

Chapter 732



January 15th Meeting

**Drake Field
1:00 Potluck
1:30 Meeting**

Send newsletter items to: ea732newsletter@gmail.com



A Message from Chapter 732 President



Well we start a new year with a new president. So to introduce myself. Rich Rost. Pronounced like roster only without the er.

I've been involved with aviation as a hobby since teenage years. I am past president of another chapter, but that was quite a while ago. The one thing that experience taught me was, **an active chapter takes input (ideas) from all the members!** So don't be afraid to speak up.

Looking forward to the year ahead.
Rich

EAA Chapter 732 - Treasurer's Report, January 2023

Period: 12/13/2022 – 01/09/2023

Previous Balance: \$2,173.08

Deposits: \$ 57.00 Dues and Donations

Withdrawals: \$ 66.23 Meal supplies and ham

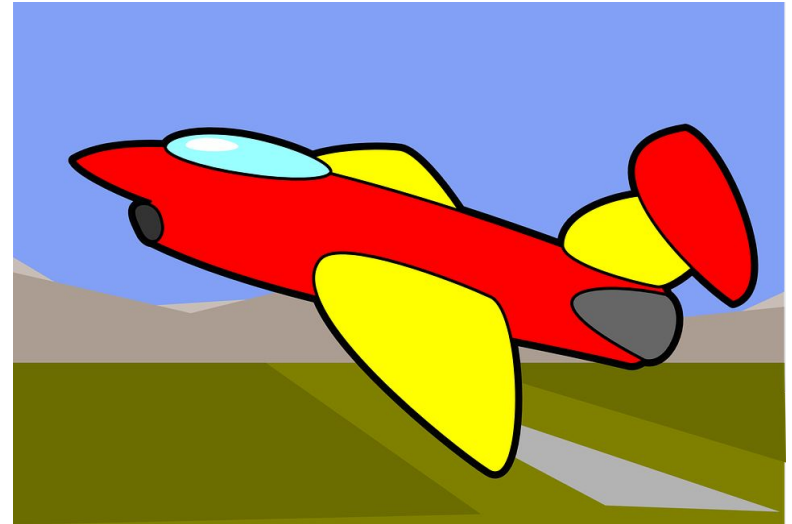
Withdrawals: \$ 398.00 Chapter renewal

Current Balance: \$1,765.85

Members who have paid their 2022 chapter dues: 48

Randy Doughty

EAA Chapter 732, Treasurer



Secretary Report: EAA Chapter 732 Meeting 12/18/2022

EAA Chapter 732 Gathering 12/18/22

- Meeting location – Drake Field (KFYV) Terminal Building
- Members and visitors – 21 members and 2 visitors present for a total of 23
- Lunch – Baked Ham provided by Randy and Pam Doughty
- Treasure report by Randy Doughty – There is \$2,173 YTD in the bank account.
- Chapter Administration – Rick McKinney - Pres. presided over gathering.

1. Rick asked for nominations for President, Vice President, and Secretary. Gerald Resh volunteered for the secretary position. Finally at the end of the gathering Rich Rost volunteered for the President position and Gary Moore volunteered for the Vice president position. Our officers for 2023 are President -Rich Rost, Vice President- Gary Moore, Secretary- Gerald Resh, Treasurer-Randy Doughty, Newsletter editor-Martha Molina and YE coordinator - Rick McKinney.

2. Justin Tisdale talked about his two engine out incidents in his Zenith Super Duty, both happened with Viking engines.

• Project updates

1. R. Doughty – installing firewall stiffeners and then will move onto gear installation on his Zenith 750 Cruiser.
 3. G. Moore – Working on wiring from the firewall back and has installed aileron trim. He also moved his RV 7 project into a new hangar at Huntsville.
- Safety – B. Smith talked about emergency descent planning and practicing engine out procedures.
 - Har-Ber Aviation Club – Jason McMullen has been very busy this fall attending various colleges that offer aviation programs, he and several other AR high school teachers attended the AOPA Stem Symposium in Memphis. The Har-Ber aviation club will be hosting an aviation day camp this summer. Jason will be meeting with major aviation companies to discuss the AR aviation workforce and ways to fill employment needs. R. McKinney and Jason are making plans for YE flights for the aviation club students possibly in the spring of 2023.
 - EAA Chapter Video – Homebuilders week will be Jan. 23-27,2023.
 - Our next gathering will be Sunday, Jan. 15, 2023 at the Drake Field terminal building.

