

# The Flypaper

Promoting Sport Aviation in Central Illinois for More Than 60 Years



## September Chapter Gathering & Fly-in at 11LL

The rains stopped Friday afternoon in time for Chapter 129 folks to prepare the hangar and field at 11LL for our chapter gathering at six. After receiving 4 inches of rain in the past two days, the field remained in great condition. There was no shortage of food as our cooks served up burgers, brats and hot dogs along with lots of side dishes and desserts provided by members. And no Thacker Airport event would be complete without a movie at dusk on the side of the hangar.



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The movie choice that night was Apollo 13 with a great cast including Tom Hanks as Jim Lovell and Ed Harris as Gene Kranz, Flight Director. Famous Kranz quotes, 'We've never lost an American in space and we're sure as hell not gonna lose one on my watch! Failure is not an option.' And 'Let's work on the problem people. Let's not make things worse by guessing.'



Our next order of business, get some sleep and get set up for our Saturday morning fly-in pancake and sausage breakfast.

**See September Gathering Page 4**

## October Chapter Gathering 10/19

This cool Fall weather calls for a chili dinner. If you have a favorite chili recipe, bring it along to share at our gathering or bring a side dish. We will eat at 6:00 pm.

Join us and test your aviation knowledge in a game of Aviation Jeopardy with your host Kirk Sampson.

Categories are subject to change.



Aerodynamics	Physics/electricity	Helicopters	Jet Engines	Recip. Engines
100	100	100	100	100
200	200	200	200	200
300	300	300	300	300
400	400	400	400	400
500	500	500	500	500
		Team 1	Team 2	Team 3
		1	2	3



6:00 Meal and Discussion - 6:30 Cleanup - 6:45 - Visitor intros, chapter milestones, discussion - 7:00 - 8:00 Program



## Milestones

Chapter 129 members achieving their goals in aviation



Andrew Jolly passes his PPL Checkride  
Oct 3, 2023



Matt Kerner passes his PPL Checkride  
Sep 30, 2023



George Wilts first flight in his Cub  
Oct 2, 2023



## Chapter 129 VMC Club - October 21

*The intent of EAA VMC Clubs is to create a community of pilots willing to share information, provide recognition, foster communications, promote safety, and build proficiency. Real world scenarios will be presented and discussed to determine the best solution from the conditions presented.*

Our **September VMC Club** meeting involved a discussion over right-of-way at an uncontrolled field and expanded into an excellent discussion over the regulations and the many gray areas. Many examples were presented and discussed. Be sure to join us for our October VMC Club.

### September QOM

An aircraft is maneuvering at an uncontrolled airport to pick up a banner alongside the runway in use. The intent is to pick up the banner and then depart the area. For the purposes of *right-of-way*, would this aircraft be considered on approach to land?

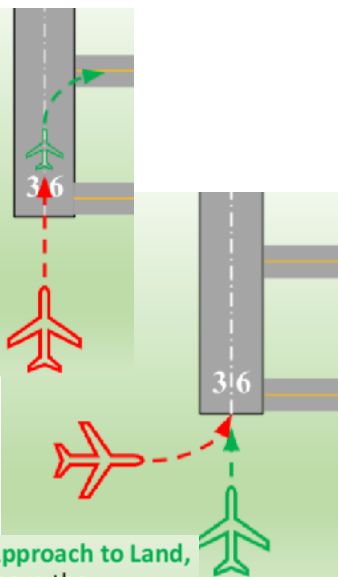
**Answer:** Although the pilot is not intending to land and is not lined up with the runway but rather the area adjacent, it should still be considered "landing" for purposes of right-of-way.

**Guidance:** According to AC 90-66C, Para 8.2.2.1, "An aircraft in the traffic pattern of an airport is considered an aircraft approaching to land at the airport."

We studied many examples of right-of-way as part of the September program, airfield and enroute.

### Traffic Pattern Position

Aircraft on Final Approach to Land, or while landing, have the right-of-way over other aircraft in flight or operating on the surface (except that they shall not take advantage of this rule to force off an aircraft on the runway surface which has already landed and is attempting to make way for aircraft on final approach).



Aircraft on Final Approach to Land, or while landing, have the right-of-way over other aircraft in flight...



- **October 21 0930**
- Complimentary 6 month EAA memberships available
- Qualifies for FAA WINGS credit!
- Come early for breakfast

### October Question of the Month:

**Question:** Pilots are often taught to not lean the mixture of a normally aspirated engine below 3,000 feet. When departing an airport when the density altitude is 5,000 feet, should we wait until reaching 3,000 AGL before leaning the engine?

VMC Clubs offer a great opportunity for pilots of all experience levels to explore flight scenarios together - from students to ATP. Come learn with us!





## September Gathering - from Page 1

A number of us headed to our tents after the movie, some shared a camp fire. Saturday morning brought sunny weather, light winds and 20+ planes full of hungry pilots. Our volunteers arrived early to get set up and get the griddles heated up. The day was filled with planes in the pattern taking advantage of the great weather and taking kids of all ages for rides. Thanks to our hosts Janice and Bill Thacker for opening their beautiful airport for our event!

### More Photo Page 5





## September Gathering - *from Page 4*

Thanks to all of our volunteers who helped make this event a success and to folks who contributed photos from the event.





