



EAA 512

PLACERVILLE, CA

AUGUST 2023

Prez Sez by Jim Wilson

Chapter 512 Ray Aviation Scholarship update

Sam Garcia completed two milestones, his solo flight and written exam, has started his next phase of training at McClellan Airfield with the Flying Panthers flying club and a new instructor. He has a few hours to complete requirements and take his check-ride later this summer.

Hunter Sites completed his solo flight in June at the Sacramento Executive airport and is studying for his written exam.

Young Eagles

The next YE event is October 14 when chapter pilots will take over 30 kids for their first Young Eagle flight. Thanks to all the pilots and ground crew for a job well done last month and pledge to work the next event. Faced with a shortage of chapter pilots or airplanes, our friends from LHM and O61 have helped fill the void. We encourage new pilots to join the ranks of Young Eagle pilots who meet the [requirements](#).

YE Build and Fly Program

This program was created by EAA as the

next step to engage youth in aviation education. The EAA's Young Eagle Build and Fly Program, an intensive RC model building and flying initiative to introduce youth to aircraft construction and the fundamentals of flight.

This is a chapter modeling "program-in-a-box" designed for EAA chapters to partner with local Academy of Model Aeronautics (AMA) clubs to engage Young Eagles participants and other youth.

The chapter has already purchased the RC kit to build and fly a SIG KT-40 model plane built from balsa wood and fabric wings. Dale and Jim are planning to conduct a workshop to start in October after the pancake breakfast and Young Eagle flight. We will enroll kids ages 8 to 17 to build the RC plane in the chapter hangar loft. The workshop will be limited to 6 kids. We anticipate about 24 hours over a 6-to-8-week period. The workshop would include time in the chapter RC flight simulator before going to the Sacramento Area Modelers RC field near Mather Field. Contact Jim Wilson to enroll.

Volunteer at Oshkosh AirVenture 2023

Ever since EAA's creation in 1953, volunteers have been the heart and soul of the organization. Volunteers from all over the world

have helped make EAA a recognized leader in the aviation community. This was my sixth trip to Oshkosh since 2011. In two of those years, I volunteered my time, over twenty hours during the week, working 4 hours each day. My first job was to park vintage airplanes, as a crossing guard stopping foot traffic at a taxiway/road crossing or riding a follow-me scooter directing planes on arrival to a parking spot or on departure to the taxiway. The next year I worked in the Blue Barn where chapters show their programs and activities to visiting guests.

The AirVenture Volunteer Center lists a variety of volunteer opportunities each year starting in March. The best jobs go quickly, [Volunteer Opportunities](#)

Another opportunity is the weekend work party, it's a two-day volunteer event where people from all across the country come to Oshkosh, Wisconsin, to help us prepare for EAA AirVenture Oshkosh.

Volunteering at a Weekend Work Party is a simple, fun, and easy way to get involved in the aviation community. You'll spend a weekend day (or two) connecting with people behind the scenes, learning how your skills relate to aviation, and helping the biggest fly-in in the world come to life.

EAA is looking for volunteers to help with a variety of tasks and projects as we prepare the grounds for the next EAA AirVenture Oshkosh. Projects can vary but can include grass cutting, tree planting, gardening, building construction/remodeling, fence removal, painting, material staging and more. The work varies in physical demand, but there are tasks suitable for all abilities.

Volunteer Benefits

- Daily admission exchange ticket for EAA AirVenture Oshkosh (good for any day)
- A meal and beverages during volunteer shifts
- Water, gloves, tools and training needed for the assigned duties

An experience of a lifetime!

We welcome everyone, no matter your skill or availability, to volunteer at an upcoming Weekend Work Party. Come as an individual, a group, family or troop! We promise your experience will be meaningful, rewarding and fun!

