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News!

January 2021

On the Web: www.EAA80.org

Facebook: www.facebook.com/eaa80

Twitter: https://twitter.com/eaa_80

Notes from the President

By Bruce Mundie



Due to the effect of COVID-19, was 2020 a “wasted year?” I certainly hope not! EAA 80 and its members have quite a few accomplishments in 2020. Executing these activities was not easy and not without risk. They have one thing in common: they were worthwhile and will

have a lasting impact to aviation enthusiasts throughout Eastern Nebraska and Western Iowa.

Young Eagles, under the leadership of Scott Pridie, safely flew 23 Young Eagles in 2020. This number, compared to previous years, is quite low. However, the number is near miraculous with regards to COVID-19 and the precautions that were required. Scott is also branching out to Fremont with next year’s Young Eagles’ flying schedule.

Scholarships, under Mike Howard, was able to grant our \$2000 academic scholarship to Graham Geyer at UNO. Word is getting out on this amazing opportunity as our pool of applicants was triple in size this year. Also, our application for the Ray Scholarship will be submitted in 2020.

Our 501(C)3 charitable organization status is also worked well in 2020. EAA 80 received a Zenith aircraft project and a newly rebuilt

Corvair Aircraft engine. We hope to continue to leverage our tax-free status in coming years. Future is bright for EAA 80.

Weekend flyouts, our chapter cookout, Holiday Party, and a number of other events and activities were also highly successful in 2020. Thanks to all our members who were engaged in 2020 and planning for 2021!

All the best to you, your families, and to EAA 80 in the New Year! I am looking forward to 2021.

Bruce



Christmas Gathering

Here are the details on the Chapter 80 Christmas gathering:

Where: Anthony's Steak House
7220 F Street
Omaha, NE 68127

When: Saturday, January 23
5:30 PM Cocktails
6:30 PM Dinner

What: Prime Rib carving, Salmon, and Chicken Marsala

Cost: \$30/person for the first two people.
(\$3/person is subsidized by the Chapter.)

RSVP

To: Bruce Mundie
By: Monday, January 18
How: Text (703) 405-7817

See you there!

Homebuilders Week – Online Event Starts January 26

An online opportunity to learn about all aspects of building your own aircraft



By Charlie Becker, EAA Homebuilt Community Manager

EAA is launching a new online learning event for aircraft builders:

(www.EAA.org/HomebuildersWeek). It will be five straight days of educational forums covering a broad spectrum of aircraft building topics. It will launch on Tuesday, January 26, 2021, and run until Saturday, January 30, 2021. The live online presentations will be open to everyone interested in building their own aircraft. Sessions will start at 1 p.m. CST and run until 8:30 p.m. CST daily.

This event is an opportunity for a new person to jump in with both feet and learn a lot about the wonderful world of homebuilding. We will cover areas like getting started successfully and techniques when building with sheet metal, composites, steel, and wood. But it won't be just for the newbie; we are offering in-depth talks on panel planning, engine selection, FAA certification, flight testing, and selling a homebuilt aircraft. There will be something for every builder, whether you are just starting out, knee deep in a project, or

just received your airworthiness certificate — it is going to be a great learning opportunity.

EAA is working with industry experts, kit manufacturers, and other subject matter experts to provide top-notch material for builders. The sessions will be live and allow plenty of time for attendee questions. Recordings will be archived and available to EAA members for review.

The launch of EAA Homebuilders Week coincides with the 68th anniversary of the founding of the Experimental Aircraft Association in 1953. Those founding members of EAA lit the fuse on the homebuilt movement that provides affordable access to aircraft ownership and today has spread worldwide.

EAA Homebuilders Week is possible through the generous sponsorships of Aircraft Spruce & Specialty Co., Dynon, Scheme Designers, Inc., and Van's Aircraft, Inc.

Visit EAA.org/HomebuildersWeek to review the schedule and sign up for a session.

EAA Chapter 80 Meeting Minutes December 2020

The chapter meeting was held on December 14th at Oracle Aviation. The meeting was called to order at 7 PM by President Bruce Mundie.

Two new guests were introduced. Tony Bruno recently attained his private pilot's license at Oracle Aviation and purchased a C-150 for lease-back to OA. Doug Pennington has had a private license for about two years and recently purchased a Colorado based flyable RV-7A.

