



Spirit of Flight

**Experimental Aircraft Association
Chapter 14: San Diego, CA**

May 2022



The Eagles Return! Departure and Arrival desks in front of the Eagles' Nest at our April Young Eagles Rally. Chapter 14 is back in business!

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Upcoming Events

- May 14th—Young Eagles Rally.**
- May 21st—Pancake Breakfast & Membership Meeting.** John Mahany on "Review of VFR Flying"
- June 11th—Young Eagles Rally**
- June 18th—Pancake Breakfast & Membership Meeting.** Shane Terpstra on "100LL Replacement"

Chapter Briefing

EAA Chapter 14
Members



Chapter Activities: Information provided by Chapter members.

Week ending April 2: Despite it being a cold, rainy day, a number of EAA 14 members gathered in Hangar 3 to hear Jim Wright and Gene Hubbard provide a demonstration of the South Bend Milling Machine. The machine had been donated by the San Diego Air and Space Museum several years ago and Gene Hubbard, Jimmy Kennedy, Ryan, and Ron Shipley all played a role in getting it ready to use. Gene provided the last bit of tooling and maintenance. After the demonstration, members enjoyed the serve yourself pepperoni pizza in Hangar 1. Member Dan McCarthy reports so far so good on his Grumman's oil leak – hardly a drop. Next, he will be dealing with some radio and transponder issues. As he said, “both always work fine when the mechanic is around, but 45 minutes into a flight the gremlins get to work wreaking havoc.” We all know the feeling. On a more positive note, Dan bought a retirement

home outside of Yuma, Arizona. It has a 3,000-foot dirt runway which just got paved. Hangars are already present on the site, and more are being built. For safety's sake, aircraft take off and remain 400 feet AGL and make a 90 degree right turn to stay out of Yuma International airspace; otherwise, there are lots of F35 jets climbing and landing as well as ultralight and crop dusters at less than 400 feet.

Member Mark Nash is looking forward to going to Sun n Fun – always a great destination. He has been in Arizona for some time. We look forward to seeing him back at the Chapter – he's always willing to help out with mechanical issues and is glad to share his knowledge.

Week ending Apr 9: Great news – Hermes Hernandez has agreed to become our new young Eagles Coordinator. His first event brought out lots of pilots, eager kids, and patient parents. It has been a long time – spread the word we're back in business. Trinidad and Sharon Lopez provided a filling lunch of pizza and hotdogs and Richard West made homemade lemonade for the kids. Of course, one of the reasons we could be proud to offer this community activity is because Gary List and Jonathan Robbins spent a lot of time prior to the event cleaning up the area and the restrooms. They need help – we're a volunteer organization and we need volunteers to spend an hour or so during the week to get everything clean and in order. Ask Gary how you can help. During the week Jimmy Kennedy and Jim MacKinnon kept up their progress on their Nieuports



Jim Wright orients chapter members on the use of our newly-provisioned South Bend mill in Hangar 3. 4/2

projects. Gene Hubbard spent time at the Chapter as well, wrapping up some projects before he leaves for a few months to Michigan. Nigel Worrall flew in to assist Ryan with some engine mount work. Jonathan Robbins spent time working on the Myers.

Week ending April 16: Our speaker for the month had to cancel at the last moment because of a medical emergency, but a good crew had already enjoyed the pancake breakfast prepared by Kevin Roche and his son David. Ted Krohne had signed up to prepare lunch for the day and he had pulled out all the stops with fixings for ham and turkey sandwiches. Chapter members and Directors made short work of it.

Week ending April 23: Big round of applause for our Volunteer Hero, Jonathan Robbins. He spent many hours dealing with our emergency need for obtaining a new phone service and new connection for our alarm service. By Saturday he reported that he got the phone number port request entered into the AT&T system by T-Mobile; once the change goes through, then he can port it again to Google Voice. He also set up the install for our new alarm system and purchased the new VoIP phone. And to top it off, he ran the lines at the Chapter to prepare for the alarm and phone. Hearty round of applause for all of his efforts – not only for dealing with all of the companies, but then doing the physical work to get us ready for the updates. We really appreciate all of his efforts.