Volunteer at EAA 512

As the local chapter, we have many activities for volunteers. Chapter 512 is the grass roots of EAA and our airport community. When you join our

chapter, we ask members to join EAA national, then **JOIN AND PARTICIPATE in Chapter 512**. Our membership is small, about 80 members, depending on how and when you count. While we exceed the national average of 41 members, our typical attendance at monthly chapter gatherings is 25.

As chapter president, I ask for your participation to help the chapter to thrive. Get involved in our activities, such as Pancake Breakfast, Adopt-A-Highway cleanup, Young Eagle pilot or ground support volunteer, Scholarship Committee, Fund Raising, Aero Educate or pilot mentoring.

What can you do?

Join the Pancake Breakfast crew to put on seven events each year from April through October. We need people: including cooks, setup and clean up, parking attendees, servers, hosts and cashiers.

Sign up for Adopt-A-Highway work party to earn \$500 each month and promote community pride and support the chapter and youth programs.

Volunteer as a Young Eagle pilot and share your love of aviation with kids.

Be a chapter leader. A chapter must elect officers and directors each year. The chapter forms a nominating committee in the Fall and holds an election in November for four officers and two directors to serve a one-year term on the board of directors. Most of the board members have served more than one year. Contact any of our current board members to submit your name and offer your leadership skills and passion for aviation to this unique organization. The rewards are great!

Leadership Boot Camp. For potential office holders, EAA offers a free leadership boot camp which travels around the country holding 4 to 6 one-day seminars plus a two-day camp at Oshkosh headquarters. This is an excellent opportunity for prospective or newly elected officers to learn about how a chapter operates and the resources available. I have attended two workshops, the first boot camp held at Chapter 1 in Riverside in 2017, and another this year in Independence OR. I will ask the board to approve travel expenses for anyone who puts their name on the slate of candidates and pledges to attend boot camp in 2024.

Dates to Remember!

August 16 - General Meeting
Picnic/Potluck 6pm & General Meeting 7pm

August 19 - Adopt-A-Highway 7:30am
Volunteers **must** contact Judi prior at
judieaa512@gmail.com

September 1 - Hangar Clean Up 1-3pm

September 2 - Pancake Breakfast 8-11
Vintage Display Day 9-1
**Sign in if you are displaying!

