

Home-Built 4-WD Still Going Strong After 27 Years

When John Melnyk got frustrated with the tractor he had and decided to build his own from scratch, he never imagined his home-built tractor would still be going strong 27 years later.

After buying a brand new 145 Versatile 4-WD in 1969, Melnyk was faced with one problem after another.

"First the engine blew up and then, the transmission," he says. "The only thing that didn't give me trouble was the rear end. I was so cheesed off with that tractor, I decided the only thing to do was to sell it, but then I would have no tractor."

Luckily, the northern Alberta man owned a machine shop in nearby Dawson Creek, B.C. in addition to his Bonanza, Alberta farm. It took about eight months of his spare time to finish building a tractor of his own design in the spring of 1973.

His finished product was a 335 hp 4-WD tractor. Melnyk made everything himself except for the 8-speed Clark powershift transmission, the 88,000-lb Clark axles, and radiator, glass, tires, and new plate steel for the frame. He made the articulation joint at center as well as the steering cylinders.

"At the time, it cost about \$25,000 for materials and I could have bought a brand

new tractor for \$15,000 to \$17,000, but I knew it was worth it, because there was no comparison. It was like trying to compare a Cadillac and a Model T," he says.

Melnyk was so pleased with his first creation, that he went ahead and built another identical one in 1977. Both tractors have been running ever since without major incident, putting on an average of 500 hours per year each. With 13,500 hours on the oldest tractor, Melnyk proudly points out that no repairs have been needed, "outside of breaking the odd hydraulic hose.

"Also, the air conditioning quit once and we broke a couple of U-joints. We reset the valves and injectors once for maintenance and, of course, we've put on four sets of tires due to ordinary wear," he says. "The only thing I could criticize is that I put on big singles (30.5 x 34) and I think it would have been better with duals... the tires wouldn't wear out as quickly due to slippage."

Seventy-six year-old Melnyk still has his machine shop in Dawson Creek, and assists his son and grandsons on the 6,080-acre family operation.

Their negative experience with Versatile was reinforced by another blown transmission in 1990, on a 1984 470 hp



It took John Melnyk about eight months of his spare time to build this 335 hp, 4-WD tractor.

Versatile 1150 that had only 4,000 hours on it at the time. That repair alone cost the family between \$8,000 and \$9,000.

Although they took many hours and dollars to build, Melnyk's twin home-built tractors leave him with no regrets. He says they have repaid their debt many times over, with

reliability and long life.

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Handy 3-Pt. Mounted Cargo Carrier

"I use this tractor-mounted carrier to haul calves, firewood, bales, and anything else you need to carry around the farm," says Henry Berry, Box Elder, S.Dak., about his cargo carrier that mounts on a tractor 3-pt. hitch.

The frame of the carrier is made from 3 by 2 1/2-in. square steel tubing with angle iron around the edge of the platform to hold planks for the floor. The 52-in. high sides, made out of steel tubing fitted with wire cattle

panels, fit into stake pockets. There's a gate in one corner to load livestock, and you can remove the back - and also the sides, if necessary - to load cargo.

"This has become one of the handiest pieces of equipment on our place and it cost only about \$260 for materials to put it together," says Berry.

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With 52-in. high sides, the 3-pt. carrier works great for hauling livestock.



"It's built heavier than anything on the market, using readily available components," says Alec Yeager about the all-terrain tracked vehicle that he built from scratch.

Home-Built "Poor Man's" Utility Vehicle

"I came up with a simple design that uses ordinary shop tools and low-cost, readily available components to keep the cost down," says Alec Yeager, Hendley, Neb., about the all terrain tracked vehicle that he built from scratch.

It rides on 11-in. wide, 8-ft. long rubber tracks made by cutting the tread out of a pair of 46-in. rear tractor tires. The tracks are friction-driven and ride on three sets of axles equipped with 16-in. pickup wheels. Power is supplied by an Isuzu 4-cyl. diesel engine and a manual 4-speed transmission, both of

which mount on back. The transmission shaft-drives a Chevy rear end (off a 1978 3/4-ton pickup). The rear end is mounted upside down on the front of the machine. There are eight forward gears and two reverse. A 2-speed transfer case provides low-speed gears. Top speed is about 30 mph.

The rig rides on an air suspension system that includes air bags off a Dodge pickup mounted over the center axle, and gas-filled coil shocks at each corner.

The cab was made from sheet metal and is protected by a roll guard cage made from sq.

steel tubing. The cab has an air ride seat and heater. The cab's front window and both side windows were cut out of safety glass.

"It will go just about anywhere. I built it because I've always wanted an all terrain tracked vehicle," says Yeager. "My total cost was about \$2,000. Most commercial 6-wheeler tracked vehicles aren't built nearly as heavy as mine and cost a lot more.

"It required minimal machine work to build - I think anyone with basic metal working tools could build it. They might not use exactly the same engine and rear end, etc., but they could use the same basic design. The big advantage is that you can use components built in the mid 1970's or 1980's, which are readily available at scrap yards. This spring I plan to offer a video that will show the rig in action. If there's enough interest, I'll make another video that will describe how I built it, with tips on how others could do the same.

"It works great for checking on livestock in nasty weather because it's very maneuverable and is absolutely unstoppable in mud. It can go through snow no matter how deep it is. It'll go over logs without getting hung up so it would be great for logging or fence-fixing. It weighs about



Rig's tracks are friction-driven by three sets of axles equipped with 15-in. tires.

3,500 lbs.

"You could use a much bigger engine - maybe one with up to 300 hp - to power it since pickup rear ends are built to handle tremendous torque. The 4-cyl. Isuzu diesel engine I used has only about 100 hp and is a little under-powered. I plan to replace it with a Ford 3.8-liter, 6-cyl. gas engine."

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