



CHAPTER 1093
Experimental Aircraft Association

LOOKIN' UP

The EAA Chapter of Modern Explorers

EAA Chapter 1093
Midland, MI
Jack Barstow Airport
KIKW
December 2019

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1093 HOLIDAY PARTY

DECEMBER 7, 5:00 PM - ?

OUR ANNUAL CHRISTMAS PARTY WILL BE HELD IN
THE EAA BUILDING ON SATURDAY DECEMBER 7

JOIN US FOR AN EVENING OF GOOD FOOD AND
GOOD CONVERSATION SOCIAL HOUR BEGINS AT
5:00 DINNER STARTS AT 6:00

DINNER THIS YEAR WILL BE CATERED INCLUD-
ING PUNCH, COFFEE POP AND DESSERT IF YOU
WISH BRING AN APPETIZER AND A LIBATION

HOPE TO SEE YOU THERE

↑ Our Next 'meeting' will be the Holiday Party ↓

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Santa is coming to Town!!!

Santa will be flying into Midland Barstow Airport on **Sunday, December 8!** There will be crafts from 1:00pm until Santa lands at 2:00pm. After Santa lands, the children will be allowed to sit on Santa's lap, take a picture, and give him their letter. If you are willing to come and help with a craft or crowd control/safety please let me know. Volunteers

are asked to arrive by 12:00pm. We will most likely be done by 3:00pm.

This is a lot of fun, both for those participating and the volunteers. Please consider helping us spread the Holiday Spirit with this event.

Sarah Pagano

sarahkpagano@gmail.com, (989) 525-5206

Santa Fly-In



Sunday, December 8

Kids Crafts 1:00pm—2:00pm

Santa lands at 2:00pm

Midland Barstow Airport

This FREE event is presented by EAA 1093



Upcoming December events

- ❖ Holiday Party: **Sat Dec 7th**
Catered dinner this year! More information coming
RSVP and details coming soon!
- ❖ Santa Fly-In: **Sun Dec 8th; 1:00 pm**
Come out and help with kids crafts and/or crowd
control and see a bunch of smiling children!
- ❖ Monthly Young Eagles Rally: **Sat Dec 14th** 9am
to noon. Pilots needed! Please pre-register and
assure your credentials are up to date
at youngeaglesday.org. Or help with registration
and parental questions Contact Jeff G or Sarah P.
and put a smile on a young person's face!



1093 HOLIDAY PARTY **DECEMBER 7, at 5:00 PM - ?**

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**DINNER THIS YEAR WILL BE CATERED
INCLUDING PUNCH, COFFEE POP AND
DESSERT IF YOU WISH BRING AN
APPETIZER AND A LIBATION**

**WE MUST HAVE AN RSVP AND NUMBER
ATTENDING NO LATER THAN NOVEMBER
15 FOR THE CATERER**

HOPE TO SEE YOU THERE

**Please respond to Dave or Don with how
many will attend.**

davef3079@gmail.com



2020 SCHOLARSHIP APPLICANTS WANTED

Next year a variety of Aviation scholarships will be available through the Chapter. There will be at least one Ray Scholarship, to be announced early in the year, and possibly a second announced late Spring. There will also be Chapter Scholarships, which will be announced at the May Pancake Breakfast. Scholarship eligibility criteria are the same for all scholarships with two exceptions - the Ray Scholarships are open to youth under age 18 who are seeking the private pilot certificate, while the Chapter Scholarships are open to youth and adults seeking pilot or mechanic certifications or who wish to pursue one of the many other aviation related careers. Successful nominees will be those who are active with Chapter 1093 and demonstrate a keen interest in aviation. Nomination forms are available on the Chapter 1093 website, <https://www.1093.eaachapter.org>.

Nominations for Ray Scholarships will be considered during January. Nominations for Chapter Scholarships will be considered during April. If you would like to be considered for a scholarship (it is not necessary to specify which one), or you know someone who should be considered, fill out a nomination form and submit it as soon as possible. Those received by the end of 2019 will be considered for the Ray. For additional information, contact Chapter 1093 Scholarship Coordinator Jim Murphy at coljimurph@icloud.com.

