EAA Chapter 478

COCKPIT CHATTER

Lexington Park, MD December 2023

A Bronze EAA Chapter

EAA Chapter 478 Monthly Gathering

December 19, 2023, 5-7:00 Setup and Pot Luck Dinner
Program 6:30PM – Chapter Awards and 2023 review
Pax T&E Museum

The Leader In Recreational Aviation

Food & Drinks! Year in Review! Games & Fun!

EAA Chapter 478 Holiday & Volunteer Appreciation Party!

Date: Tuesday, December 19th 2023
Time: 5:00pm Social Time/Set Up
6:00pm Pot Luck Dinner
7:00pm Program & Fun
Location: Patuxent River Naval Air Museum

Bring an Hors d'oeuvres/ dish/dessert to share
Turkey/Ham/Drinks/Condiments/Tableware provided
For info/directions check chapter website *http://www.478.eaachapter.org*

In this edition of Cockpit Chatter

From The Top – Election results. Chapter Survey, YE events
Board of Directors Meeting Minutes – 5 December 2023
Treasurer Report – Current Status
Young Eagles Corner - Status, Build and Fly Program
The Homebuilder's Corner - Challenger II, RV7 engine dehydrator, Sport Air Avionics Workshop
The Flying/Maintenance Corner – Hummel Lunch
For Sale – Vacuum Pump, Artifical Horizon

FROM THE TOP

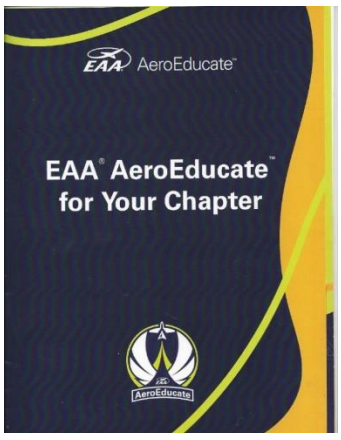
Tom Weiss, President EAA Chapter 478

This is my final "From the Top" message to you. I want to thank everyone for the support of the Chaper you have provided during the 8 years I have been President. We have accomplished many good things and the future for the Chapter is bright.

Please take a few minutes to respond to the EAA Chapter Survey, this information helps the Chapter Board plan the future for the Chapter. I have posted the link below, but each of you should have received an email from me a month or so ago about the Survey. If you don't have the email, try the link below, your feedback is valuable to the Chapter Leadership.

Chapter elections were held in November. The results of the election for 2 year terms were:
President: Darryl Crawford
Secretary: Beernie Wunder
Young Eagles Coordinator #2: Paul Gambacorta and YE Coordinator #3 Greg Stevens
Newsletter Editor: Tom Weiss

The Build and Fly program is coming together and should be an exciting new program for the Chapter to host, I expect the Young Eagles that attend will learn a lot and will have fun while learning. We have now received most the items for the Build and Fly Program. It appears a few items are back ordered. The simulator is here and looks like a good tool to teach the students how to fly using the control box for an RC aircraft (You can try this at the Chrismas Party). Development of the detailed plan for the workshop events later in 2024 is in progress now.



You will hear more about the Aero Educate program next year. One of my Grandsons has done a couple of the modules, I will review these with him during our visit at Christmas to see what him impressons were, if I can anything meaningful out of a 13 year oil.

Hope to see you at the Chapter Christmas Party.

Merry Christmas and Happy New Year to you and your families. Build and Fly Safe.

Tom Weiss

2023 EAA Chapter Survey

https://www.surveymonkey.com/r/DQHN2L5?utm_source=ch_annualsurvey_231108&utm_medium=email&utm_campaign=chapters_2023&utm_content=accessrenewal&mkt_tok=OTEwLVNFVS0wNzMAAAGPTxBQ9cDC62BGTBQLABc9rKl7FXgELWBBDZnISqH-Jj_O0PF2y0ZicXBfZ1GCfGowgLFrovY66p5P-qGlfDOjnBUl6MuydWVUET33NHzNdC4W


Donation QR Code for EAA Chapter 478

UPCOMING EVENTS

Chapter Christmas Party -December 19 at the Museum 5 PM start

EAA CHAPTER 478 MEETING MINUTES

December 5th, 2023

2014 – Exploration Flight Test-1, the first flight test of Orion, is launched.