# Cadet COMEBACK

THE TRIUMPHANT RETURN OF A CULVER CLASSIC  
BY HAL BRYAN

**K**eith Unzicker, EAA 575959/VAA 726533, didn't want to restore an airplane. He wanted to build one. "I got interested in the Culver STF that was designed by Neal La France from Kansas," he said. "He took the wood Culver and designed a steel-tube fuselage and drew up plans for it, sold them for a while. So I got excited about that, and because I'm a corporate pilot and I get to travel, I ended up out in San Diego and I called him and I talked to him, went over to his hangar and visited with him for a few hours and talked about the project and plans and got to go flying in his steel-tube version of the Culver Cadet."

got to work. He built the tail section and a few other pieces and then realized that it would be a lot easier if he could buy a parts airplane and reuse some



pieces from the wing, the landing gear, etc., rather than building everything himself. In 2010, he found one on Barnstormers.com.

"So I found this project over in northern Indiana," he said. "It was an estate sale, and I was going to just start robbing parts off of it, but after I got it, I

realized it had some pretty significant history as far as winning an air race in 1941, owned and flown by a lady, and all the pieces were there for the most part. ... I got it home and immediately tore it all apart and fixed a lot of parts that needed repair and bad wood and bad fabric and, anyway, got real excited about the Culver then."

Keith immediately shifted gears and decided that he'd rather restore his parts donor than build the STF. "I think I have a pretty cool piece of history right here," he said.

That history dates back more than 80 years and involves a couple of pretty big names in aviation.

**See Cadet Page 14**



Keith bought a set of plans and went home and



# Young Eagles 2023



**Dustin Davis**  
Young Eagles Coordinator

Our 2023 Young Eagle season has come to an end. In our final Young Eagle event on September 30 at CMI, we flew 50 kids. Thanks to the five pilots and the many ground volunteers that helped with this event and to the many volunteers who helped at these events through the year. The joint efforts of Chapters 29 and 129 allowed us to register more kids for these events and greatly helped reduce the work load for our volunteers. In all, we flew over 390 kids at rallies and over 230 were first time Young Eagles. It was a great year for our Young Eagle programs.





## Jim Hazen's Legal Eagle XL



Jim has completed his folding wing design for transportation and storage of his Legal Eagle. Now it is headed back in the shop for mounting the engine and dash assemblies.



EAA CHAPTER 129  
BLOOMINGTON-NORMAL, ILLINOIS



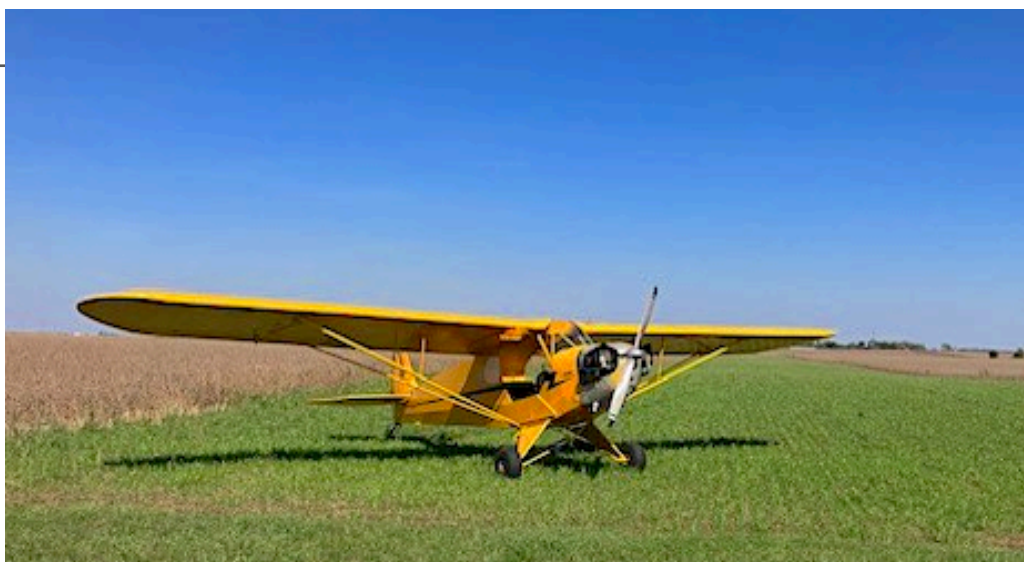


## George Wilts' 1940 Piper Cub



In January we visited George's workshop finding his 1940 Cub in various stages of assembly. At that time he was hoping to finish this year, put his runway back in and convert one of his buildings into a hangar.

George's updated report: *First flight was Monday the 2nd. Everything went well, left wing was heavy so shortened the left rear half a turn. Still could use another half turn but I want to fly it a while. Have about 5 hours on it now, burnt 1/2 quart of oil, not bad as it has new rings installed. Having a starter is really nice as getting in is a little difficult for an old person like me. Don't have an alternator or generator so I don't need a transponder or ADS-B out. I moved the plane to my house on the 3rd, kind of nice being able to fly without having to go 30 miles to the airport. In the process of getting the autogas STC, that way I will be able to keep fuel easier at my house plus \$2.00 a gallon cheaper.*



## Search for a 170

~ by Jay Allen

On September 4, 2023 I brought my new airplane home from North Carolina. After nearly two years of looking, every single day, for Cessna 170's. I found what I was looking for in Rockingham County Airport (KSIF), just north of Greensboro, North Carolina. It is a 1952 B Model which was very well cared for by its previous owners, the most recent of whom is a retired Braniff captain.

During this prolonged airplane search I communicated with numerous sellers and reviewed many sets of logbooks. I had commenced 3 separate pre-buy inspections, only to reveal airplanes that were in varied conditions of airworthiness, many with significant damage history, yet with asking prices that seemed inconsistent with condition. I quickly discovered that the 170, which is becoming a rare airplane is also highly sought after. This combination adds up to highly motivated buyers and elevated prices in the market. Ultimately, I succumbed to the feeling that I was running a losing race every time I began looking seriously at any one of the planes. So much so, I had begun to lose the faith that I would ever be successful in buying a Cessna 170. Clearly, I had to spool up or give up.

