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News!

September 2021

On the Web: www.EAA80.org

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President's Corner

By Bruce Mundie



August was an incredible month for EAA 80! We had the grand opening of the build and education facility in the Oak View Mall. Our aviation friends the Omahawks, Omaha Soaring, Create Drones, Omaha Aviation STEM, and Aviation Nation were all there to celebrate with us. Many others attended too to include Duncan Aviation, Oracle, Advanced Air, Omaha City Council, and even the FAA. The facility is well beyond my original expectations; it will serve EAA 80 and our aviation education partners well into the future.

Additionally in August we had a very well attended Young Eagles session under the leadership of Scott Pridie. Our numbers of Young Eagles are up greatly since 2020 and COVID restrictions, and weather permitting, we should have great opportunities for more this Fall.

Speaking of opportunities, Jim Beyer and Hague Howie (both proud members of EAA 80) are hosting Omaha Aviation STEM Day on Saturday, 4 September. If you have the opportunity, please visit Oracle Aviation at Millard on the morning of September fourth to take part in this amazing event. Months and months of planning will pay off, and your attendance will only make the event better.

EAA 80 will be supporting STEM by hosting a separate, but co-located, Young Eagles event. If you can volunteer to fly or work ground crew, we would appreciate your support.

Thanks and fly safe!
Bruce

Safety

Bruce Mundie

Friends, what we do can be inherently dangerous and unforgiving. EAA 80 is here to make sure that when we build and fly aircraft, we do it with the best knowledge and technical support that is available. Our chapter has the resources: Incredibly skilled and experienced aircraft builders, with pilots and instructor pilots ranging from air combat veterans, airline pilots, and even test pilots. We have an incredibly clean safety record, and I thank you for your diligence in this area.

I implore you to use what the chapter has to offer. And, I desire for you to take an active part in Operational Resource Management (ORM) during your and EAA 80 building and flight operations. I would like the chapter to consider a Safety Officer as a new position for the 2022 year. ORM, safety, and attention to details while doing what we love, will keep us and our aviation partners safe for future flying adventures.

Annual Chapter Picnic

By time you see this newsletter, you should have received an invite to the picnic at Plattsmouth, September 12. If you have not, contact Ed Kirker for more information.

EAA Chapter 80 Meeting Minutes August 2021

The chapter meeting was held on July 9th at the Able Ace build facility, Oak View Mall. The meeting was called to order at 7 PM by President Bruce Mundie.

Guests and New Members: None

Meeting Minutes: The July 2021 minutes were approved as written.

Treasurer's Report: Steve Farner's treasurer report was reviewed for July. The opening balance was \$12,562.03. Chapter receipts totaled \$4,575.00 (dues & EAA Scholarship). Chapter expenses were \$4,300.00 (ABLE/ACE July/Aug rent, Oracle). The ending balance is \$12,837.03. The report was approved.

Membership: Bob Condrey was not present but an updated membership slide was presented. There are 110 members as of today, up 10%. Student membership is \$15, regular membership dues are \$25. Twenty-two members have not paid their 2021 dues.

Scholarship: Mike Howard mentioned that Patrick Stolinski has soloed and is preparing for his written exam. He is close to flying his dual cross-country and proceeding very well to attain his license. Oracle Aviation made some adjustments to his flying bill and his parents have committed to help with financing his training once the scholarship funds run out.

Tech Counselors: Nothing new.

Young Eagles: The next YE rally is this Saturday, August 14th. There are 10 youths to fly and four pilots signed up.

Tools: No change.

Builder Reports:

- Bill Haas got his engine back from Central Cylinder and it is 90% installed. He put an aux fuel tank in the back seat for taxi tests coming.
- Brad Safford has finished his Zenith 750 and is ready for first flight.

Builder Meeting: None scheduled

Chapter Build: The chapter Zenith project will be starting soon. Mike Howard purchased a Corvair cowling and other parts for the project at Oshkosh. The plan is to have at least Tuesday and Thursday afternoons (1:00-5:00 PM) for chapter builds. There

may be some sporadic weekend sessions as well, but currently no regular weekend sessions. There may be more sessions if additional Zenith build leader(s) are available. Brad Safford, Zenith 750 builder, was asked to assist but still works full time. He will consider helping out. Contact Bob Condrey to be added to the email list and if you would like more information.

Fly-outs: Mike Howard has a fly out scheduled for this Sunday to Mankato MN (203nm).

