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News!

March 2022

On the Web: www.EAA80.org

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President's Corner

By Bruce Mundie



It feels like spring is here! With spring, the flood gates of EAA 80 activities open. In line with spring flying, we start Young Eagles on 19 March and expect a restart weekend fly-outs as well. Let's all get out and enjoy the upcoming

great flying and building weather!

If you missed it, EAA 80 made the news in February as a participant in Omaha Aviation's Winter STEM Day. It was put on by Hague Howie and Jim Beyer (both members) and it was very well attended by hundreds of youths interested in aviation. Great Job Hague and Jim!

EAA 80 was chosen again to award a Ray Scholarship in 2022. That is \$10,000 toward a private pilot's license or glider rating. We will announce to the public on 14 March; resumes and questionnaires will be due by 15 April; interviews for the top 3 applicants (and a parent or guardian) the week of 25-29 April; and announce the winner on 2 May. Applicants for powered flight must be between 16 and 19. Date of birth between 24 June 2003 and 24 June 2006.

That being said, Patrick, our current Ray Scholar has scheduled his flight eval for his birthday on 7 May 2022. All the best of luck to Patrick!

If you would like to be our Ray Scholarship lead for 2022, please contact me at (703) 405-7817.



We need to get back with the owner of the Glastar project donation. I am looking for interest and ideas on how to accept this generous donation (aircraft kit and engine) and not overwhelm an already busy chapter. Let me know if you have an idea or interest in this project.

Once again, great flying and building weather is ahead....get out there and enjoy!
Thanks and fly safe!

Bruce

EAA 80 Calendar of Events

Mar 14 Chapter meeting, ABLE ACE mall, Presenter Ken Bader et al., from the Lincoln Sport Parachute Club
Mar 19 Young Eagles, Millard Airport
Apr 11 Chapter meeting, ABLE ACE mall
Sep 24 STEM Day, location TBD

VMC Meetings are the 2nd Tuesday of the month

IMC Meetings are the 2nd Thursday of the month

Gold Status!

Chapter 80 has reached Gold status! This is recognition given by national to chapters that are active and engaged. According to the EAA website, 63 chapters attained Gold in 2019. It takes all the active members of the chapter to help achieve this goal!

EAA Chapter 80 Meeting Minutes February 2022

The chapter meeting was held on February 16th at the Able Ace Facility (Oak View Mall) and called to order at 7 PM by President Bruce Mundie.

Guests and New Members: Five guests from the EAA Chapter 569 in Lincoln attended and presented later.

Meeting Minutes: The December 2021 minutes were approved as written. No minutes were taken for January as there was no meeting.

Treasurer's Report: The treasurer's report was provided in the February newsletter and approved as posted. The opening balance was \$14,262.19. The ending balance is \$14,057.20.

Membership: Rich Kolkman reported that 44% of the membership had paid their 2022 dues, with more coming in at the

meeting. No total membership number was provided.

Scholarship: Patrick Stolinski was present and announced a 92% grade on his private written test. He will resume flying as soon as the weather warms up. Bruce announced that he is submitting the application for the chapter for another Rays Scholarship in 2022.

Tech Counselors: Neither Mike nor Bob had anything to say.

Young Eagles: The first YE weekend is posted for March 19th (normally the Saturday after our monthly meeting). Scott Purdie is in need of pilots to contact him as volunteers. Phillips 66 is offering a \$1 discount to YE pilots (when using a P66 credit card). Card applications can be obtained at Oracle Aviation.

Bruce provided guidance for YE flights:

- YE kids should fly at least once a year.
- Priority is for kids that haven't flown yet, but then as available for those that have gone before.
- Parents should be encouraged to stay on the ground, and not fly.
- Safety first

Tommy Ostlund commented that EAA youth training is required for the pilots but not for the ground crew (when at least two adults are present).

Tools: No change.

Builder Reports:

- Bill Haas has been working on his Berkut wiring, fixing an oil problem, and relocating the GPS antenna.
- Ken Barr is working on his Sonex firewall and mount.
- Kim Fostvedt is working on the baffling and cowling for the Bearhawk, and awaiting warmer weather for final assembly.
- Bob Condrey is working on Jim Beyer's RV10 finishing up the interior paint and then installing the rest of the interior; then it's going up on the gear.
- Ted Drefs received a ground adjustable prop for the Lycoming O-235 in his Zenith

750. Dynon avionics have been ordered and he's working on the cowling.

- Bruce showed pictures of Mike Stahl's RV8 fuselage in work.

