



Jim Tesmer's home-built, amphibious 6-wheeler uses the drive unit off a zero-turn Ariens mower.



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## “Made It Myself” 6-Wheeler Great For Work Or Play

Jim Tesmer calls his homebuilt 6-wheeler a “toy”. But the amphibious, wall climbing, zero-turn machine has done heavy work in the woods and swamps as well as providing dizzying fun for the 63-year-old Minnesotan. And it only cost about \$3,000 to build, even with all new materials and parts.

“Years ago, I had a 6-wheeler that I bought cheap. It was a fun rig until one axle broke and another one bent,” he recalls. “Having a zero-turn Ariens mower got me to thinking that the drive unit could make an interesting vehicle.”

When he saw a zero-turn drive unit for sale in a Surplus Center catalog ([www.surpluscenter.com](http://www.surpluscenter.com)), he came up with a plan. Four matching frames of 14-gauge 1-in. square tubing support the bearings for the axles (the kind used in go-karts). Tesmer determined the frame length by slightly overinflating three tires and leaving an inch between them.

“I raised the front axles 1-in. higher than the back two axles so the front axle only helps when climbing over uneven surfaces,” Tesmer says.

He added 1/8-in. plate to the frame to fasten greasable bearings so he can drive through water and snow. He built frames for the drive unit and used 1/8-in., 1 by 2-in. rectangular tubing in the front and back for extra strength.

“The hardest part was getting all 6 axles true with each other and with the bearings and plates. An angle iron and vise grips helped a lot,” Tesmer says.

To install the zero-turn drive he mounted a 50-chain sprocket on the hubs with Grade 8 bolts.

“By using a double tooth sprocket and single chain I was able to run one chain to the rear axle and one to the middle axle. The front axle is driven by a chain from the middle axle. When the drive unit was in place I mounted the engine to line up the drive belt and added

a tensioner,” Tesmer explains.

The engine is a 23 hp Kohler electric start with a home-built exhaust system.

He installed the seat and steering levers and used his plasma cutter to cut the body out of two 4 by 8-ft. sheets of 1/8-in. aluminum bright tread plate, after making cardboard patterns.

“I was able to bend the fenders and front stiffening lip to work with a sheet metal brake. After that, I cut and drilled holes to mount the bearings outside the body to make it easier for possible replacement. I put silicone under the bearings to seal out water,” he says.

The only problem Tesmer had was with the drive belts. He replaced them with No. 40 chain after cutting the hubs off the transmission pulleys and welding sprockets in place.

The 6-wheeler had no leaks after driving through a foot of water and “it was a blast” in

4 in. of snow. Tesmer drove it about a foot up his garage wall and has made himself dizzy driving it.

“Turning is wild due to the fact that the seat is centered and the zero-turn drive unit is able to have one side’s wheels going forward while the other side is going backward – with me sitting at the pivot point like a top,” he says.

Tesmer found everything he needed at farm or tool stores and online. He’s willing to offer tips to FARM SHOW readers interested in making their own 6-wheelers.

Tesmer has worked as a mechanic and spends his free time improving and building practical implements and tools to use around his home.

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Darrell Longman boosted the suction power of the blades on his Deere lawn tractor, by welding a 1/4-in. square rod to the back side of each blade’s cutting edge.

## Modified Mower Blades Eliminated Plug-Ups

Darrell Longman boosted cutting power and eliminated plug ups when he modified the blades on his Deere yard tractor. The simple change gives it more suction, lets him mow long grass, even with heavy dew, and makes clean-out a breeze.

“All it took was welding a 1/4-in. square rod to the back side of the cutting edge,” says Longman. “It really increases suction. I don’t have to wait for the grass to dry, and clean-out is as easy as driving over a rain puddle.”

Longman thinks mower manufacturers have reduced the suction that mowers produce as a way to increase fuel economy. He figures any increased fuel usage with his modification is offset by less time starting and stopping to clean out plugs.

“I’ve done it to my blades for years, and a lot of my friends have tried it too,” says Longman. “You do have to be careful not to run over rocks, as it will suck them up as well. I always keep the deflector down just

in case.”

He says the extra suction lets him easily mow tall grasses and weeds. The modification also gives the mower more throwing power.

“My son-in-law asked if I had mowed the road side with a batwing mower,” recalls Longman. “He couldn’t believe I had used my riding mower when he saw how it had thrown the clippings to the other side of the road.”

The 83-year old inventor (first featured in FARM SHOW’S Vol. 10, No. 1) is always looking to make things work better. When his wife found it difficult to climb steps around their home, he created “Granny Blocks”.

“I taped two bricks together with non-skid tape,” he says. “I just set them on each step, making the step shorter and easier for her to climb.”

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## Grooved Mower Blades Last Longer, Cut Better

Put grooves in your shredder blades if you want them to last longer and to do a better job. It’s faster than grinding them down to sharpen them, and you won’t have to buy new blades as often.

“There’s no reason to do it with a new blade,” says Doug Eberhart. “However, when it’s time to sharpen them, put grooves in instead. I cut grooves 1/4 in. deep every 3/4 in. on the cutting edge of the blade. I run them against the cutting direction of the blade. The serrations help the blades bite into the weeds a bit more.”

Eberhart pastures cattle and cuts hay in pecan groves, using a batwing mower to keep the weeds down. Shredding the weeds instead of using weed killer lets vetch and clover grow. He has found that serrating the edges with grooves takes out hard-to-cut mature weeds like broomweed or ragweed.

“With the grooves in the blade, it cuts them right off,” he says. “If you cut them off below the bottom leaf, it will kill them.”

Eberhart especially likes how easy it is to cut grooves in the blades. He can do three sets of blades on his mower with batwings in less than 10 min. Grinding the blades down to sharpen them would take a lot longer and leave less steel for cutting.

“As the blades wear down, I just serrate them every 100 acres or so,” says Eberhart. “That can be 10 times a year, as I’ll shred a thousand acres a year or more.”

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Putting grooves in your shredder blades is faster than grinding them down to sharpen them, and does a better job, says Doug Eberhart.



He cuts grooves 1/4 in. deep every 3/4 in. on the cutting edge of the blade.