Attendees**:** John Atterbury, Don Byrne, Darryl Crawford, Bill Englehart, Paul Gambacorta, Gabe Murray, John Reinert, Tom Weiss, Sid Wood, and Bernie Wunder

1. Christmas Party Plans

a. Tuesday, December 19th
b. Sign up via Bernie's email. Setup at 1700-1730. Main meal 1800.
c. Holding it at the museum.

2. Programs for January and February
   a. Darryl is going to host the program for January
   b. Need one for February
3. YE Build & Fly
   a. A suggested plan has been developed
   b. Looking to host one day workshops starting probably in February
      i. About 10 kids, Go over rules & Regs with the kids completing the Dronezone-TRUST FAA certificate.
      ii. Additional topics include building pieces or using the RC Simulator
   c. These workshops should help with downselect for the Summer camp
   d. Tentative data, June17th-21st at 2W6 terminal
      i. Coordinate with Patuxent AeroModelers for the weekend after to fly RC models.
   e. Aiming to target kids from 12-17 yrs old
4. Request to support a joint YE event at Cambridge with the Essex Chapter (143)
   a. For awareness
   b. Darryl is going to talk to the airport on when would work well.
5. Request for YE event on 4 May at 2W6 for Eyes Above the Horizon program
   a. This group will be here the week before. No clue on number of participants.
6. Chapter Renewal due 31 Dec
   a. Don is working on it.
7. Chapter Member Survey due 31 Dec
   a. Please fill this out
8. YE credit request has been submitted to EAA HQ

TREASURER'S REPORT

EAA Chapter 478 Financial Report

Through 26 September 2023

Fund	Amount
Petty Cash	$31.40
Savings	$439.00
Checking	$19,987.69
Total	$20,458.09

Submitted by Don Byrne

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
Total	12	67	34	0	0	0	0	0	0	1	13

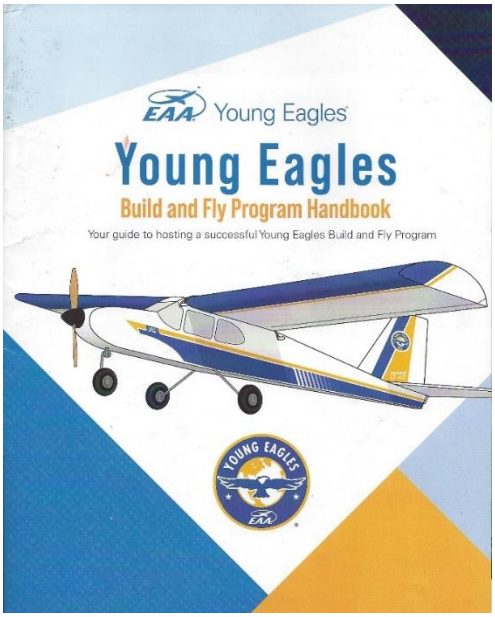
EAA Chapter 478 Young Eagles Total

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	
Total	**1760**	**Total**	**1777**
Grand Total		**3537**	

Young Eagle Build & Fly Program Status

Submitted by Bernie Wunder

Last summer the chapter board discussed conducting the EAA Young Eagle Build and Fly program, but time was too short to do it. However, we made the decision to buy the radio-controlled airplane kit with our Young Eagle credits and to do the program in 2024.



We finally got most of the kit in November 2023. The kit has everything from the RC model to tools to simulators. We inventoried the kit and are still missing some parts like the servos and the covering iron. At the December 2023 board meeting, we laid out a high-level plan to start conducting EAA workshops in the Feb-May 2024 timeframe to recruit and identify about 10 youths between the ages of 12-17. These youths, who would take the program seriously, would attend a summer camp at the St Mary's airport, build an RC airplane, and learn to fly RC airplanes. Then on 22-23 June 2024 we would take the kids to the AMA Patuxent Aeromodelers RC field and fly the airplane with experienced model fliers.

