-final” plan was set out based on only the instruments from the 601 plus a donated radio (Garmin GPS/Com) and a donated transponder (Narco AT 150). With a centre control stick, throttles are placed at both sides of the panel so that the stick does not interfere with throttle control. The other consideration was to leave a large open central area in the panel where different users could mount their own IPAD or similar tablet. The panel is planned to have three segments or sub-panels, plus the centre console which could be independently removed for access and servicing different instrument groups (Fig.1).

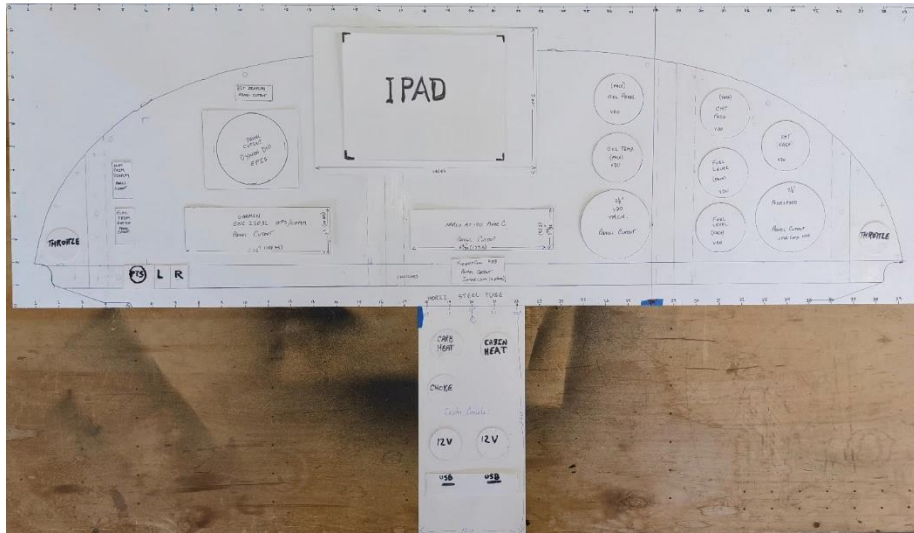


Figure 1. Proposed panel layout using existing donated instruments, radio, and transponder.

The panel has now progressed to cutting sheet metal. This involved preparing openings in the base panel for the three subpanels and riveting in the vertical stiffeners that divide and strengthen the base panel (Figs. 2 & 3).



Figure 2. Three subpanel bays are separated by L-angle stiffeners prior to cutting out the openings.



Figure 3. Subpanels fitted to the base panel



Figure 4. Panel assembly in the Cruiser and the first hole cut for the Dynon D10 EFIS from the old Zenair 601.

Subpanels were cut from 6061-T6 0.040" aluminum kindly donated by John Montgomery. This is about the maximum thickness that could be cut using aviation snips. The rough edges were filed back to the cut lines and then finished with a deburring tool for a smooth edge, all corners were rounded off. The subpanels are secured to the base panel using nut plates and screws salvaged from the old Zenair 601 (Fig.3). After checking that everything fit back into the Cruiser, the first hole was cut for the D10 EFIS (Fig.4).

### **The Cruiser Future:**

The Cruiser project was discussed in the March general membership meeting by President Mark Richardson where he outlined the investment that Chapter 245 has in the project. The project is at a stage of airframe completion where an interested group of members or an individual member could take the project to completion. The Jabiru 3300 engine would need to be rebuilt but, the useable parts have been cleaned and everything else forward of the firewall would still be required, included a cowling, prop, and spinner. The option at this stage is also for a group to put together their own instrument panel, select a different engine and firewall forward components. The chapter hangar would also be available to a group or individual for completion of the 750 Cruiser.

Any interested individual or party can contact the President or other members of the Executive team.

# UPCOMING EVENTS

Chapter 245 Clean Up Day – Date to be announced

Oshkosh Airventure: July 25<sup>th</sup> to July 31<sup>st</sup>

Young Eagles: Saturday September 10<sup>th</sup>, rain date is September 11<sup>th</sup>

EAA Chapter 245 Fly-In Breakfast at Carp Airport (122.8)  
Sunday September 18<sup>th</sup>, 07:30 – 10:30 at the hangar  
Adults \$8 - Children \$5

# CLASSIFIEDS

Does anyone have anything aviation related to list? Drop me a line at [newsletter@eaa245.org](mailto:newsletter@eaa245.org) or [pwhittaker@bell.net](mailto:pwhittaker@bell.net) to let me know and I will add your treasure to the classifieds listing. For now, it is empty!