September 3 - Vintage Display Day 9-1

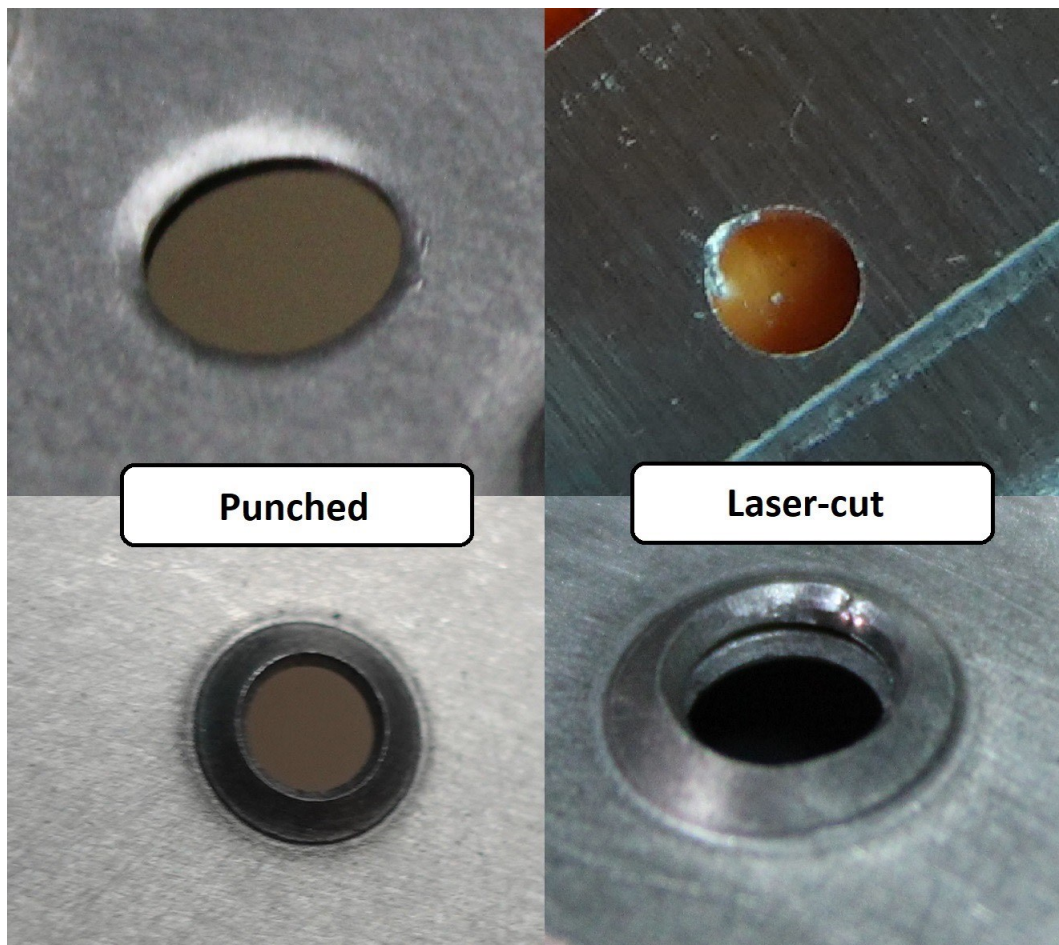
September 5 - IMC/VMC Meeting 7pm

September 13 - Board Meeting 6pm

Van's Aircraft's Laser-Cut Hole Fiasco, Part 1

As far back as the RV-6, Van's Aircraft has been distributing kits with metal parts that have rivet holes punched by a programmed punch press, saving construction effort, and, in later kits, alleviating the need to build the structure in a jig. But, between January 2022 and June 2023, in an effort to increase production to better serve demand from COVID-era builders such as myself, Van's outsourced the production of many parts, approving the use of laser-cutting techniques to form those holes. These days, Van's is very much regretting that decision, as are many builders, including me.

When you look at a part closely, it is easy to tell when it is punched versus when it is laser-cut. The punched hole has a slight rounded bevel on one side and a thin burr on the other. A punched hole is a very clean cut, resulting in a dimple that is also clean and structurally sound. There's a reason Van's has been using this process for decades. The laser-cut holes, however, do not have these properties. Instead, many of the laser-cut parts have additional features that, it turns out, may lead to hole cracking when dimpled and riveted.



At a minimum, all the laser-cut holes on an affected part have a build-up of metal at one specific spot on the hole, which requires additional hole preparation to clean. This is annoying, especially for builders of the RV-14 like myself, because part of the draw of the latest kit is that the holes are supposed to require minimal preparation. I think most current builders, who have seen kit delivery lead times exceed a year, would be willing to accept the tradeoff of having to do a little extra hole prep as long as they got their kits delivered sooner.

But, that's not the real problem. Many affected parts, particularly ones coming from one particular outsourced manufacturer, according to Van's, also have a notch in the hole. If that notch is not removed, the hole will almost certainly crack when dimpled. Van's has known this for some time. Many builders had reached out to Van's about said holes and were told to file out the notch prior to dimpling, adding yet more prep work, usually to every single rivet hole in a component. As long as the filed hole was not oversized beyond military specifications, Van's told us to just "build on". Van's also quietly updated their General Information (Section 5) to state that as long as a crack did not exceed one-third the height of the dimple, the part did not necessarily need to be replaced. In other words, Van's had gone from a message of "dimple cracks = bad" to "a few small dimple cracks = okay", but only after the reports of dimple cracks in laser-cut holes started coming in. It is unclear what testing Van's may have done to substantiate that change in guidance. Prior guidance was based on testing that showed cracks in dimples had a tendency to propagate.