Week ending April 30: The usual crew were present working on their projects and planes. And right in the nick of time, Jonathan Robbins reported the following: “The new alarm is in place and programming and testing are complete. It is monitored on both the Chapter internet connection outgoing and the built-in cell modem both in and outgoing as a backup to the internet. . The new chapter phone arrived today, a day early, and it too is now in place, programmed and working properly for incoming and outgoing calls with the proper 619-661-6520 number in place and free from monthly charges from now on.” Jonathan spent all day on Thursday at the Chapter working with our alarm company to get the new system up and running, as well as doing all the programming for our new phone. The Chapter will really benefit from both upgrades – couldn’t have done it without you, Jonathan – thanks so much!



Hangar flying at its best: Jonathan Robbins, Joe Russo, and Gary List give the refurbished simulator in the Eagles’ Nest a workout.



President’s Message

Hello Everyone,

I would like to remind our Chapter members about the 2022 Ray Aviation scholarship nominations. Although there has been a lot of interest, we have had very few nominations so far. We are therefore extending the nomination period through the end of this month. This is a great opportunity to nominate a young person you know, as the chances of receiving the scholarship are very good. It is worth noting that both our 2020 and 2021 Chapter scholars have received their private pilot certificates through this program. To all of those interested, please contact me directly at (619) 661-7117.

On the second Saturday of the month our Chapter is hosting a Young Eagles event. This month’s event will also include Eagle flights. It’s a great chance for those who haven’t flown in a while to take a flight with one of our Young Eagle Pilots. Anyone interested in an Eagle Flight or volunteering for the day’s events, please contact our Young Eagles coordinator, Hermes Hernandez at (858) 633-7140.

On the third Saturday of this month, we will be holding our normal schedule of events. There will be a pancake breakfast, followed by our general meeting and lunch. We hope to see you there.

To add to our Chapter activities, we have designated a donated aircraft as a Chapter project. The donated Sonerai 2L is complete but needs some work to make it airworthy. It’s a great opportunity for Chapter members to volunteer in the restoration of this aircraft. This is open to our Chapter members as well as Young Eagles. Please contact Ron Shipley for details at (619) 857-5201.

Also worth noting this month is our Chapter flight simulator. It has been fully refurbished and certificated. It’s available to all our Chapter members. Please contact Gary List at (619) 721-9017 for the details.

Clear skies,

Trinidad Lopez



Chapter Sonerai project. Contact Ron Shipley at (619) 857-5201 if you’re interested in helping make this airplane fly again.

AOPA Webinar on Unleaded Fuel

Short Summary by Donna Ryan

The following information is based on an AOPA webinar on September 16, 2021.

The FAA's July announcement (and announcement at Oshkosh) that it has issued Supplemental Type Certificates (STCs) for the use of the world's first high-octane unleaded fuel was a milestone in General Aviation's (GA) move away from leaded fuels. However, the announcement also left many unanswered questions. AOPA held a webinar to help answer these questions, including how FBOs and airport managers can get ready to use this fuel once it is more broadly approved.

AOPA Editor in Chief Tom Haines hosted the webinar and was joined by George Braly, Chief Engineer at GAMI (General Aviation Modification, Inc), which has created this new fuel, and Muneeb Ahmed, Director of Trading and Logistics from AvFuel, which has been tasked with distributing the fuel. Leaded fuel is a big problem for aviation because of environmental concerns and there has been increased pressure to get the lead out of aviation fuel, especially west of the Rockies. However, high compression engines need at least 100 octane to operate well. After a number of years working on this issue, and with exhaustive oversight by the FAA, GAMI has come up with such a fuel, G100UL™ High Octane Unleaded Avgas and is partnered with AvFuel to bring it to market.



G100UL™, an unleaded replacement for 100LL, may be available soon for General Aviation.