1. For Sale: Chapter 245 Zenith 750 Cruiser project, \$28,000. The airframe is assembled, an engine and firewall forward components are needed, the instrument panel is currently being built using instruments from the old Zenair 601. The assembled airframe is in the chapter hangar for viewing. A torn down Jabiru 3300 engine (Generation 1) is also included. Contact the chapter president if interested.
2. For Sale: Zenair CH601-HDS (C-GKWI), \$55,500. Powered by a Jabiru 3300 Generation 3 engine with 120 HP and 90 hours on the engine. Panel has a Dynon D180 FlightDek for EFIS and EMS with 6 cylinders reporting EGT and CHT. Garmin SL40 radio and Garmin GTX 327 transponder. Reason for selling – have started building a 750 Cruiser. Contact Peter Whittaker for further information at [pwhittaker@bell.net](mailto:pwhittaker@bell.net).



# WHO WE ARE - Website: <https://chapters.eaa.org/EAA245>

**Experimental Aircraft Association Chapter 245 Ottawa.** We are a group of Amateur Aircraft Builders, Owners, and Enthusiasts with a hangar, lounge and workshop facility located at the Carp Airport (CYRP & 122.8), just west of Ottawa.

President: Mark Richardson- 613-983-7764 [president@eaa245.org](mailto:president@eaa245.org)

Vice President: Mark Briggs - [vice.president@eaa245.org](mailto:vice.president@eaa245.org)

Treasurer / Marketing Manager: Ken Potter - 613-259-3242 [treasurer@eaa245.org](mailto:treasurer@eaa245.org)

Secretary: Mark Cianfaglione - 613-600-4501 [secretary@eaa245.org](mailto:secretary@eaa245.org)

Operations: John Montgomery - 613-286-8543 [ops@eaa245.org](mailto:ops@eaa245.org)

Membership Coordinator: Phillip Johnson - 613-790-4929 [membership@eaa245.org](mailto:membership@eaa245.org)

Webmaster: Phillip Johnson – [webmaster@eaa245.org](mailto:webmaster@eaa245.org)

Newsletter Editor: Peter Whittaker – 778-919-4661 [newsletter@eaa245.org](mailto:newsletter@eaa245.org)

Technical Information Officer: Phillip Johnson – [membership@eaa245.org](mailto:membership@eaa245.org)

Young Eagles Coordinator: Andrew Henry - [young.eagles@eaa245.org](mailto:young.eagles@eaa245.org)

Hangar Group Liaison: Bill Reed - 613-858-7333 [Bill@ncf.ca](mailto:Bill@ncf.ca)

Past President: Phillip Johnson – 613-790-4929 [membership@eaa245.org](mailto:membership@eaa245.org)



# Membership Application and Renewal Form



We have a “Google Group” for the EAA Chapter. If you are not familiar with Google Groups, it is a service from Google that provides discussion groups for people sharing common interests. If you would prefer NOT to be a member of the group, please tick the box in the membership application form when you renew your membership.

Application Date: \_\_\_\_\_

New:                       Renewal:

Name: \_\_\_\_\_

Street: \_\_\_\_\_

City/Town: \_\_\_\_\_

Province: \_\_\_\_\_

Post Code: \_\_\_\_\_

Email Address: \_\_\_\_\_

Home Phone: (    ) \_\_\_\_\_

Mobile Phone: (    ) \_\_\_\_\_

EAA Number: \_\_\_\_\_

EAA Expiry Date: \_\_\_\_\_

I do **NOT** wish to be part of the  
EAA Google Group

Annual Dues: run from  
January 1st to December 31st.

**Associate Member:**            \$50

**Full Member:**                    \$100\*

- Newsletter, hangar, workshop, tie-downs.

**Note 1:** Members must also be members of EAA’s parent body.

**Note 2:** On-Line E-Transfers to  
[Treasurer@eaa245.org](mailto:Treasurer@eaa245.org) are the preferred method of payment.

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