Cub Cadet Repowered With 3-Cyl. Car Engine

Carlo Shefveland and Dale Lemmerman often attend antique tractor and engine shows. Whenever they want to get through a show in a hurry they sometimes take their 1970 Cub Cadet 104 garden tractor, which they repowered with a Geo Metro 3-cyl., 60 hp car engine.

Just for looks, one side of the engine is equipped with three motorcycle carburetors to go with the 3-cyl. engine. The other side has three curved exhaust stacks. There's a seat for a passenger behind the driver. It's supported by a single caster wheel that hooks up to the tractor drawbar. The tractor still has its original 3-speed transmission.

"We call it our Metro Cadet. We built it because we just thought it would be fun to put a car engine into a Cub Cadet tractor," says Shefveland. "It really gets people's attention. At shows we'll stop to look at something, and by the time we turn around often there will be several people walking around the tractor.

"Installing the engine was quite a job. You could fill a book with the stuff we did to make everything work right."

They took the tractor apart, sandblasted it, and repainted it.

They didn't have to lengthen the tractor frame at all. However, the car engine is much bigger than the original 10 hp one and didn't leave room for the tractor's original steering sector. To solve the problem, they replaced the original steering sector with one out of a 1948 Ford car.

The new engine had so much power that it ruptured the seals on the tractor's driveline. To build a new driveline, they used the CV joints off the front wheel drive Metro. However, those CV joints blew apart so they replaced them with U-joints from the steering shaft off an old car.

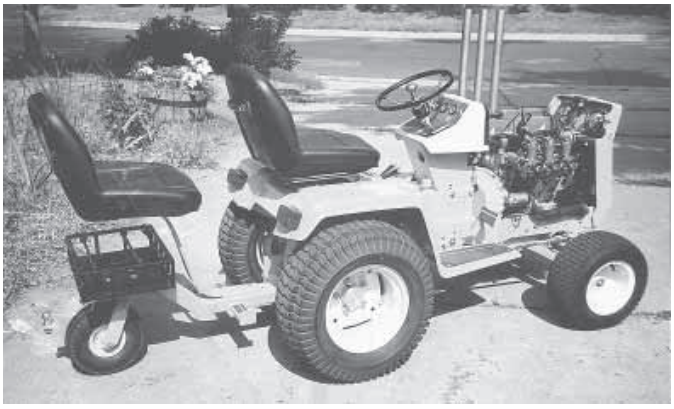
Compared to the original Cub Cadet engine, the car engine ran backward and would have caused the transmission to go too fast backward and too slow forward. To reverse the engine, they removed the original reduction gears from the transmission and replaced them with a chain and sprocket system to the rear wheels so the tractor goes nice and slow.

The turbocharged intercooler radiator is off a 1990 Ford car radiator, and the fan is off an old Honda car. The distributor is off a 1963 Chevrolet 6-cyl. car. "The original tractor had a capacitor discharge ignition, but when we installed the car engine there was no longer room for it. We only needed three spark plug points, so we used every other terminal on the distributor," says Shefveland.

"It'll probably go 20 to 25 mph. But the steering system is so poor that it wouldn't be safe to go that fast," says Shefveland. "When the driver steps on the accelerator it'll lift the tractor's front end right off the ground. It's a good thing we're not kids anymore or we could get hurt driving it."

They made the exhaust mufflers from Midas Muffler pipe, cutting it to fit and bending it. They also installed new gauges on the dash.

Contact: FARM SHOW Followup, Carlo Shefveland, 5807 Lyndale Ave. N., Brooklyn Center, Minn. 55431 ph 763 561-8871) or Dale Lemmerman, 18927 Jewel St., Wyoming, Minn. (ph 763 434-7936).



Just for fun, Carlo Shefveland and Dale Lemmerman repowered this 1970 Cub Cadet garden tractor with a Geo Metro 3-cyl., 60 hp car engine.

Home-built electric lift hitch is equipped with a 2-in. receiver hitch and is powered by a winch that operates off the tractor's battery. Inventor Stephen Ferrante uses it to pull a 4-ft. wide rake that he built himself.

Electric Lift Hitch Powered By Winch

"It makes hooking up to an implement a fast and easy job," says Stephen Ferrante of Gaylord, Mich., about the home-built electric lift hitch he built for his new Deere X500 garden tractor. It's equipped with a 2-in. receiver hitch and is powered by a winch that operates off the tractor's battery.

The hitch attaches to the tractor at three points and can be installed or removed in only a few minutes. Ferrante uses it to pull a 4-ft. wide rake that he built himself.

The winch mounts on top of a vertical metal channel that's attached to a pair of hinged metal frames. To raise or lower the rake he flips a switch that's velcroed to the grab handle on the tractor's left fender. Retracting the cable causes the frames to pivot upward, and extending the cable causes the frames to pivot downward.