Hint - the more recommendations received for a specific applicant, the better that applicant's chances of receiving a nomination. Similarly, applicants who are active in the Chapter and are known for their work ethic are more likely to receive favorable consideration.



Airline offers flight education grants

This year, [American Airlines](#) Pilot Recruiting & Development team are offering flight education grants with a primary focus on high schools using the [Aircraft Owners and Pilots Association](#)'s High School Aviation STEM curriculum.

AOPA and each high school have been invited to apply for a grant, which can be as high as \$25,000. In the last several years, American Airlines has granted more than \$800,000 through this program.

Grants are awarded based on the potential, creativity, and probability of success of the proposal.

"The AOPA You Can Fly curriculum is really making a difference in the lives of the students in the program and American Airlines recognizes that," said Brad Morrison, Manager of Pilot Career Recruiting at American Airlines. "Together we will work to build the foundation for a lifetime journey of achievement and success in the cockpit."

"AOPA is honored to see the confidence American Airlines has in our aviation STEM curriculum," said Elizabeth Tennyson, Executive Director of You Can Fly. "The program instills a love of flying in young people and prepares students for careers in aviation and aerospace, which not only makes a difference in our industry but also makes a difference in the lives of thousands of young people as they set a course for their future."



AOPA's High School Aviation STEM Curriculum became a reality in 2016 with the development of a four-year curriculum for high school classrooms. To date, ninth, tenth, and eleventh graders at 161 schools in 34 states are using the program, which is provided free of charge thanks to donations to the AOPA Foundation.

AOPA collaborated with professional instructional designers and pilots to create the program, which will help students be prepared to achieve a certification or take an industry-accepted test, such as the FAA Private Pilot knowledge test or the Part 107 drone pilot certification.

Approximately 5,000 students in private, public, urban, and rural schools across the country participate in the program. According to AOPA officials, 22% of the students utilizing the aviation STEM curriculum are female and 38% come from underrepresented groups - "a game changer for the future aerospace workforce and the face of the aviation industry," AOPA officials said.

Cascade Warbirds offers scholarships

Cascade Warbirds, an organization that promotes the restoration, preservation, operation, and public display of historically significant military aircraft, is offering scholarships for Private Pilot Ground School with Introductory Flights to inspire today's young people to become the aviation pioneers of tomorrow. Cascade Warbirds has teamed with Galvin Flight Service at Boeing Field in Seattle to provide scholarship recipients with tuition, books and supplies, and two introductory instructional flights. The ground school portion includes classroom lectures, visual presentations, group discussions, practical exercises, and field trips over a period of approximately 55 hours. Classes generally meet two nights a week for two and a half hours and one Saturday a month for four hours over a period of six weeks. Successful completion of the ground school will qualify a student to take the FAA Private Pilot Written Exam.

This award also includes two instructional flights in a general aviation aircraft. The first flight will occur part way through the ground school, based on the instructor's



recommendation, and the second flight will occur after the successful completion of the ground school course.

Each flight includes a pre-flight briefing, actual taxi and runway procedures, introduction to radio communications, the takeoff, a series of in-flight maneuvers, the return and landing, and post-flight procedures. These two flights will be logged in the student's logbook and count toward the minimum flight time required to earn a Private Pilot certificate. The scholarship, valued at \$1,125, is available for students between the ages of 16 and 21 at the time of award.

The application is available at [CascadeWarbirds.org](https://www.CascadeWarbirds.org). Deadline to apply is Jan. 31, 2020.

Young Eagles Credits System Change

A change in how chapter credits are tabulating will allow more credits to return to EAA chapters. Previously, a Young Eagle pilot had to give 10 flights to qualify for credits that returned to a home chapter to support a young aviator. Under the new guidelines, all Young Eagles flights will count toward these accumulated credits.