Meeting Minutes: The November 2020 minutes were approved.

Treasurer's Report: Bob Cartwright's treasurer report was presented for November. The opening balance was \$13,511.82. Chapter receipts totaled \$0.00. Expenses were \$334.14 (refreshments and tax filing fee). The

ending balance is \$13,177.68. The report was approved.

Membership: Bob Condrey reported membership at 100, but increased by three more at the meeting to 103.

Tech Counselors: Mike Howard gave an explanation of the EAA Flight Advisor role.

Young Eagles: Scott Pridie stated we flew 23 Young Eagles in 2020 (numbers down due to Covid). He recommended we have future YE flights the weekend after the monthly membership meeting. Expect to resume YE flights in April. The plan is to have a YE event concurrent with the Fremont Airport Civil Air Patrol weekend in May, as well as with the STEM effort in June. With the YE funds received this year two tent canopies and radios were purchased.

Tools: no report

Builder Reports:

- The list of current builders was presented.
- The Aviation Nation RV12 is hopefully awaiting an FAA inspection for flight in January.
- Cook's RV14 is now being completed by Bob Condrey.

Builder Meeting: no report

Chapter Build:

- Bruce Mundie found a potential build location for EAA80's Zenith CH750 at 96th & L. The facility has more than adequate space to build the project and is both heated and cooled. There was a question as to whether the EAA national chapter project insurance would cover the construction of this plane and the leased building, or if would just cover liability. Clarification is needed.
- The leasing agent Brett Klug suggested \$450 for the rent, but the chapter countered with only \$100. The utilities would be paid for by the leaser. Water, electric, and a bathroom are provided. It was asked, but an answer not provided, whether other members could use the

facilities to build their project (if there's room). By voice vote it was approved that we would seek a one-year renewable lease at up to \$200/month. Bruce Mundie will approach the leasing agent.

- There is a modified Corvair engine available as a chapter donation from Alan MacKlem. This engine is compatible with the CH750 design. The engine has a \$6,000 estimated value, and has been successfully test run on an engine stand. Alan's only request is that he complete the donation in 2020.

Fly-outs: Mike Howard said there was a fly-out to Paola KS the first weekend in December.

Social Coordinator:

- The Holiday party is set for January 23rd at Anthony's Steak House. Similar to two years ago but the buffet will be modified due to Covid restrictions. The meal is \$33 per person and a minimum RSVP of 50 attendees is needed. By voice approval the chapter agreed to subsidize the cost down to \$30/person (the reduced price is limited to 2 persons/member). The menu includes Prime Rib carving, Salmon, and Chicken Marsala.
- Ed Kirker volunteered to take over the social coordinator function from Bruce.

VP: Lisa and Deb are making the presentation on the 99's organization tonight. There will not be a meeting in January, but in February Jim Laster, sales manager for Garmin Aviation will speak to us. Future potential speakers are Dave Leslie from the Omaha Soaring club and Mark Gaffney from the FISDO FAAS Team.

Calendar: Jan 23 Holiday party
Feb 8 Chapter meeting, Oracle (Scholarship presentation)
Mar 8 Chapter meeting, Oracle
Apr 12 Chapter meeting, Oracle
Apr-May Resumption of Young Eagle flights
May YE at KFET with CAP
Jun 12 YE flights, STEM at KMLE

Old Business:

- Officer Elections. All incumbent officers volunteered to stay another year and were approved by voice vote. The exception is that Dale Botkin could not be reached and it is unknown whether he will continue as the Web Editor.
- Mike Howard indicated the EAA80 Scholarship for \$2,000 will be awarded to Graham Geyer at UNO. Graham was selected out of 9 applicants. He is a student pilot at Oracle Aviation with a 3.9+ GPA in school. Numerous quality applicants applied this year, all from UNO.
- Bruce Mundie put together a Ray Scholarship requirements document for submittal to National next week. This \$10,000 scholarship will be awarded for any student under 19 years-old that is working on their pilot's license. Payments would be in increments directly to the FBO as the training progresses. The winner will need to join the local EAA chapter and participate regularly.

New Business: see Chapter Build

Announcements:

- Cole Dostal passed his private check ride this month and will start working on his Instrument and CFI ratings.
- Ron Hefner brought in boxes of Sport Aviation and Kit magazines from long ago, and made them available for anyone that wanted any of them. Otherwise, they are destined for the landfill.