Corben Super Ace

Submitted By Gerald Resh

Attached is an article from the August 1977 Sport Aviation magazine highlighting a little known airplane called a Corben Super Ace. FAA records indicate only a handful have ever been built, and only 1 or 2 are airworthy. This example still exists and currently lives in Fayetteville, AR awaiting restoration.



Building and Flying an Oldtime Homebuilt

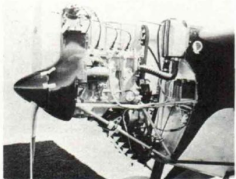
ON A COLD rainy evening in January, 1975, for want of something better to do, I was browsing through some old *SPORT AVIATION* magazines. In the February, 1966 issue was an article and some drawings of the 1934 Corben Super Ace. I reread the article with interest, for this was one airplane I had always liked. I thought it was an airplane that had class, or better still, character, if that is possible with an airplane. Although I had never seen one, I had built a rubber powered model of it as a teenager.

When I first saw the article in *SPORT AVIATION* in 1966, I was in the process of building a Casutt racer and all my time and efforts were devoted to that project. I did promise myself that when the Casutt was completed, I would come back to the Super-Ace and then promptly forgot all about it. Now in the new year of 1975 here was my old friend, again. The plans and the how to build it, appeared in four issues of *SPORT AVIATION*, a

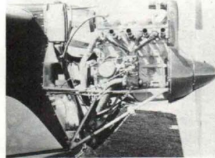
By: Elton J. James (EAA 9722)
7071 Wilshire Circle
Sacramento, CA 95822



(Photo by Howard Levy)
Super Ace cockpit. Note the unusual windshield(s).



(Photo courtesy the author)
The Vega installation, left side.



(Photo courtesy the author)
The Vega installation, right side.

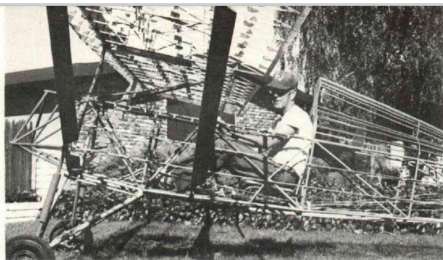
reprint of an article by Ace Corben that originally appeared in the 1935 *Popular Aviation Magazine*.

By today's standards the plans would not be considered complete, but enough of the essential information was there, along with some pictures of the original airplane. With this information a person shouldn't have any trouble building a Super-Ace. The more I thought about it, the more convinced I became that this would be my next project. Before I could get started building, however, I would have to solve the problem of an engine. The original was powered by a Model A Ford, but that engine, now fifty years old and out of production for I don't know how long, was just not the way to go. Although Mr. Corben had nothing but praise for the Ford engine, and some Pietenpols today are being pulled around by them, I didn't like the idea of putting a couple years work and a couple thousand dollars behind one. I could see no way of adapting a horizontally opposed aircraft engine to the airframe and have it look anything like a Super Ace. So, what to do?

At Oshkosh in 1973 I saw that beautiful Sky Scout with a Chevrolet Vega in the nose. It sure sounded good and I thought it flew quite well. Now, there was an inline engine about the same size and weight as the Model A Ford, so why not use it? I was still concerned about reliability and inquired around amongst the automobile people and what I learned wasn't very encouraging, but if General Motors guaranteed it for 60,000 miles, it just couldn't be all bad.

Now that the decision was made, materials were ordered and construction got started around the first of March. The fuselage was constructed first, followed by the tail and the landing gear.

Wheels presented somewhat of a problem. The original Super Ace used 20x4 cast aluminum wheels, but where could one find wheels that size today? They could be made



(Photo courtesy the author)
The author, Elton James, and his Super Ace at an early stage of construction.

up locally, but the cost was prohibitive, so 500x5s were tried. After mounting, the wheels looked too small and out of proportion. 600x6 wheels didn't do anything to improve the looks, so the 500x5s were retained and a pair of slim wheel covers were added. They give an illusion of larger wheels and I thought, added to the racy lines of the airplane.

