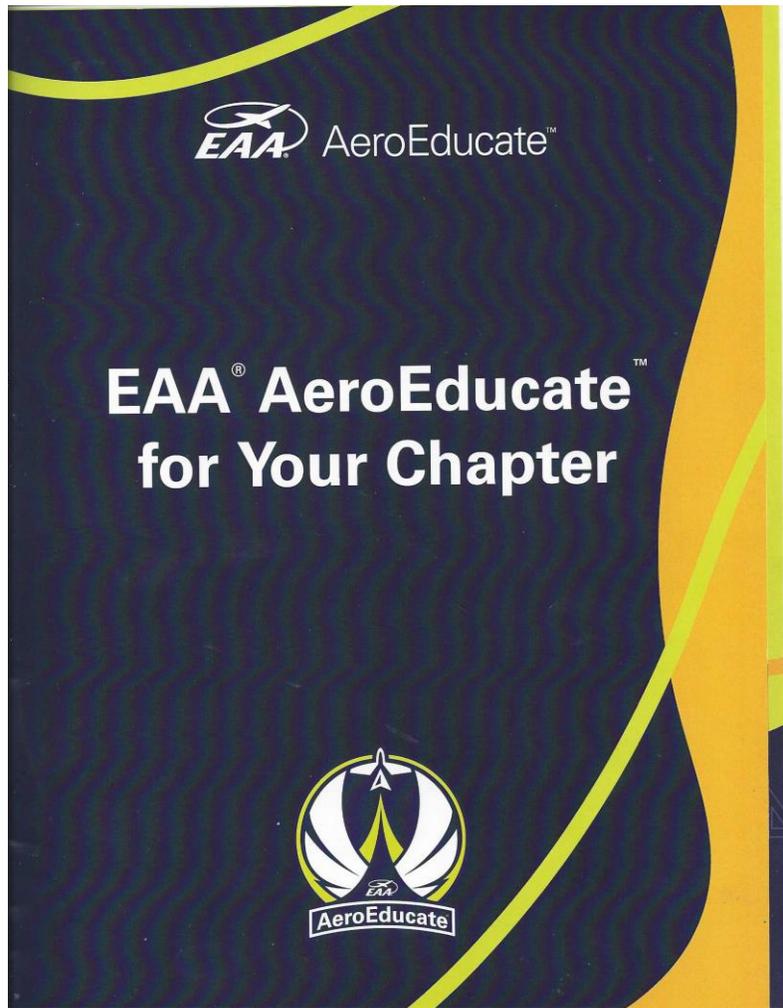




EAA Chapter 478  
**COCKPIT CHATTER**  
Lexington Park, MD November 2023  
A Bronze EAA Chapter



**EAA Chapter 478 Monthly Gathering**  
**November 21, 2023, 6-6:30 PM social time**  
**Program 6:30PM – Chapter Elections and EAA**  
**AeroEducate Program overview**



## In this edition of Cockpit Chatter

**From The Top** – Elections, Update on Build and Fly Program

**Board of Directors Meeting Minutes** – 7 November 2023

**Treasurer Report** – Current Status

**Young Eagles Corner** - Status, Build and Fly Status

**The Homebuilder's Corner** - Challenger II , RV7 Update, CA-2 Update

**The Flying/Maintenance Corner** - \$100 Hamburger Flight, Starter Upgrade

**For Sale** – Vacuum Pump, Artificial Horizon

### FROM THE TOP

Tom Weiss, President EAA Chapter 478

November is Chapter election month. The Terms for the President and Secretary are up this year. There are also several Board Member positions available. We also need another Young Eagle Coordinator and another VMC Coordinator. These are several of the ways you can support YOUR Chapter. Please consider one of these positions for the next 2 years and either nominate yourself or let me know you are interested.

Election Slate – Nominees and volunteers

President: Darryl Crawford

Secretary: Bernie Wunder

VMC Coordinator #2: None

Young Eagle Coordinator #2: Paul Gambacorta, #3 Greg Stevens

We have finally seen some movement on the delivery of the kits we ordered for the Build and Fly Program. We will take inventory soon, but from what I have been told it sounds like we have most of the items we ordered. We will get busy in the New Year planning the progra for this exciting program.

The Runway at Bay Bridge Airport is now re-opened.