Then one day in Trade a Plane I saw a new ad for this airplane, its apparent first day on the market. It appeared to be in great shape (although pictures can be very deceiving) and only 2200 hours on the airframe. I made immediate arrangements to go see the airplane and try to determine if it was worth pursuing further. As we negotiated the terms of the

visit, the buyer was requesting a signed contract, to include a purchase offer, with money held in escrow. At first, this set me back thinking how can I even make an offer that is both a fair price for

me to pay, not having seen the airplane yet, while demonstrating to the seller my seriousness as a buyer? The pressure was on for sure. But I realized these are just good guys trying to earnestly represent and complete an airplane sale while not wasting their time with tire kickers or bargain hunters who won't or can't follow through. By the time we had discussed and agreed on terms of a contract I was within a few days of my scheduled visit to SIF so they pro-actively agreed to hold the airplane for me. By then we had established a great rapport and understanding of each other's values and motivations which helped to produce a comfort factor between us.

So, I flew the airlines to GSO and went to see and fly the airplane on August 20<sup>th</sup>. A quick mention of obstacles in this process.

1. No active insurance on the airplane.
2. No access to a competent Cessna 170 knowledgeable A&P to conduct a pre-buy for me.
3. Scant access to an insurable CFI with adequate time in type for the demo ride.
4. Adequate access to tools and equipment needed for the pre-buy that I didn't have to carry on the airlines for myself.

So, I just pushed through and hoped for the best. Obstacles have a way of working themselves out no matter how much you decide to worry about them. The airplane was beautiful and seemingly exactly as advertised, my only concern was that the airplane had been too idle over the last 6 years. The airline pilot/CFI got me in his schedule at 0600 for the demo flight, with insurance coverage for the day, and I managed not to wreck it. I did my own version of a pre-buy, although this is clearly not recommended. This enabled me to make a more informed purchase offer by 1500 that day, which was accepted. Relief, a deal done.

**See 170 Page 11**





## Search for a 170

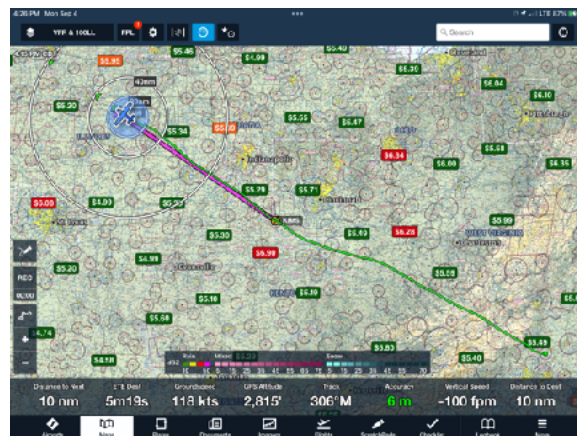
Although yet to accomplish the administrative aspects of moving money, a signed contract, dealing with the escrow agent, binding insurance, and trip logistics for the return. And besides all of this, then you get to fly it home. All worked itself out beautifully. So back to September 4.

I departed SIF around 1030, great weather there, BMI and enroute. First sector altitude was over 6000 ft. So climbed to 8500. Keeping mind, you have literally no experience with the airplane in a cross country. No onboard navigation other than VOR, but there aren't (m)any VOR's on the course. Added to that, I am learning about the accuracy of 71-year-old mechanical fuel gauges and no fuel flow information whatsoever, except for the manufacturers original fuel flow charts. Needless to say, a conservative fuel stop is warranted. I selected IMS which is Madison Indiana, a great little airport roughly equidistant between Cincinnati and Louisville with relatively cheap self-serve fuel. That



leg took 2.9 hours. Also at IMS, a very knowledgeable A&P/IA I met last November who did a pre-buy on another 170B for me that he unfortunately found to be unairworthy. That was my *first* walk-away-from-the-purchase story which I will leave for another day. I did feel that if maintenance support was to be needed during my cross country,

dropping in on a proficient type-experienced mechanic was worth passing over other attractive refueling stops. He helped me do a mid-flight inspection which added confidence to my operation and we had a nice visit besides. Final leg then from IMS to BMI, with weather still good but rain and gusty winds forecast to be moving into the BMI area. Side note: the airplane is minimally equipped for IFR flight, which I had no intention of using. As I consider myself a proficient marginal VFR flyer, if need be, I pressed on. I had forgotten how much



fun it can be to fly VFR enroute, both on top and underneath the cloud layers. This does require a certain amount of experience which spawns some comfort in knowing and using various weather-related coping strategies. But it also relies somewhat on airplane performance, and in any airplane in which you are less familiar, conservatism should weigh heavily on your decision making. So, the remaining 1.9-hour leg into BMI went smoothly with some minimal deviations due to rain showers contained to very small areas. The contingency I had planned for excessive crosswinds upon arrival included a friend with a grass strip, oriented east/west, since BMI had 11/29 closed at the time. I was not about to make a strong cross wind component landing on my very first cross-country experience in this airplane with very few landings under my belt. My opinion, is that best practices dictate creating these types of self-imposed limitations which should be determined prior to flight.

**See 170 Page 12**



## Search for a 170

You simply cannot allow operational pressures to influence your pre-existing values that govern your otherwise good decision making. This is a causal factor in many a pilot error. You must develop standards and stick to them, period.

So, without regard to the above rant, I got my new baby home, I lived to tell the tale and you just heard it. I humbly acknowledge that the process of writing this piece caused me to review and critique my own decisions, and this is no fluke. It is a standard practice for me, and I stick to it, period.

