

## Home-Built Utility Vehicle

"My youngest son gave me a chop saw and some square tubing for Christmas last year, which helped launch me on a project I'd been dreaming about for a long time," says Stanley Smiley, Winchester, Ind.

The project? A home-built utility vehicle built out of a 1964 Fiat 2-WD car.

The completed rig is painted orange and black and is complete with a manually-operated dump bed, rollbar cage, front bumper, schoolbus seat, 4-wheel hydraulic brakes, and power steering. It also has two big mirrors, taillights, and headlights off an old combine. It rides on the car's original 14-in. wheels.

The Fiat body was bad but the engine was still in good shape. He kept the car's 4-cyl., 42 hp engine, 4-speed manual transmission, front and rear axles, and leaf springs. He cut the car's frame off behind the front wheels and used 2-in. tubular steel to build a new front frame.

He used a 4 by 8-ft. sheet of plate steel to make the bed.

The power steering system uses a pump that came off an older Ford car that had a hydraulic cylinder connected to the tie rods. Smiley mounted a pulley on front of the en-

gine so he could belt-drive the pump. It sends oil to a hydraulic motor that operates the cylinder. The steering column, steering wheel and hydraulic motor are off a tow motor forklift. The fenders were purchased at an engine show.

"I had a lot of fun building it, and my family and I enjoy riding it around our farm. It comes in handy for transporting a variety of things," says Smiley. "I spent about \$1,500 to build it, which is much less than the cost of a new utility vehicle. The rig's wheelbase is the same length as on a Cub Cadet or Deere Gator. I had to cut 18 inches off the car's driveshaft in order to get the correct wheelbase length. I kept the car's springs on back but added new shocks on front.

"It steers so easy on the road that I have to be careful that I don't go too fast or I'll oversteer. I overhauled the engine, and I rebuilt all the brake and master cylinders. I plan to add wider tires and a hydraulic hoist to dump the bed. I also want to add brake lights and turn signals."

The hood was designed for a commercial utility vehicle. "My son bought it on the internet from a plastics company. It has a



"I had a lot of fun building it, and my family and I enjoy riding it around our farm," says Stanley Smiley about the utility vehicle he built out of a 1964 Fiat 2-WD car.

quick coupler pin on each side, which makes it easy to quickly raise the hood and work on the engine," says Smiley.

There's a diamond plate steel platform in front of the seat. The gas tank is off a zero turn riding mower and is located between the

bed and the seat.

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Steve Haas transforms steel wheels, horseshoes, auto exhaust pipe and flat iron into homemade rocking chairs with a farm equipment "flavor".

## Farm Equipment Chairs Rock On Steel Wheels

Steve Haas's homemade rocking chairs were so popular as gifts that he quit his job at a hog confinement operation and started making them full time five years ago.

He sandblasts, welds and paints to transform steel wheels, horseshoes, auto exhaust pipe and flat iron into rocking chairs with character.

"I use grain drill press wheels because they are lighter," Haas says. Chairs weigh about 70 lbs., which he ships through the mail in two pieces. The chair back made with exhaust pipe tubing and batch dryer screen slips off receivers to meet package size requirements. The seat is an implement seat and horseshoes attach the metal rockers to the wheels. Haas accessorizes with a horseshoe cup holder.

The Seward, Neb., man paints each chair in authentic colors for various dealers from Deere green to Allis-Chalmers orange to International red. Each chair has a company decal.

One Dallas, Texas, customer bought one of each model for his restaurant. "Then he wanted a double-seater," Haas says. Haas also makes Harley-Davidson and Nebraska Cornhusker chairs, but notes that most of his customers don't live in Nebraska. He ships many rockers out East and to Texas.

Adult chairs cost \$250, children's chairs cost \$225, and the double-seater is \$300. Shipping is extra.

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Seat is off an implement and horseshoes attach the metal rockers to the wheels. Note horseshoe cup holder.



He even made a double seater for a Texas customer.

## Vertical Lift Gate Folds Out Of Way

Jack Kaspari wanted a gate that wouldn't get hung up in the snow, so instead of a swinging or sliding gate, he built one that raises up vertically. The 12-ft. long gate can be raised and lowered with a switch at the gate or from a transmitter in his car or even from his house 250 ft. away. The gate works smoothly, but it took some effort to work out the details.

"I had to make a model of it to get the cross bars and the channel iron uprights just right," recalls Kaspari. "Each of the four cross bars had to be offset a little before I pinned them in place so they would fold up on themselves."

The gate itself was the easy part once he got the design right. It consists of two 4-ft. upright 1 1/2-in. channel irons with one secured to the gate post. The second upright swings free as it rises into the air and folds. The 12-ft. cross bars are 1-in. square tube stock.

"If I was doing it over, I would use 1 1/2-in. tubing and add a couple more feet to the length," he says. "That would make it more solid. As it is, it vibrates a bit when I drop it down."

The lift mechanism is an electric winch mounted at the base of the post to which the gate folds. Kaspari used an old power pole for a gate post, giving him the height he needed. The cable runs from the winch to a pulley mounted at the top of the post. From there it runs out to the top corner at the far end of the gate.

The winch is controlled by a 12-volt, three channel receiver powered with a 120 to 12-volt converter that Kaspari picked up at Radio Shack. Since the receiver had a one amp maximum, he installed three relays, one for up, one for down and one for a yard light installed at the top of the pole.

If someone comes to the gate after dark, Kaspari can turn on the light before deciding to open up. Best of all, he doesn't have to worry about snow drifting against the gate.

"It beats trying to swing a gate or even lifting it," he says.

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The 12-ft. long gate can be raised and lowered with a switch at the gate or from a transmitter in Kaspari's car.



Fold-up gate's lift mechanism is an electric winch mounted at base of gate post.



Vertical lift gate means no worrying about snow drifting against the gate.