5 best online aviation degrees

Embry-Riddle Aeronautical University's online degree program tops the list of the Online Schools Report (OSR) ranking of the best online bachelor's degrees in aeronautics and aviation for 2019-2020. According to officials with the Online Schools Report, the rankings are based "strictly on data, prioritizing the school's ability to deliver an online education comparable to an on-campus degree. Based on the numbers, these are the programs to get you to the cutting edge."

You can read the full rankings on [OSR's website](#).



EAA introduces online builder's log

EAA AVIATION CENTER, OSHKOSH, Wisconsin - The [Experimental Aircraft Association](#) has introduced a new, online EAA Builder's Log, free for all EAA members, to use to document projects and demonstrate compliance with the [FAA's 51% rule](#). The online log, available at [EAA.org/BuildersLog](#), allows members to post an unlimited number of entries, including photos, text, PDF documents, Excel files, and more, to create a detailed record of the work done on building and restoration projects

"The EAA Builder's Log is a great way to show your work to an FAA inspector or designated airworthiness representative, and to simply have a searchable reference on your project," said Charlie Becker, EAA's director of chapters and homebuilding. "Our hope is the EAA Builder's Log will support our homebuilding members, allow them to share useful information, and make it easier to document compliance with the 51% rule. Additionally, the searchable online log will be a great help to builders who may need to troubleshoot an issue with their aircraft."

Users can follow along other builds, although there is also a private entry feature that allows some entries to be visible to only the creator of the build log. It's also possible to document multiple builds at once, and multiple builders can contribute to the log in the case of group build projects.

The EAA Builder's Log resulted from a collaboration with EAA member, aircraft builder, and programmer Don White. More information on using the EAA Builder's Log is also available through a [September 2019 webinar](#) that reviews the new resource.

A twist on metal foam could improve aircraft wings

Tough, resilient composite metal foam has been around since the 1920s, but researchers at North Carolina State University have improved on it. By filling CMF's hollows with a hydrophobic epoxy resin, they've created an infused CMF that's suitable for the demanding structural challenges of aircraft wings, offering better performance than aluminum at the same weight.

"Aluminum is currently the material of choice for making the leading edge of fixed-wing and rotary-wing aircraft wings," said Afsaneh Rabiei, professor of mechanical and aerospace engineering at NC State. "Our results suggest that infused CMF may be a valuable replacement, offering better performance at the same weight."

CMFs, which have survived fits and starts in development since their [emergence](#) in the mid-1920s, are mostly hollow metallic matrices built from materials like stainless steel and titanium. Lightweight CMFs perform very well in extreme conditions and have demonstrated the ability to withstand high temperatures, resist extreme blast pressures and even withstand the concussive force of a .50-caliber round.

Following on these remarkable characteristics, NC State engineers engineered their newest CMF with a bit of a twist. Rather than allowing the hollows in their CMF to remain empty, those cavities were filled with a hydrophobic epoxy resin, creating what engineers call an infused CMF.

When put through testing rigors, including contact angle exams, insect adhesion tests, and erosion sampling, NC State's infused CMF outstripped traditional aluminum wing performance by a wide margin.

"Researchers found that infused CMF had a contact angle 130 percent higher than aluminum," insect adhesion was down across several vectors, and "CMF retained its properties through erosion and wear, which indicates that it would give leading-edge wing components a longer lifetime and reduce the costs associated with maintenance and replacement."

Though aluminum will continue to be the material of choice for aircraft manufacturers, as the industry trends toward lighter weight and possibly [all-electric flyers](#), technologies like infused CMF wings might be a building block upon which a new generation of crafts emerge.