Always learning,

Jay Allen



**Wayne Aldrich**  
**Chapter 129 STEM**  
**Coordinator**

### We Need Your Help!

We are seeking career aviation professionals including aircraft mechanics, pilots, engineers and others with experience in the aviation industry willing to assist in developing and/or presenting information to students interested in careers in aviation. These presentations will be targeted at students from the ages of 10 to 18. We are currently focusing on presenting aircraft mechanics to vocational center students studying automotive mechanics. We are also considering a program to help Scouts achieve their aviation badge and presentations targeted at grade school age students to inspire an interest in aviation at a young age.

In addition to aviation professionals, we are also seeking professional educators to assist with developing content and hands-on exercises and demonstrations. If you are interested in helping inspire young people to consider careers in aviation and are willing to share your professional experience, please contact Wayne Aldrich at [waldo26z@yahoo.com](mailto:waldo26z@yahoo.com) or 309-824-2455.





## Aviation on-the-go!



**Kirk Sampson**  
[kirksampson@me.com](mailto:kirksampson@me.com)

**Aviation on-the-go!** A monthly dose of some of my favorite digital aviation content, books and podcasts.

**Kirk Sampson**

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About 10 months ago I got in touch with Charlie to find out about our chapter and learn more about how to get involved. How many of us had the same conversation? I was thrilled to find a group of like-minded people in Chapter 129 who like to hang out and experience aviation.

It has been an amazing year.

- Membership has grown!
- Teenagers are showing up for meetings, breakfast, and Young Eagle Events
- VFR Club has brought pilots and instructors together for safety related discussions
- We held two amazing fly-in events with participation from surrounding chapters
- Young Eagle Volunteers and youth participation is up
- Use of the Chapter Hangar is up

The future is all about you!

We need to understand what gets you excited about aviation and how that passion can shape and contribute to the value of our chapter. To that end a survey is going to be sent out in the next couple of weeks.

There are multiple purposes for the survey:

- Refresh your contact information and allow you to select the distribution lists/topics that interest you
- Understand your use of our social media and chapter website
- Collect ideas for events, programs, flying, building/restoration, STEM programs, mentoring, etc. that will focus opportunities in 2024
- See where you may be interested in contributing your talent and passion

Please take some time to fill out the survey online or respond via email to any of the questions/topics if you prefer. This will be immensely helpful for the team planning for next year. By the way, all are invited to help with the planning. Send an email to [EAACChapter129@gmail.com](mailto:EAACChapter129@gmail.com) or talk to Charlie if you want to help out. We meet occasionally during breakfast on Saturday morning.

You all are awesome! Thank you!





### TAKE COMMAND OF THE SKYWAYS

Back when Al Mooney worked for Lambert Aircraft/Monocoupe, he designed a sharp little low-wing taildragger called the Monosport G. When Monocoupe ran into financial trouble, Al got together with a Monocoupe dealer named Knight K. Culver, bought the rights to the Monosport, and formed the Dart Manufacturing Company. The company quickly evolved into Culver Aircraft, and the airplane became the Culver Dart.

Tasked with upgrading the Dart to achieve better performance on a smaller engine, Al set to work and designed the Model L, later named Cadet. While the various production Darts had

been powered by a variety of radial engines ranging from 90-125 hp, the first Cadet was built around a 75-hp, four-cylinder

Continental A75. Like the Dart, the Cadet, which first flew in December 1939, was a low-wing, two-seat taildragger, but it incorporated several upgrades, the most obvious being the hand-cranked

retractable landing gear.

While the Dart was built around a steel-tube fuselage, the Cadet's was a semi-monocoque structure made of wood, covered with a stressed skin that the company described as "reinforced plastic type material." The fuselage was then covered in fabric, contributing to the airplane's slick slipperiness, both aesthetically and aerodynamically. The fabric-covered wings were built around a laminated spruce and mahogany built-up spar, reinforced with a steel truss. The cantilever wings, with their "baby Spitfire" elliptical shape and a low-profile air-foil, made for some potentially rough stall behavior, which was mitigated with the installation of fixed slots that helped with low-speed controllability.



The Cadet's empty weight was 750 pounds, nearly 200 pounds lighter than the Dart, and the gross weight of 1,305 pounds gave it a useful load of 555 pounds. After you subtract 120 pounds for full fuel, you're left with 435 pounds to fill the seats and the 50-pound-capacity baggage compartment. The lighter weight helped with the

goal of more performance on fewer horsepower — the Cadet boasted a cruise speed of 120 mph, sipping about 4 gph for a maximum range of about 600 miles. A factory brochure circa 1940 promised "big plane appearance, pursuit performance, air liner stability" to anyone willing to spend \$2,395 to "take command of the skyways with a sensational Culver Cadet."

The prototype Cadet was built at the former Dart factory in Columbus, Ohio, after which the company relocated to Wichita, Kansas, and the Culvers were bought out by none other than Walter Beech, who kept the name and installed himself as vice president. The Continental-powered Cadet became the

Cadet LCA and was quickly followed by the Cadet LFA, which was powered by an 80-hp Franklin engine and included an electrical system and a starter. Cadet production wrapped up

after the United States entered World War II in December 1941, but by that time, the company had already started shifting its focus to the military market, building a series of optionally piloted, radio-controlled target drones based on the Cadet.

**See Cadet Page 15**





## Cadet Comeback NC20988 - from Page 14

### ~From 70G Page 9

Like everyone else, the powers that be at Culver looked ahead to the end of the war. They produced a series of promotional publications called Culver's Going Places, and in one of them, they published a tribute to the Cadet titled, "To a dear departed friend." It was a response to customers who had written to urge the company to resume production of the Cadet after the war was over. The company said it was grateful for the sentiments, but said that its obligation to the military pilots who were currently serving "as well as those millions who will want to learn to fly postwar transcends a rework job on an old design." The company promised to "give the fly- ing public the benefit of design experience gained during the war in the New Culver which will be introduced when America is again flying on the wings of peace." The New Culver was designed in 1945 and became the Culver V, the V, of course, for victory.

