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# CAA Chapter 32 News

The official publication of Experimental Aircraft Association Chapter 32 - St. Louis, MO (Jim Bower, Editor)

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**October, 2023**

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## **CONGRATULATIONS to Captain Bill Jagust, American Airlines, RETIRED!**



**Flying to DFW as I pass over Chicago-Midway airport where it all began in 1975.**

### **Newsletter Contributions and Deadlines**

Anyone wishing to submit articles, advertisements, rants, etc. to the newsletter should send them to your friendly editor on or before the Tuesday ahead of the scheduled meeting. Send contributions to [newsletter@caa32.org](mailto:newsletter@caa32.org).



# President's Corner

by Bill Doherty

Leaves are beginning their annual change of color; the humidity of summer is gone and we're deep in the usual onslaught of everything pumpkin spice. Although the Cardinals didn't make it to postseason play, hockey season has started, and the pursuit of the Stanley Cup has resumed.

Yep, it's Autumn. As we prepare for the change of seasons, we can look back on another highly successful Young Eagles summer. The weather for the October event wouldn't cooperate so there were no flights. Nevertheless, several scouts participated in the Aviation Merit Badge class by Chris Ward. They're invited back when we resume Young Eagle events in the Spring.

It's time to celebrate and congratulate our own Mr. Bill, now Retired Captain Jagust for his long and successful career with the airlines. Well done, sir!

I've been enjoying some of the visitors to my workplace. Recently we had a visit from a group of Air Force JROTC cadets from Lafayette High School. The Army National Guard brought in two UH-60 helicopters and took the cadets on an orientation flight from our ramp,

south around Six Flags and back. They were thrilled. In the midst of this and quite unplanned, we had the arrival of two F/A-18 Super Hornets stopping in for fuel. We took advantage of the opportunity and parked them in the same area of the ramp near the cadets. The Hornet crews were happy to oblige in talking about their jets and experiences. Add to this that a one of the members of the two seat planes was from Australia!

The cadets and their instructors were elated at the opportunity as well and as soon as we finished fueling the jets and the crews were available, they were allowed up close. I can remember being in that age group and getting to see F-15s like that, so I know how big of an impression it made.

We also had a visit from four USMC VH-22 Ospreys one day. These weren't regular Marine aircraft. These were from the VIP unit that might carry the President or members of the Cabinet. For all their size and power, they arrived and were landing almost before we knew it. I expected to hear them coming from a distance. They really can sneak up on the bad guys when they need to.



When all four left together, they sure stirred up the air! While they were all running and blowing everything around, I saw an ATP Archer waiting at one of the entrances to the ramp. I thought what an inopportune moment to try to taxi through all that turbulence. I was worried it might get tossed around but the pilot of the Archer waited until the Ospreys moved toward the other ramp exit. Good idea!

The Ospreys all taxied out to the runway together and took off to the west, one after another.

Last month I was unable to include the chapter video magazine in my article. Well, I found it along with the October video magazine on EAA's website. I've included it here:

<https://www.eaa.org/videos/chapters/6336699283112>

Charlie Becker talks about some of the events and happenings at AirVenture we may not have known about. Note: The Bell 47 helicopter donated by the Bush family had been based at Spirit. I know it's in perfect condition.

There's also some discussion about the MO-SAIC program. EAA has been quite pleased with what they've seen in the proposal which is still in the public comments stage.

Moving into October, we're getting ready for the Airport Open House on Saturday the 28th. As always, we'll need lots of volunteers to assist with our food booth. The flyer that went out lists us providing BBQ from 11:30 - 4:30pm. That's a long day but we usually make decent funds for the chapter.

I'm also including the October Video Magazine here:

<https://www.eaa.org/videos/chapters/6337560072112>

In this month's magazine Charlie talks about EAA AeroEducate for Chapters, Solid Edge (which you can download for free!) Chapter Elections, Chapter Leadership Academy and Leadership Bootcamps.

Our Chapter elections are in November, so if you're interested in volunteering for a leadership position let us know. Nominations will occur this month. If you're interested but don't feel quite ready yet or just want to learn more about how chapters work, look into the Leadership Academy. It's a weekend visit to HQ in Oshkosh where you'll get to meet some of the key people at EAA including Jack Pelton, Charlie, and many others who work on the programs offered to chapters. It's a great experience I've been to twice. I very highly recommend it!

Chapters survive and thrive on the volunteerism within the membership. I've always considered EAA to be part of my family and have thought of every chapter member as a member of this family. I feel honored to serve as a chapter officer. It's a very rewarding experience.

Well, that's about all I have this time around. I'll see you at the ARC or maybe around the pattern. Stay vigilant and fly safe.

**Blue Skies!**  
**Bill Doherty,**  
**President**  
**EAA Spirit of St. Louis Chapter 32**



# September Meeting Minutes

Dave Deweese



September's meeting began with the Pledge, Bill Doherty presiding.

Sam with the RV-6 is visiting, looking for a chapter.

Bob gave the treasurer's report including checking, savings, PayPal, and Ray Foundation account balances.

River levels in safe range: 15.74 feet.

We flew 43 kids at last month's YE event. As of 6/27 2.33 million flown total, per Jim Hall. Dave Brickhaus notes that his son's flight instructor's first flight was here with Chapter 32. Michelle notes that we're getting more repeat business, and they're bringing friends. Ron Burnett encourages pilots to keep a few current application forms, as he flies lots of kids outside of our monthly events. Jeff adds that you can contact Samantha at HQ and ask for a "Ten Pack" that contains 10x the certificates and forms and she can mail them.

Jeff Stephenson has just passed 800 flying hours, he just took up his 566th Young Eagle.