Builder Meeting: Bob Condrey will be hosting a builder meeting Saturday March 12th from 9-11AM at his house (1105 Kountze Memorial Dr, Bellevue). He will be displaying the RV-10, RV-14 tail kit, and other "stuff". Donuts and coffee!

Chapter Build:

- Mike Howard reported that he applied for the Zenith aircraft registration. He has applied for N80ZA. Bruce Mundie will be assisting him as Chapter President to register the aircraft. Jim Beyer volunteered to pay a third agent to assist in getting the registration through the FAA red tape.
- Mike needs a Bill of Sale from Ron Parks for the FAA paperwork. Bruce will assist getting this.
- Mike has been working on the front end of the Zenith aircraft (engine/avionics) while Bob Condrey and Craig Tylski have been working the back end (flight controls and tail installation/rework). Several other members have been assisting during the build sessions.
- John Price has agreed to make CAD 3D printed fairings for the rudder cables (current fairings were incorrectly installed and not re-usable).

Fly-outs: Mike Howard has not called any due to winter weather.

Social Coordinator: Ed Kirker reported the holiday party was a success. Anthony's will be closing and a new party site will be needed for the next one.

VP: Bob Dyer is looking for speakers at our meetings. Contact Bob with suggestions.

PRESIDENT:

- Bruce announced that Cole Dostal, member, recently passed the commercial pilot flight check in the Aviation Nation RV-12.
- EAA Chapter 64, Illinois, is selling raffle tickets for an Ercoupe as the first prize, with other prizes. \$50/ticket (3/\$125).

- Elections were finalized last meeting. Rich Kolkman has taken over at membership; Ron Hansen is assisting with the chapter website.
- The chapter has a nametag machine for members that need them made.
- Bruce handed out the 2021 annual awards to those present.
- Bruce chose and presented the Chapter MVP Award to Jim Beyer. Others in contention were Mike Howard, Hague Howie, and Bob Condrey.

Calendar:

- Mar 14 Chapter meeting, ABLE ACE mall
Presenter Ken Bader et al., from the Lincoln Sport Parachute Club [Added-Ed.]
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Old Business: Ten-year Plan. Bruce is still on target to speak with the Millard Airport and Omaha Airport Authority soon on the proposed chapter hangar at Millard. The current design is approximately a 100'x100' hangar with a kitchenette and bathroom. Cost estimates, Omaha airport regulations and special requirements have not been evaluated yet.

New Business: George Stratbucker, Glenwood Iowa, would like to donate his Glastar project to the chapter. It has a completed composite fuselage, metal wings in work, tail and flight controls completed, and an engine with 3-bladed CS prop. It does not include any wiring or avionics. There was a discussion as to whether there would be enough interest and chapter members to work on the project. There was talk about using the profits from the sale of the Zenith when completed (or use those profits towards the proposed chapter hangar) to fund the remaining expenses. The Glastar Company has gone bankrupt, it has new owners, but it is unknown how much company support the project would have. It does have some commonality with the more recent Glastar 2+2. George has two requirements for the donation: 1) he'd like younger kids to have the

opportunity to work on it; and 2) he'd like a flight in it after completion. The discussion was tabled to the March meeting.

Announcements:

- Jim Beyer has sold some of the RV4 raw metal he has with some remaining.
- The winter STEM expo is set for February 19, 2022 from 11-2:30 at the Able Ace facility in the Oak View Mall. Hague Howie has been driving this effort with details on Facebook. The fall STEM expo is set for September 24th.
- Jim Beyer has a couple of solid crew seats for an ultra-light project if anyone is interested.
- Hague Howie has disposed of all plastic hangars and mannequins from the Able Ace storage to make more room.
- Tommy Ostlund reported that the Tri-Motor is not available this year for Millard. The Lincoln EAA chapter is hosting the Tri-Motor this May 5-8 out of KLNK. Flyers distributed.
- Tommy found out that the EAA B-25 requires 5,000'x100' runways for its operations. That rules out Millard, but not Council Bluffs. This will not be pursued further.