In my experience working with laser-cut parts, filing the holes to remove notches is insufficient to preventing hole cracks, especially for bigger holes. When looking at a filed dimpled hole under a magnifying glass, a crack is still evident in many cases right at the location of where the notch used to be. Even if a crack is not evident after dimpling, there is an unacceptably high likelihood that the hole will crack when riveted. Self-proclaimed materials engineers posting on the Van's Airforce forums (VAF) claim the laser-cutting process also heats and hardens the hole edge, especially when the pathing for the hole cutting isn't correct, making the metal brittle and prone to cracking.

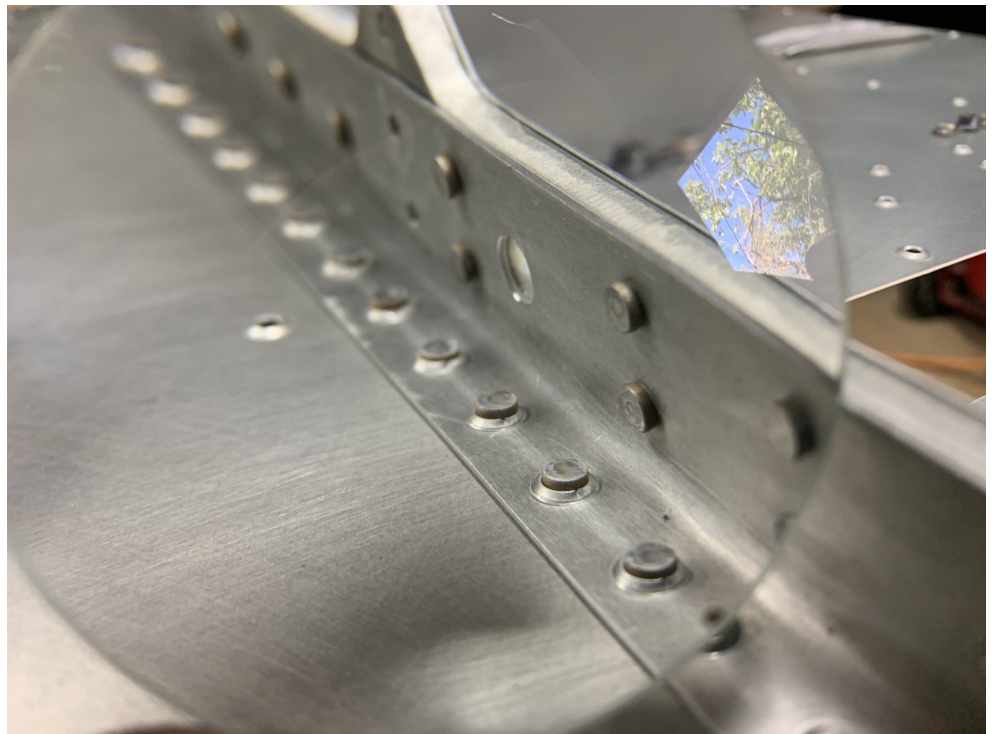
As a prime example of the problem, I had received some laser-cut parts for the aft gear brace assembly that secures a brace supporting the main gear legs on a tricycle gear model. It's a rather important structural part of the plane. The laser-cut holes were originally in a condition as described above, so I put extra elbow grease into cleaning up the holes prior to dimpling. I felt rather satisfied with the results, finding only very minor hole edge cracking after dimpling, which I addressed with additional filing as per Vans' instructions.

But, when I riveted the assembly, large cracks formed right in those areas that needed to be filed.

Nearly every single hole in the riveted assembly has a crack visible to the naked eye, some exceeding the one-third height minimum.

This is clearly a problem, and it appears to be a materials problem, not a builder problem.

(Continued Pg. 5)



Help Wanted!