The wings were built next. Being light and simple they required less time to construct than any other component of the airplane. After the ribs were built and the spars cut and drilled, it required only two week-ends to assemble the wings.

Most homebuilders seem to want to personalize their projects, and I am no exception. I wanted the airplane to be authentic, but I couldn't resist slipping in a few changes. From the pictures of the original it appeared the fuselage was slab-sided. I took the liberty of adding a couple of light fairing strips down the sides and bottom. The wings called for formed aluminum tube false ribs outboard with plywood leading edge inboard. I used .016 aluminum leading edge full length. The original didn't appear to have much of a cockpit wind screen. After years of Ag flying in open cockpits without wind-screens, I have had about all of the dirt, oil, and bugs in the face that I care for. Therefore, I was quite generous in the use of plexiglass forward of the cockpit. I also added navigation and landing lights though I doubt that I will ever need or use them. To be practical, a small tail wheel was used in place of a tail skid.

With the airframe completed, it was time to get on with the engine

and now the fun began. Up until now someone else had done all the head-work, and all I had to do was follow the plan. Now I was on my own and the project became an exercise in problem solving. The first problem was in obtaining an engine. It was my intention to go down to the Chevrolet dealer and order a complete new engine. That was not to be. General Motors will sell a complete engine for almost any car or truck they produce except the Vega. You can buy the block, head and other components to build up an engine, but that can be very expensive. The only other way to go would be to purchase a used engine out of an auto wrecking yard — and the long search was begun.

Plenty of wrecked Vegas were found, but they were either early models, high mileage or the engines were damaged in some way. After two months and many miles of chasing around, I finally found an acceptable engine — a 1974 model with 5,000 miles on it. It was purchased at a reasonable price, brought home, torn down and inspected. It showed no appreciable wear; in fact, everything looked brand new. Those parts that I could mike and check against the tolerances listed in the shop manual all checked out. Two bad cracks were found in the aluminum block near the rear mounting pads, no doubt a result of the rear-end collision the car was in. These were welded up and the engine assembled. The only parts that required replacing were two cam shaft bearing inserts that I ruined when removing the cam without the special tool required.

I will not go into what modifications I made to the engine for they were few. The engine drives direct. No propeller reduction devices are used.

Again, using the pictures of the original Super Ace for reference, I made up an engine compartment

cowling out of cardboard. Now, the idea was to fit the Vega engine into it. Though the Model A Ford and the Chevy Vega engines are four cylinder inlines, there are similarities. There is a vast difference in shape and physical dimensions. By relocating the carburetor, rearranging the accessories and plumbing and working out an engine mount, everything would fit under the cowling except part of the carburetor and the distributor. To accommodate them, a couple of bumps or bulges were built into the final aluminum cowl.

Now, with the engine installed and the cowling completed, next step was to get it covered. Dacron fabric and nitrate dope were used with the finish in automotive enamel.

Except for the propeller the project was completed in April, 1976 — thirteen months after the first tubes were cut. When ordering the prop, I allowed one month lead time. The manufacturer promised 90 day delivery and the prop arrived five months later. During the waiting period, engine testing was conducted in the front yard, using an old cut-down prop as a test club. Problems were encountered with the cooling, ignition timing and carburetor. All were worked out satisfactorily except for the fuel intake system. The main trouble there was getting an equal distribution of fuel to each cylinder.

I was not satisfied with the engine performance, but I decided to take the airplane to the airport before the neighbors had me arrested as a noise polluter. The airplane was taken over to the Sacramento Executive Airport, about a quarter mile from my home. There it was assembled, weighed and prepared for inspection and licensing. FAA was contacted, but they refused to inspect or license the airplane on that airport. Seems like ever since the F-86 with Experimental painted on its side went through the ice cream parlor, the powers-that-be get edgy whenever anything Experimental shows up around the field. Nothing to do but disassemble the machine and trailer it 18 miles out to Franklin Field. That airport, a leftover from WW II has a nice long runway, but is without services or security. There the airplane was reassembled and again prepared for inspection. This time when inspection was requested of FAA, the inspector came right out, did his thing, and issued a special airworthiness certificate.