Our next event is 10/16. Alton's YE event is 10/1 and they could use volunteers: they do one big annual event versus monthly.

Ray Foundation: Isaac is now a private pilot. Lauren (in attendance) is taking her written test on Tuesday, she had a cross country to Columbia scheduled for today but it looks cloudy in the west: Sunday is her alternate. Marco is also getting ready for his written. Jim Hall reports that the media will interview Marco, as well as Bob Murray, who gave him his first Young Eagles flight.

Explorer Scouts has an open house at the Boeing prologue room this week. They're getting a lot of interest. Libby has a tour set up of the American Airlines ops and the tower. Andrew Hedlund is setting up activities with the astronautical society. Joseph Hill with the FAA is also working on some presentations for the group. During a recent virtual meeting they expressed interest in speaking with a FAAST team member, Jim's getting a contact who can speak with them. They're also interested in NASA and they'll attend a model rocketry event. A contact is going to provide plans for a 3-D printed rocket. Jim notes that chapter members are welcome to attend a meeting to see what's going on, and encourages us to share aviation events to add to the calendar. Bill's general manager, Doug Drescher, would like to do a tour of the FBO for our Explorer's group, and had more contacts who can show them some large corporate jets.

Doug and Signature Flight Support has made a donation of \$1,500 to the chapter. What would we like to use it for? In our recent board meeting we discussed adding it to a scholarship fund for the youth aviation academy. We also discussed updating the flight simulator, and this was mentioned in the current meeting as well. Dave Doherty suggested an r/c airplane project. Bill replies that we've got a lot of materials for workshops; keep in mind that this will require volunteers and time. Another possibility is to apply it to the partial Ray scholarship, we think it's currently a 75/25%. Jeff made a motion to use it for the aviation academy, seconded and voted in favor. An objection was to use it for something that impacts more people. We discussed refurbishing the Soneraï to do pre-flights while kids are waiting. Bill also suggested workshops at events: wing ribs for example. Note that the donation frees up funds to use on other expenses like the simulator, and we can then inform the donor of what, specifically, we used their money on.

Chapter officer elections are coming up in November, nominations are open. Positions are Vice President and Treasurer; the incumbents have volunteered to run again. According to by-laws we also elect Class II Directors. Jim Hall nominates Libby as one, she accepts. If anyone is interested in any leadership position, let us know: you can attend a leadership academy at Oshkosh as prep for taking on a position. As officers we're looking at succession planning. Jeff notes that part of our Gold chapter status comes from people attending the leadership events.

We'd like to have some work sessions in the ARC, in part to prepare for upcoming events. Note that we need details on the open house. Today, after the meeting, we'd like to do some general housekeeping: last minute cleaning before the in-laws visit. Ken built another chair rack for us, as well as straightening a sagging table. Note that Art and Rusty installed donated LED overheads. Future events might include painting doors and the flag pedestal. Bob bought some black goo for fixing roof leaks. Bill sets a hard no on anyone going up there alone: it will be a group project. The wall will involve a little bit of welding: a 6-inch bracket.

If we have an open house we're considering a pancake breakfast. We'll send a chapter e-blast.

Holiday banquet: we need volunteers for chairman. (Nominated Patty.) We've got 5 Saturdays in December, we'll shoot for the second. We'll aim for 1H0 again. Libby is looking for another reenactor, the first she thought of was expensive. She mentioned an author who put together a history of Lambert. Dave Doherty suggested Jack Pelton. Same caterer - the chapter is happy with last year's.

Next weekend is the CAF hangar dance. Bill's going to borrow the "coffin tent". Tickets are \$20 in advance, \$25 at the door.

Airstravecenza today at Greenfield.

Jim Hall is looking for a volunteer to print labels for the new badges. Also need someone to put safety vests through the laundry.

Ron Burnett has Dierberg's food cards, reminds us to use Raise Right.



# EAA Chapter 32 Board Meeting Minutes

Dave Deweese

Attendees: Chris Ward, Dave Doherty, Jim Hall, Bob Murray, Dave Deweese, Bill Doherty, Don Doherty

Work sessions after monthly meetings - we've got three more this year. We might choose a focus area for each session. Dave suggests a punch list. West side wall, required moving stuff. Cleanup before open house. We need to push more for volunteers.

- September: preparation for upcoming events: scrub bathrooms, men's commode flushes slowly, print labels for new name tags, general cleaning of ARC.
- October: Garage door needs painting, as does the flag pedestal. Bob bought material for patching leaks in the roof.
- November: West wall: one bracket to weld, two to bolt on. Need to drill some holes.

Budget planning, part I. Signature Flight Support Monetary Donation, \$1500 - where to use. Bill notes that there's a big corporate jet, might be available for Explorer Scouts to tour. Scholarships are a possibility: do two 50/50s versus one full. New computer, software for flight simulator. Building improvements. AeroEducate r/c plane kit.

We will consider historic use of education funds and base a budget on that. Don used Quicken in the past to categorize expenses.

We briefly discussed B-17, B-25, and Tri-Motor tour stops.

Barry-Wehmiller - Anheuser Busch hangar - Falcon jets, tours for scouts.

Spirit of St. Louis air show is next summer: now may be the time to start pushing. Last time it would have cost us over \$3K. Cleaning up Sonera for display prior.

Holiday Banquet - Bob talked to Libby about another re-enactor: Bessie... early black female aviator. We're planning on 1H0 again. We'll shoot for 12/2, second or even third weekends optional. Same caterer.

Chapter Office Nominations, VP and Treasurer. Jim's happy to continue, we need to consider inclusion. Don suggests considering candidates well before.