We need a volunteer to provide a container for worn out aircraft tires that can be re-treaded. The container would be placed outside of Sid Wood's hangar as agreed to by 2W6 management. Not anything too elaborate, simply something with Signage and a lid to protect from the elements. It should hold about 20 tires. These tires can be recycled for \$5.00. This tire recycling effort is a fund raising opportunity for the Chapter. If you are willing to build a box or if a group of Chapter Members are willing to build a box, let me know.

Wishing all of you and your families a safe and enjoyable Thanksgiving with friends and family.



Donation QR Code for EAA Chapter 478

I look forward to seeing you at an upcoming Chapter event.

# UPCOMING EVENTS

Massey Open Hangar Party – December 3, 10am – 2 pm  
Placeholder: Christmas Party -December 19 at the Museum 6 pm start

## EAA CHAPTER 478 MEETING MINUTES

EAA Chapter 478 Board Meeting Minutes

November, 7, 2023

Attendees: Don Byrne, Darryl Crawford, Bill Englehart, Paul Gambacorta, Keith King, Chris Moody, John Reinert, Greg Stevens, Tom Weiss, Sid Wood, and Bernie Wunder

1. Nov Program: EAA Aero Educate Program Overview
  - a. Elections
    - i. Board Members Availability
    - ii. Young Eagles Coordinator opportunity
    - iii. Secretary opportunity
    - iv. President
2. December Christmas Party:
  - a. Do it at the museum, on December 19th. Expect to see details in the coming months.
3. VMC No Young Eagles planned.
4. Build and Fly Status
  - a. Still waiting for the kits. Kit manufacturer seems to be moving facilities.

## TREASURER'S REPORT

Submitted by Don Byrne

<u>EAA Chapter 478 Financial Report</u> Through 26 September 2023	
<b>Fund</b>	<b>Amount</b>
<b>Petty Cash</b>	\$31.40
<b>Savings</b>	\$439.00
<b>Checking</b>	\$19,987.69
<b>Total</b>	\$20,458.09

# YOUNG EAGLES CORNER

Young Eagle Coordinators – Darryl Crawford/Keith King



## Young Eagles Flown in 2023

Pilots	3/18	6/10	7/1							Other	Total
John Attebury	3										3
Scott Boas											0
Robert Bray											0
Don Byrne											0
Dan Byrnes											0
Richard Byrnes											0
Matt Carruthers											0
Michael D'Errico	2										2
Egon Frech	3										3
Paul Gambacorta											0
Don Gates											0
Robert Lightstone											0
Grant Miller	2										2
Chris Moody											0
John Nelson										1	1
Robert Jake Piercy											0
William Posnett											0
David Rivera											0
Ron Shipee											0
Ronald Surfield											0
Benard Wunder	2										2
<b>Total</b>	<b>12</b>	<b>67</b>	<b>34</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>13</b>

EAA Chapter 478 Young Eagles Total			
Year	Flights	Year	Flights
1992	6	2012	242
1993	54	2013	79
1994	44	2014	127
1995	79	2015	248
1996	89	2016	206
1997	90	2017	205
1998	47	2018	209
1999	23	2019	112
2000	113	2020	2
2001	94	2021	65
2002	90	2022	269
2003	101	2023	13
2004	66	2024	
2005	138	2025	
2006	97	2026	
2007	122	2027	
2008	51	2028	
2009	113	2029	
2010	156	2030	
2011	187	2031	
<b>Total</b>	<b>1760</b>	<b>Total</b>	<b>1777</b>
<b>Grand Total</b>		<b>3537</b>	

Received four boxes from Horizon Hobby this week. If you look at the pictures closely, you will see these kits are very complete even including tools. Don Byrne.





# THE HOMEBUILDER'S CORNER

## Challenger II Builder Report – November 2023

Submitted by Sid Wood

I am Building a Quad City Aircraft, Challenger II E-LSA 2007 Kit:

I installed the Enricher Bowden Cables for both Bing 54 Carburetors. These controls are ganged together on one lever and are operated only for starting the two-cycle engine. A return spring in each Bing 54 carb shuts off the Enricher fuel circuit immediately when the lever is released. The Enricher control is located overhead the pilot position. The Enricher Bowden cables, as supplied in the kit, needed to be cut to fit. I purchased a steel cable cutter,

heavy duty crimper and a supply of various aluminum swage clips to make the cable installation.