***Greg Stein is looking for help
facilitating the IMC/VMC
meetings the first Tuesday of
each month.***

Please contact:

greg.stein777@gmail.com

I sent my pictures to Van's support. I also posted them on VAF. Six days later, Greg Hughes (Van's CEO) finally acknowledged on VAF that this situation was wider-spread and more serious than they initially believed, and was conducting testing, while also vowing to replace any laser-cut part a builder found unacceptable for free. Later, they advised affected builders by email to put on hold any work involving laser-cut parts, warning them that they may also need to replace laser-cut parts in some critical components of already-built assemblies, such as the main spars of control surfaces. Imagine completing a rudder, the second major assembly you are likely to complete on a Van's kit, and being told that you will need to drill out all the rivets involving the main spar because the spar must be replaced. Yikes!

As Van's says, "the second rivet that is driven in any one hole is likely to be more defective than the first because the hole is enlarged and the rivet will be more likely to buckle and form an imperfect head." This leaves many builders wondering what is worse: an entire row of cracked dimpled holes or an entire row of defective rivets caused by enlarged holes. As such, some are basically demanding Van's replace not only the laser-cut parts, but all the parts that would be affected by having to drill out those laser-cut parts, up to replacing entire assemblies. It's a tough spot Van's has gotten itself into. It's also a tough spot to be in as a builder. I can only imagine the angst felt by those who paid a premium for quick-build kits and had to wait two years for their delivery, only to find cracks and are now wondering if they have to do major repairs themselves.

Now approaching two months later, Van's continues their testing, meanwhile providing only minimal information about their eventual plans for resolution. They have since stopped producing and distributing laser-cut parts for most components (except those that were already laser-cut to begin with) because they can now meet demand with their recently acquired in-house punch press equipment. They have indicated a commitment to replacing any structural laser-cut part at the builder's request, though the process for doing that is still being developed. Most of us affected builders are waiting patiently for more information from the "mothership". Some are not so patient, and are expressing their frustration on VAF.

As for me, all my wing ribs, leading edge ribs, and tank ribs have laser-cut holes. I also have dozens of components in my fuselage kit that have laser-cut holes. Those parts not yet incorporated into a structure, I intend to have replaced on Vans' dime. Those that are already parts of structures

would, frankly, be a nightmare to have to drill out and replace. So, I am patiently awaiting word from Van's on exactly what I'm supposed to do about those.

Ultimately, the onus of build quality is on the builder. There may come a day soon when I have to decide whether to knowingly accept small cracks in some components, assuming Vans' testing concludes that is safe, or to risk enlargening holes in my fuselage bulkheads. In the meantime, I've transitioned to doing some fiberglass work with fairings until more questions are answered. I intend to write a Part 2 to this article in the future describing Vans' ultimate resolution plan, and what I decide to do about it. Stay tuned.

Written by Eric Thomas, EAA #1382457

The Pursuit of a Private Pilot License

By Ray Aviation Scholar Ben Varozza

In 2021, a friend told me about EAA, a program that offered discovery flights to local youth. That fall, I experienced flight in a small aircraft for the first time. Soon after, I started attending EAA 512's Chapter Meetings and enjoyed talking to experienced aviators and listening to riveting stories varying from military encounters to plane crash survival stories. Upon getting more involved in the chapter, members encouraged me to apply for the Ray Aviation Scholarship. I started soon after on an accelerated schedule, aiming to get my license before I left for college that fall. I started flying a Cessna 150 and flying with a young CFI. Things were progressing smoothly but slowly due to my CFI having many students. It was challenging to learn when I was only flying once a week. However, eventually, I soloed at the start of summer (pictured below).





cockpit, which unfortunately slowed my progress a bit; having to learn new systems, new V speeds, different handling characteristics, and many other changes. However, I quickly adjusted and began working to solo in the new aircraft. Another big adjustment was that Melbourne International Airport (KMLB) is much bigger and busier, being a Class D, unlike Placerville Airport (KPVF). Once I began my training here, my new CFI felt I lacked ground knowledge, so we spent a long time building that up. Along with more training in the air, I was ready. Early one morning, we flew down to Sebastian Municipal (X26), where I soloed in the 172. (Pictured below)

After a few more lessons and solo practice flights, the summer was over, and I had to shift my focus onto college. I moved to Melbourne, Florida, to attend the Florida Institute of Technology. There, I am working towards a degree in Aerospace Engineering; a path I chose after experiencing my discovery flight. Soon after the semester started, I began looking for an EAA Chapter near Melbourne. I found EAA Chapter 724 and attend there regularly, though I look forward to my return to my home chapter: EAA 512.