Deadlines: EAA Aviation Academy - Ben Skikas, he's doing his paperwork now for the Advanced group. Chris has another candidate from the minorities in aviation group. Chris notes that people would need to put in names for the following year: enrollment opens mid-August. We need to have names before that. Advanced > 1400, 11-1200 for basic. (Based on age.)

For Ray Foundation we find out in January who gets the scholarships. As long as we remain 100% successful, we'll get more (we are). We discussed mentoring specifically for the written test. Also discussed age issues: if they start at 16, they can't finish up until 17 - in the past we've had candidates who were all 16. Mentoring also to stay ahead of problems, and ongoing: regular contact, maybe bi-weekly. Jim suggests doing the written test early. Chris wants candidates to pass Sporty's first. He notes there's a back door for instructors to help out, he didn't get further details from them. Brian may know. We should get information from our prior scholars.

Do we want to partner with Gateway in some manner? Bill asked about meeting with them. News media will be there Monday. They'd like to do a separate show around Marco, Chris would like to include Bob (first YE pilot), Herman, and Bill. Chris will get contact information to Bill - Andrew Craig and another. We could hold a chapter meeting there January/February.

Geanovea is moving back to St. Louis, would like to do another Minorities in Aviation / YE event. She's in transition, however, and is looking for someone to help out. Spring may be a better option.

We need a new lead for Flying Start. We also need individuals or a group for the YE ground activities/workshops. The latter might be facilitated through Gateway.

Bob asked Chris if Gateway does summer programs, Boeing's going to go in and do this, something like an internship program. Seniors do after-school work with Boeing, then in the summer after graduation they're involved in this program.



Airport Open House: Bill hasn't heard anything. He'll talk to the Dennises. If we do the open house, we'll do food again but should set a budget limit to make sure we don't repeat the car show situation. Bob suggests watching the weather. Bill has a waiver now allowing him to buy two days in advance. Don suggested someone who stays back and could pick up extra food, then run it out here if necessary.

Car show note: we could do a trial run with the chapter on pancakes. If they're doing food trucks, then we'll only do breakfast. Then, if it's a bust, we're only out the cost of breakfast food.

Chapter recognition: when do we send that in? October time frame.

We've got an unused chapter blast email, may use it for the airport open house.

Chapter 64 has an upcoming event and could use volunteers: 9/30 Wings and Wheels, 10/1 YE.

Bill will follow up with Bob's son on the sign.

We discussed what to do with the magazines and papers along the east wall of the office.

Large monitor in the office: Don hears a relay clicking, he'd like to open it up and isolate the issue.

Motion made and seconded to adjourn.



# Learners as We Go “Oh, What a Month! You Retired and Did What?”

mr. bill

Here I sit in Albuquerque, NM after 7 wonderful days at the AIBF-ALBUQUERQUE INTERNATIONAL BALLOON FIESTA. Today was the final day and because the winds were 20 miles per hour (as indicated by the flags surrounding the stadium) and no Hot Air Balloons flew. None even came out of their cargo vans. It was a day of good byes and “Happy Trails to you,” wishes.

Because the winds were 12 mph on the launch surface, the 0600 am Morning Balloon Glow gang launch was grounded.

The National Anthem is sung at 0700 but again, due to the winds, no balloons were launched with the American flag below it to salute.

In this situation, the balloonists with their baskets in the back of their trucks just “blast their burners” at the end of the song. This is called “Candle sticking.”



Notice the strobe and navigation lights.



“Candle sticking” the burner after the  
National Anthem

On the perfect calm morning day, this was the view at 0600 in the morning.....



WHY this Balloon Fiesta to go and visit? That is a great question.

It seems that the Code of Federal Regulations states: That an Airline Pilot can NOT fly on his 65<sup>th</sup> birthday. So, in preparation for the end of my 35 year career at the airlines, I was able to bid a 4-day trip that had layovers in STL and two nightly layovers in Chicago-ORD O'Hare, at the airport hotel. I was able to get a "retirement" send off leaving Saint Louis and in Chicago too.

The best part of it all was after the landing on Saturday, October 07, from Chicago-O'Hare Airport to the DFW Airport, I was able to get the Airport Water Cannon Salute from the DFW ARFF (Airport Rescue Fire Fighters) as I taxied the airplane into the terminal gate for the last time.



**The FINAL taxi in for the Retirement flight**

So, what does the newly retired pilot do when they CAN DO WHATEVER THEY WANT NOW???

Well, on his Bucket List was visiting the ABQ Balloon Fiesta. The plan started last January with reservations for a car in DFW to drive to ABQ. Oh yeah, this event is booked up years in advance like OSH-KOSH. No cars or hotels or airline seats! I was in contact with the MASTER BALLOON INSTRUCTOR in ABQ and was told to meet the Shuttle Van at 0500 on Monday morning. (This was already day 3 of the Fiesta.) When I arrived at 0500 for the 0515 am drive into the CREW parking lot, I was excited. I was crewing for SMOKEY BEAR. The people in the van had all been doing this for over 20 years. They tested this Rookie and quickly called me GRANDPA because I was the oldest in the van.



**CONTINUED**

# Learners as We Go (Continued)

Well, the first part of Flight Training is to learn all the skills needed on the ground. And after 7 days of removing/ assembling, filling, static glowing, and on three occasions, LAUNCHING the balloon, I received my ground crew checkout of this 97-foot Aerostar International Special Shape Balloon. This is the B-747 of balloons.

The launches are fairly easy. It is finding a spot to land and deflate and repack that can be a challenge. And the week was filled with many challenges.