The Fuel Tank Tray and Fuel Tank went well. This was actually a re-installation, from a year ago, following the fuselage fabric installation this past winter. Thanks to Jim MacWilliams for his assistance in installing the stainless steel pop rivets in the Fuel Tank Tray.

The Dorsal Fin was reinstalled on the tail boom after the Dacron fabric covering this past winter.



More details may be found in the [EAA Builders Log Site](#)

More yawn inducing details may be found in the [EAA Builders Log Site](#)

# RV-7 Builders Report

Submitted by Chris Moody

After almost exactly seven years from receipt of the first kit, my RV-7 project first flew. Relative to the RV-6 it replaced, this one has a tip up canopy (instead of the slider on the -6), 180 hp vs 160, a CS prop vs fixed, FI vs carburetor, and a Garmin G3x centric panel vs a much more basic panel on the -6. I have just completed 40 hrs and had June as the first passenger. In addition to a lot i need to learn about the avionics, some of my next steps are gathering the leaning data for nozzle tuning (to balance cylinder leaning) and a dynamic prop balance. My thanks to the help of several chapter members during my final push to completion (Don, Bernie, Buck, Tom). You really seem to need help toward the end.



# CA-2 Update

Submitted by Fred the Ultralight Guy.

Sad to say, flying is put off for yet another year. The wing damage will require a near total disassembly of one wing, partial on the other. More bad news; the wing strut fittings I had done at a professional aerospace shop are out of alignment for the thru bolts, and the 1 1/8" T3 bar stock is on backorder with Aircraft Spruce. I am making progress on a trailer to haul the plane- I've completed a 4'x8' Harbor Freight kit, intending to stretch out to 12' with help from a welder, then topping with a near 7' wide platform. As owner, all construction and airworthiness are my responsibility, per Part 103. I am in contact with Adams Aero through their chat group for CA-2s, so there might be some advice from them, though I doubt anyone has had to deal with this issue. Keep 'em flying.

Editor's Note: Fred attached the Flying Club Newsletter below, provides some insight on running a flying club. TAW



Volume 23 – 09

www.FlyingClub1.org

September 2023



## The Privileged View

Steve Beste, President

**Project News.** The Board officially approved the purchase of that M-Squared Breese II in Florida that I wrote about last month. At \$18,000, it's a steal. It cost \$43,000 four years ago and has only 26 hours on it. Donations now total \$9,000 (thank you!). I have loaned the club the difference on a 5-year 5% loan. Our crew – probably Jeff Crider, Michael Bishton, and Tim Loehrke – will take Bob Chapman's trailer to Florida sometime this month and bring the plane home to Culpeper. The exact timing is yet to be determined, but we will be flying in October!

### How much to charge?

At a Board meeting in August, we agreed on these rates for people who join the club as flying members. Dues for everyone else will continue as they are.

- Dues: \$700/year, payable in advance. Your year begins when the club accepts you as a flying member, so people's years will start on different dates from one another.
- Flight-hours: \$35/hour, dry. "Dry" means that you'll buy your own gas. At current prices, that will cost you another \$22/hour, for a total of \$57/hour.
- Since the Breese has a 2-cycle Rotax 582 engine, it also burns oil. The Club will supply the oil.



These rates should cover our costs, providing that we have at least nine flying members, so now we're recruiting! If you want to dig into the finances, you can download a [spreadsheet](#) that shows how these rates will work.

### Risks – and what to do about them

Let's be blunt about it: this project carries a lot of risks for the Club. There's the liability risk, of course. But also the risk that one of the pilots will damage or destroy the airplane. The more I dug into the world of aircraft insurance, the more gloomy things got. Here's our situation and what we plan to do.

**1. Liability risk.** It turns out that no one will sell liability insurance to a club that has students flying an Experimental aircraft. That's us, so we will be operating an airplane uninsured – both for liability and for damage to the plane. Yikes!

*Mitigation #1.* To offset the liability risk, we'll require every pilot to purchase non-owned aircraft insurance (about \$190/year). This will cover them if they injure someone or cause property damage, like taxiing into a Cirrus on the ramp.

*Mitigation #2.* We'll require pilots to sign a pretty severe liability waiver that we got from AOPA. It says *they* won't sue the Club.

*Mitigation #3.* We'll require pilots to get their *passengers* to sign a liability waiver like the one that's been on the Club [website](#) for years.

