



# Sport Aviation

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## Honoring Amelia

A visit to aviation's newest museum

## Timeless T-18

Thorp's homebuilt turns 60

## Building a Bücker

The latest in antique biplanes



# THUNDERBIRD

Bendix winner roars back



## Excellence From Start to Finish

BY WEST MICHIGAN AVIATION ACADEMY

**THANKS TO A GIFT** from the Michigan Business Aviation Foundation and a matching gift from the Dick & Betsy DeVos Foundation, West Michigan Aviation Academy students began building a Carbon Cub EX-2 in the fall of 2019. The simplicity of the large box and its 8,000 neatly packed parts belied the complexity of producing a truly excellent, airworthy airplane.

Students spent almost 1,000 hours building the airplane. In the process, they learned about logistics and supply chains. They focused on engineering requirements and quality control. They learned strict adherence to technical data, all while practicing lean manufacturing principles. They built an airplane according to the same industry standards used by aerospace manufacturing companies.

And all that excellence was just the start.

### GETTING TO THE FINISH LINE

Martin Grant, EAA 1538182, is a former Royal Air Force maintenance engineer and certificated A&P mechanic. He came in as project manager in 2021 to assist Clayton Melby, the Build a Plane instructor.

"I've spent an inordinate amount of time not at school," Martin shared with a laugh. "I had to stay ahead of the project, making sure we had all the right tools, equipment, expert assistance, and more." Martin needed to resource two significant tasks once the students finished the build. The airplane needed to be painted, and it needed to be certificated by the FAA. For those tasks, Martin connected with passionate local professionals from the Sparta chapter of EAA.

### FABRIC AND PAINT

Dan Bauman, EAA Lifetime 60094, is a bit of a legend in experimental aircraft circles. In 2019, he received the Wright Brothers Master Pilot Award from the FAA for logging 50 safe years as a pilot. He has attended every single EAA Oshkosh event since they started 53 years ago. He is also an A&P mechanic who's currently working on his 51st airplane. Dan is a perfectionist about every airplane he touches, winning awards on seven out of the nine airplanes he has shown at EAA.

Dan was the ideal person to help finish our airplane. After students applied the fabric, we brought the Cub up to Sparta. Dan applied a series of stencils that formed the basis of the airplane's artwork. Then he went into action with a spray gun. Hundreds of hours later, a gorgeous paint job emerged. "Fabric and paint are an art form," he said modestly. "I've always loved doing hands-on work."

### FAA CERTIFICATION

Gordon Gilchrist, EAA 1092581, is another of the incredibly talented and dedicated aviators who has helped WMAA build an airworthy airplane. He is building his eighth

airplane but has sold only five. "I kept two, including the float-plane," he said with a grin.

Gordon stepped up from the beginning, showing up every month to help oversee the build and do quality checks. He also worked alongside the students on the trickiest parts of the assembly, such as the windshield, engine cowling, and wing rigging.

When it was time to start the FAA approval process, Gordon came to carry out a pre-inspection. "We only had a few minor 'squawks,' or things that needed to be addressed," he said. "The students did an incredible job." Gordon was first to take the Cub airborne, helping to complete the 40 hours of Phase I testing needed to receive FAA certification. "I feel completely safe in this plane," he said. "[CubCrafters] has been designing planes for 30 years. That, plus my knowledge of how the plane was built and how it flies, makes me entirely comfortable getting her up in the air."

### COMPLETING THE JOURNEY OF EXCELLENCE

Now the Carbon Cub is finished and ready for sale. The proceeds will help fund the next build cycle, which already has more student interest than available slots. "We're helping kids discover their potential and turn it into a career they love," Martin said. "We're feeding the entire aviation skills pyramid with qualified, capable students."

From the beginning, this class has drawn students from many different interest areas. We've had aspiring pilots, focused mechanics, and students with no previous interest in aviation all sign up to take the class. All of them have raved about the experience of building an airplane, while highlighting the important skills they have acquired.

"I'm working on a plane that our instructors are going to fly. ... We are completely focused on doing it right." (Gavin Helder, '20)

"Continuous improvement and value stream mapping, respecting other people and making deliberate decisions ... these are all great skills for me no matter what I do in the future." (Samantha Perrone, '21)

"WMAA has crazy opportunities. I'm in the Build a Plane class and will be able to put on my college applications that I've done it. How many people can say that?" (Drew Delvaux, '23)

"I didn't initially plan on an aviation career, but working on this plane convinced me to pursue my A&P license. I'm proud of the completed product, especially knowing how much work we all put into it." (Seth Blanchard, '24)

"From beginning to end, this project demanded persistence and excellence," Martin concluded. "We could have bought a cheaper kit, but we didn't. CubCrafters has an excellent record, and the sale will help the sustainability of the program. We could have done a cheaper paint job, but we didn't. For buyers, confidence in what they see creates confidence in what they can't see. We are completing this project according to the motto of the aviation department: safety first, professionalism, and the pursuit of excellence." *EAA*