With the event ending today, my seven days of morning and night crewing was quite THE learning experience and one I will never forget.

It is said that the only FUN in ballooning is for the two or three people who get to go in the basket and FLY in the balloon. The others do ALL the hard work of assembling for the flight or the Static glow. Even that gets exciting because we have two 150-foot static lines that need to be held so Big Smokey Bear stays stable from any wind that will move him around..... And on Friday it did when the winds picked up. And after all that wrestling, the parachute top of the balloon is pulled, and the fabric comes SLOWLY down. And the 145,000 cubic feet of warm (150°F) air must be “milked out” of the envelope. Here is that photo of milking and the “gathering of the fabric.” More fun.

Here is a balloon (Sunshine) that was next to us and had to pull the parachute top out and it collapsed over the crowd. The B(ear) team was called in to “milk” and roll up the balloon. The Sunshine ground crew went shopping and missed this.

Well, this morning I am leaving ABQ and heading to Roswell, New Mexico to go visit some alien friends. Actually, I hope to buy the nose gear door off the MD-82 that I flew into Roswell on 09/04/2019.



Tomorrow I will be walking Carlsbad Caverns in the morning followed by the 7-hour drive back to the DFW area. Then I will sort through all the gifts, the knowledge, and the memories of the last 10 days of my life. Or was that the first 10 days of my retirement. Hmmm.

One last photo I wanted to leave you with. *(This is a thumbnail...see the cover - ed.)*



I took this selfie and hoped to use it in the title of my last flight article. We took off from Chicago, O'Hare Airport and were told to fly south earlier this year. We then flew by the Chicago Midway Airport. That is the airport you see over my shoulder in the selfie. I thought it was a cool and fitting photo of the airport that I grew up (me grown up???) and rode my bike around drooling over airplanes as a youngster. It was the airport where I soloed in August 1975, which was the beginning of my flying adventures in a Cessna 150. Now I am flying over it in a Boeing 737-800 Next Generation.

Thank you ALL who have helped me along the way to make it through the coolest job a person could ever have.

Q? What is the cost per day to park your aircraft on the ramp in storage at the Roswell, NM airport?

A: \$15 a day



# Burt Biermann's Thatcher Project

Glad to have a list of Thatcher owners w/ locations. My CX5/093 is nearing an airworthiness inspection in the next couple of months. It has been a slow and steady build at KSET at the St. Charles County Airport near Portage Des Sioux, MO. EAA chapter 32 is doing a great job with Young Eagles and Ray Foundation scholarships and our chapter building is where I have a paint booth setup.





# Brian Wasson's RV-10 Project

My wife and I received the empennage kit to our RV-10 back in 2019. Since then we have been quietly building under the radar in our basement and now our garage. We are long overdue for submitting a progress report for the newsletter. We have the empennage complete, the wings are built with the exception of running wires and closing out the bottom skins. The fuselage is coming along nicely and is now mated to the empennage. We are to the point where the project has turned from metal work to fiberglass work. The cabin top is all fiberglass and has been fitted to the fuselage. Currently I am working on the doors. They are very tedious with lots of internal mechanisms to fit and tons of trimming and fine tuning to get them to work right. I still have tons of door work to do as I tackle the hinges, door struts and door seals.

Aside from the actual build process I have found this project is just a huge project management process. Planning the timing of the Vans kits was relatively easy as I got most kits before the lead times went crazy and the laser cut parts debacle. I ordered the engine in March of 2022 with hopes that I will have it in my hands sometime around February. I ordered the panel in September of 2022 and will receive the final product in a few weeks.

By next month's newsletter we will hopefully be done making fiberglass dust and ready to prep the interior for a panel. Below are some photos of the recent progress.



**This photo shows the current home for the project. We are very fortunate to have a good workspace we can visit everyday when we have a spare minute.**



Modifications are what makes the build process take a long time. This mod is pretty standard among the RV10 builders. Combines the Vans mechanism which pushes a latching pin out the front and back of the door with an aftermarket mechanism that latches in the middle. Also changes out the outside door handle with a lower profile handle that has the ability to lock the door.

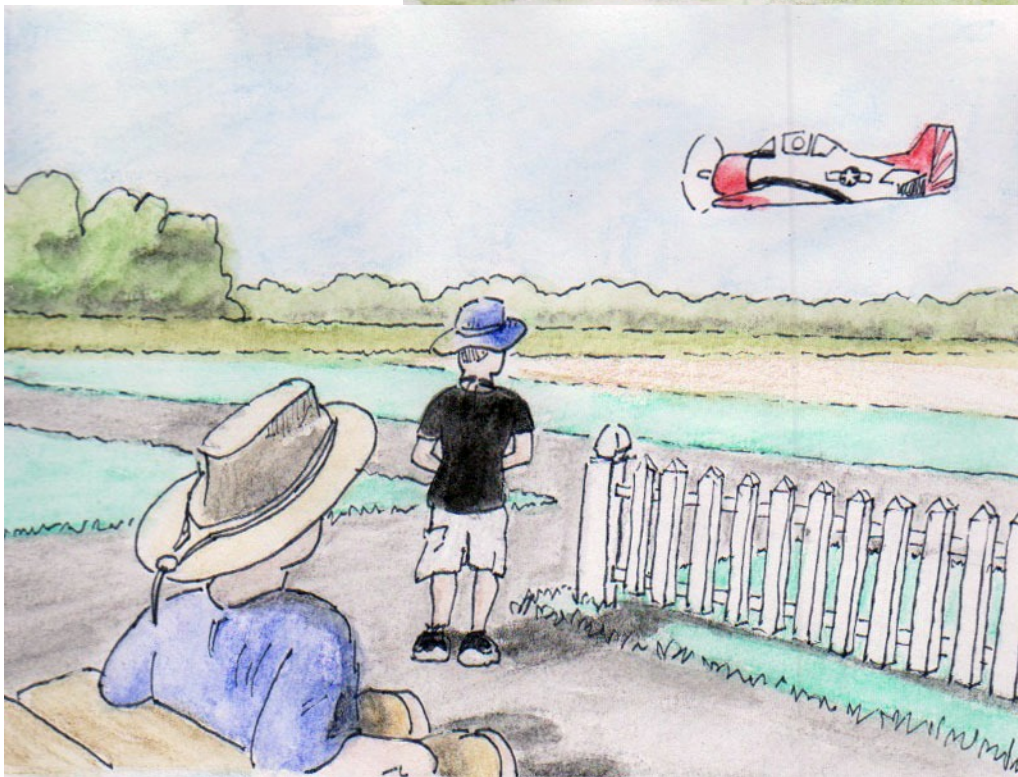
In this photo the outer and inner skin were epoxied together and clamped to the canopy to form the correct shape.