One day, a plane could give you flying lessons

Vehicles make more decisions for people than we might realize - and they have been for a while. Just nine years after the Wright brothers successfully flew the first plane in 1903, autopilot was invented. Cruise control came along in 1948. But as both air and road travel witness the introduction of more automated features and shift toward highly autonomous systems, people will need more help learning how to use them. That led to the formation of a team of researchers to develop algorithms that would allow a system to recognize when a human doesn't know how to use it, and then adapt to that person's skill level. The researchers believe that these systems would not only train pilots faster, but also increase safety. "We're already asking humans to interact with intelligent machines and autonomous systems all the time, but we need to do it much better than we currently do," said Neera Jain, an assistant professor of mechanical engineering at [Purdue University](#). To study how much people trust these systems, the team will collect data on changes in heart rate, blood pressure, eye movement, and other metrics through psychophysiological sensors. Jain and Tahira Reid, a Purdue associate professor of mechanical engineering, developed models that use these measurements to help a system estimate a human's level of trust. "Imagine an autopilot system that can identify your experience level and then gradually relinquish control as you improve. It could significantly reduce the amount of time it takes to train a pilot," said Inseok Hwang, a professor of aeronautics and astronautics and principal investigator for Purdue on this project. University of New Mexico researchers, led by Meeko Oishi, a professor of electrical and computer engineering and the project principal investigator, will use data from these experiments to come up with theories of how humans best learn while using these machines. The researchers will then develop algorithms and test them for translation into software that will enable machines to understand, predict, and adapt to human behavior. The researchers hope the work will not only grow the field by developing machines that are responsive to human behavior, but also develop ways to prevent the ongoing pitfalls of how humans use autonomous systems. "There are 3 things that the field wants to avoid in human-machine interaction - misuse, disuse, and abuse of the technology. We're designing new algorithms to make advances toward overcoming each of those barriers," Jain said.

Young Eagles flights cancelled this month

Due to weather Young Eagles flights for today have been cancelled. Thank you to those who were planning to join us! The next YE day is December 14. And don't forget -- Santa is flying in on December 8!!

Sarah Pagano,

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Phone: (989) 525-5206

Training apps supplement flight instruction for aspiring pilots

Here are a few training apps and supporting materials to guide your learn-to-fly path.

A wide variety of flight training apps are available to complement traditional instruction, offering such features as test prep, flight-tracking software and information about aviation regulations. It's not an exhaustive list, to be sure, but the links below should get you started in navigating the aviation training landscape.

Learning styles determine what programs work best for you in training - and your instructor can help guide you to the training aids that will correspond to your syllabus and course outline.

King Schools offers access to its online courseware through its [Companion app for iOS](#). The app works for customers using the Cessna Sport/Private and Instrument courses as well - and you can download videos and answer those questions for the commercial, multiengine, and flight instructor courses. Those who use Android devices can view the courseware through a browser on the device.

Sporty's Pilot Shop offers several apps for both iOS and Android devices that will keep you focused on training. Of particular use for students are the [Learn to Fly and Instrument courses](#). Avionics courses may help you dive into the details on your training airplane's equipment, as well.

Aviation Supplies & Academics hosts a wide range of pilot training apps covering the gamut [from test prep to the latest FAR/AIM](#). Geared towards those who want a comprehensive system, with digital and print versions of most titles, ASA is a great starting point to orient a budding pilot.

CloudAhoy's newest version of its flight-tracking software offers the CFI Assistant feature that will score your maneuvers based on airman certification standards. [A free trial](#) helps you determine if the system will be useful for you.

[Boldmethod apps](#) feature content from their online courses, covering VFR Publications, Aviation Weather, and Airspace. Course progress uploads to the Boldmethod cloud for users of the program. Other online flight training providers you might consider include [Pilot Workshops](#), and [Gold Seal Online](#).

Once you have your certificate and you're ready to use it, you can look into a broad selection of aviation apps to help [keep you flying](#). Happy training!

Vanishing VORs

The FAA has big plans to decommission VORs, and the project is already underway. Citing the increased costs of maintaining a network of 967 VORs, the agency proposed cutting the number to about 500 VORs located at what the FAA calls the Core 30 airports around the country. Core 30 being the larger airports served primarily by Air Carriers. This level is called the Minimum Operational Network (MON).

The MON will provide:

- A backup capability for lower end GA IFR aircraft in the event of a widespread GPS outage
- An operational contingency, and not the robust network of current VORs
- A transitional network of VORs to allow users time to equip with new avionics to transition to RNAV and RNP

Once the VOR system has reached the minimum operational network (MON), the planned VOR coverage would also enable airplanes in the conterminous United States to *proceed safely to a destination with a GPS-independent approach within 100 nm*. MON coverage would only be guaranteed above 5,000 feet AGL.