Raffle Drawing: A raffle drawing for \$10 was won by Bob Dyer. A chapter T-shirt was also awarded.

Presentation: Lisa McWilliams and Deb Gangwish provided a presentation on the Nebraska area 99s. The 99s were started in 1929 by Amelia Earhart and is now in 44 countries with thousands of members. It is open to women pilots (including student pilots) and they have a "Friends of the Ninety-Nines" group that non-women pilots (or any man or woman for that matter) can join to support the organization with more limited benefits. Their meeting places vary throughout the

state but are usually closer to Lincoln, with approximately 24 members. They support various aviation scholarships and have a special project coming up to paint the compass rose at the Hastings airport (to be finished for the June 18th State Fly-In at Hastings). On July 7-10 they will be having an international conference on the Queen Mary in Long Beach CA and it is open to all membership. For more information you can contact Lisa or Deb, or go to their website at ninety-nines.org. They can use help painting the compass rose if anyone would like to help them.

Next Meeting: There will be NO meeting in January. The chapter Holiday party is January 23rd at Anthony's, and maximum participation is needed (50 minimum).

Technical Advisor

Koehler's Korner



This past month (November 2020) I had the opportunity to do a periodic condition inspection on a friend's RV-8. Specifically, for various reasons, my friend had just purchased the plane and did not do a pre-purchase inspection, so after owning the plane for three months and flying it about 20 hours, we did the needed annual periodic safety inspection which doubled (a bit tongue-in-cheek) as the pre-purchase inspection. Let me emphasize that it is risky to not do a pre-purchase inspection of an aircraft just like it is risky to purchase a house without a housing inspection. You really do not know what you are buying, and there could be ugly surprises that could be costly or even worse, dangerous.

So, we launched off on the inspection knowing it was going to be very extensive, perhaps even more than usual. First, I reviewed all the paperwork, which was mostly complete and well documented. This included all the Van's Service Letters and Bulletins. One Service Letter concerning a relatively

simple reinforcement of the tail cone had been missed, having just been issued in August of this year. There were three Service Bulletins for special recurring inspections for cracking of certain parts of the structure. We added these to our inspection checklist. The owner found an inspection checklist that met the spirit of FAR Part 43, Appendix D, which is called out in the Operating Limitations. To jump to the finish, we found several minor issues that we fixed and we lubricated everything and the plane had no major or costly problems. However, several of the items we found were very timely and having not resolved them, the plane could have had future safety issues. I will review a few of these here.



First, when we looked in the wing to inspect for cracking of the aileron attach bracket doublers (per the SB), we found several mud dauber nests (see above). These nests must have been there for some time, since at least one had broken loose and one was partially "melted" by water getting into the wing bay. These dirty nests can be a great starting point for corrosion. We had to break them loose, vacuum out the debris, and then wash out the residue with water. Some bays had multiple nests.

The next photo (top of opposite column) shows the same nest as in the first picture and another nest in the inspection mirror at the other end of the same wing bay. We also found nests in the tail. All together we found nine nests, each about the size of two cigarette packs. We joked that the weight and balance needed to be redone.

On a serious note, I have found pitot static and fuel vent systems with mud dauber nests blocking them. Either of these could be a major safety problem.



The next photo (below) shows the area under the vertical tail, looking at the left horizontal tail root rib. The left edge of the photo is the horizontal stab spar. On the upper right is where the nest was originally located, with stuck-in-mud and light surface corrosion. In the left edge of the photo is the nest that broke loose, and then got wet, and stuck next to the spar. The box in the foreground is the power supply for the tail strobe light. Mud dauber induced corrosion in this area could lead to both electrical and structural issues.



Another interesting issue we found was the incorrect mounting of the Nippo Denso alternator. As with most alternator mounting, the alternator pivots at the broad base on a bolt and bracket attached to the engine case, and belt tension is maintained with a steel strap and tension bolt that screws into the face of the alternator. On almost all Lycomings and some Continentals, the alternator is driven with a belt. Using a belt drive tends to dampen out the power pulses of each of the cylinder firings, significantly reducing the stresses on the mount structure of the alternator. (On direct alternator drive applications there is usually some sort of [expensive] rubber isolation system in the

drive train.) The picture below shows the mount brackets attached to the crankcase.