In this picture I am going off the plans a bit and adding an LED light in the door that will light up the wing walk when the door opens.



After our most recent Young Eagles event I went flying with Jeff, along the Mississippi, allowing me to look over the bluffs into Illinois. After spending my formative years on the Orchard Farm campus, gazing at those formations, and imagining what lay beyond them, this view always gives me a thrill. That memory reminded me of old model airplane daydreams, so in October I explored some local radio control flying fields.



Google shows one near my house in St. Peters: the Spirits of St. Louis RC Club, so I drove over and met members Dan and Steve. They had nearly identical T-28s, though Dan's was brand new. Steve sat nearby during the maiden flight as a coach, calling out maneuvers and discouraging anything too aggressive. Impressive features included LED lights, and the flexibility of electric motors: after landing Dan flipped a switch on his transmitter, the prop reversed, and he backed his plane down the runway like a car. I stared in slack-jawed amazement, like a kid at the hobby store.



The next weekend I traveled further, clear past Fenton to the St. Louis Radio Control Flying Association field, where they were holding a scale warbirds event. I spoke with their secretary, Alicia, but only briefly: she was orchestrating the gig, directing everyone from pilots to the cook. When a scale AWACS plane dove headfirst into a soybean field she was instantly aware and kept an eye on the spot. Her club also has an interest in youth education and STEM, so we exchanged contact information.

The actual Young Eagles event that preceded my flight with Jeff went well. As is customary these days I was ground crew for Mr. Bill. At one point he was doing a preflight with two teenagers, while next to us on the ramp Libby explained flight controls to two younger passengers. They were paying attention, but their even smaller siblings were distracted. This pair was at the bottle-rocket stage: liable to launch suddenly at high speed, and in random directions. I glanced over repeatedly, expecting just that. No need to worry, however, as Mom and ground crew Lauren had the situation under control. Safety first.

I'm increasingly impressed, by the way, at how our younger members are stepping up to volunteer. They'll be our future chapter leaders, at which point I'll be back in the Peanut Gallery with some other retired officer, and we'll look like Statler and Waldorf on the Muppet Show.



# Scrounge'n Around

By James Braley

## Two paths:

I have found that scratch building a double eagle presents the builder with a lot of latitude on design applications. For example, while Leonard Millholland's plans call out using Workman tricycle wheels for the main landing gear, a majority of builders seem to favor more traditional wheel and tire options. Personally, I was neutral towards both options with a preference to whichever was a good combination of price and ease of build.

## The find:

While pondering which option of wheels to integrate into the build I found myself in Oshkosh this year at one my favorite places; the Aeromart. I would stop by at least once a day and look at the several hundred-dollar wheels that were for sale and would mentally try to understand what a full up tire/wheel/brake system would cost, each time thinking this is over kill for my "near-Ultralight" airframe. On Thursday my patience paid off and I saw a set of tires and wheels that were not previously there. A 500x4 set of Hayes wheels with Goodyear aircraft tires already on them. They were tagged for 29 bucks each. I could not pass that up.

## What did I just buy?

When I got back from OSH I started my research on what these wheels were and how to fit brakes on them. I noticed on the price tag, that these wheels were "set up for expanding brakes".

Doing some research, it seems like these are a set of old J3 Cub wheels. When I looked up how much it was going to cost to buy the expander set up, I found out I might as well just buy another set of wheels new. I had to find another way to install brakes.



## R&D and the result.

I started looking at the drums that were riveted to these wheels. They had some interesting features: there was a curved-up lip on the edge of the drum, with the drum somewhat sloping away from the tire. As I looked at these, I figured this would be a fantastic application for go-kart style band brakes. I disassembled the tires and removed the paint off the exterior drum and started to mockup the mounting system for a set of 5-inch band brakes. I found that I had to shorten the band mounting stud to make sure that as the tire experiences side load that the side wall would not impact the stud.





I also had to design a holder for the brake cable. Once everything was connected I was very pleased with the braking result. I was able to spin the wheels quickly and then engage the bands with an almost immediate stop. Success! The entire set up cost me less than 150 bucks for wheels, tires, cables, and brakes. While I believe that I will have to replace 2 of the 4 bearings before the project is ready for inspection, this allows me to move the fuselage around as I work on other sub-assemblies.