Fewer than 100 were built, the company went bankrupt, and Al and his brother Arthur left to (re)form the Mooney Aircraft Co.

### NC20988

Keith's Cadet, serial No. 117, was built in 1940, and registered as NC20988. One of the airplane's first owners was a Culver dealer, an avid and successful race pilot named Edna Gardner Whyte. Born in Minnesota in 1902, Edna learned to fly when she was 29 and went on to a long and successful career as a n instructor, own ing multiple flight schools over the years. During her racing career, she won more than two dozen races and placed in many more. In January 1941, flying NC20988, she won the Alcazar trophy as part of the Miami All American Air Maneuvers race. The Alcazar was a women's race consisting of one lap over a 25-mile course, open to pilots flying airplanes with engines of less than 200 cubic inches of displacement.

"I don't think she had it for more than a few years," Keith said. NC20988 made the papers in the mid-1960s when then-owner William Magnuson put it on its back in the snow at the

Richard I. Bong Airport (KSUW) in Superior, Wisconsin. "And then it sat in Minnesota for quite a while being repaired, and then that's the state that the previous owner to me bought it [in]. It had a little bit of vandalism done to it with baseball bats. The owner that I bought it from trailered it from Minnesota back

**" I think I have a pretty cool piece of history right here. "**

— KEITH UNZICKER

to Charlestown, Indiana, in the late '70s, I believe it was. He had it for probably 30 years, with good intentions of getting it done, and life caught up to him and he passed away before it was finished. Then I got it in 2010."

Keith had completed two other projects prior to starting on the Cadet, a Piper Tri-Pacer and then an Aeronca Chief that he restored for a friend who'd bought it as a retirement gift to himself. This experience set him up nicely to restore the Culver, and to do it right.

**See Cadet Page 16**



### CADET CONSTRUCTION



The Culver takes shape.



Restoring an airplane is a family affair. Keith's kids were a big help, and provided a lot of encouragement when it came time to paint.



### SEVEN YEARS' EFFORT

"There was quite a bit of woodwork done to repair the fuselage and the tail and different things, but since the previous owner had such a long rebuild time, I think it was probably 30 years that he had it, some of the things got damaged in storage," Keith said. "The son of the previous person said, 'Yeah, my brother was chasing me through the shed on our bikes, and that hole in the leading edge is from my pedal, or with a wheelbarrow, or something like that. Dad was so mad at us.'"

Keith stripped down the airplane and set to work.

"When I picked up the tail it just rattled on the inside, so I knew that this top skin had to come off, which was all plywood, and figure out what was going on," he said. "I removed the skin of the plywood tail, fixed a lot of loose gussets on the wing. The spar, though, is the original spar, and it's in very good shape. There were a few places on the trailing edge that needed some wood repair and some work. I did that all with the guidance of AC-43.13 and all that. I am an A&P and IA, so that makes it easy to do repairs myself and make it all legal and legit and safe. That's the big part."

The previous owner had a Continental O-200 that he'd intended to install, but Keith sold that and bought the proper A75-8.

"They built thousands of these engines. This is one of the only applications that on the type certificate data sheet requires an oil cooler," he said. "You don't find those lying around either so I bought the engine. It came off a Taylorcraft and [I] had to find an oil cooler to make it all work. And I found that out at Pacific Oil Coolers out in California."

Keith enjoyed digging in and doing the research, developing the historical detective skills that all good restorers ultimately embrace. One of the other challenges in outfitting the engine was trying to find an air-intake box for the carburetor. "You can't find it, you can't make it, it's just impossible, so I ended up putting a bracket air filter and intake on it and got that all approved, and it's a little bit of the new with the old," he said. "It would've been nice to make it all completely original, but some of that's just not practical."

**See Cadet Page 17**

**EAA CHAPTER 129**  
BLOOMINGTON-NORMAL, ILLINOIS





## Cadet Comeback NC20988 – from Page 16

When it came time to find a propeller, well, he couldn't.

"I think I was up at Oshkosh, probably in 2012 or something like that, talking to the Sensenich people, and I knew that they had it on their PMA list that they could make this propeller," he said. "I was talking to them, and they're like, 'Oh, we never heard of that before. I don't think we can make that.' And I said, 'Well, it says right here you can.' He said, 'Well, if it says that, then I guess we can.' So they went back to their files, I guess, and found the documentation that they could make it, so they did."

Keith describes the wood prop with its brass leading edge as a work of art. He was frugal on the project where it made sense, but he said that the prop was worth spending the extra money on to get it absolutely right.

One of the more unusual features of the Cadet is the interconnect between the throttle and the landing gear. Today we're used to warning horns that sound when the gear is up, and the throttle is reduced below a particular range. The mechanism on the Cadet goes a step further and physically prevents the pilot from reducing the throttle below about 1900 rpm while the gear is retracted.

"It's ingenious," he said. "I've got to hand it to the designers, Al Mooney and his group that did it. ... I had a little bit of documentation from the Culver factory. There were some service letters and I just re-created everything, and it really works great. So, on the throttle hookup to the carburetor, I had a little thin plate made so when I pull that throttle back, that plate stays with the throttle arm, and then there's a follow-through cable with just a pushrod that goes to the gear up-and-down lock lever, and that slides that pin either in the way of the throttle so you can't bring it back, or out of the way so you can, depending on your gear position."