Once I soloed, my flight instructor left the school, and I was reassigned to a new instructor who is fantastic. He really helped me across the finish line and taught me many things that I had missed with previous CFIs. We did the night flights and then the cross countries, usually going down to Okeechobee County (KOB). Once I had all my hours, we began checkride prep, and I was ready to take my Checkride in early May, but due to DPE availability, I couldn't take it till the end of June. I passed the ground and unfortunately had to discontinue after that because the weather was bad, with severe thunderstorms in the area. After rescheduling the flight for the next week, I soloed a few more times to prepare myself but felt very relieved, knowing that the ground oral examination was over. In my opinion, that was the hardest part. The flying was the fun, easy part. I then took the other half of my Checkride and passed! I am now officially a licensed private pilot! (Pictured next page). I am very grateful for the many people in the EAA 512 chapter who have encouraged and supported me through this journey and pursuit of my dreams.

After finding an EAA Chapter, I took a break from flying for a couple of months to settle into college and focus on the next step in my journey; the written test. I studied for hours daily, varying from making flashcards to studying materials and videos. I took that in the fall and passed with a score of 92%. After the distraction from several hurricanes, I started looking for a flight school or CFI to use. I talked to several EAA Chapters, called many flight schools around the area, and eventually decided to go with Melbourne Flight Training. This was a big change from flying with a young CFI to being enrolled in an aviation school. I went from being in a very informal, personal training to a very structured, rigorous course. Both have their benefits and downsides but are very different. At this school, I switched to the Cessna 172 with a partial glass

Thank you,
Ben Varozza



I'm on the Cameron Park airpark and you can drop off at any time. If you're interested in aviation yourself, or would like to learn more about the chapter, please feel free to visit the website at

<https://chapters.eaa.org/ea512>

In addition to scholarships, we provide extremely valuable programming to many members, youth, and the community at large. We offer pancake breakfasts on the first Saturday of each month from April to October, the Flying Start program for adults interested in getting into aviation, semi-annual Young Eagles rallies offering free flights to kids, school programming, including S.T.E.M. programs, monthly safety meetings, membership meetings, and board of directors meetings, among many other things to support aviation.

Ben Verozza receives his Private Pilot. Congratulations!

One Very Happy Young Eagle Participant

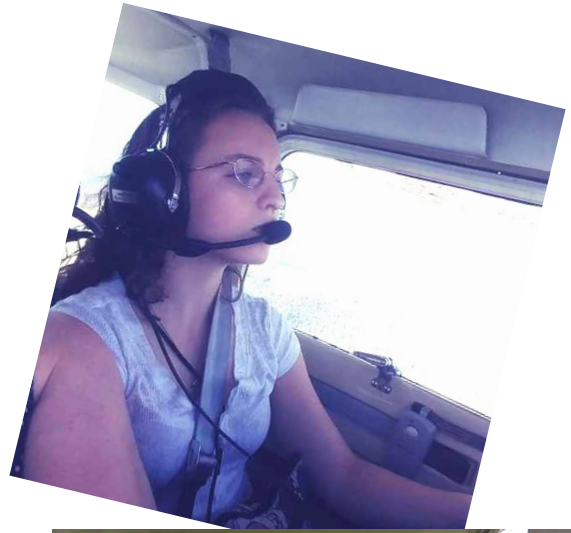
Want to support youth in aviation?