## Editor's Note:

*I really enjoyed getting this article from someone who is building an old-school project. James is going back to our collective EAA roots, where no kits existed and builders had to accumulate various parts and assemblies to commit flight. I hope he blesses us with more articles as his project progresses.*



All Young Eagle photos courtesy of Lisa Miano



# Aviation Explorer Post 9032 Activities Update for October, 2023

Jim Hall, AE Advisor

## ABOUT POST 9032

Aviation Explorer Post 9032 is an established career exploration program based in St. Louis, MO. Part of the Greater St. Louis Area Council, 'Learning for Life' program; AE Post 9032 is a chartered youth group with advisors and support from Boeing and Chapter 32 of the Experimental Aircraft Association. Meetings are held in the Boeing Prologue Auditorium located in Building 100 @ 6300 James S. McDonnell Blvd, Berkeley, MO 63134, USA.

Additional links to AE Post activities are listed below:

<https://www.facebook.com/ae9032/>

<https://www.instagram.com/ae9032/>

## Upcoming Plans:

- October 28, Open House at St. Charles County Regional Airport (Smartt Field) Aviation Explorers have been invited by the airport manager to help at the event (parking, etc.)
- November 1, 6pm tour of CAF (Commemorative Air Force) Museum at St. Charles County Regional Airport (Smartt Field) ) Confirmed with Rob Jenner CAF MO Wing Leader
- November 8, 6:30-8:00pm Aviation Explorer Post 9032 Officers & Advisors Virtual Meeting
- November 15, 6pm FAAST representative Randal Ottinger speaks in the Boeing Prologue Auditorium Building 101.
- St. Louis Rocketry Association  
<https://www.stlouisrocketry.com/> Date: TBD  
Maintains two insured launch sites where they fly at least once a month, sometimes more, weather permitting. The model rocket launches are held at Buder Park. High power launches are held at Elsberry, Missouri site. Aviation Explorers have been invited to attend and the rocketry association offered to share some online software that would allow them to print out their own rockets.
- December Dates & Additional Events TBD

## Recently Completed Activities:

(Note: see previous EAA Chapter 32 archived monthly Newsletters for information re: past AE activities)

- October 18, St Louis Astronomical Society  
<https://www.slasonline.org/> Event - Wed, October 18, arrival time open from 7:00pm – 9:30pm  
**Where:** Francis Park, Eichelberger St & Donovan Ave, St. Louis, MO 63109, USA **Description:** Stargazing with the St. Louis Astronomical Society – Note: if weather permits
- October 11, 6:30-8:00pm Aviation Explorer Post 9032 Officers & Advisors Virtual Meeting
- October 7, Saturday, 9-12:45 Tour of operations at Lambert International Airport. A tour of the FAA control tower is included. Note: 25 Students; 3 Advisors; 3 Chaperones (parents) attended. “We thank Aviation Explorer Post 9032 (seen in this photo) and a select group of SLU College of Aviation students for stopping by today and touring the STL facility. We enjoy sharing our passion for aviation with others.” – Per Roger Lotz, Lambert Airport Spokesperson and PR Manager.
- October 4, 6pm Aircraft Pre-flight in a Spirit of St. Louis Airport hangar by Bryan Chavez. Note: had nearly 20 Students; 5 Advisors; 6 Parents
- September 20, 2023, 6:00pm Aviation Explorer Post 9032 Open House to be held in the Boeing Prologue Auditorium Building 101. Note: We had 57 emails on our signup list from the open house!

## Update on EAA and Other Aviation Scholarships

NOTE: Look ahead by gathering information for filling out scholarship applications and plan on including demonstrations of your “Passion” for pursuing aviation by listing your demonstrated participation in aviation activities throughout the year. Next round of scholarships will be here before you know it!

Are you interested in pursuing flight or a career in aviation or an aviation-related field? We encourage well-rounded individuals who are involved in their school or community and interested in the world of aviation to apply for an EAA scholarship.

<https://www.eaa.org/learn-to-fly/scholarships>

**Tentative dates for Aviation Explorer Post 9032 meetings and activities are on the website calendar:**

<https://www.aepost9032.org/>

The AE post officers have had a lot of great activities lined up this year and are working on arranging even more.

Proposed Agenda: Each month the usual schedule (flexible around other activities):

1<sup>st</sup> Wednesday; 6-7pm General Meeting in Boeing Bldg. 100 Auditorium

2<sup>nd</sup> Wednesday; 6:30 & 7pm Post Officers and Advisors Virtual Online Meetings

3<sup>rd</sup> Wednesday; 6-7pm Guest Speaker or offsite Activity (day/ date subject to changes)

## **Photos from Lambert Airport tour Courtesy of Roger Lotz**



# Aviation Calendar Events

## Normally Scheduled Monthly (local STL area EAA Meetings/ Gatherings)

- EAA Chapter 64 – every 1<sup>st</sup> Tuesday 7pm in Millstadt, IL
- EAA Chapter 32 IMC/VMC – every 1<sup>st</sup> & 3<sup>rd</sup> Tuesday 6:30pm at Creve Coeur Airport
- EAA Chapter 1387 – every 2<sup>nd</sup> Wednesday 7pm in Troy, MO
- EAA Chapter 1675 – every 2<sup>nd</sup> Thursday 6:30pm in Chesterfield, MO at Wings of Hope building
- EAA Chapter 864 – every 2<sup>nd</sup> Thursday 7pm in Bethalto, IL
- **EAA Chapter 32 – every 2<sup>nd</sup> Saturday 9am (April- October) Young Eagles event St. Charles County Airport at the ARC**
- **EAA Chapter 32 – every 3<sup>rd</sup> Saturday 10am Gathering/Meeting in St. Charles County Airport at the ARC**
- EAA UL Chapter 331 – every 3<sup>rd</sup> Saturday 10am in Valmeyer, IL

