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News!

May 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



It has been a windy Spring thus far, but not windy enough to dampen EAA 80's activities. Thanks to Scott Pridie, Young Eagles started strong and we flew a morning's worth of young pilots on 17 April. We are planning another installment on the 15th of May and we need your

help! Please consider volunteering.

Please join our friends in the Nebraska 99's and help them paint a compass rose at the Hastings Airport. Deb Gangwish and Lisa McWilliams are asking for volunteers to assist on Saturday the 15th and Sunday the 16th of May. I am planning on driving West to Hastings on the evening of Saturday and helping all day Sunday. Please let me know if you are going to help so I can send word to the 99's.

Our busy Spring is only going to get busier. Please join us!

Bruce

Chapter Build Update

The chapter Zenith is currently getting its wings worked on at KMLE, but we are working on a more permanent location at Oak View Mall. Stay tuned for more details!

EAA Chapter 80 Meeting Minutes

April 2021

The chapter meeting was held on April 12th at Oracle Aviation. The meeting was called to order at 7 PM by President Bruce Mundie.

Meeting Minutes: The March 2021 minutes were approved with one correction to the minutes provided by Ed Kirker (the March presenter was with Omega Aerial Refueling Services, not Oracle).

Guests included Tim Erickson, Joseph Lemons, and FAA presenters Mark Gaffney and Owen.

Treasurer's Report: Bob Cartwright's treasurer report was presented for April. The opening balance was \$11,704.02. Chapter receipts totaled \$425.00 (dues). Expenses were \$27.04 (refreshments). The ending balance is \$12,101.98. The report was approved.

Bob Cartwright resigned from being treasurer and Steve Farnier volunteered to replace Bob.

Membership: Bob Condrey reported membership at 104. Dues are owed by 49 members; 37 need pictures for the directory; 18 are missing their EAA numbers; and one has not provided an email address.

Contact Bob if you would like to be on any of the email distributions: General, Young Eagles, Fly-out, and/or Builders.

Tech Counselors: Bob Condrey helped two builders installing Garmin G3X equipment with two more requests for assistance coming up this month.

Young Eagles: Scott Pridie stated the first YE event is this Saturday, April 17th at KMLE. Seventeen students are registered with eight more Burke High students expected. The next YE events are: May 15, Jun 19, Jul 17, Aug 14, Sep 4 (STEM), and Sep 12 (Plattsmouth). There will not

be an event at Fremont, and Tekamah is still a possibility this year.

Tools: No change

Builder Reports:

- Bill Haas has the Berkut now at Eppley.
- One member reported a down payment on an RV-12 kit.
- The Aviation Nation RV-12 now has 10hrs with Phase 1 testing completed, and Jim Byer flew today with the planes first passenger.

Builder Meeting: none scheduled

Chapter Build: Bruce reported that we are still looking for a hangar home at Millard but an opportunity at the Oakview Mall is being pursued. The space is on the mall and would require a dolly to transport the Zenith into the room. Bob Condrey has a dolly that might work, with modifications.

Fly-outs: Mike Howard reported that four aircraft (5 guys) flew out to Lamar Iowa, with some flying out to Cherokee Iowa the week before.

Social Coordinator: Ed Kirker confirmed the next social event is the Plattsmouth Harvest Day picnic with YE flights on Sunday September 12th.

VP: Not present to report but has Dave Leslie from the Soaring Club on deck, and Dave Greer lined up to talk about the B52 and Desert Storm.

PRESIDENT: Bruce Mundy discussed the Ray Scholarship, Zenith hangar, and chapter hangar.

Calendar:

May 10 Chapter meeting, Oracle
May 15 YE flights, KMLE
Jun 14 Chapter meeting, Oracle
Jun 19 YE flights, KMLE
Jul 12 Chapter meeting, Oracle
Jul 17 YE flights, KMLE
Jul 26-Aug1 **Air Venture**, Oshkosh
Aug 14 YE flights, KMLE
Sep 4 STEM Day, KMLE
Sept 12 YE, chapter picnic (Plattsmouth)

Old Business:

- The chapter is still looking for a building site for the Zenith 750.
- Bruce reiterated he is working on a 10 year plan and working with an architect to design a proposed hangar layout on the Millard airport property next to Oracle. When ready he intends to brief the Millard airport manager and Omaha airport authority on the concept.