We now have permission to conduct the camp at the terminal building at 2W6 from 17-21 June. We have a POC at the Patuxent Aeromodelers club who will assist us in the flying aspects of the program. We have identified an executive committee of 4 of our chapter members (Don B, John R, Charlie F, and me) who will meet in January 2024 to scope out details for the building of the RC airplane and all the other aspects of the program such as the workshops to conduct, logistics, execution, identifying the summer camp attendees, etc. All of this will involve more volunteers from both our EAA Chapter and the AMA Patuxent Aeromodelers chapter. Please standby to help out as we progress through this evolution. If you would like more information about the program, just go to the EAA website and search for YE Build and Fly.

THE HOMEBUILDER'S CORNER

Challenger II Builder Report – December 2023

Submitted by Sid Wood

This report is a summary of construction done in 2023:

All Dacron fabric covering and painting on fuselage, vertical tail, horizontal stabilizer, elevator, dorsal fin, accessory compartment covers and ailerons are complete.

Ailerons are installed on the wings.

Vertical tail, horizontal stabilizer, elevator and dorsal fin are installed

Engine and Belt Re-drive are installed. Engine controls, instrumentation, dual carburetors, front and rear seat throttles, enricher controls for starting, and electrical wiring are installed. The tuned muffler is installed. The fuel tank, electric fuel pump, engine-driven fuel pump, shutoff valve and all associated fuel plumbing is installed. Propeller installation has been deferred to better facilitate wing installation in 2024.

Front and rear seats are installed, including associated floor boards.

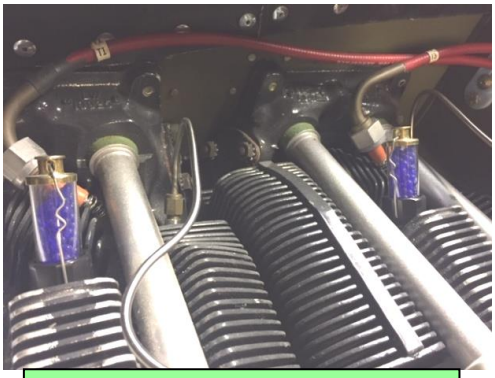
The aircraft is registered as N26383 and the associated Use Tax has been paid to the Comptroller of Maryland. Liability insurance (not in motion) has been obtained through Global Insurance Company. The Hangar landlord is somewhat satisfied with this arrangement (so far).

More details may be found in the EAA Builders Log Site

RV-7 DIY Engine Dehydrator

Submitted by Tom Weiss

As my RV-7 build has consumed more years, I keep reading stories about builders building dehumidifying systems for engines that are sitting. My engine is in my basement which is climate controlled, so the conditions are as good as they can be for the long term storage of an engine. I have also had one dehydrator plug in each cylinder since I got the engine and the engine was overhauled before I bought it. I have blocked the air inlet to the fuel servo, have sealed each exhaust port and sealed the breather port. Even with all of these precautions, adding a dehumidifier can't hurt.



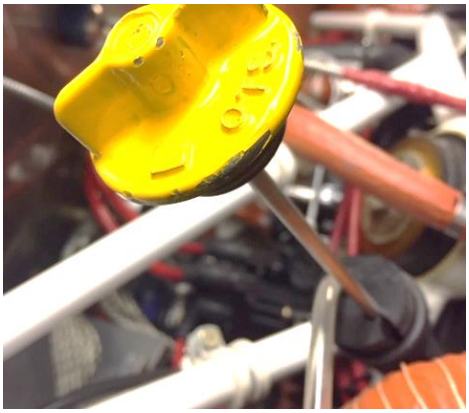
Dehydrator Plugs installed
Blue is dry, pink is saturated

I was inspired to finally act by an article in Kitplanes recently. The first decision to make is to determine if the system would be a closed loop or open loop system. The easiest system is one that pumps dry air into the oil dipstick tube, this is open loop. The open loop system would take air from the basement, dry it and pump it in the engine with the air exiting the breather. A closed loop system would supply the same dry air the same as the open loop, but would suck air out of the engine and return the air back to the pump. I chose the closed loop system but would probably change to an open loop once in a hangar. The advantage of the closed loop is the desiccant would last longer between drying cycles.

