

## Hydraulic-Operated “Tilt Back” Tractor Canopy

Leonard Cook, Lynchburg, Mo., wanted to equip his 1948 Farmall Super A tractor with a shade canopy but he couldn't find one he liked. So, he made his own retractable model that tilts out of the way by simply pulling a lever.

“The tractor is equipped with an offset seat and steering wheel so there's no room to climb on from the back. I have to climb in from the front, where a canopy would be in the way,” says Cook.

The canopy is made from a sheet of lightweight aluminum bolted onto a big L-shaped frame fashioned out of 1-in. sq. tubing. The back of the tractor was already equipped with a pair of lift arms and a horizontal metal rod originally designed to mount a cultivator. Cook mounted a homemade metal bracket to the bottom part of the frame and then bolted it to the lift arms.

He also bolted a 2-ft. dia. disc plow alongside the tractor that he uses for garden work. The disc plow provides a natural step to

climb onto the operator platform.

“Pulling on a lever lowers the lift arms, which tilts the canopy back out of the way so I can climb onto the seat. Pushing the lever forward brings the canopy back up over the seat,” says Cook. “I can take the canopy off by removing 4 bolts. I also added a large mirror on front of the canopy so I can see what's going on behind me.

“It's a lot of fun to show in parades, where I drive along real slow and tilt the canopy back and forth at the same time,” says Cook, who notes that he bought the tractor for his wife as a Christmas present.

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Leonard Cook wanted a shade canopy for his 1948 Farmall Super A tractor, so he made this retractable model that tilts out of the way by simply pulling a lever.

## “Reversed” 4020 Makes A Powerful Loader Tractor

“This loader tractor is a lot easier to handle than a conventional tractor. It handles heavy loads of manure, snow or round bales without slipping,” says Ted Lacey, an inventive South Dakota farmer. Lacey flipped the differential, the rear wheels, and the operator station and mounted his Westendorf loader facing the back of the tractor. The engine, power steering, gear shift and hydraulics all remain the same as a stock 4020.

“The rear wheels carry the weight and have a lot more traction this way,” Lacey says.

Lacey started his project by removing the tractor's operator seat, the steering wheel and the 3-pt. hitch. He flipped the differential over so the new gearing would allow the tractor to use all of its old forward gears going backwards and its old reverse gears going forward. The rear wheels were flipped side to side so the treads would pull as the tractor went backwards rather than forward. Lacey says the tractor now can travel nearly 20 mph going backward, but only a couple miles an hour going forward.

All of this reconfiguration bears the

question “why”? Lacey says he's always looking for new ways to use machinery and old parts and he's seen similar rigs made from combines and swathers. He decided to try it with a tractor and is pleased with the results.

Lacey faced the old tractor seat to the rear and mounted it securely to the platform. He extended the steering shaft through a pivot point and mounted the steering wheel on hinges so it folds away when the operator gets off the tractor. He shifts gears with a lever mounted on a pivot block, using the same pattern as the stock 4020. Hydraulics are controlled with the stock levers that are extended to the left side of the operator seat. A 3-spool valve was added so Lacey can use the loader's grapple fork along with the lift and tilt cylinders.

“This whole idea just came to me one day so I decided to give it a try,” says Lacey. “It took about two months to build, and I like it much better than a loader mounted on the front of a tractor.”

The loader mounts on the existing vertical frames but faces the back of the tractor rather



Ted Lacey flipped the differential, rear wheels, and operator station on his Deere 4020 tractor and mounted his Westendorf loader on back.

than forward. New lift cylinder mounting points were added to the base of the vertical uprights.

Lacey's loader tractor has a cab that he salvaged from a 615 IH combine

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## “Free” Water Irrigates Big Garden

Robert Thomas, Oak Grove, Mo., used old gutters and downspouts from his house to drain water off his 50 by 35-ft. pole barn and into a 1,200-gal. water storage tank, which he uses to water his garden.

“The gutters and downspouts were recycled when we put a new roof and siding on our house. We grow our own vegetables in a big 50 by 30-ft. garden, and this homemade system provides a low-cost way to irrigate it,” says Thomas.

He bought the poly water tank used on Craigslist for \$150. He set the tank up at one end of the pole barn, which is peaked at the middle and has a 14-ft. wide lean-to attached to one side. He mounted a gutter on the lean-to's metal roof and then attached a long downspout to it. The downspout angles down across the back of the barn and is hooked up to a short length of 4-in. dia., non-perforated drain tile that enters the tank's fill hole.

Water gravity flows out the tank from a garden hose that's connected to a series of low ground sprinklers.

“It works great and I saved a lot of money,” says Thomas. “I came up with the idea because we have to pay the county for the water we use, and irrigating a big garden gets expensive. I used a total of about 50 ft. of gutters and 16 ft. of downspouts.

“We grow peas, beans, cucumbers, potatoes, and sweet corn. Our growing season is long enough that we can usually plant two crops, one in April and the other in July. However, the weather usually turns dry in late summer so we need irrigation water then. I plan to add another lean-to and tank on the other side of the pole barn to increase the water storage capacity.”

The low ground sprinklers won't work to irrigate sweet corn when it gets tall. So for sweet corn Thomas uses a Harbor Freight transfer pump and sprinkler heads that he mounted on top of 6-ft. high metal uprights. “I used black field pipe to make the uprights and welded on a base made from short lengths of rebar,” he says.

To prevent algae from forming in the tank, Thomas's wife Jackie bought a floating chlorine dispenser that's designed to hold 3-in. dia. chlorine tablets in above-ground swimming pools. “The tablet has minimal contact with the water so it dissolves slowly. I tied a string to the float which lets me easily fish it out of the water,” he notes.

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Old gutters and downspouts from his house allow Robert Thomas to drain water off his pole barn and into a 1,200-gal. storage tank.



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