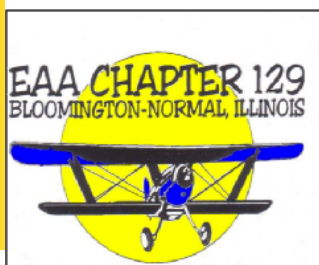
Retracting or extending the gear requires about eight quarter-turns of what looks kind of like a side-ways trim wheel mounted on the center spar carry-through between the pilot and passenger. Leaf springs behind each wheel ensure the oil struts are fully extended so that the wheel fits properly into the well when the gear is retracted. When it's time to lower the gear, visual verification comes from a pair of small Plexiglas windows near the cockpit floor.



The Cadet's clean lines are apparent, even before the final paint goes on.



You're never too young to help hang an engine.



**See Cadet Page 18**

## Cadet Comeback NC20988 – from Page 17

While the airplane originally had a nonsteerable, fully castoring tail wheel, Keith's was upgraded to a steerable version long before he bought it. The airplane does, however, still have the original Hayes expander tube brakes. Keith is considering a set of Clevelands or something from Grove, but the brakes work well enough as is, and he appreciates the originality.

The Cadet has a mahogany plywood panel that Keith built using the original as a template, though he changed the layout a bit.

"The original layout didn't really have anything on the right-hand side and then a mishmash of stuff on the left," he said. "So, I went in with just basic flight instruments, and here's where I varied a little bit from the original. I just didn't feel like it needed to have a whole lot of avionics or instruments or anything. There's no battery. There's no alternator. I'm not putting any radios in it so I wanted to keep it simple but yet have it be aesthetically pleasing. It looks like it could be original ... It's a small, simple airplane, and if you overcomplicate it, it gets heavy and it gets dogger and slow, and it's best served by keeping it simple like that."

The throttle, mixture, and carb and cabin heat knobs are mounted vertically in the center of the panel. The unconventional layout stems from the fact that the cables from each knob are routed through a pass-through hole in the middle of the 20-gallon fuel tank that's installed just behind the panel. There's a visual float fuel gauge just below the panel that came right out of a Ford Model A, while the door handles originally came from a 1930s Plymouth. Keith only had one of those, and couldn't find a matching spare, so he made his own out of a block of aluminum. "It's pretty close," he said. "It's not exact, but you can only see one at a time when you're looking at it."

Off to the left side of the panel, there's another bit of ingenuity hidden in plain sight.

with the original mag switch beyond repair and not worth the money, and I already had a switch that fit, so I just installed the switch to the panel and put this cover plate over it and put the key inside this red handle and love it. It wasn't my idea. I copied it from somebody else."

Another switch in the cockpit is connected to LED nav lights powered by a removable, 12-volt, sealed motorcycle battery. Keith doesn't fly at night, but the lights do provide some extra visibility both early and late in the day.

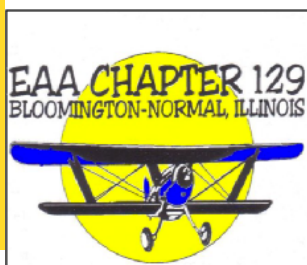
"I can control a lot of things about the airplane, but I can't control whether or not someone else sees me, so I figured it'd be helpful to have something on there," he said.

The airplane is covered with Poly-Fiber fabric and Stewart Systems paint. The Cadets left the factory with one of two general paint schemes, standard and



deluxe. "There was a standard, which was one base color with a narrow stripe straight down the fuselage. I was going to go that way, and my kids kind of talked me into trying a little harder and doing the deluxe scheme," Keith said. "Laying out the scallops took a lot of effort, and I wasn't completely confident in my painting ability and things like that, but [I've] got to hand it to my kids, they kept encouraging me to do it ... So, I laid out the scallops and took cues from every Culver design I could ever find on the internet. ... You lay out the scallops, you rip it off and you lay them out again, you rip it off, and [I] finally got to the point where I didn't have to rip it off, so I painted them."

**See Cadet Page 19**



"One other thing that's a little bit different about my panel is ... the mag switch," Keith said. "I've got a real Bendix key attached to that red handle and so it's basically just a faceplate. ... It came



### FINALLY FLYING

And then, after seven years, it was time to stop restoring and start flying. Kevin hadn't flown an original Cadet prior to that first flight, but he had been checked out in the STF about seven or eight years earlier, so he had some idea as to what to expect.

"I got to the point where I was doing some higher-speed taxis," he said. "I have about a 2,000-foot grass runway here and I can do whatever I want on it, so it was pretty nice to have that freedom. Then I got to the point where I'm done with taxi testing, I'm done with engine testing, everything's working the way it's supposed to. And I had a few friends come over that are also pilots and A&Ps and just airplane friends, and I said, 'Can you sniff at it? Find something wrong?' And nobody's ever had anything to say suggestion-wise. And, yeah, [I] waited till a nice windless day and I didn't have a crowd or anything." In October 2017, an airplane that had sat for 45 of its 77 years flew once again.

"The first flight, I would say, went really well," he said. "It takes a lot of work, involves a lot of people, moral support, and for me that's just fun. But having it fly the first time, it's awesome to be able to tell your friends. I took a few pictures of the wing in flight and sent it to all my airplane friends while I was still flying ... That's a really satisfying feeling."

After that flight, Keith had no major complaints.

"All first flights after the rebuild or a new airplane are totally special. Unfortunately, the euphoria of that is quickly squashed by the, 'I still gottodothis, and I still gottodothat' ... It is a little bit wing-heavy on one side. I'm reluctant to put a trim tab on the aileron because it messes a little with the way it looks, but I can compensate for that in other ways." Other than that, the only other squawk was that the throttle-gear interconnect needed a little bit of adjustment.