Social Coordinator: Ed Kirker confirmed the next social event is the Plattsmouth (Harvest Day) EAA 80 picnic with YE flights on Sunday September 12th. He asked for grill master help as well as set up help (before noon) and cleanup crews. Pilots are encouraged to fly into the event (pilot breakfast free).

VP: Dave Greer will present at the September 13th meeting on the Desert Storm B52s staging missions from US soil.

PRESIDENT:

- Bruce highlighted the mall grand opening for Able Ace. There were a lot of guests and other aviation organizations in attendance.
- Bruce is requesting a facilities manager for the mall space. This person would need to keep track of the facility condition, key control, and coordinate with the mall POC as required.
- Bruce said he'd have drawings at the next meeting for the chapter 10-year plan to build a hangar.
- We have student memberships available now for \$15.
- Officer elections will be done at the December 13th meeting.

Calendar:

Aug 14, YE flights, KMLE
Sep 4, STEM Day, KMLE
Sept 12, YE flights, Plattsmouth chapter picnic (Note: Sunday)
Sept 13, Chapter meeting, Oracle, Dave Greer presenting

Old Business: See president notes

New Business: No new business

Announcements:

- Tom Wieduwilt (TW) talked about magnet spheres he's seen used to take out aluminum dents – perhaps the chapter could purchase a set (3 sizes, ~\$180)
- TW announced that for the last three months or so there's been an informal dinner meeting prior to the chapter meeting. They've been meeting at places like Mama's Pizza around 5:15 and then coming out for the meeting. Contact him if interested in joining.

Raffle Drawing: No raffle drawing

Presentation: Lt. Jim Pauly, Omaha Police Drone Operations, gave a very enlightening presentation on the use of drones by the Omaha Police Department (OPD). Jim has been with OPD for 34 years and has been a (recreational) drone pilot since 2014. He presented the police chief with the drone patrol concept in 2018 and the operation was started shortly after. Drone pilots have a 100hr training program covering ground, flight, and night flight operations prior to qualifying for any police missions. The pilots are part-time assignments in addition to their primary police functions. The pilots are certified to operate under FAA Part 107. Pilots are evaluated on an annual basis to remain mission ready. There are 23 current pilots with 12 very active on police missions. He had several of the drones they fly on display and showed us some of the data/photos they are capable of recording and/or displaying via livestream to police cruisers during the mission.

Next Meeting: The next meeting is September 13th at Millard Oracle Aviation, at 7pm.

EAA 80 Calendar of Events

- Sept 12, Young Eagles, chapter picnic (Plattsmouth)
- Sept 13, Chapter meeting, Oracle Dave Greer presenting

Technical Advisor

Koehler's Korner



I They say that if you stick around long enough, you will see everything. Well, I saw something this week that I thought I would never see. This month I have another short story

on an aircraft maintenance mistake. It is presented in the spirit of learning from the error to make flying safer. The owner will remain anonymous.

The story involves a Piper Warrior with the usually very reliable Lycoming O-320 engine. Like almost all other Lycomings, the cylinders have a standard two-stud exhaust port with a nominal exhaust port hole size of about 1 $\frac{3}{4}$ " inside diameter. Because almost all modern Lycomings have the same exhaust size and studs, they all use the same exhaust gasket. The most popular gasket is the spiral wound No-Blo type, shown on the right side of the first picture (gasket p/n 77611).



Note that the middle gasket (same size for a Lycoming) is the beaded No-Blo type (use two per cylinder), and the smaller gasket on the left is the fiber-filled type (used to be asbestos) such as the RA632837 used on early small Continentals. Note that each of the beaded and filled type has discrete stud holes in them that prevent them from being installed on the wrong cylinder, but the spiral wound type has a slot for the studs.

Back to the Warrior, there was a lot of exhaust "dust" around the lower sparkplugs, ignition leads and cylinders. There were no obvious exhaust leaks, but the presence of the dust meant there was some leakage. On the right side, it was worse. Also, all the

exhaust hardware including plain and star washers were badly corroded and needed to be changed. I always remove all these washers the moment they show signs of corrosion and replace them with fresh washers whose cadmium plating is sacrificial and provides general corrosion protection around the exhaust flange area. So, we agreed to replace all the hardware, and since the gaskets also showed signs of corrosion, to replace them too. We removed all the exhaust stacks at the cylinders and I laid out the spiral wound gaskets as shown in the following picture.