This is the latest Lycoming design and is extremely rugged. If you look closely at the picture you can see that the left mount hole is "hogged" out about 50% bigger that it should be. Unfortunately, the builder put the pivot bolt in with a castle nut and cotter pin and never fully tightened it in place. As a result, the alternator could vibrate, ever so slightly initially, but after about 1000 hours (276 million power pulses), the initially, ever-so-slightly loose joint worked itself to hog out the holes and equally to reduce the diameter of the bolt. Unfortunately, I do not have a picture of the bolt, but it was worn from 5/16" diameter to under 1/4" at the bracket holes. It was only a matter of time until something broke. We had to remove the engine brackets, weld the holes shut, and then machine new holes (perfectly aligned) and replace the AN5-42A bolt. I put it in with a high temperature lock nut and tightened it hard after taking tension on the belt. All other bolts had drilled heads and had to be safety wired, due to the vibration environment. Never leave the pivot bolt loose on an alternator installation.

In a similar vein, I found all the engine controls, throttle, mixture, and prop governor had been similarly mounted with drilled bolts, castle nuts and cotter pins. All of these bolts connected to female rod ends that were attached to the engine controls in the cockpit. All of these bolts were loose and had partially hogged out the holes in the actuator arms on the injector servo and governor, introducing hysteresis at the engine control in the cockpit. In other words, from the cockpit all the controls were sloppy and slow to respond. I replaced all the castle nuts with high temp lock nuts and tightened the bolt stack hard against the actuator arm. The ball in the rod

end became the pivot point like it is supposed to be, and the owner could tell the improved accuracy in the controls. Never install your engine controls with the bolt pivoting in the actuator arm, unless you have a clevis type rod end. If you do, plan on wear on the pivot arm hole and plan to replace it every so often.

I hope these inspection examples both entertained and educated you a bit, and that any knowledge you gained will help you fly safe in the future.

Keep building, flying and maintaining.

Dick 12/2020

Re-published with permission of Dick Koehler, EAA 186

EAA 80 Calendar of Events

January 23

Christmas Gathering at Anthony's Steakhouse. Please contact Bruce Mundie to RSVP. See details elsewhere in the newsletter.

February 8

Presenter: Jim Laster, Garmin aviation regional sales manager

EAA Chapter 80 is classified as a Non-Profit Charitable Organization per section 501(c)3 of the Internal Revenue Code. As a result, we are eligible to receive tax-deductible contributions in accordance with Code section 170.

TAX DEDUCTIBLE

Your contributions will go towards such things as:

- ✓ *Aviation scholarships*
- ✓ *Scholarships to send kids to EAA's Air Academy in Oshkosh, Wisconsin*
- ✓ *Helping promote Young Eagles events and rallies for the community*
- ✓ *Many other events that promote aviation in the Eastern Nebraska and Western Iowa region.*

EAA 80 is a 100% volunteer organization, there are no paid members to the staff. Our only funding comes from chapter dues and occasional fund raising.

Please visit our website eaa80.org or contact an office to inquire about making a tax free donation.



<https://www.centralcylinder.com/>

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Photos

The Ninety-Nines presenters at the December meeting.



L to R: Deb Gangwish, Lisa McWilliams, and Bruce Mundie.

Allan MacKlem donated a Corvair conversion engine to the chapter. It sounds as it may be a possible engine for the CH750. Thanks for the donation, Allan!



Monthly Funny

When it's your first landing in 6 months 😄



[FYI-it's an Apple Watch.-Ed]

Upcoming Webinars

[It's Baffling](#)

1/6/21, 7 p.m. CST

Qualifies for FAA WINGS and AMT credit.

Mike Busch

[Huey: Saving an Icon from the Vietnam War](#)

MUSEUM WEBINAR SERIES

1/12/21, 7 p.m. CST

Chris Henry

[Surviving Carbon Monoxide](#)

Qualifies for FAA WINGS and AMT credit.

1/13/21, 7 p.m. CST

Prof. H. Paul Shuch

[The International Aerobatic Club Turns 50 Years Old and It's a Golden Birthday!](#)

1/19/21, 7 p.m. CST

Lorrie Penner and panelists

[Avionics Options for your Homebuilt Aircraft with Dynon](#)

HOMEBUILDERS WEBINAR SERIES

2/2/21, 7 p.m. CST

Michael Schofield

[How Mags Work](#)

Qualifies for FAA WINGS and AMT credit.