By Judi Gordon

Please donate your aluminum, batteries, and copper! Experimental Aircraft Association (EAA) Chapter 512, Placerville provides scholarships to youth interested in pursuing an education in any field of aviation, whether they want to learn to fly, become an aircraft mechanic, or be part of the next NASA mission to Mars!

One way we raise money for this endeavor is by recycling aluminum, lead-acid batteries, and copper. Aluminum could be from soda cans, ladders, wheels from cars and trucks, or any other source. Lead-acid batteries are usually from cars, lawnmowers, trucks, motorcycles, boats, RVs, scooters etc. Copper pipes and wires are great too!

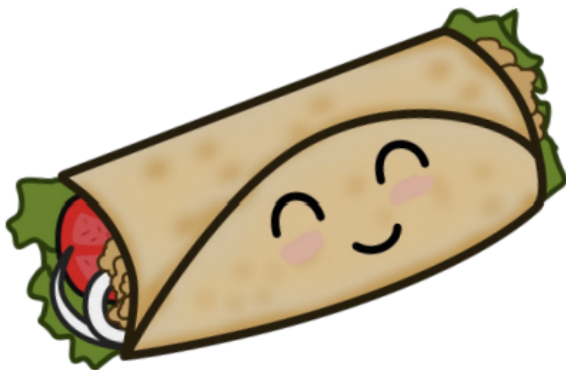
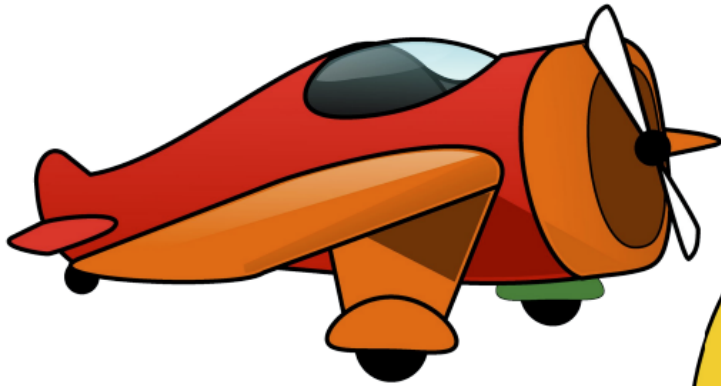




Oshkosh Crew 2023



EAA Chapter 512 Annual Fly-In Breakfast at Cameron Park Airport (O61)



Date: Sunday August 27th, 2023, 8am - 11am

Location: Starfall Hangar – 3204 Western Drive

Breakfast: Breakfast Burritos, coffee, orange juice, soda, water.

Price: \$8 for adults, \$4 for children 12 and under

Car Parking: Parallel park as close to the curb as possible along the south side of Western Drive.

Airplane Parking: Park on the streets with tails pointed into available empty lots.

PILOTS! BEWARE OF DENSITY ALTITUDE AND SHORT RUNWAY!

Airport Day

Columbia Airport



Saturday, September 9, 2023

10:00 AM - 6:00 PM

Food Vendors

Craft Vendors

Cornhole Tournament

50/50 Raffle

Glider Contest (Ages 4-18)

Tricycle Races (Ages 4-99)

Historic Aircraft &

Classic Cars

CalFire Aircraft

Smokey Bear

And MUCH More

***Airplane & Classic Car
Show & Shine***



FREE Admission & Parking

Columbia Airport 10723 Airport Rd., Columbia, CA

For more information call Traci (209)533-5685 or twilliams@co.tuolumne.ca.us

What Our Members are Building/Flying

John McPherson – Pietenpol



Caught John exercising the “Piet” on Thursday, August 10th.

Rob Bulaga – FlyKart 3



FlyKart 3 (flying go-cart, 3rd version) has finally made the trip from Folsom to Placerville. Final preparations for flight testing are underway.

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**Good Men
Do Exist.
We're Just**

Building airplanes, buying
airplanes, thinking about
buying airplanes, buying
parts to fix airplanes,
talking about airplanes,
flying airplanes...