



Miller Motorsport

Ohio WM-2

I HAVE TO ADMIT, I felt emotional on that day in July. I had just landed my Miller Motorsport WM-2 homebuilt motorglider at AirVenture Oshkosh 2015. It marked the conclusion of an 18-year rebuild. The airplane was designed and built by the father and son team of William Y. (Bill) Miller and William T. (Terry) Miller. This aircraft, N24832, was the first Miller Motorsport built. Plans were sold, and a handful of airplanes were built.

The first flight of the Miller Motorsport was in 1972. It appeared in an article in *Sport Aviation* in May of 1973. The airplane has a single retracting landing gear. The construction is wood and fabric and fiberglass. The 40-foot wingspan barely allows it to fit in a T-hangar.

In 1987, my friend Dave Raney bought the aircraft from Lewis Tuttle and Bill Betts. Dave wrecked the airplane the day he bought it in a trailer accident on the Pennsylvania Turnpike. This is where the story could have ended. In the accident, the canopy had been smashed, the tail was broken, the wings had impact damage, and the wingtips were gone. The propeller was bent meaning the crank was questionable, the engine mount was bent, and the fuselage attachments destroyed at the firewall.

The aircraft was stored for several years, and some repairs to the tail and wings were completed. In 2012 I was reading through the logs, and Bill recounted flying the WM-2 at 4,000 feet and spotting a flock of geese. He shut the engine down, descended, and joined up in the flock. He had geese joined up on each wing. I read about the 142 mph the airplane accomplished in the Pazmany Efficiency Contest at

Oshkosh in 1976, and this with a little A65 engine! I read about countless glider flights and wave exploration in the Allegheny Mountains. At that moment I could see the possibilities.

With the help of my local EAA experts we came up with a plan. My longtime friends Steve Statkus, Ken Jones and Ray Parker (technical counselor) helped formulate some structural repairs. FAA Advisory Circular 43.13 was used, and the original blueprints were followed as much as was possible. The engine had to be overhauled, and there were some troubleshooting challenges. Once again I relied on real experts in my EAA chapter. Had it not been for Charlie Ruehl, Bill Duffy, Brian Charlton and Tom Nelson, I would still be trying to get it running. There were many others who gave advice and lent parts.

There were many mountains to climb. This included fabricating an engine mount because we could not find anything that matched the firewall. There was a pretty serious repair on the firewall attachment

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points requiring several scarf joints and reinforcements. After that, structural repair to the tail seemed like small potatoes. There was a necessary mock-up to blow a new canopy because there were no pieces of the old canopy larger than a dinner plate. Fabrication of the exhaust was another chore. When you put it in perspective, it wasn't that bad. Fiberglass work, wood rot repair; you name it, we did it.

Each time a major challenge was met an equally big challenge was ahead. Each time we came up with a plan, and the job was completed. Other setbacks included hanging two engines and tearing both down again—it's a long sordid story.

The good news is that it flew. The other good news is that the entire project was done for under \$12,000. Bill Miller called this airplane the poor man's U-2. It's got a long wingspan and a 65-hp engine. It makes it an easy cruise at 10,000 feet and 120 mph, meeting the original design goal.

I've had the fuel flow down below 2 gallons an hour making 100 mph of airspeed. The engine may be shut off in flight allowing it to be flown as a sailplane. To restart the engine, the plane is put into a descent. Around 95 mph the propeller starts windmilling. Turn on fuel, turn on ignition, and the engine restarts.

The Miller Motorsport has a retractable single main wheel. An outrigger wheel is on each wingtip. The airplane taxis with one wingtip on the ground. It looks very awkward, and many people think something is wrong with the airplane. The landing gear is retracted by a Johnson bar handle.

After pulling out onto the runway, the throttle is advanced, and at 15 mph the wings start flying and the aircraft is leveled. Stall speed is in the low 30s, and that's where the Motorsport wants to fly. Sixty-five hp isn't much power, but the airplane climbs like a homesick angel with that 40-foot wingspan and low wing loading. The aircraft can climb at 750 fpm to 15,000 feet. The airplane was taken to 17,500 feet in August. The engine uses a Stromberg carburetor and electronic ignition.

Attending AirVenture Oshkosh 2015 was the capstone of an 18-year restoration project. Changing owners probably didn't hurt. If two different owners hadn't realized the possibilities, this amazing, strange, and wonderful airplane wouldn't have returned to the sky.

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