George Braly of GAMI spoke first about the process, begun in 2010, of developing the fuel and its characteristics. The fuel had to meet the following engineering requirements for a practical unleaded Avgas replacement for ASTM D910 100 LL:

- Octane had to be the same as 100LL (low lead). On July 27, 2021, the FAA said it met this requirement.
- Fungible with 100 LL in the FBO tanks and the wing tanks of the aircraft (including material compatibility). The fuel had to be interchangeable with 100LL and be able to be in the same tank during the transition period.

- Had to be able to be produced within existing blending and refining facilities and FBOs had to be able to mix new 100UL with 100LL without needing to set up a new tank.
- Cost needed to be comparable with 100LL. Initially it may cost \$.60 or \$.80 more a gallon – cost will go down as production increases.
- Had to have fleet wide “All Aircraft – All Engines” FAA approval.

Mr. Braly pointed out that GAMI was three years into its STC certification effort when the FAA established its “Government/Industry” Piston Aviation Fuel Initiative (PAFI). The PAFI “rules” required GAMI to “start over from scratch” and this made no sense. Thus they declined to enter the PAFI program and continued to pursue the traditional STC certification path previously used to certify other unleaded fuels for use on aircraft and engines. This path has had FAA buy-in; Mr. Braly went into detail how numerous senior FAA personnel have been actively involved in the certification process. He also mentioned the types of tests they conducted with FAA oversight.

- Material compatibility;
- High altitude operation, high altitude re-start
- Hot day/hot fuel climb and operational testing;
- Performance testing;
- 150 hour 14 CRF Part 33 engine “block” test on aircraft;
- 170 hour on-aircraft real world functionality and reliability testing;
- 14CFR33.47 detonation testing using an engine with an “octane appetite” higher than any other engine in the fleet.

All tests were passed successfully. For the material compatibility test, aircraft & engine fuel wetted components remained unaffected with the G100UL™. Tests were conducted on numerous engines to ensure it conformed to specifications. Results showed that there was no change in performance from 100LL, no material change in weight and balance, no cold weather starting issues, etc. The flight test engines were remarkably free of deposits after operation. The figure on the next page shows the dramatic difference in deposits between a cylinder head running 100LL with one running G100UL during the comparison test.

It also looks like there will be some other maintenance benefits, such as being able to use synthetic motor oil, e.g. Mobile 1.

Several slides showed the FAA approval papers, including FAA approved detonation testing for a selection of the engines with the highest “octane appetites” found in the fleet. Mr. Braly hopes to have all STCs by the first or second quarter of next year.

Mr. Ahmed then spoke about the logistics, infrastructure, and transportation on how to get the fuel refined and delivered to airports. They will manage all of the vetting



Cylinder head running 100 LL. Note deposits.



Cylinder head still exquisitely clean after running 170 hours on G100UL.

and qualifications for refiners and blenders who wish to produce G100UL™ Avgas. The rollout process will begin slowly. Only 5 refineries in the U.S. produce avgas and it is only 1% of the gasoline produced by these refineries. They will probably start with one production center and a couple of flight schools, but are already in contact with many distributors. The industry wants to implement UL; as soon as all of the STCs are approved by the FAA, then the demand should really take off and production will increase. He presented a short overview of the roles 4 different entities will play.

- GAMI is responsible for patents, FAA certification and quality control.
- LanXess (a subsidiary of Bayer of Germany) is responsible for chemistry, patents and critical production of octane enhancer.
- Refineries will be responsible for production of 100 + million gallons/year of high quality aviation alkylate used in GAMI's G100UL™ Avgas.
- AvFuel will oversee the logistics of production so that G100UL™ unleaded avgas can be produced, delivered to FBOs and into the wings of the entire fleet of GA aircraft.

Since the Oshkosh announcement, the FAA has now agreed to an intermediate expansion of the Engine AML STC. It is on track to be approved in the next four weeks. That expanded AML will include hundreds of additional makes and models of popular engines.

Remaining task: All Aircraft/All Engines AML STC approval for G100UL™ avgas. Once this has happened, then refineries can start producing it, FBOs can start stocking it and pilots will be assured that wherever they land and need to refuel, they will be able to get FAA approved UL fuel for their engine type.

