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Self-Propelled Sprayer Built From 1-Ton Truck

"It has all the features found on modern commercial self-propelled sprayers, but I built it myself for only about \$20,000," says Bob Wood, St. Pauls, Ontario, about the self-propelled sprayer he built on top of a 1-ton GM 4-WD truck frame.

The one-of-a-kind rig is equipped with a 500-gal. tank and 60-ft. boom and rides on 8-in. wide, 42-in. high wheels set on 90-in. spacings. The 5-section boom mounts on a

subframe that Wood bolted onto the truck's frame. The sprayer pump is direct-driven off the truck pto. Power is provided by the truck's 6-cyl. 292 cu. in. gas engine and 5-speed transmission. He used sheet metal to build a hood over the engine. The cab is off a Massey Ferguson 750 combine and has Hardi sprayer controls mounted inside it.

"I use it to apply herbicides to corn, soybeans, and wheat on about 1,500 acres per

year. It works great," says Wood. "I built it because I had been using a pull-type, 40-ft. sprayer and wanted a wider boom. I also wanted the protection of a cab, but my tractor didn't have one. I paid \$2,500 for the truck and about \$10,000 for the boom. The truck was five or six years old and had a lot of miles on it. The wheels were designed for a high clearance sprayer and are new, as are the tank and boom.

"There's 2 1/2 ft. of clearance under the axles. I generally drive in low range and use a rate controller to automatically compensate application rates for varying ground speeds," notes Wood.

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Powered Wheelchair Made From ATV

When Paul Winkler decided to build a motorized wheel chair for a paraplegic friend, he started with a new Kawasaki Bayou 220 ATV and the frame of an old wheelchair.

"Everything just seemed to fall into place as I went along," he says. "Any competent welder/mechanic could do what I did."

The first step was to cut the fiberglass body in two, removing part of the front end to make a place to mount the wheelchair. The gas tank and part of the original seat had to be removed.

"The frame of the ATV looked like it was made for the wheelchair. I didn't have to cut anything except the fiberglass body. I put three bolts from the rear of the wheelchair frame into the existing ATV frame and a couple more in front. The chair sits solidly on the frame, but can be unbolted and moved out of the way if you need to work on the engine," he says.

Winkler replaced the seat in the wheelchair with a piece of solid steel. He puts a cushion over that and says it's comfortable.

The trickiest part of rebuilding the ATV was moving the steering farther forward and

extending the other controls on the handlebars.

"I used a shaft with a universal joint to lengthen the steering column and remounted it so it swings out of the way as he gets onto the ATV. Once he's seated, it swings into place in front of him and locks there," he says. Lengthening the throttle cable was probably his toughest task. "It took some time to get it right, but it finally worked," he says. "I found out later I could have bought a cable at a bicycle shop that was approximately the right length."

He left the brake control levers and the throttle button in place, but moved the ignition switch and the choke. With the wheelchair seat in the center, he had to relocate the lights onto the fenders.

Since the chair extends back into the area where the original seat had been, Winkler had to come up with a different place to mount the gas tank. Since the configuration of the original tank wouldn't work anywhere else, he pieced together a new tank from sheet metal, welding the edges with his torch, and mounted it behind the original seat, right over



Wheelchair bolts onto front part of ATV frame. Driver has easy access to controls.

the rear axle.

"What was really amazing was I didn't have to touch the engine or drive train," he says. "In fact, I did everything with just hand tools, an electric drill, and my welder," he says. "I didn't have to do any machining at all."

While he cut off part of the original seat, more than half of it remains, so his friend can take a rider along. Some additional adjustments were necessary to fit the machine to his friend's disabilities. "He can't grip tightly with his hands, so the brake levers were rotated to the other side of the handlebars. Now he can push on them instead of having to squeeze them," Winkler says.

There were some problems as he went along. "When I cut the fiberglass body apart, it disrupted the physical integrity of the frame and stress cracks developed around the mountings that remained. I was able to correct this by adding some steel strap supports," he says. Also, mounting the wheelchair changed the weight distribution

on the machine. "With the weight so far forward, the front wheels had a negative camber. When he noticed this was causing unusual tire wear, he replaced the old spring-assisted shock absorbers on the front with some heavier ones made for motorcycles and that restored the camber," he says.

Beyond the original \$3,100 cost of the 4-wheeler, cost of the conversion was minimal. The most expensive part was the shaft and universal joint to extend the steering shaft, which Winkler says cost about \$50.

"We selected this model ATV because it was the least expensive one we could find with a 4-cycle engine that had both electric start and reverse. He didn't want the bother of mixing fuel for a 2-cycle engine. And with no use of his legs and limited use of his arms, the electric starter and reverse were necessary to give him the amount of independence he wanted."

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Mower Deck "Undercoat"

Grass and dirt have a tougher time building up under mower decks with new "Clean Deck" undercoat, according to the company that developed the graphite-based coating.

Available as an aerosol or as a liquid, the company says it helps prevent corrosion and keeps wet grass, dirt and grime from sticking to the deck. After you're done mowing, the deck can be easily cleaned with a hose and rag.

"It eliminates the need to do any power washing or scraping to get the deck and blades clean," says Julie Korzenko of Willmar Graphite Co., Inc., Ball Ground, Ga. "One aerosol can is enough to coat a

residential mower several times and will last most of the season, depending on the region. The liquid is sold in 1-quart and 1-gal. cans."

The aerosol can covers 12 sq. ft. and sells for \$7.90 plus S&H. The liquid is sold in 1-quart and 1-gal. cans. A quart covers 50 sq. ft. and sells for \$12.50 plus S&H. A gallon covers 200 sq. ft. and sells for \$38 plus S&H. Discounts are provided on all case orders.

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