*Mitigation #4.* The Club will also be buying Directors' and Officer's insurance. This protects us officers from the possibility that someone will sue us individually, claiming that we were derelict in our corporate duties, by, say, failing to maintain the airplane in a safe condition. Without this, nobody will serve as a Club officer.

**2. Risk of aircraft damage.** Paul Mather, the M-Squared owner, told me this story. He had an inexperienced instructor working for him once, flying one of Paul's airplanes. The instructor misjudged a student's readiness to solo. The student took off on his first solo flight, got scared, and pulled the BRS emergency chute rather than try to land the airplane. The chute worked, and the student pilot walked away. But the airplane was destroyed. The student refused to pay (and probably didn't have the money anyway). Paul took a \$35,000 loss.

Let's not have that be us.

*Mitigation #1.* We'll require all pilots to purchase aircraft damage coverage with their non-owned airplane insurance. (about \$380/year for \$50,000 in coverage). As a bonus, this coverage extends to any airplane you rent. So if you want to rent a Cessna, you're covered. If the non-owned insurance chosen by the pilot has a deductible, a refundable deposit will be required equal to the amount of the deductible. This prevents pilots from walking away from damage too small for their insurance to cover.

*Mitigation #2.* The Breese is inexpensive to repair. It's a simple bolt-together airplane with slip-on wing covers. Further, the manufacturer is still in business, so parts are available. We won't be needing to fabricate parts.



### What about the ultralight?

Recall the point of this whole project of buying airplanes: It's to bring more pilots into the ultralight end of the sport. The Breese will make a nice trainer, but where's our ultralight?

We'll get there. But we're going to start with pilots who can fly the Breese because they already have licenses. That's just the simplest way to get going. Once we have enough flying members to assure our financial viability, we'll expand to getting an ultralight.

The first challenge will be finding a hangar for it. Let me know if you hear of one.

The second challenge will be finding CFIs to train the pilots. That's our next step.

If I had to guess, I'd say we'll be in the ultralight business next June. But so much depends on finding a hangar. Stay tuned.

Fly safely,  
Steve



## THE FLYING/MAINTENANCE CORNER

### PIREP – Fall Flying

Submitted by Bernie Wunder

On Veterans Day there were 10 of us who flew to Williamsburg airport for their last pancake fund raiser for sponsoring youths who want to become pilots. What a pretty day. The fall leaves around here were at their peak. The local EAA chapter was sponsoring a Young Eagles rally and as I walked to the airplane, I noticed all the paperwork laid out on a table and being filled in by the participants. I thank our Young Eagle coordinators who have gone paperless at our rallies by using the EAA website.



Williamsburg Pancake Breakfast and Young Eagle Check In Table (Paper Process)

Then to get one last flight into a beautiful fall week, Sid and I, along with 4 other planes, flew to Shannon airport on November 17. With gas being over \$6/gallon, and my Cherokee burning about 8 gallons/hr, a two-hour flight gets you that \$100 hamburger!



Flight to Shannon Airport for the \$100 Hamburger!

# PIREP – Maintenance Starter Problems

Submitted by Bernie Wunder

It began on July 1, 2023 when Sid and I were buckled into the old Cherokee to fly to Cambridge for our Young Eagle Rally. I hit the starter switch and the prop barely turned over. We tried jumping the battery but to no avail. Never made it to the Young Eagle rally.

The following week my neighbor, Don, and I proceeded to trouble shoot the problem. In the process of troubleshooting, we somehow touched the starter solenoid on the firewall and the prop spun over quickly. Problem solved by replacing the solenoid. Over the next couple of months, I could get 10 starts in a row during Young Eagle rallies, but then if the plane sat for a week, the prop would not turn over. By having a fully charged battery, I could get that first hard start, but then all subsequent starts were normal. So I bought a new battery to replace my old 5-year battery and life was good for a couple of weeks; but then back to a hard first start or not even starting. Now the only thing left was the starter and so Don and I pulled the starter. This was an original Declo-Remmey starter that Don had on his TriPacer that he gave to me when my starter failed about 7 years ago. It had never let me down. But Don had no idea how old this starter was or how many starts it made. When we pulled the inspection band to look at the carbon brushes, it was obvious that they were worn down to the nub (see picture below). One of the maintenance problems with a Cherokee 140 is, that to pull the starter, to inspect the starter motor involves removing the prop and cowling, so that was one reason I was sort of reluctant to jump quickly to replacing the starter. Troubleshooting an intermittent problem is a bear So I bit the bullet and bought a new Sky-Tec lightweight starter. What a difference \$800 and a new starter can make. I can now taxi with the starter 😊