When a VOR is decommissioned, it is replaced with a GPS based intersection and GPS based airways. For most of us, the effect will be minimal. Only the rare GA aircraft that is still navigating solely by VORs will see an impact - and that is still years away.

The original plan called for decommissioning 470 odd VORs starting in 2014 and completing the project by 2020. As with most things in the FAA, the project has slipped. The agency is now targeting (a reduction of) 308 VORs by 2025. As of April 2019, the FAA had decommissioned 23 VORs."

National Weather Service to monitor space weather for effects on aviation

By Dan Namowitz

A National Weather Service unit that monitors solar activity has begun issuing advisories on conditions that could disrupt GPS navigation and high-frequency radio communications or pose a radiation risk to aircraft occupants.

The NWS's [Space Weather Prediction Center](#) was chosen in 2018 by the International Civil Aviation Organization (ICAO) as one of three space weather centers around the world to maintain 24-hour watches and disseminate advisory information "regarding the extent, severity, and duration of the space weather phenomena and supply the advisory information to area aeronautical control centers, flight information centers," and other users of meteorological data. The other observations will be taken in Australia and France.

"The commencement of space weather services within ICAO represents a major step forward in better preparing the aviation community to deal with the variety of impacts space weather can have on the safety and efficiency of flight," Clinton Wallace, the Space Weather Prediction Center's director, told AOPA.

The advisories will be produced "as conditions warrant," and once issued will be updated at six-hour intervals "from the nearest hour after the advisory is issued until the space weather phenomena are no longer detected and/or are no longer expected to have an impact," it said.

The format in which the advisories are presented, abbreviations, and examples of advisory messages are included in this [product description](#) that the NWS issued in October. Strong effects of intense space weather on terrestrial communications and navigation are rare, but past events demonstrate that the solar emissions can wreak havoc.

An [article](#) in the February 2018 newsletter of the Commission for Aeronautical Meteorology recalled that the "Halloween Storms" of 2003 - as an outbreak of significant space weather that fall was known - had a variety of impacts on aviation. On October 28 that year, the FAA "issued their first ever advisory" suggesting a risk to aircraft occupants of excessive radiation doses. Also, the Wide Area Augmentation System (WAAS) "was seriously impacted for a 15-hour period on October 29th and an 11-hour interval on October 30th, essentially rendering the system unusable during that time."

EAA 1093 Chapter Membership Meeting Minutes

November 2, 2019

President Dave Fick called the meeting to order at 10:08 EDT.

Jim Murphy, Chair of the Scholarship Committee, requested that Chapter members notify the Committee of potential recipients for scholarships. Applications for most scholarships are not due until March of 2020, but Ray Scholarship nominations can be made as early as January 1, 2020.

Fick reminded members that the Chapter holiday dinner will replace the December monthly meeting on Saturday, December 7. Since the dinner will be catered, members are encouraged to RSVP early so that there will be an accurate count for the caterer. Invitations and details will be sent to the membership via e-mail.

Ballots for the slate of candidates for the 2020 Board of Directors were distributed and collected, with the following results:

Chapter President	Dave Fick
Chapter Vice President	John Sorg
Chapter Secretary	John McPeak
Chapter Treasurer	John Haag
Program Chairperson	Paul Ries
Membership Chairperson	Tom Ryden
Young Eagles Coordinator	Jeff Gallant
Historian/Librarian/Webmaster	Chris Pagano
Chapter Facility Manager	Sarah Haskett
Newsletter Editor	---
Publicity Chairperson	Sarah Pagano
Technical Advisor	Pat Howe
Flight Advisor	Dick Sipp

Incumbents were re-elected to 9 positions, and Chris Pagano (Historian/Librarian/Webmaster), Sarah Pagano (Publicity Chairperson) and Sarah Haskett were newly elected to their positions. Chapter members interested in the Newsletter Editor positions should contact President Fick.