Scholarship: We have received five requests for applications for the Ray Scholarship, two have been completed, and more expected. Applications are due to the committee by May 13th to be considered for the award. Mike Howard reported that the EAA National will approve the scholarships no later than October 31st.

New Business: None

Announcements: Bob Condrey indicated Oshkosh advanced tickets can be purchased on line and mailed to you. In May the request for Oshkosh volunteers will be announced if you'd like to sign up.

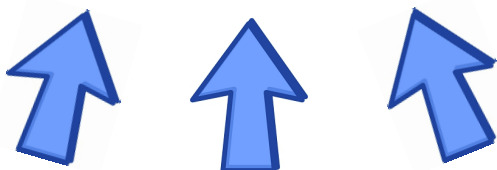
Raffle Drawing: No raffle drawing

Presentation: Mark Gaffney, FAA FAAST team, Program Manager, Lincoln. Mark provided reviews of several general aviation accidents as well as new safety systems coming out (airbag seat belts, ballistic parachute recovery systems, auto land). This presentation qualified those that signed up for the WINGS program. Website is FAASAFETY.com.

Next Meeting: The next meeting is May 10th at Oracle Aviation, 7pm.

Young Eagles

The Young Eagles rally on May 15 is still in need of pilots and ground crew. If you can volunteer, please contact Scott Pridie at 832-489-2159 or pridie@sbcglobal.net.



Technical Advisor

Koehler's Korner



Two months ago, I promised more info on engine analyzers. Here it is, finally. First off, the first picture is of the JPI- 930 engine analyzer in my Mooney. There are many brands and

types of such units now available to us aircraft owners, and I strongly recommend you install a multi-probe system that displays both Exhaust Gas Temperature (EGT) and Cylinder Head Temperature (CHT) for each cylinder, particularly for a homebuilt and really in particular if your engine installation is in any way different than the normal installation.

My Mooney has a normally aspirated (carbureted) Lycoming O-360 engine. Note on my display below that the engine is in cruise at 75% power and the fuel flow is about 1 gallon per hour less that the book value for 75% power. This is because I have leaned the engine to near lean-of-peak, and I have a Power Flow exhaust system that allows this. Carbureted engines have a reputation for not providing an even fuel/air ratio to each cylinder so each cylinder will have very different values of CHT and EGT.



Now note that cylinders 1 and 3 have higher EGTs than cylinders 2 and 4. However the reverse is true for the CHTs, with 1 and 3 being significantly lower than 2 and 4. Note also that the Carburetor Air Temperature

labeled CRB just below the EGT/ CHT displays says 103°F. This particular probe is in the carburetor air box, not in the throat of the carburetor as normal Carburetor Air Temperature (CAT) probes should be placed, because I have an independent CAT system there, so this display of carburetor temp is about 25°F higher than the actual CAT in the throat of the carb. Nonetheless, why do I have such a high CAT?

Although one pays a small performance loss due to a high CAT, on a carbureted engine where there is generally poor distribution of fuel, heating the air significantly helps vaporize the fuel and actually makes the engine usually run smoother, actually resulting in more power! I suggest you try various amounts of carb heat at altitude in cruise, while carefully monitoring the EGTs and see what gives you the most even temperature distribution. If you own a C-182 with a Continental O-470, I guarantee you will see a significant change in EGT distribution by using partial CAT. The O-470 is a very nice smooth engine, but the long induction runners from the carburetor make it notorious for wildly varied EGTs of 300 to 400 degrees!

can be found in Lycoming Service Bulletin 1094D. I have duplicated the last page here, which is really too small to use. You can easily download the Service Bulletin on-line, and also get the equivalent Continental SB, M89-18. Both discuss optimum leaning of the engine.