All systems I have read about use an aquarium pump as the air source, since mine was going to run 24/7, I bought the smallest Walmart had which is for a 10 gallon aquarium. While I was on the Walmart site, I bought desiccant, a half gallon by a company call Dry & Dry and it

states it is Rechargeable. Generally once the desiccant turns pink you put it in the oven at 250F for about 30 minutes and it will turn it back to blue and can be reused. Total costs from Walmart with shipping about $30.

The next step was to determine what I had in the house that I could use for the system components. I have some plastic tubing from the aviation isle at Lowes, some barbed fittings and several containers. The discharge barbed fitting on the pump is 1/8" OD, so the 3/16 OD/1/8 ID plastic tubing I had was the perfect size. I had a plastic ice cream tub in the garage that would hold the pump and a drink bottle filled with the desiccant. A few brass fittings from the hardware store completed the material list with the exception of adapting to the oil dipstick tube for the supply air.



I decided I wanted to be able to use this system once the airplane is completed and I wanted to be sure that anytime I removed the dehumidifier during a preflight that I didn't forget to put the cap on the dipstick tube. I found a company on line called WidgetCo.com that sells a wide variety of craft supplies including all kinds of stoppers. I ordered several to fit the Lycoming oil dipstick tube with two holes in them. The holes are the size of the dipstick. One hole has the hose from the pump (3/16 OD) and the other holds the dipstick. I sliced the stopper so the dipstick can be inserted from the side of the stopper. It is a little hard to see in the picture. This way I don't have to remove the dipstick completely to add the stopper and removing the stopper I will always have the dipstick in my hand, which hopefully means will be secure the dipstick before flying.

The last step was to put it all together. I had some tubing that is ¾ OD that fits inside the breather tube perfectly. Connect the breather tube to the ice cream bucket, add fittings to the drink bottle for air in and out, run the supply air out of the ice cream bucket to the stopper and run the power cord from the pump through a grommet out of the bucket. The bucket has a lid that seals so that the air that returns from the engines goes into the budget and pump reuses the air for the next loop. So far it has been running for about a week with no change in the color of the desiccant. The biggest drawback of the system is that the top of the ice cream bucket needs to be opened to check the desiccant. I wanted all components to be in one container for easy movement to and from the airplane during pre and post flight activities.

I don't know if this will protect my cam shaft and lifters, but I don't think it can hurt. Total cost was about $50 and I have plenty of desiccant for refills.

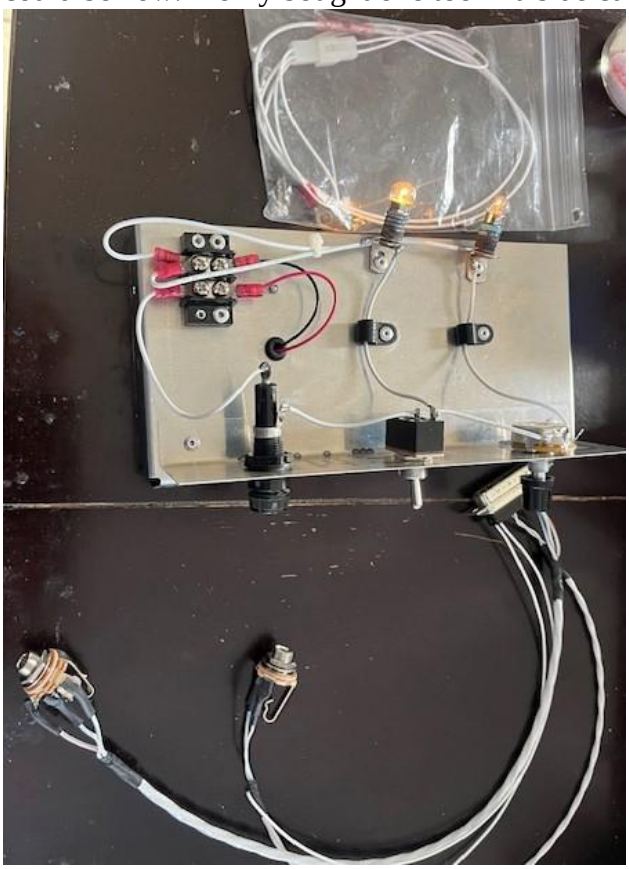
After writing this, I decided to change the configuration of the system. I now am using a small spackle container only for the pump, the drink bottle is now free standing next to the spackle container, this way I can easily see the condition of the desiccant. Maybe I will build a support that holds both the container and the bottle. If I keep writing this and keep thinking about it, I may be making more mods. For now, it is running 24/7.