Note that the bottom gasket is significantly larger than the other three. It had come off cylinder #2. A quick review of the engine logbook showed that the #2 cylinder had been replaced about 400 hours ago, and the other cylinders had not had any work since engine overhaul about 1000 hours ago! A quick comparison of the two gasket sizes shows in the following picture that the larger gasket has a 1 $\frac{3}{4}$ " center hole and the smaller a 1 $\frac{1}{2}$ " hole.

In this picture you can clearly see that the spiral material on the bigger gasket is silvery where it has been tight against the face of the exhaust flange, but the smaller gaskets show



that the spiral material is all contaminated with exhaust gas material. Note also that the

mount stud holes are a slot and allow for the small gasket to be used on the larger size Lycoming cylinder. These improper gaskets had been mounted incorrectly on the engine by the FBO following outside overhaul of the engine. I am sure the FBO carries parts for multiple engines, and a quick search shows that the smaller gasket is for older small bore Continentals such as the C-85, O- 200, etc. You can also see that the slots for the studs allow the incorrect small gasket to fit over the Lycoming studs. This is not possible with the copper gaskets in the first picture.

Besides the fact that the smaller gaskets did not seal fully and allowed carbon monoxide (CO) to leak in the engine compartment, the small gaskets probably significantly hurt the power output of the engine. A quick calculation shows 26% reduction in the cross

sectional area of the exhaust for all the cylinders with the undersize gaskets. That has to affect the thermal efficiency of the engine. Anecdotally, the owner reports the CO monitor in the cockpit used to indicate around 8 to 10 ppm, but now is usually 0. Duh!

Moral of the story, double dog check that you are installing the right parts. Even if it fits, it may not be right.

I hope this helps you work on your plane smarter and safer.

Keep building, flying and maintaining.

Dick 08/2021

Re-published with permission of Dick Koehler, EAA 186

EAA 80 MONTHLY TREASURER REPORT

Aug-21

Checking

Opening Balance \$17,137.03

DEPOSITS

8/27/2021 Dues \$75.00

EXPENSES

August Rent ABLE/ACE \$150.00
Trailer Tires \$254.97
Oracle (EAA Scholarship) \$4,649.87
Food and Drink \$59.04

Ending Balance **\$12,098.15**

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			



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- FAA Testing
- Pilot Supplies/Merchandise
- Aircraft Brokerage
- Aircraft Acquisition

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

Photos



Left: Greenfield, Iowa fly-in breakfast.

Right: Lt. Jim Pauly, Omaha Police Drone Operations



Below and below right: August Young Eagles



A couple panoramic photos of STEM Day.

KETV link about STEM Day: <https://ketv.com/article/aviation-stem-day-at-millard-airport-invites-kids-to-explore-passions-and-careers/37483828>



Upcoming Webinars

[Avoiding Carburetor Icing - A Cool Pilot's Guide to Carb Heat](#)

Qualifies for FAA WINGS and AMT credit.
9/8/21, 7 p.m. CDT
Prof. H. Paul Shuch

[Air Racing History - Part 2](#)

Museum Webinar Series
9/14/21, 7 p.m. CDT
Connor Madison

[Buying Your First Aerobatic Airplane](#)

9/21/21, 7 p.m. CDT
Budd Davisson

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

9/28/21, 7 p.m. CDT
David Leiting

[Flying With the iPad — Your Digital Co-Pilot](#)

Qualifies for FAA WINGS credit.
9/29/21, 7 p.m. CDT
Bret Koebbe

[Rotax 912 Engine Installation & Operational Tips](#)

Homebuilders Webinar Series
10/5/21, 7 p.m. CDT
Phil Lockwood

[Blowout!](#)

Qualifies for FAA WINGS and AMT credit.
10/6/21, 7 p.m. CDT
Mike Busch

[The Grumman Duck](#)

Museum Webinar Series
10/12/21, 7 p.m. CDT
Chris Henry and Ben Page

[Preventing VFR Into IMC: Using Your Personal Weather Minimums](#)

Qualifies for FAA WINGS credit.
10/20/21, 7 p.m. CDT
Dr. Scott Dennstaedt

[A Clue \(or Two\) For Your Next Flight Review](#)

Qualifies for FAA WINGS credit.
10/27/21, 7 p.m. CDT
Rod Machado

[The Autogyro](#)

Museum Webinar Series
11/9/21, 7 p.m. CST
Chris Henry and Ben Page

These are the current webinars listed on eaa.org.
Please check the site at:

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

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 office to inquire about making a tax free donation.



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

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EAA CHAPTER 80

2021 APPLICATION FORM

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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		
PAYMENT	TYPE				AMOUNT				DATE		

Last updated: 1/3/2020