Raffle Drawing: No raffle drawing

Presentation: Five members of Lincoln Chapter 569 joined us to outline how they put on the monthly Crete Nebr pancake breakfast fly-in. Lori Oliveros was the primary spokeswoman. President Tom Trumble was also present. They utilize seven people each fly-in with five stations set up to serve eggs (served as you like), pancakes, meat/potatoes, juice/coffee. The Wednesday prior they decide (based on the weather) how many meals may be served. On Thursday two members shop for the food; on Friday they prepare the food for Saturday. On Saturday preparation starts at 5:30am for the meals that are served between 8-10am. Cleanup is completed by 11am. They normally net around \$500 with about 150 meals served. They have had as many as 45 aircraft fly in, and have about 50-50 aviators to locals eating.

There was a side discussion with respect to using this meal method for STEM day instead of the Pancake Man. Our chapter has a grill at Plattsmouth that could be used. We have tables and chairs and the ability to do it at Millard. Aside from STEM day it was suggested that perhaps we could do a fly-in breakfast on the 5th Saturdays of the month when they occur. Insurance is required, but reportedly not difficult to get.

Next Meeting: The next meeting is March 14th at the ABLE ACE build site, Oak View Mall, at 7pm. *Presenter Ken Bader et al., from the Lincoln Sport Parachute Club [Added-Ed.]* Note: Exterior mall doors are locked at 7pm.

Technical Advisor

→ Koehler's Korner →



I admit, I promised to chat this month on ignition system alternatives to magnetos. But another subject has come up, so mags are deferred for another month. The subject of “time between overhaul” (TBO) has come up several times recently, so, this month I will kick the subject around a bit and use this written document to answer a couple of e-mails.

On all certificated (please do not say “certified”) engines, the manufacturer has established a TBO. This is done in an “official” document, usually a Service Instruction (SI) or similarly named paper. On most for-hire aircraft operations, such as commercial airlines and charter operations, the engine manufacturer’s TBO is mandatory. On the other hand, for not-for-hire operations, such as our Part 91 general aviation operations and our homebuilts (Experimental, Amateur Built), the engine manufacturer’s SBs are not mandatory. So, you can legally ignore the TBO, if you want to. As an aside, in many other countries, the manufacturer’s SIs are mandatory, so bless your lucky stars for

being in the good old USA.

Now the question comes, “Should I follow or ignore the manufacturer’s TBO?” To get into this, let’s look at how the TBO is established. There is usually a bit of a struggle within the engine manufacturer to pick a TBO. Marketing (sales) would like to have a very high number, as a selling point, whereas engineering tends to be much more conservative, wanting no failures due to worn parts. Also, engineering is trying to balance weight, cost, and durability. Early in the life of a new engine design, extensive test cell work is done to look at long term cyclic fatigue, typical usage profiles, and the effects of exceeding limits. In the military, we called it Advanced Simulated Mission Environment Testing (ASMET). Alas! this testing is done to establish the expected “life” of the engine. First thing to notice is that this is a statistical process. One cannot empirically calculate the exact time that an engine will last. One can calculate that with some probability, the engine will last X hours, and with a lower probability, it will last X+Y hours, etc. Given this theory, one would probably want to assign a TBO that is prior to a rapid rise in the chance of a failure. Again, back to the internal argument within the various departments within the engine company to establish a TBO. Of course, as an engine begins actual operation, the actual usage data is used to further adjust the TBO (and/or upgrade components of the engine).

Obviously, the TBO is predicated upon a certain usage profile. If your engine is operated differently, one should expect a different result. One of the best ways to safely reach TBO is to operate the engine every day, and do lots of moderate power cruising. Some engines are allowed a TBO extension if the hours are accumulated quickly (like 40 hours per month). This said, many TBO SIs also have a calendar time limit associated, of which many owners are unaware, in my opinion. For Lycoming and Continental, it’s 12 years! Seals, gaskets, and chances of corrosion drive this number.

This process of selecting and adjusting TBO is not a precise science. As a result, some engines and/or engine/airframe combinations develop a reputation for usually falling short of or exceeding TBO. For instance, the Continental IO-360 engine on the Cessna

Skymaster has a reputation for rarely lasting to TBO. On the other hand, the same engine on a Mooney M20K often seems to reach TBO, but usually needs a top overhaul part way through. The Lycoming O/IO-320 series has a great reputation for reaching TBO, but the Lycoming O/IO-480 (six instead of four of the same cylinders) does not.