Sport Air Electrical Systems and Avionics

Submitted by Bernie Wunder

I have always wanted to take the two-day Sport Air workshop on electrical systems and avionics but did not want to travel to far away places to take it. It is now on-line, and I found it to be well worth the money.

The course costs about $160 and the hardware kit costs abouts $90 (another story). Dick Koehler, who is the instructor, is a wealth of knowledge. A lot of what he presents looks like a compilation of Hints for Homebuilders. It covers basic wiring of an aircraft and avionics installation. What I learned is that you need to invest a bunch of money into tools if you want to do it right; there is a different crimper tool for every kind of plug & wire. I was lucky in that a couple of members of our EAA chapter had the tools I could borrow. I only bought one tool – a side cutter wire dykes for $12 from Amazon.



What is great about these on-line courses is that one can go at your own pace. I probably worked on it on and off for a month. If I wanted to go back and review something or had to find a tool, I could jump around in the course and keep on going. I also have a lot of reference material for future use. Beats a cram course in one weekend.

The one complaint I had was that they put the AA battery in the same zip lock bag as a bunch of connectors and components. The battery leaked and everything was covered in a layer of corrosion. So I spent some time cleaning everything up, but definitely let EAA know about the problem. I received an e-mail that they would fix the problem. Buying the kit is an essential part of the course in my opinion.

Overall, an A+ course. I feel confident that I could make an airworthy electrical or avionics connector for an airplane….but practice makes perfect for

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THE FLYING/MAINTENANCE CORNER

Lunch time at Hummel

Submitted by Bernie Wunder

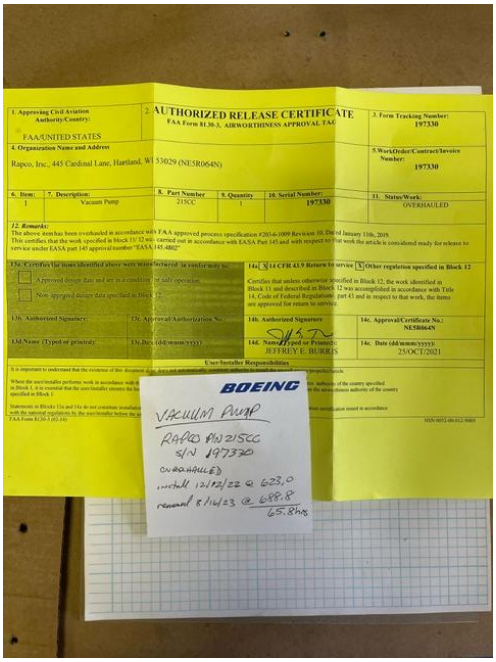
On the 15th of December, several of us launched our reindeer out of CRE for a lunch at Hummel airport in Virginia. The day was warm and crystal clear, so we all found the airport with no problem. We set a chapter record for the youngest aviator to fly out for lunch…the one-year-old son of one of the pilots. Following lunch, one of the local residents who had never seen a SeaRay, was beside herself that she could get close to one and touch it.

When we got back to MD50, low and behold Santa was making his annual Christmas run around Calvert and St Mary's County. I was standing on the wing of the airplane taking pictures when he stopped, hovered, and made a pivot to give me a Christmas wave. He blew my hat off and almost me off the wing of the airplane. Thank you, Santa, and great show by all those who sponsored this.

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



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

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 ^: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.