About a half hour was spent in taxi testing — fast and slow, straight ahead and turns, tail up and tail on the ground. Tail wheel control was excellent and rudder control with the

tail off the ground good but a little on the sensitive side. Brakes worked well, but could not hold the airplane at full throttle.

My program called for three lift-offs with flights down the runway, increasing in length and height. This was supposed to tell me something, though I really don't know what. On the first attempt, just at lift-off, the engine quit. Twice more I tried with the same thing happening. So, back to the ramp and into the carburetor. Raising the float level seemed to solve this problem, but it was now near dark and I, along with a small group of Chapter 52 members who came out to witness the first flight, went home disappointed. Next day only a couple EAAers showed up, and I was thankful they were there. If something went wrong and the airplane got on top of me, I wanted someone around to take it off.

The first flight was short — just a circuit around the field. There was some binding in the ailerons and the engine ran horrible, black smoke pouring from the two rear cylinders and I don't think the front two were doing anything. For the first six hours, all short flights, I was plagued with this fuel problem. Two different type intake manifolds were made up and each modified several times. In to the seventh hour I must have done something right with the manifold,

because the engine began to run perfectly, and what a smooth running little mill it is.

Since its first couple flights, the Super Ace has not been on an airport. It is hangared in a machine shed on a friend's farm and all flying has been off a level fifty-acre dichondra field.

The Super Ace is a stable airplane. It will fly straight and level for long periods of time without touching the controls, even righting itself if not bumped too hard in turbulent air. It has good take-off and landing characteristics, not awfully unlike the old Piper Cub. Rudder control is sensitive and took a little getting used to. Elevator control is excellent, good response with light stick pressures through all speed ranges. Aileron control is on the poor side, slow in response and requiring a good deal of stick pressure. Controlwise, I would rate the Super Ace between fair and good.

Initial sea level rate of climb is 900 ft. per min. indicated with climb to 8,000 ft. requiring fourteen minutes. The power-off stall is normal; a warning is received, the break is clean and easy, wings remain level as the nose falls through the horizon. Power-on stalls are something else. Little warning is received — the break comes fast, the left wing going down with about a quarter turn before recovery can be effected. I do believe this airplane is a spinner.

With my six feet and 180 lbs. the cockpit is just my size and comfortable. However, with a parachute it gets a little tight and quick egress is not possible. I am afraid to spin the airplane without a chute and am now

waiting for some little guy to come along and volunteer to do the spin tests for me.

Maximum full throttle speed is 124 mph. Cruising speed can be anything you want down to slow flight speed about 50 mph. I cruise at 2750 to 2800 rpm and get 92 mph. This cruise rpm is not based on fuel economy or any percentage of power, but was selected simply because it runs smoothest and is less noisy than at the higher rpms. Speeds were determined by flying timed runs two ways over a measured mile, altitude was 350 ft. MSL, temperature between 60 and 65 degrees. Absolute ceiling is 15, 250 feet.

No accurate fuel checks have been made as yet. By rough estimates it appears to be burning between four and one-half and five gallons per hour.

Depending on wind, temperature and fuel aboard, take-off runs on sod at 50 ft. MSL have been as short as 175 ft. and as long as 500 ft.

An oft-asked question when the airplane is seen for the first time is: How do you see where you are going? You normally look out under the wing, visibility down, to the sides and above is excellent. The airplane does have a blind spot straight ahead, however, by leaning your head to left or right you can see around the engine. Also, by leaning your head back and stretching the neck a little, you can see over the wing. This poor forward visibility has presented no problem so far in that all flying has been done out in the country, off airways and away from any airports. Later on, when the airplane is flown into heavy traffic areas, I must be vigilant and not let another airplane slip into this blind spot.

The configuration of the Super Ace presents another little annoyance. In a steep power off approach the wing blocks some of the landing area from view. To avoid this I use either a shallow power-on approach or fly the steeper power-off approach in a nose high slip.