So, should you overhaul an otherwise good engine at TBO? The answer is, "It depends." What is your usage? Is the engine being used for flight instruction or cross country cruising? Do you fly a lot of formation? How long has it been since the last overhaul? Was it a rebuild or overhaul (different acceptable wear limits)? Lastly, what is the current status of the engine? What is the oil usage? What are the compression readings? Is there oil analysis information available? What is the trend? How old is the engine (beyond 12 years)? Is it clean or an oil oozing mess?

Also, you may want to review your insurance policy. Some, I am told, include wording that the aircraft insurance is contingent upon the aircraft being properly maintained. Even though we do not have to follow manufacturer's TBOs, a wily lawyer might argue that you are not smarter than the engine manufacturer, and so should follow the TBO, even though the regulations say you do

not have to. Just a thought.

Lastly, it can be argued that overhauling an engine with relatively low time will have a less costly overhaul, since fewer parts will be worn out. For instance, a cam might be reusable on a lower time engine, but require replacement if run a few hundred hours beyond TBO. Ditto for crankshaft journals. The engine at TBO should usually only need a minor clean-up of the journals, but as you exceed the TBO you enhance your chances of having to replace the engine crank (think thousands of added cost). Obviously, if you run the engine until it fails catastrophically, you will have a much bigger overhaul cost, assuming what is left is even repairable! If it fails in flight, you may also have airframe repair/replacement costs, and if you are really unlucky, maybe hospital bills too.

I hope this little review of rules and regulations was useful for you. The applicable Lycoming SI is SI 1009BE and for Continental, SIL98-9C. You can find both easily on-line.

Keep building, flying and maintaining.

Dick 02/2022

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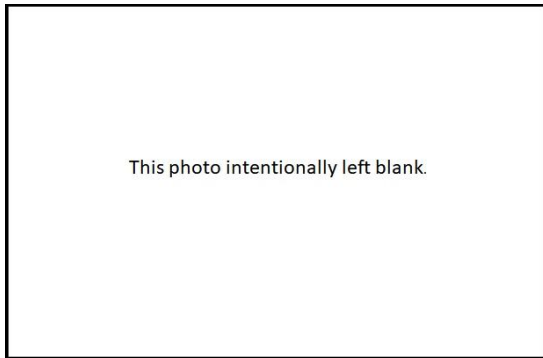
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Photos



Left: Have a photo from an EAA event? How about a non-EAA aviation related event you happened to attend? Or maybe you snapped a picture of a part on your airplane that “plumb wore out” while doing maintenance recently? Send it my way with a short note of what it is. Good chance it’ll make the newsletter.

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.

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 officer to inquire about making a tax free donation.

EAA 80 MONTHLY TREASURER REPORT

Feb-22

Checking

Opening Balance	\$14,057.20
DEPOSITS	
Deposits Christmas Party	\$873.00
Deposit Dues	\$723.36
EXPENSES	
Rent ABLE/ACE	\$150.00
Anthony's Christmas Party	\$1,315.83
Christmas Party - Other Costs	\$204.64
Snacks and Drinks	\$28.43
Ending Balance	\$13,954.66

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		\$250.00			

Upcoming Webinars

[Mustang: The History of EAA's P-51s - Part 2](#)

3/8/22, 7 p.m. CST

Chris Henry and Ben Page

[Shiny Side Up — Avoiding Spatial](#)

[Disorientation](#)

Qualifies for FAA WINGS credit.

3/9/22, 7 p.m. CST

Prof. H. Paul Shuch

[EAA Ray Aviation Scholarship Coordinator](#)

[Training](#)

3/10/22, 7 p.m. CST

Christopher Gauger

[International and Cross-Border Aircraft](#)

[Transactions](#)

Qualifies for FAA WINGS credit.

3/16/22, 7 p.m. CDT

Paul Herbers and Patrick Floyd

[Home Flight Simulation for Private Pilot](#)

[Training and Proficiency](#)

Qualifies for FAA WINGS credit.

3/23/22, 7 p.m. CDT

Evan Reiter and Phil Coyle

[Young Eagles Workshops – Bringing Youth](#)

[Back to the Airport](#)

3/24/22, 7 p.m. CDT

Serena Kamps

[EAA Learn to Fly Day – Hosting a Chapter](#)

[Flying Start Event](#)

3/29/22, 7 p.m. CDT

David Leiting

[Taming the Tailwheel Shimmy](#)

Qualifies for FAA WINGS credit and AMT credit..