Membership Chairperson Ryden welcomed several guests, and reminded those Chapter members present that 2020 dues are being collected now. In addition to the traditional method of payment by cash or check, the Chapter will be accepting payment via PayPal this year, with details to be disseminated in the December issue of Lookin' Up.

Program Chairperson Paul Ries introduced Dick Sipp who gave an entertaining presentation on

building an airplane. Dick has built three planes (RV4, RV10, and RV12) and has helped others on numerous builds. Following his A/V presentation, the attendees were invited to inspect Dick's finished RV12 and member Dave Schmelzer's unfinished Baby Great Lakes fuselage and do some hangar flying.

Meeting adjourned at 1100 EDT; attendance 24 members, 4 guests.

Respectfully submitted,
John McPeak, Secretary

Member in the News



Dave Fick earned his Sport Pilot Certificate in his Cessna 162 Skywatcher, fondly known as Baby Doll, in September 2019. Congratulations, Dave!

Looking for Santa's helpers

On December 6 and 7, 2019, Santa will be flying general aviation in Michigan. That's when Child and Family Services of Michigan Inc. enlists the aid of volunteer pilots who deliver Christmas gifts throughout the state to foster children.

This will be the 48th year of making Christmas wishes come true for foster care children in Michigan through a program called Operation Good Cheer. Thousands of volunteers participate in Operation Good Cheer. Donor groups and individuals purchase Christmas gifts from wish lists. Then, at donor sites, these gifts are picked up, loaded, and transported by volunteer trucking companies and their drivers to Pontiac-Oakland County International Airport. Volunteer pilots use their aircraft to transport the gifts to local airports across Michigan. At each airport, volunteers gather the gifts and deliver them to the children and youth in foster care.

This generosity provides thousands of Michigan children - some of whom would not receive anything otherwise - with Christmas gifts, and the joy of knowing there are people who care.



More than 13,000 gifts are delivered each year to more than 7,000 children. Pilots and aircraft descend on Pontiac's airport and participate in a choreographed ballet of gift sorting, loading of aircraft, and sending flights out across the state. Web: cfsm.org/operation-good-cheer

Santa Fly in

We are still in need of some helping hands for the Santa Fly In on **Sunday, December 8.**

We will have various crafts for the children beginning at 1:00pm. At 2:00pm Santa will land and greet the kids. Once Santa has landed I plan to have 2 or 3 craft tables still available but the majority of them will be packed up -- once your station is packed up you would be free to leave. I ask that all volunteers plan to arrive by **noon.**

If you have already agreed to help *Thank you!* I will be in touch soon with "assignments". This is a lot of fun and doesn't require a large time commitment, so please consider joining us and helping spread some holiday, aviation cheer.

Thank you,

Sarah Pagano, Phone: (989) 525-5206

sarahkpagano@gmail.com



EAA 1093 Board meeting Minutes

November 21, 2019

President Fick declared a quorum present and called the meeting to order at 1706 EST.

Directors in attendance: Don Bonem, Dave Fick, Jeff Gallant, John McPeak, Sarah Pagano, Tom Ryden, John Sorg, Mike Woodley (via Skype)

Directors unable to attend: Mike Carter, Dan Graiver, John Haag, Pat Howe, Paul Ries, Dick Sipp

Guests: Dot Hornsby, Linda Langrill, Sarah Haskett, Chris Pagano

Minutes from October 17, 2019, Board meeting were approved - motion by Gallant/Pagano.

Treasurer's report: Fick will ask Haag to submit the Treasurer's report via e-mail.

Membership: Chair Ryden reported that 10 members whose 2019 dues are delinquent will be dropped from the membership roll.

Hangar Committee: Chair Bonem reported that all available hangars are occupied. Door of hangar 7A2 is unusable, donated Cessna 150A is currently stored there. Quotes are being sought for repair of hangar 7A2 door. City is reported to be investigating building more T-hangars.

Young Eagles: No Young Eagle flights in October due to marginal weather conditions.