On our air-cooled aircraft engines, a significant amount of cooling can be accomplished by running the engine with a rich mixture so the fuel metering device (carb or fuel injection) is set up that way. Therefore, the engine will be rich while climbing out and initially upon leveling for cruise. You will be operating on the right side of the chart, but as you lean the engine, you will move to the left. You will achieve maximum power first, and further leaning will further increase temperatures until you get to the peak CHT and then shortly thereafter the peak EGT. Between peak power and peak temperatures is about 100°F to 125°F.

If you want best power, then lean to peak EGT, remember the temperature, and then richen about 120°F. If you want best economy (horsepower per gallon) lean to just beyond peak EGT, by about 40° F. On a normal carbureted engine, with its uneven fuel air mixtures at each cylinder, you will have to compromise on which cylinder is lean of peak, while others will be rich of peak, maybe all the way back to best power. This may result in rough running, so you may have to richen further.

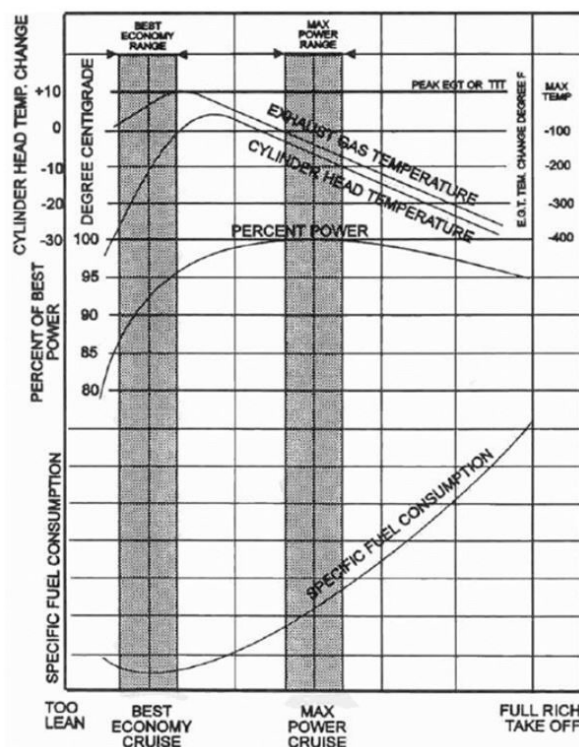
On fuel injected engines, particularly with the aftermarket GAMI matched injectors, you can usually go right up to lean-of-peak operation with the engine still running smoothly. Be sure to stay within all manufacturer's suggested limits and power settings. For instance, you cannot do this at high power settings, like while climbing. Also, for carbureted engines, the peak cylinders may change with altitude. I hope this helps you fly safer.

Keep building, flying and maintaining.

Dick 04/2021 .

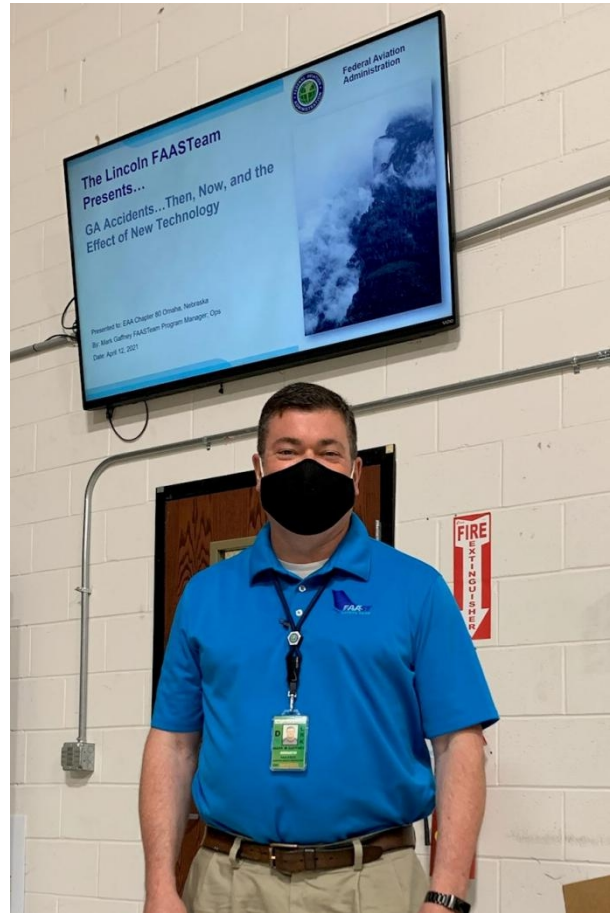
Re-published with permission of Dick Koehler, EAA 186

Back to the opposite EGT and CHT values for left and right cylinders, a bit of the explanation



Photos

The following are a few photos of Pres. Bruce Mundie from the recent Young Eagles rally at KMLE.