To hook up to the rake, Ferrante simply inserts a pin through the receiver hitch. He can change the rake's pitch by manually adjusting a mid-mounted turnbuckle. Two other turnbuckles are used to make the hitch frame more stable.

The hitch attaches to the tractor with a 4-in. long bolt that goes through the drawbar, and with a pair of horizontal metal straps with bolts welded onto one end. The bolts fit through holes already in the tractor frame.

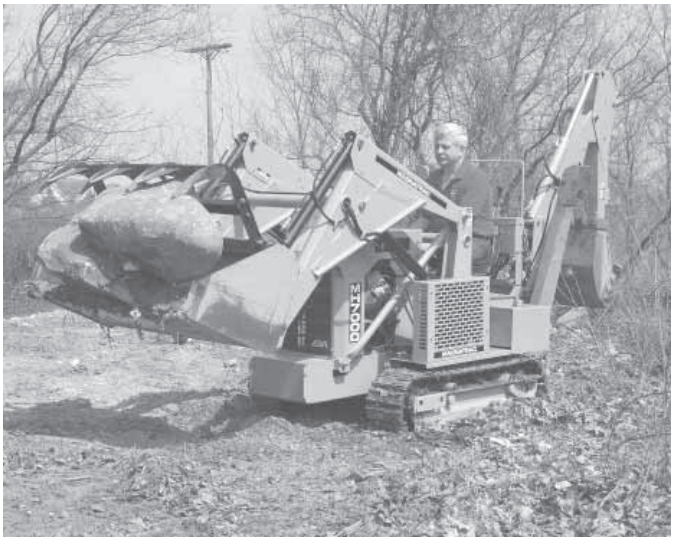
"I think it has potential not only for garden tractors, but also for ATV's and utility vehicles," says Ferrante. "I didn't change anything at all on the tractor. My biggest expense was $200 for the winch. I use a tensioner to keep the cable from unraveling whenever it's let down too far. I rigged up a limit switch from an old dehumidifier in order to keep the cable from raising too far.

Winch mounts on top of a vertical metal channel that's attached to a pair of hinged metal frames.

"I added the horizontal mounting bars to keep the hitch from tilting too much on sidehills and as I raise and lower the implement. I plan to make adapters so I can mount the same hitch on front of the tractor and operate a snow blade, etc."

To build the rake he bought curved steel tines with holes drilled in one end and bolted them to a length of 3-in. angle iron. The tines are 1 in. wide and are spaced 1 in. apart. The rake can be turned 360 degrees and pivoted 30 degrees up or down on side hills. The rake's tongue has 1/4-in. thick steel welded onto one end to fit the receiver hitch.

Contact: FARM SHOW Followup, Stephen J. Ferrante, 4342 Whitehouse Trl., Gaylord, Mich. 49735 (ph 989 732-7924).



The all-steel Struck crawler tractor is available with a wide variety of attachments.

Struck Crawler Still Making Tracks

After 38 years, the all-steel Struck crawler tractor is still winning the hearts and minds of do-it-yourselfers and small contractors across North America. Equipped with loader, backhoe, tree spade or grapple fork, there isn't much it can't do.

"About 80 percent of our buyers are homeowners who need commercial quality work done, but they want to do it themselves," says Chris Bonniwell, C.F. Struck Co. "Each crawler is built to order and built completely in Cedarburg, Wis."

The crawler tractors are available with a variety of attachments built by Struck. Dozens of other attachments from manufacturers can also be used. Equipped with live pto and rear 3-pt. hitch, the Struck crawler can also pull a wide variety of Category 1 implements from plows and tillers to rough cut mowers.

"What sets Struck crawlers apart are the all-steel tracks," says Bonniwell. "Even rubber tracks won't take the abuse of steel tracks."

Struck crawler tractors are available in two models. The Magnatrac 4800 has a 25 hp gas engine and a list price of $11,725. The Magnatrac 7000 has a 31 hp gas engine and lists for $15,905. At the recent Lawn, Garden & Power Equipment Exposition in Louisville, Ky., a 7000 model outfitted with excavation bucket and grapple on the front and backhoe kit was priced at $27,105.

Bonniwell says people will say, "I have a loader." He tells them, "Yours won't do what ours will. Because of the traction and low center of gravity, we can dig right down into a hole and climb right out again."

The Struck tractor hasn't changed in 38 years. It's still one of the heaviest-built rigs out there. The company uses the latest in computer-aided design, welding technology and computer-aided fabricating.

"Even our weight box on the front is strong enough to plow dirt with," says Bonniwell. "We joke that you could air lift our units by their steel hoods. You won't find any plastic or cup holders on Struck crawlers. They're all about getting work done."

Contact: FARM SHOW Followup, C.F. Struck Corp., P.O. Box 307, Cedarburg, Wis. 53012 (ph 262 377-3300; fax 262 377-9247; info@StruckCorp.com; www.StruckCorp.com).