## SPECS

### *Aircraft Make and Model:* *1940 Culver Cadet LCA*

LENGTH:	17 feet, 8 inches
WINGSPAN:	27 feet
HEIGHT:	5 feet, 6 inches
MAXIMUM GROSS WEIGHT:	1,305 pounds
EMPTY WEIGHT:	750 pounds
FUEL CAPACITY:	20 gallons
SEATS:	2
POWERPLANT MAKE & MODEL:	Continental A75-8
HORSEPOWER:	75
PROPELLER:	Sensenich two-bladed, wood
CRUISE SPEED/FUEL CONSUMPTION:	120-125 mph, 4 gph
POWER LOADING:	17.4 pounds/hp
WING LOADING:	10.9 pounds/square foot
V <sub>NE</sub> :	175 mph
V <sub>SO</sub> :	45 mph (est.)

he said. He praised the rudder effectiveness and described the airplane as being sensitive in pitch and stiff in roll. "I fly with my fingertips in pitch and my biceps in roll, and it's fine," he said.

The Cadet lifts off at about 55 mph and, perhaps surprisingly, delivers factory numbers of 120 mph at 4 gph in cruise. "High-speed cruise, wide open, I can probably get close to 140, but how practical is that?" he said. "I kind of joke that this old wood airplane is kind of like an old wooden rocking chair; it'll rock but you don't want to rock it too hard."

**See Cadet Page 20**



"I don't know if it's the low wing or the way the gear is, but it's the easiest taildragger I've ever flown,"

## Cadet Comeback NC20988 – from Page 19

### WHAT'S NEXT?

When asked if he had plans for any other projects, Keith answered a bit ruefully.

“Well, you know, I have a problem,” he said. “The Culver’s been done a couple of years now, and I’ve got some Frankenclusters that I’ve been welding on ... I don’t have any- thing aerobatic ... I haven’t pulled the trigger on plans yet, but a Skybolt, Pitts, Eagle, something like that I think would be a lot of fun. But I also have two kids starting in college this fall, and I just bought another car for my 16-year-old. ... I could find something that [ just] needs a cover job and a little bit of TLC; that makes more sense. But that’s not why you do this, right?”

*HAL BRYAN, EAA Lifetime 638979/VAA 714005, is managing editor for EAA print and digital content and publications, co-author of multiple books, and a lifelong pilot and aviation geek. Find him on Facebook, Twitter, and Instagram @halbryan or email him at [hbryan@eaa.org](mailto:hbryan@eaa.org). April 2021*

PHOTOGRAPHY BY JIM BUSH



## FOR SALE

### 1/5 Partnership Share N313AC - 1977 Piper Warrior II



Hangared at the Central Illinois Regional Airport, N313AC is owned by Aero Craft of Bloomington, LLC. Our annual was recently completed, which also included a biennial pitot static system inspection. The airframe has 4300 hours and the engine is at TBO (2200 hours). Aero Craft maintains a reserve fund and an engine overhaul will likely be performed in the next 12-18 months. Avionics include GNS 430, Garmin 496, ADSB in/out, Lynx NGT-9000 transponder, King KX170B (Comm/Nav 2) and King KMA24 Comm Panel. Very well maintained, planned improvements also include a WAAS GPS and an interior refurbishment. A maintained partnership operating agreement (i.e. Bylaws) is also in place.

Share price: \$11,000 – Monthly fixed expense \$80 – Operating expense: \$80/hr (Wet)

**Contact: Mark Rayburn at (309) 838-5125 or [rayebay@msn.com](mailto:rayebay@msn.com)**





## A 4-hr Prior Notice to Land?

**A**lways check the comments section for your arrival at the airport as part of your preflight briefing!

My wife wanted me to fly her to meet her daughter at the World Equestrian Center near Wilmington Ohio to attend a horse show. The closest airport to Wilmington is the Wilmington Air Park (KILN), halfway between Dayton and Cincinnati, two miles from the Equestrian Center. I did my usual preflight briefing to review the flight track, weather, NOTAMs, and airport information. I always check the NOTAMs for important information and didn't see anything unusual there. I also checked the FBO (LGSTX Services) to see if there are landing fees or to check fuel prices and only noted that they did not have 100LL but only Jet fuel on site. I thought that was unusual by I wouldn't need fuel there anyway.

I just happened to check the comments section on Foreflight and found something that I hadn't experienced before.... a four-hour prior approval to land was required for all transient aircraft. It noted the airport manager's phone number during business hours and after hours to call flight center.

It was the evening before my scheduled flight, and I had planned to leave Bloomington at 7:30 a.m. the following morning. My flight was only two hours, so I needed to call for permission to land that evening.

I tried the phone numbers listed but got voice mail. I finally called the FBO phone number and spoke to their receptionist who connected me with a lineman. He took my personal information, date of arrival, time of arrival, type of plane, N number, the reason for my flight, how long I was planning to stay at the airport and when I was departing. He said I was approved to land.

The following morning, I asked for flight following to KILN and had a perfect flight. When I called

Wilmington tower to land, I was told they had no record of my request and I had to give them all the same information that I had given the FBO the night before. I was eventually cleared to land on one of the two parallel runways, one 10,700' and one 9,000' long. The ground controller directed me across a huge, totally empty ramp to park next to the only GA aircraft on the field, a Beechcraft Bonanza with a turban engine.



**Wilmington Air Park KILN**

When the FBO line van came to pick us up, he knew who I was and all about my flight. He was a very polite and helpful host. He shared the information about the airport and its history.