That piece behind the screw with writing on it is a carbon starter brush worn down to almost even with the holding bracket

The smaller lighter stronger shiny new Sky-Tec starter on the Cherokee 140

# FOR SALE/FREE

1. Overhauled Rapco Vacuum Pump p/n 215CC. 65 flight hours. Includes air filter assembly. \$100.00

Don Byrne - 301-602-7403

A photograph of a yellow FAA Authorized Release Certificate (Form 138, A) for an overhauled vacuum pump. The certificate is filled out with the following information:  
1. Approving Civil Aviation Authority Country: FAA UNITED STATES  
2. AUTHORIZED RELEASE CERTIFICATE  
3. Form Tracking Number: 197330  
4. Organization Name and Address: Rapco, Inc., 441 Cardinal Lane, Hartford, WI 53029 (NLSR064N)  
5. Work Order/Contract/Invoice Number: 197330  
6. Item: 1  
7. Description: Vacuum Pump  
8. Part Number: 215CC  
9. Quantity: 1  
10. Serial Number: 197330  
11. Status/Work: OVERHAULED  
12. Remarks: The above item has been overhauled in accordance with FAA approved process specification 42014-1099 Revision 01, dated January 10th, 2019. This certifies that the work specified in Block 11, 12, 13, 14 and with respect to the work the article is considered ready for release to service under EASA part 147 approval number "EASA-147-080".  
13. Certificate for the item identified above was either performed in (a) repair shop or (b) Approved repair shop and air is in accordance with (c) Part 147 or (d) Part 141  
14. Other regulation specified in Block 12: 141 CFR 43.9 Return to service  
15. Approval Certificate No.: NLSR064N  
16. Date (dd/mm/yyyy): 25/01/2021  
Handwritten notes on a white card attached to the certificate read: "VACUUM PUMP", "RAPCO #10215CC", "S/N 197330", "overhauled", "overhaul 12/12/22 @ 623.0", "rehaul 8/16/23 @ 688.8", "65.8hrs".

2. RC Allen Gyro Horizon p/n RCA227. Working when removed from RV-9A. Replaced with uAvionix AV-30E. \$200.00

Don Byrne - 301-602-7403





## CHAPTER 478 CALENDAR OF EVENTS

**Date**

**Event**

**Location**

## In the Chocks

Thanks for all of the inputs this month, looking forward to seeing all of you at a Chapter event soon.

Build, Repair and Fly Safe.

Tom Weiss – Editor/President

*Cockpit Chatter* is published monthly by the Experimental Aircraft Association (EAA) Chapter 478 solely for the dissemination of information and ideas to the membership. Gatherings are held on the Third Tuesday of the month at 7:30 PM in the Patuxent River Test and Evaluation Museum. Membership is \$20.00 per year and requires an active membership in EAA. Any opinions expressed herein are strictly those of the author and do not necessarily reflect the opinions of the chapter or the Experimental Aircraft Association.

### Chapter Officers

President: *Tom Weiss 2022-23*

Vice President: Paul Gambacorta 2023-24

Secretary: Gabriel Murray 2022-23

Treasurer: *Don Byrne 2023-24*

### Committee Chairs and Chapter Advisors

Social Chairman: *Bernie Wunder, Sid Wood*

Membership Chairman:

Program Coordinator: Paul Gambacorta

Young Eagles: Darryl Crawford/Keith King

Flight Advisors: *Bill Posnett*

Technical Counselors: Sid Wood 2018

Newsletter Editor: *Tom Weiss*

Web Editor: Chris Moody

Tool Crib Committee: Colin Cline/Alan Tolksdorf

### Board Members

*Sid Wood 2022-23*

*Darryl Crawford 2022-23*

*Chris Moody 2023-24*

*Bill Englehart 2023-24*

*John Attebury 2023-24*

*Brian Link 2022-23*

*Jacqueline Link 2022-23*

*John Reinert 2023-24*

*Greg Stevens 2023-24*

*Keith King 2023-24*

### Chapter Web Address

<https://chapters.eaa.org/EAA478>