Bylaws Review Committee: Ryden reported that revisions have been approved by National EAA, electronic copy is on Chapter Dropbox site, hard copy is in file in office, and a hard copy will be posted in classroom.

Scholarship Committee: Chair Murphy sent report that no applications have been received as of this date. Gallant/Pagano made motion to apply for the Ray Scholarship \$5K/\$5K matching fund program, plus \$10K Ray Scholarship; motion passed. No action on appointing Committee Chair to succeed Murphy.

Unfinished business:

Cessna 150 donation: Sarah Pagano has polled membership re: interest in restoring plane to flying condition, several Chapter members have indicated interest. Motion by McPeak/Sorg that Board support project to restore plane to flyable condition, and appoint project leader; motion passed. Pagano will shepherd project, head up administrative area, report to Board in December re: plan, budget, process, restoration location, etc.

A/V system in EAA Building: Pagano reported that all parts are on-site, installation is scheduled to begin the weekend of November 22/23.

Operating Guidelines for The Ormond Barstow Aviation Education Center Building: Committee Chair Ryden reported that a draft of revisions has been posted in the classroom, a copy will be placed on the Chapter Dropbox site, and a copy will be e-mailed to Board members. Instructions for using the online calendar will be posted in classroom and also placed on the Dropbox site.

Santa Fly-In: Sunday, December 8, from 1:00 – 3:00. Pagano reported that enough volunteers have signed up so that Santa has sufficient help, and there will be some craft tables. No food will be made available this year, but 50¢ water and 50¢ coffee will be offered

Holiday dinner: Fick reported that Shirlene's is catering the event on Saturday, December 7. Bonem reported that ~50 people are currently signed up; set up will be 12/7 in the afternoon, e-mail note will be sent requesting volunteers for set up.

Income from Yonkers hangar to Yonkers Scholarship Fund – no report by Treasurer.

1050C hangar arrangement for Chapter members – Bonem reported no progress in discussions with new owners re: written agreement.

New business:

Ryden reported that Chapter is now able to accept dues (and hangar rent) via PayPal, instructions will be published in Lookin' Up plus sent to membership via e-mail.

EAA National Annual Chapter Member survey: 25% or more of members need to complete survey by December 15 in order for Chapter to receive credit toward Recognition Program. Reminder will be published in Lookin' Up, and Holiday Dinner diners will also receive reminder.

In the absence of a Newsletter Editor for 2020, President Fick stated that he plans to publish Lookin' Up at least bi-monthly, Bonem offered to assist Fick in effort.

QAS has agreed to do snow removal from taxiway beyond apron and from parking area, but not from hangar apron, or hand shoveling around doors.

Midland R/C Modelers Club upgraded pedal plane paint scheme, members have asked how/when they

can volunteer to help Chapter with activities since they use classroom for monthly meetings.

Past President Woodley suggested that the Chapter contact AOPA re: presenting a Rusty Pilot seminar in conjunction with the May pancake breakfast. Woodley will investigate possibilities and report to Board at December meeting.

President Fick adjourned the meeting at 1754 EST.

Respectfully submitted,
John McPeak, Secretary
EAA Chapter 1093

Reminder: Chapter Survey

EAA 1093 Members -

Every year the EAA conducts a membership survey and the results are shared with your board members. Both National EAA and the 1093 Board Members take these survey results very seriously and use them to help guide the chapters.

This is YOUR chapter and YOUR opinion matters.

This is your opportunity to share it!

Please complete the survey. It doesn't take long to complete and help us make our 1093 chapter even better. If you have any difficulty with the survey please let me know, I would be happy to help.

Sarah Pagano, (989) 525-5206

sarahkpagano@gmail.com

We believe chapters who participate in this survey will gain feedback to help provide them value added information about their chapter, as well as provide EAA with a snapshot of our chapter network as a whole.

Please complete the survey by December 15th.