Eagles' Nest 10 Years Old!

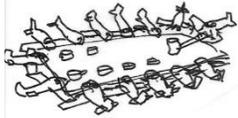
It's been ten years since chapter members cleaned out the storage area between hangars 1 and 2 to construct what we now know as the "Eagles' Nest." We've come a long way.



Eagles' Nest in April 2012, when the area was called "Hangar 1 1/2" and was used for storage



Same area in November 2019, when Ashley was running the Young Eagles program.



April 16, 2022 Board Meeting

Donna Ryan, Chapter 14 Secretary

Provisional Minutes – Pending Board Approval

The Board meeting was held on Saturday, April 16, 2022 beginning at 10:45 a.m.

Directors and officers present were: Gene Hubbard, Jimmy Kennedy, Ted Krohne, Trinidad Lopez, Kerry Powell, Jonathan Robbins, Kevin Roche, Larry Rothrock, Donna Ryan, Ron Shipley, Alan Sparkes, Stu Strebog. Directors and officers absent were: Ashley Lopez, Francisco Munoz. Guest: Mark Albert

Board Decisions

(Subject, moved by, seconded by, pass/fail)

- March 2022 Minutes reviewed and approved. Ron Shipley/Larry Rothrock: passed.
- March 2022 Treasurers Report reviewed and approved. Kerry Powell/Stu Strebog: passed.
- Designate a Chapter Clean-up/Maintenance Day every three months, with the first one commencing on May 7, 2022. Ted Krohne/Ron Shipley: passed.
- Designate the donated Sonerai as a Chapter build project. Stu Strebog/Ron Shipley: passed.
- Upgrade our alarm system for \$1,200 and approve the \$25 increase in the monthly monitoring fee. Jonathan Robbins/Ron Shipley: passed.
- Port our Chapter phone number to Google Voice service (one-time \$20 fee). Acquire a VoIP phone for incoming and outgoing calls, including receiving calls from the gate (at a cost of approximately \$50 a phone. Jonathan Robbins/Ron Shipley: passed.
- Motion to adjourn. Stu Strebog/Ron Shipley: passed.

Old Business

Lease Option: **Trinidad Lopez, Larry Rothrock, and Gene Hubbard** had met that morning to discuss matters pertaining to the lease option. Trinidad discussed some of the costs involved in exercising the option, as well as some additional expenses.

Recognition of Pete Grootendorst: The Board agreed on the award suggested for **Pete Grootendorst**. **Donna Ryan** will follow up with **Janeth Grootendorst**.

Milling Machine: **Gene Hubbard** mentioned that the actual price for the tooling for the donated Bend Milling Machine was \$391.29.

Young Eagles Coordinator: **Hermes Hernandez** has accepted the position as Young Eagles coordinator. The Board expressed its appreciation for his volunteer spirit and expressed thanks for last week's successful session.

Ray Scholars: A memo will be sent to all members encouraging them to share information about our Ray

Scholarship for 2022 with their acquaintances. Youths between 16 and 19 can apply.

New Business

Taxes: **Ron Shipley** gave an overview of the current state of filing our 2021 taxes. He will be following up.

Upcoming Young Eagles Activities: Directors offered suggestions on letting the community know we're open for business again. A memo will be sent to all members encouraging them to spread the word. For May, in addition to Young Eagles we will have an informal Eagles Day. We will also be encouraging "rusty pilots." In June, we will have a special Young Eagles day that will go into a more in-depth discussion of aviation.

Lunches for May: A memo will be sent out to all renters asking for volunteers for lunches. A new lunch schedule for May, June, and July will be posted in Hangar 1. At the meeting, **Trinidad** offered to host the Young Eagles lunch on the second Saturday of May, and **Alan Sparkes** offered to do lunch on the 3rd Saturday of May.

Chapter Clean-up Day: **Trinidad Lopez** suggested having a designated Chapter Maintenance/Clean-up day every 3 months. The Board agreed and designated May 7th as the first one. A motion was made to that effect.