3/30/22, 7 p.m. CDT

Will Fox

[Your Airplane's Report Card](#)

Qualifies for FAA WINGS credit and AMT credit.

4/06/22, 7 p.m. CDT

Mike Busch

[Gyrocopters of the EAA Collection, Part 2](#)

4/12/22, 7 p.m. CDT

Chris Henry and Ben Page

[Welcome to EAA – Getting the Most Out of Your Membership](#)

4/13/22, 7 p.m. CDT

David Leiting

[Young Eagles Build and Fly – EAA's Youth RC Build Initiative](#)

4/14/22, 7 p.m. CDT

Serena Kamps

[Bad News Is Good News: Avoiding Most Accident Scenarios](#)

Qualifies for FAA WINGS credit.

4/27/22, 7 p.m. CDT

Tom Turner

[Tulip Fever \(Pre-buys\)](#)

Qualifies for FAA WINGS and AMT credit.

5/4/22, 7 p.m. CST

Mike Busch

[Baby Ace: The Airplane That Brought Homebuilding to the Headlines](#)

5/10/22, 7 p.m. CDT

Chris Henry and Ben Page

[Pass Your Checkride, Part 1: Paperwork & Oral Quizzing](#)

Qualifies for FAA WINGS credit.

5/18/22, 7 p.m. CDT

Larry Bothe

[Pass Your Checkride, Part 2: The Flight](#)

Qualifies for FAA WINGS credit.

5/25/22, 7 p.m. CDT

Larry Bothe

[Aluminum Overcast, the history of EAA's B-17](#)

6/14/22, 7 p.m. CDT

Chris Henry and Ben Page

These are the current webinars listed on eaa.org.

Please check the site at:

[www.eaa.org/en/eaa/news-and-publications/eaa-](http://www.eaa.org/en/eaa/news-and-publications/eaa-webinars)

[webinars](http://www.eaa.org/en/eaa/news-and-publications/eaa-webinars) to see if there are other webinars

available.



EAA CHAPTER 80

NEW MEMBER APPLICATION FORM

CONTACT INFORMATION

NAME:	<input type="text"/>	EAA #:	<input type="text"/>
HOME ADDRESS:	<input type="text"/>	SPOUSE NAME:	<input type="text"/>
E-MAIL ADDRESS:	<input type="text"/>	HOME PHONE #:	<input type="text"/>
PROFESSION:	<input type="text"/>	CELL PHONE #:	<input type="text"/>
		RETIRED?	<input type="checkbox"/> Yes <input type="checkbox"/> No

MEMBERSHIP PROFILE

OWNED AIRCRAFT?	<input type="checkbox"/> Yes <input type="checkbox"/> No	TYPE:	<input type="text"/>	N-NUMBER:	<input type="text"/>
AIRCRAFT BUILDER?	<input type="checkbox"/> Yes <input type="checkbox"/> No	TYPE:	<input type="text"/>	% COMPLETE:	<input type="text"/>
AIRPORT BASE:	<input type="text"/>	HANGER:	<input type="text"/>		
PILOT LICENSE/RATINGS:	<input type="text"/>				
JOIN E-MAIL GROUPS:	<input type="checkbox"/> Fly-Out <input type="checkbox"/> Builders <input type="checkbox"/> Young Eagles <input type="checkbox"/> AirVenture <input type="checkbox"/> Chapter Build				
YOUNG EAGLE VOLUNTEER?	<input type="checkbox"/> Yes <input type="checkbox"/> No	YOUTH PROTECTION TRAINING CURRENT?	<input type="checkbox"/> Yes <input type="checkbox"/> No		
OK TO PUBLISH INFO. IN CHAPTER DIRECTORY?	<input type="checkbox"/> Yes <input type="checkbox"/> No	DO YOU HAVE A NAME TAG?	<input type="checkbox"/> Yes <input type="checkbox"/> No	YEAR JOINED EAA80?	<input type="text"/>

PAYMENT – DUES \$25/YEAR

PAYMENT FOR YEAR(S):	<input type="checkbox"/> 2022 <input type="checkbox"/> 2023 <input type="checkbox"/> 2024 <input type="checkbox"/> 2025 <input type="checkbox"/> 2026					
PAYMENT DETAILS:	TYPE:	<input type="text"/>	AMOUNT:	<input type="text"/>	DATE:	<input type="text"/>

MAIL CHECK TO:

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