[Take the Survey Now>>](#)

It's time to renew your membership - 2020 Chapter's dues are due

Annual membership is \$25 (\$30/family)

You can choose one of these options:

- ❖ Write a check Payable to:
Midland EAA Chapter 1093
PO Box 2464
Midland, MI. 48641-2464
- ❖ drop in the Education Building white mailbox
- ❖ PayPal users: ea.1093chapter@gmail.com
and please Change
FROM: Paying for an item or service
TO: Sending to a friend
PayPal fee for \$25 membership: \$1.03
PayPal fee for \$30 family membership: \$1.17

EAA Chapter 1093 Scholarship forms

Attached to this Newsletter issue are the requested Scholarship Application and the Scholarship Recommendation forms in PDF and Word formats.

5 Tips for Storing Your Airplane for the Winter

5 things to do prior to winter storage and 1 thing NOT to do.

Winter is here, but there's still time to prepare your aircraft for winter storage to ensure that it's ready to go when spring flying season starts. Your best guidance comes from your A&P, but here are some tasks to consider with the goal of keeping corrosion and other damage to a minimum.

Change the oil. It may seem counter-intuitive to change the oil now rather than starting with new oil come spring, but remember that the oil in your engine is old and contains dirt and contaminants that can cause rust and corrosion. Not only should you change the oil, but you should replace it with a preservative oil mixture. Then take a quick flight with your new oil to make sure the oil is distributed throughout your engine.

Prepare your sparkplugs. Remove the sparkplugs and spray the holes with a preservative oil mixture. Then replace the original sparkplugs and they'll be set for winter. Another item to consider is the airplane battery. It probably won't hold the charge, at least enough of a charge, to start in the spring after sitting for a few months. Bringing the battery home and storing it out of a super-cold location is good. Or a trickle charger can be used every few weeks while it's in the airplane to maintain the charge and enhance battery life.

Guard against critters. Mice and other animals will seek refuge from the cold both in your hangar and in your airplane. Of course, no food of any kind that could provide enticement for pests should be left in your hangar or in your airplane. Plug all the holes. Use pitot tube covers and static vent covers, which will keep insects and dirt out that could later form a blockage. Plugging all holes will also prevent moisture that could get into your engine and cause corrosion.

Cover what you can. Your airplane's windows, canopy, prop blades, and tail should be covered. That will reduce damage to those surfaces, and also help reduce damage to the panel and upholstery caused by exposure to the sun and moisture from rain, ice, and snow.

Keep the fuel tanks full. Storing your airplane with full fuel tanks reduces the moisture that can condense in a partially full tank. If your airplane has a flexible, rubber fuel bladder, a full tank will also minimize cracking. And don't worry about the age of fuel. Most avgas is good up to a year.

These five items are what you should do. But what shouldn't you do during the winter storage period? Here's one thing: **Don't "ground run" your airplane.** It is tempting to visit your airplane every few weeks and start it up, thinking this is good for your airplane, but this is a bad idea. Ground running your airplane is not a substitute for an actual flight, where the engine heats to a uniform appropriate temperature. In fact, the uneven heating as a result of ground running is worse for your airplane than doing nothing at all. Leave it alone.

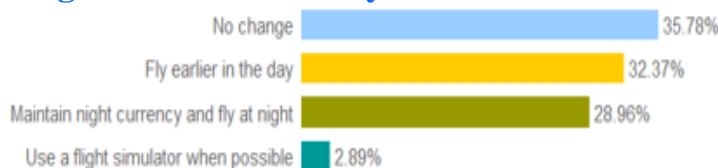
Preparing your aircraft for its winter hibernation takes time and effort that will pay off when that first perfect spring flying day comes around again. Consult your pilot's operating handbook, maintenance manuals, and your A&P for the best winter storage solutions for your specific make and model.

A short note from the editor:

Wishing you all a nice and enjoyable Holiday Season and hope you have already prepared your airplane for the cold winter flying ahead.

Starting next issue Dave Fick will take over to become the editor of our Newsletter. He has been the editor in the past and has done a great job keeping us all well informed on all events related to the chapter's activities – so good luck to you, Dave, as the new editor. We are all looking forward to read what you will be publishing.

How do you prepare for winter longer nights and shorter days?



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