April presenter, Mark Gaffney, FAAS Team Program Manager.

Monthly Funny



PRE-FLIGHT
You did it last time

Upcoming Webinars

[The History of Air Racing](#)

MUSEUM WEBINAR SERIES

5/11/21, 7 p.m. CDT

Connor Madison

[IFR in an LSA: Is it Safe? Is it Legal?](#)

Qualifies for FAA WINGS credit.

5/12/21, 7 p.m. CDT

Prof. H. Paul Shuch

[Ultimate Aircraft Buying Guide 2021](#)

5/18/21, 7 p.m. CDT

Scott Sky Smith

[Are you Stumped About Weather? Here are the Top Ten FAQs](#)

Qualifies for FAA WINGS credit.

5/19/21, 7 p.m. CDT

Scott Dennstaedt

[Flying to Meet the Challenge: Completing 5 Midwest State Flying Programs](#)

Qualifies for FAA WINGS credit.

5/26/21, 7 p.m. CDT

Michael Haubrich

[AirCam Kit Aircraft](#)

HOMEBUILDERS WEBINAR SERIES

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

Phil Lockwood

[What Plane Should I Buy?](#)

Qualifies for FAA WINGS and AMT credit.

6/2/21, 7 p.m. CDT

Mike Busch

[Spirit of St. Louis](#)

MUSEUM WEBINAR SERIES

6/8/21, 7 p.m. CDT

Chris Henry and Ben Page

[Evolution of Flexwing: Weight-Shift Trikes](#)

Qualifies for FAA WINGS credit.

6/9/21, 7 p.m. CDT

Mike Hudetz

[Decision-Making and Loss of Control Inflight \(LOC-I\)](#)

Qualifies for FAA WINGS credit.

6/15/21, 7 p.m. CDT

Gordon Penner

[Aviation and Aircraft Taxes](#)

6/16/21, 7 p.m. CDT

Greg Reigel and Paul Herbers

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

6/22/21, 7 p.m. CDT

David Leiting

[Tips for Flying Into EAA AirVenture 2021](#)

Qualifies for FAA WINGS credit.

6/23/21, 7 p.m. CDT

Fred Stadler

[Ultralight/Homebuilt Rotorcraft Arrival Procedures - AirVenture 2021](#)

Qualifies for FAA WINGS credit.

6/30/21, 7 p.m. CDT

Mark Spang

[The Great Beyond \(TBO\)](#)

Qualifies for FAA WINGS and AMT credit.

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

Mike Busch

These are the current webinars listed on eaa.org.

Please check the site at:

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

EAA 80 Calendar of Events

May 10, 7 PM

Chapter meeting, Oracle

David Leslie, Omaha Soaring Club

May 15,

YE with CAP

June 14,

Chapter meeting, Oracle

Dave Greer, Dessert Storm B-52 missions

June 19,

YE flights at KMLE

July 12,

Chapter meeting, Oracle

July 17

YE flights at KMLE

July 26-August 1

Air Venture Oshkosh

August 14

YE flights at KMLE

September 4

STEM Day

September 12

YE flights, chapter picnic at Plattsmouth

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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



EAA 80 MONTHLY TREASURER REPORT

May-21

Checking

Acct. 310

Opening Balance \$12,101.98

Receipts

Dues Cash \$150.00
Dues Chks

Expenses

Y.E.Expense
Refresh

Ending Balance \$12,251.98

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		\$25.00			

Info, Bruce Mundie Donate
T-Shirts to Chptr.
Current Value \$436.68

Total to Date \$250.00 \$0.00

AS INFO APR 2020 \$13,448.17

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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.

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