Mr. Corben in his 1935 article in *Popular Aviation* stated he designed the Super Ace as a light, economical sport plane for fun flying. It is my opinion that in this he succeeded. After 40 years and many thousands of hours, flying is flying, but for pure joy nothing beats driving out into the country, firing up the Super Ace, and then go make lazy circles in the sky. Fun is also the fly-in and hopefully, the restrictions will be flown off before the end of this year's fly-in season. Nothing pumps up my ego more than to take a homebuilt to a fly-in, stand back and then watch a crowd gather around it.



(Photo by Howard Levy)

Elton James' Vega powered Corben Super Ace.

(Photo by Howard Levy)
The big rudder "is sensitive and took a little getting used to."



(Photo by Howard Levy)

The neatly cowled Chevrolet Vega engine.

Chapter Video Link and More

In this month's Chapter Video Magazine, Jack Pelton shares his thoughts on what to look forward to in 2023

- Learn to Fly Day – May 20th, 2023
- International Young Eagles Day – June 10, 2023
- AirVenture 2023 - July 24 to July 30, 2023
- Young Eagle

Tap on link below

http://eaa.brightcovegallery.com/chapters/detail/videos/feature-video-collection_/video/6317610048112/january-2023-chapter-video-magazine?autoStart=true

The chapter has the following name badges available to members. If you are one of these people or know one of them, please invite them to the January meeting to pick up their name badge. If you do not have a name badge or need a new one, let a chapter officer know.

Andrew Burr
Bill Bush
Jeff Gates
Jerry Martin
John Rango
Judy Smith
Kerry McAlister
Patrick Matthews
Phillip Palermo
Russ Smith
Steve Hopper
Travis Eddleman

When You Need to Fly Somewhere!

January 21 - Berryville, AR - Carroll County Airport (4M1) Third Saturday BREAKFAST EVENT!! 8:00 - 10:00 Attention! The time has changed: Farm fresh scrambled eggs, sausage patties & links, flapjacks, coffee, sweet tea, orange juice, and always a bunch-o-sweet treats made by the airport wives...\$10.00 suggested donation. All starting at 08:00. Contact: 870-423-8393 or 870-423-7854.

January 21 - Pine Bluff, AR - Grider Field Airport (KPBF) fly-in breakfast 3rd Saturday of every month. Our specialty is eggs anyway you want them, from fried to eggs Benedict. You should try our omelets. Come enjoy your breakfast in our WWII style Officers Club. A \$8.00 donation gets you all you can eat.
Contact: Sara Works (870-543-9933) email: works_sara@yahoo.com

January 28 - North Little Rock, AR - North Little Rock Municipal Airport (KORK) EAA Chapter 165 4th Saturday Breakfast. We start serving at 8:00 and go until 10:00. If it is cold or hot, the hangar is well heated and air conditioned. DIRECTIONS : The main entrance to NLR Airport is on Remount Road. We have OUR OWN ENTRANCE, Gate #20, which is located about a city block south of the main airport entrance still on Remount Road. Planes park in front of the hangar and cars in the parking lot behind the hangar. We are located right at the beginning of runway 5. Please come on out Arrive hungry, leave stuffed. Any questions - 419 360-7414



February 4 - Springdale, AR (KASG) Free Ground school at Springdale first Saturday of every month upstairs in the conference room 9 AM until noon or whenever we finish CFII Gary O'Neal and NWA Flying Club. Note that the restaurant in the terminal is open now for breakfast before or lunch after

February 4 - Ponca City, OK- Ponca City Regional Airport (KPNC) - Ponca City Aviation Booster Club Fly-In/Drive-In Breakfast - 7-10 AM The A-26 Invader "Lady Liberty" from Enid will be on display during breakfast. Fantastic food; very well attended long running event. The requested donation is \$8 adults, \$4 children under 12. (and well worth it) you can have pancakes, scrambled eggs, bacon, sausage, potatoes, biscuits & gravy, orange juice, coffee, and fruit. Sponsored by the Ponca City Aviation Foundation on the first Saturday of every month rain or shine. Contact Bruce Eberle 580-761-5884 email: ou444@yahoo.com



EAA T-shirts and Patch for Sale



\$10



\$5

WEALTH

Paul Howard Poberezny

PAUL HOWARD POBEREZYNY

“As a result of EAA, I have become a millionaire because I have a million friends through aviation.”

Send your newsletter items to:
eea732newsletter@gmail.com