Wilmington Air Park is a former Air Force base that has been converted into a huge air transport center. The ramp area around the tower and former Air Force hangars was covered with hundreds of commercial cargo jets. DHL and Amazon had formerly used the airport as their shipping hub. Currently there are a large number of air cargo

and maintenance carriers operating on the field. I was told that DHL used to

employ 8,000 workers prior to relocating to Cincinnati/Northern Kentucky International Airport. The FBO is run by LGSTX Services that operates a fleet of 160 Boeing 767 freighters from the site.

Since I had indicated that I was only dropping off my wife, taking a bathroom break and planned to depart within a few minutes, I was cleared back out to the runway and given permission to depart.

I can now say that not every public use airport is open for GA transient aircraft without checking in ahead of time. I'm glad that I did a thorough preflight briefing, or I might not have been able to land at Wilmington Air Park KILN and my wife would not have been a happy passenger.

**~ Doug Reeves**

The FAA Safety Team offers a number of activities, courses, seminars and webinars at <https://www.faasafety.gov>. Following are a few current webinars.



### "Balancing Act- Managing Energy in Flight"

Topic: Discussion of energy management strategies to enhance safe flying techniques.

On Wednesday, October 25, 2023 at 19:00 Central Daylight Time

**Select Number:** GL13123793

**Description:** The latest version of the FAA's Airplane Flying Handbook contains a new chapter devoted to energy management. It's a long time in coming; after all, the subject comprises a significant part of Wolfgang Langewiesche's famous text Stick and Rudder. Catherine Cavagnaro from Ace Aerobatic School will discuss the ideas presented in the new chapter a step farther and see how adopting an energy-centered approach to aviation can lead to safer flying.

To view further details and registration information for this webinar, [click here](#).

The following credit(s) are available for the WINGS/AMT Programs:

Basic Knowledge 3 - 1 Credit

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### "Emergencies - Three Steps For Success" - A Fun and Informative Look at an Airline Pilot's Tips and Training on Emergencies.

Saturday, October 14, 2023, starting at 16:00 CDT

#### **Gary Schank**

Topics include avoiding emergencies, preparing for the unavoidable, and successfully executing emergencies.

- Flight Planning
- Actions to minimize the likelihood of an emergency
- Ground and in-flight emergencies
- ATC communications
- Checklist vs. memory items
- Time-critical emergencies
- Most common emergencies in the most commonly operated airplanes

Gary Schank is a recently retired Boeing 737 Captain with Delta Airlines. For over 30 years, he has flown Boeing, McDonnell-Douglas, and Airbus airliners all over the world. Captain Schank is currently a Captain of the EMB-145 for Jet Suite. He is a CFI, an FAA Safety Representative, and owns a Bonanza A-36. Captain Schank has published numerous aviation articles and has spoken at many aviation events including EAA AirVenture Oshkosh. He is also a member of Flying Musicians Association and is a practicing attorney.

**Select Number:** WP05124603

The webinar will be conducted via Zoom. To register, please click here: [https://us02web.zoom.us/join/2516937002557/WN\\_dJx741HXTPOY-DdXd8bCQ](https://us02web.zoom.us/join/2516937002557/WN_dJx741HXTPOY-DdXd8bCQ)



After you complete the simple form, you'll receive an email with the link to your personalized entry to the webinar. Don't share that link with others, or they won't be able to receive Wings credit for attending



## Webinars, Podcasts, Videos!

Keep in touch with what is happening each month with the Chapter Video Magazine. Charlie Becker and Jack Pelton discuss current events and activities at HQ.



### Chapter Video Magazine

October 2023



Find EAA's Chapter Videos at:  
<http://eaa.brightcovegallery.com/chapters/detail/videos>

## Wanted

Do you have an aviation story to share? Send your pictures, stories, events, travel adventures, builder updates for our next issue of **The Flypaper**.

Email them to: [cmbates50@gmail.com](mailto:cmbates50@gmail.com)

EAA CHAPTER 129  
BLOOMINGTON-NORMAL, ILLINOIS



Our [October and November webinars](#) are free of charge and cover topics that include aviation history, piloting tips, fascinating stories, and more. We're sure you'll find a presentation to enjoy!



## Webinars

INTERACTIVE | EDUCATIONAL | MOBILE



Be sure to check out the October/November edition of [Midwest Flyer Magazine](#).

[Click here for link to website!](#)

## EAA Chapter 129 2023 Calendar of Events

October 19 - Chapter 129 Monthly Gathering

October 21 - Chapter 129 VMC Meeting 0930

November 16 - Chapter 129 Monthly Gathering

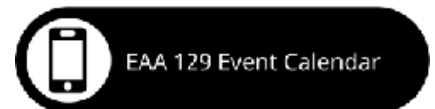
November 18 - Chapter 129 VMC Meeting 0930

\*\*\*Watch for December events\*\*\*

Every Saturday 7 to 9 AM - Gathering of Eagles at  
EAA Chapter 129 hangar F-15



- **October 21 0930**
- Complimentary 6 month EAA memberships available
- Qualifies for FAA WINGS credit!
- Come early for breakfast



Join us at the EAA Chapter 129 hangar for our Gathering of Eagles breakfasts **Saturday mornings 7:00 am to 9:00 am** for some great food and some hangar flying at its best.



EAA CHAPTER 129  
BLOOMINGTON-NORMAL, ILLINOIS



### Chapter 129

Charlie Bates-President, Treas

Jason Jording-VP

Doug Reeves -Secretary

Dustin Davis - YE Coordinator

Wayne Aldrich - STEM Coordinator

George Wilts-Tech. Counselor

Kirk Sampson - Media & Web Editor

Bill Thacker - Advisor

Web - <https://chapters.eaa.org/ea129>

fb - EAA Chapter 129