2/3/21, 7 p.m. CST

Mike Busch

[Corsair: The Story of the EAA Aviation Museum's F4U Corsair](#)

MUSEUM WEBINAR SERIES

2/9/21, 7 p.m. CST

Chris Henry

[ATC and You: How to Make the Most of Flying VFR](#)

Qualifies for FAA WINGS credit.

2/10/21, 7 p.m. CST

Richard Kennington and Bob Obma

[Flying Procedures into Canada](#)

Qualifies for FAA WINGS credit.

2/16/21, 7 p.m. CST

Luke Penner

[ATC and You: Balancing IFR Flying and the Efficiency of Controlled Airspace](#)

Qualifies for FAA WINGS credit.

2/17/21, 7 p.m. CST

Richard Kennington and Bob Obma

[Owner in Command: Things I Wish I Knew Before I Knew Them](#)

Qualifies for FAA WINGS and AMT credit.

2/24/21, 7 p.m. CST

Sebastien Seykora

[How Mags Fail](#)

Qualifies for FAA WINGS and AMT credit.

3/3/21, 7 p.m. CST

Mike Busch

[Bong: America's Ace of Aces](#)

MUSEUM WEBINAR SERIES

3/9/21, 7 p.m. CST

Chris Henry

[SNAGGED! Dealing with Defects Safely and Legally](#)

Qualifies for FAA WINGS and AMT credit.

3/24/21, 7 p.m. CDT

Sebastien Seykora

These are the current webinars listed on eaa.org.

Please check the site at:

www.eaa.org/en/eaa/news-and-publications/eaa-webinars to see if there are other webinars available.

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KMLE 12916 Millard Airport Plaza Omaha, NE 402.934.5300 www.oracleaviation.com

EAA 80 MONTHLY TREASURER REPORT

Jan-21

Checking

Acct. 310

Opening Balance \$13,177.68

Receipts

50/50 10+9 \$9.00
T-Shirt Sale

12/14/2020 Dues Cash \$125.00
12/14/2020 Dues Chks \$150.00

Expenses

Y.E. Expnse

12/14/2020 Refresh Mundie \$ 10.93
12/14/2020 Y.E. Exp Prdie \$ 194.08
12/15/2020 UNO Scholarship Howard \$ 2,000.00
Graham Geyer
12/27/2020 Nat'l Dues&Ins. Mundie \$ 398.00

Ending Balance \$10,858.67

Asset Accounting

<u>Date</u>	<u>Item</u>	<u>Value</u>	<u>Date</u>	<u>Item</u>	<u>Value</u>
6/17/2020	T-Shirts	\$125.00	5/22/2020	Zenith 750 Proj.	TBD
7/13/2020		\$100.00			
8/10/2020		<u>\$25.00</u>			
Total to Date		\$250.00			\$0.00

AS INFO Jan 2020 \$13,692.88

Mail checks to:
 Bob Condrey
 1105 Kountze Memorial Dr.
 Bellevue, NE 68005

EAA CHAPTER 80 2021 APPLICATION FORM

www.eaa80.org
 www.facebook.com/ea80
 Twitter: @EAA_80

CONTACT INFORMATION			
NAME		EAA NUMBER	
ADDRESS			
CITY, ST, ZIP			
SPOUSE NAME			
HOME PHONE		CELL PHONE	
E-MAIL ADDRESS			
PROFESSION		RETIRED	

MEMBERSHIP PROFILE							
OWNED ACFT		N-NUMBER					
ACFT BUILDER		TYPE:		COMPLETE %			
PILOT LICENSE							
AIRPORT BASE		HANGAR #					
EMAIL GROUPS	FLY-OUT		BUILDERS		YOUNG EAGLES		
PUBLISH INFORMATION IN CHAPTER DIRECTORY			HAVE A NAME TAG		YEAR JOINED CHAPTER 80		
YOUNG EAGLE VOLUNTEER			YOUTH PROTECTION TRAINING CURRENT				

OFFICE USE: (DUES \$25 PER YEAR)									
2021		2022		2023		2024		2025	
PAYMENT	TYPE				AMOUNT			DATE	

Last updated: 1/3/2020