## Upcoming Events

- **October 21 EAA Chapter 32 Gathering/Meeting**
- **October 28 St. Charles Regional Airport Open House – expecting large crowds**
  - **EAA Chapter 32 – selling BBQ**
- **November 15, 7:00 - 9:15 p.m. EST. AOPA Rusty Pilots Webinar - REGISTER NOW**
- **November 18 EAA Chapter 32 Gathering/Meeting**
- **December EAA Chapter 32 Holiday Party; to be held Saturday, December 9<sup>th</sup> at Creve Coeur Airport - pending Final Arrangements**

## Recent Events

- **October 14 EAA Chapter 32 Young Eagles event at ARC - **Cancelled due to weather****
  - **Note: Merit Badge class was held (3 students & their mom drove from Kansas City to attend)**
- **September 20 Aviation Explorer Post 9032 Open House; Boeing Building 100, Auditorium - Note: 57 respondents (in-person and emails)**

## Other Aviation Information

**Experimental Aircraft Association (EAA) @ <https://www.eaa.org/ea> Webinars, Videos, Podcasts, etc.**

**FAA Safety Team (FAASafety) @ <https://www.faasafety.gov/> Seminars & Webinars**

**Aircraft Pilots & Owners Association (AOPA) @ <https://www.aopa.org/> Training & Safety, etc.**

Weekly Aviation Webinars on Tuesday evenings on “**SocialFlight Live**” hosted by Jeff Simon

**GYAF (Gateway Youth Aeronautical Foundation) @ <https://www.youthaerofoundation.org/>** has an ‘Intro to Flight’ Program ages 14-25 initiated on January 21, 2023 start of 8 week (every Saturday) GYAF's mission is to inspire youth interest in aviation. The goal is to be that “one event experience” that proves to be pivotal in changing a youth’s life forever. The Foundation attracts and nourishes that interest in aviation with actual aircraft cockpits, virtual reality flight simulation, group STEM activities and flight opportunities provided through the EAA Young Eagles Program.

**The Aero Experience** is a celebration of Midwest Aviation and aerospace achievement presented by Carmelo Turdo. Check it out on his Blog; Facebook page and YouTube site.

<https://aeroexperience.blogspot.com/>



**Wings of Hope - Fall Airplane Raffle**    September 1, 2023 - 12:00 AM info released

**Wings of Hope – Fall, 2023 SOAR into STEM** program starts Saturday, October 7, 2023

**Wings of Hope - <https://wingsofhope.ngo/>** - SOAR into STEM Career Exploration Fair to be held November 11, 2023 - Events starts at 10:00 AM

April 9-14, 2024      **SUN n FUN Aerospace EXPO**      <https://flysnf.org/>

Jun 8 – 9, 2024      **[Spirit of St. Louis Air Show](#)**      18260 Edison Ave, Chesterfield, MO

July 22 – 28, 2024 **EAA AirVenture 2024**      <https://www.eaa.org/airventure>

[Information regarding EAA's Air Academy:](#) is a week-long youth summer camp held at EAA's home in Oshkosh, WI. There are several sessions of this aviation-themed camp held each summer. The camp includes a variety of hands-on activities that teach young people about the world of aviation. Activities include flight planning, aircraft construction techniques, and flight simulation. The camp is structured into 3 age groups:

- [Young Eagles Camp \(ages 12 and 13\)](#)
- [Basic Camp \(ages 14 and 15\)](#)
- [Advanced Camp \(ages 16, 17 and 18\)](#)

Each year, EAA Chapter 32 strives to provide scholarships for youth to attend the EAA Air Academy. Candidates are chosen from [Young Eagles](#) who show a strong interest in aviation and are active within the Chapter. The Chapters cover 100% of the camp tuition. Parents will provide transportation to and from the camp. If you would like additional information about the EAA Air Academy, please send us a message via our [Contact Us](#) page. If you would like to help support our Air Academy scholarships, your [tax-deductible donation](#) is greatly appreciated!



# NC-85862 1946 Aeronca Chief 11AC-256 Rescue and Restoration

Mike Benne EAA 1371240  
Jon Benne EAA



## October 2023 Project Update

As a wind tunnel test engineer at McDonnell-Douglas and then Boeing for 43 years, my primary function was to conduct tests and gather performance data on wind tunnel models. During my career, I followed and had supported wind tunnel tests of the National Aerospace Plane (X-30), the Sonic Cruiser, and Blended Wing Body (X-48). I was really intrigued when I saw a NASA program with the curious abbreviation SUGAR show up on the test schedule a number of years ago. SUGAR is an acronym for “Subsonic Ultra-green Aircraft Research”. SUGAR began in 2008 and was a heavily studied concept resulting in wing truss-bracing mixed with hybrid electric technologies, is now known as the Transonic Truss-Braced Wing (TTBW) or the X-66A. See Figure 1.

The X-66A flying test bed has morphed from the subsonic to the transonic flight regimes and will be an actual flying transonic sustainable flight demonstrator built by Boeing utilizing a MD-90 fuselage. It was announced in March 2023.

A sustainable airplane is one that leaves less of an impact on the environment. This can be achieved by reducing fuel consumption, managing drag and weight, while decreasing carbon emissions. There are some remarkable goals associated with the X-66 that NASA hopes will be met by 2050.