Chapter Build Project: **Trinidad Lopez** discussed the possibility of having a Chapter build project. We currently have a donated Sonerai that could be used. A motion was passed to designate this aircraft as the Chapter build project. **Ron Shipley** volunteered to be the build coordinator.

Update Library: **Trinidad Lopez** suggested it is time to update the Library to make it more usable for Young Eagles, parents, members. He suggested getting some new chairs to start with. **Jonathan Robbins** and **Alan Sparkes** mentioned some possibilities in obtaining some.

Telephone, Alarm System Connection, Internet Connection at the Chapter: AT&T is discontinuing their current All-in-One Local Exchange Service, which we use for our telephone and alarm system connection, by 4/30/22. Their recommended replacement would cause a significant increase in cost. In addition, T-Mobile (which purchased Sprint) is discontinuing our Sprint internet connection by the end of May. **Jonathan Robbins** shared information about the upcoming changes; he will begin exploring alternatives. Several days after the Directors' Meeting, he shared information and recommended a course of action. A virtual Directors' Meeting was held to go over the recommendations and agree to a course of action. Two motions were made and approved.

Items Identified for discussion next month

Signs and banners, internet connection, lease update, number of defibrillators, upcoming Chapter activities.

The meeting was adjourned at 11:48 am.

Submitted by **Donna Ryan**

14 UPCOMING PROGRAMS

Kerry Powell, EAA-14 Program Director

May 21st: John Mahany reviews the 2019 Joseph T Nall Report, as it applied to general aviation, non-commercial flying. Starting out with non-commercial fixed wing, number of accidents and aircraft, then how many were pilot related or mechanical, pilot certificate, and types of accidents, etc. Then it continues to break down accidents by landing and phase of flight. Then takeoff and climb accidents, fuel management, maneuvering accidents, etc. This should address most of the pilots in attendance, and everyone can benefit from a review like this, especially VFR pilots who don't fly very often.

June 19th: There is a lot of information around about the conversion of 100LL to Unleaded fuel. Join Shane Terpstra, Director of Safety and Chief Pilot for Plus One Flyers and FAA Team Rep for a presentation about fuel and everything you need to know about leaded fuel issues in GA and what is being done and can be done, to move away from leaded fuel reliance in aviation.

From the Archives



Five Years Ago: April 2017. Chapter members repair ramp damage from the filming of an episode of "The Last Ship." In this photo, Chuck Stiles instructs Gene Hubbard on the use of the electric jackhammer while Gabriel Ben-Orr clears rubble. Kerry Powell keeps the electric cord clear and other chapter members look on.



15 years ago: April 2007. Evening at the flyout / campout at Ocotillo Wells. Some 25 fliers, campers, and guests enjoyed Kai Schumann's lunch of corn tortillas and build-your-own enchilada, taco, tostado, etc.



Marketplace

For Sale: Brand new RV-10 empennage. Purchased for \$4,500 in February 2021. All parts, tools, and paperwork available; can be registered at Vans. Donated to EAA Chapter 14. Selling for \$1,500. Text Ryan at 858-229-4875 for more information and pictures.



Two wrongs don't make a right, but three rights make a left, and two Wrights made an airplane.

May 2022

Facebook

<http://www.facebook.com/pages/EAA-Chapter-14-San-Diego-CA/134162329986593>

Chapter Website

<http://www.eaa14.org>

EAA Chapter 14 Memberships

Applications are available at our Brown Field hangars and on our website.

General Chapter Information:

Donna Ryan (Chapter Secretary) (858) 273-4051. Leave voice mail or text.

eaal4contact@gmail.com

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EAA Chapter 14 (with answer machine) (619) 661-6520

Chapter Events

Open House at the Brown Field hangars:
every Saturday from
10:00 am to 2:00 pm.

Pancake Breakfast:
7:30-9:30 am, third
Saturday of each month

General Meeting: 10:00
am, third Saturday of each
month

Hangar Phone:
619-661-6520

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