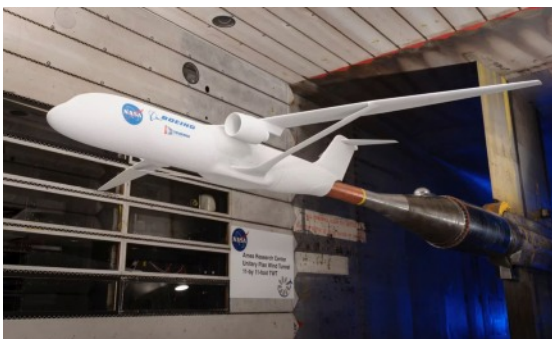


Figure 1 NASA-Boeing Truss-Braced Wing Concept in the NASA-Ames 11-ft wind tunnel (photo: NASA)

I was really surprised to see wing trusses (or commonly, wing struts) similar to my Cessna 172 supporting the wings on a 21<sup>st</sup> century aircraft model. Were you?

While we are on the subject of struts, we are cleaning and painting our Aeronca’s four 121-inch-long steel struts which weigh a combined total of 35 pounds, comparable to the 118-inch length of the Champ (Univair refers to these as “Lift Struts”, while the Aeronca drawings refer to them as “Strut – Wing Front/Rear Brace”). Each square foot of this type of under-wing streamline tube generates about ten pounds of drag at 100 knots<sup>1</sup>. That means that our four struts (two on each wing) of the Chief would generate about 45 pounds of drag at 100 knots based on my basic math, and the lift generated by the strut is unknown.

Weight and drag will need to be managed by the aircraft structural designer as we follow the X-66A transonic truss-braced wing concept and we will look forward to seeing the sustainability gains as we continue to work on our 1946 ‘definitely subsonic’ Chief.

### Status Update

One of the last steps to perform on the Chief fuselage prior to covering is to install the headliner. Jon purchased an Airtex tan wool headliner because of the vintage look.

Airtex claims to use “state of the art materials which meet FAA burn rate requirements of FAR 23.853(a) and all assemblies are certified under FAA PMA certification.” It came ready to install with the inspection zipper pre-sewn into place. A pair of muslin strips are provided on the top or the unseen portion which allow the installer to sew the headliner to the existing metal bows. Beginning at the center of the most forward seam, the two flaps



of muslin were pinned tightly together while ensuring the headliner was centered laterally on the fuselage. Jon then worked aft, pinning the flaps together at each of the five bows. Once the pins were placed, then the sewing began. It took about 40 man-hours to complete the pinning and stitching. The ability to fit the fabric headliner tightly inside the cabin takes time and patience. It appears to be almost impossible to install this type of headliner before covering the outside of the aircraft with fabric due to the complexity of the sewing.

When the headliner is completely installed and bound at the sides, water can be lightly sprayed on the wool to tighten and shrink areas with wrinkles and sags. We found that drawings and information that show how to attach the headliner to the fuselage is sparse. Of course, when we removed the previous leather headliner from the aircraft, we didn't take enough detailed pictures of how it was initially installed in the aircraft as the headliner was filled with disgusting and smelly rodent debris. However, we will carry on with the headliner installation and perhaps ask the advice of professional upholsterers if needed.

Another step prior to covering the wings with fabric is the installation of the wing leading edge panels. The five panels are about four feet long and are formed by an aluminum leading edge skin. The aluminum panels start on the top above the spar, wrap around the distal nose of the wing and end on the bottom of the wing near the bottom of the spar. These are held in place by eight ¼ inch PK-4 sheet

metal screws at each of the fifteen wing ribs. The final profile forms a clean classic nose leading edge shape for the fabric to adhere.



Figure 2 Chief fuselage with headliner installation

After reviewing Airworthiness Directives and Service Letters, we found Champion Aircraft Corporation issued Service Letter #3 in 1955 which provided for a brace (Aeronca drawing number 2-10001) which outlines a field repair for common damage on the Chief and Champ. Fabric shrinkage or striking the wing tip bow on some object can cause the wing tip to move inboard and reduce aileron clearance. We installed the simple aluminum tube outlined in the Service Letter between the spar and the outboard wing rib.

In preparation for covering the Chief, we invited our favorite A&P/IA AME to come to our home and inspect our progress. Re-covering is a major repair or major alteration of a certified airplane requires a Form 337 signed by an IA and filed with the FAA. Before covering, the airframe must be inspected and approved by a FAA-certified mechanic or repair station<sup>2</sup>. Signatures with a statement of the work accomplished in addition to data on the materials used (certificates, yellow tags, and FAA form 8130's) are also required in the aircraft logbook. He was kind enough to drive the 45 minutes and made positive suggestions on some of our practices and provided the approval to proceed with the project.

In the next installment, we will talk a bit about our instruments, controls and the instrument console.

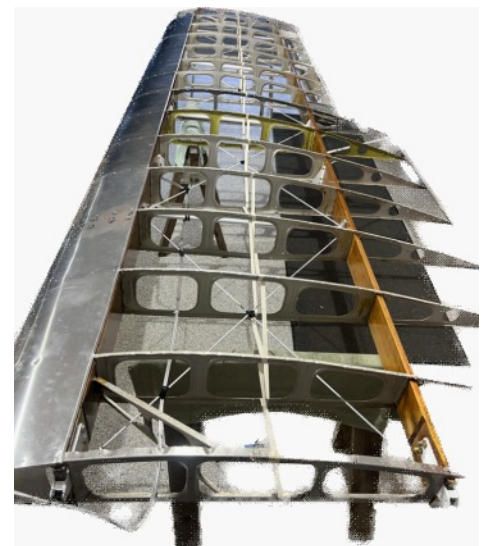


Figure 3 Chief right hand wing showing aluminum leading edge

<sup>1</sup>See Flying magazine article <https://www.flyingmag.com/the-strut-rides-again/> April 2023, Issue 936 of FLYING to learn more about the struts ("trusses") on the X-66.

<sup>2</sup>AC 43.13-1B Paragraph 2-6.

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