



Hart's built-from-scratch tractor was built with two 2-speed truck axle rear ends.

## HEAVY-BUILT UTILITY TRACTOR

# Home-Built 4-WD Articulated Tractor

"I built it because my Farmall H tractor didn't have enough power and versatility to do the many different jobs I wanted done," says Kenneth Hart, Plainfield, Ind., who built his own 4-WD articulated loader tractor for \$5,000.

Hart's tractor is powered by a 6-cyl. gas engine salvaged from a 1958 Chevrolet car and has the car's "power glide" automatic transmission. It has two 2-speed truck axle rear ends - one off a GMC, the other off a Ford - and two 2-speed gearboxes that give the transmission a high and low range. Hart used the frame from a Chevrolet truck, reinforcing it with channel iron and steel plate. The tractor has new 11.00 by 24 lug tires mounted on the wheels off an old New Holland combine.

The combine wheel hubs wouldn't fit on the truck axles so he cut the center out of the combine wheels and welded them to the truck wheels. Both axles have the same gear ratio and are locked in low gear. Top road speed is 25 mph.

He built a variety of loader-mounted attachments, including a dozer blade, bucket, heavy-duty fork, 10-ft. snow plow, remote-control "high-lift" painting platform, hydraulic-powered winch, and fork-mounted log splitter.

"I built it over a period of 15 years. It started out as a 2-WD model with the drive wheels in front, but I didn't have enough traction with the bucket loaded so about 10 years ago I rebuilt it to make it 4-WD. The steering wheel connects to a hydraulic steering valve that is the most expensive piece of

equipment on the tractor. I wish it had a cab, but there isn't enough room for one.

"There are two hydraulic pumps - one for power steering and the other for raising or lowering the loader. The loader will lift 3,300 lbs. There are six hydraulic cylinders on the bucket - two to raise it, two to tilt it, and two to automatically keep it level as it's raised or lowered.

"I used lengths of old International moldboard plow beams to make six prongs for the bucket fork. I can haul up to 40 small square bales on a pallet that slips onto the forks. I stack the bales by hand in the field and use the loader to haul them back to my barn. I can also use the forks to carry a hydraulic-powered log splitter that slips onto two of the prongs. I use loader hydraulics to power the splitter. I can use the fork to raise big logs so I don't have to stoop down to cut them with a chain saw.

"My front-mount forklift raises up 27 ft. which is high enough to paint my house. I bought it at a junkyard and made a mounting bracket for the loader arms. I converted the forklift's long hydraulic cylinder from one-way to two-way. I made a 4 by 8-ft. platform and mounted an ignition switch and control box on the platform so I can start or stop the engine to raise or lower the forklift from the platform. I can remove the forklift by removing four pins."

For more information, contact: FARM SHOW Followup, Kenneth Hart, 815 Avon Road, Plainfield, Ind. 46168 (ph 317 839-4863).



Thompson raised the sides of hopper with sheet metal, adding 3 ft. on one side and 1 1/2 ft. on other side so combine's unloading auger can reach over it.

## BUILT OUT OF A FLOTATION FERTILIZER SPREADER

# Self-Propelled 2-WD 350 Bu. "Grain Shuttle"

"It does the work of two 400 bu. grain carts yet keeps compaction to a minimum," says Mike Thompson, Rochester, Minn., about the self-propelled 350 bu., 2-WD "grain shuttle" he built out of a flotation fertilizer spreader.

Thompson bought the spreader, powered by a Caterpillar 3208 190 hp engine with a heavy-duty Allison automatic transmission, at an auction for \$9,000. He removed the two spinner spreaders on back and replaced them with a 12-in. dia. auger that's powered by a hydraulic motor. He raised the sides of the hopper with sheet metal to boost capacity, adding 3 ft. on one side and 1 1/2 ft. on the other side so the combine's unloading auger can reach over it. A belt conveyor at the bottom of the hopper moves grain back into the unloading auger.

"We've used it for four years with no problems," says Thompson. "The wide flotation tires - 66 by 43 on back and 48 by 25 up front - let it go through more mud than the combine and leave almost no tracks. We had been using two 400-bu. grain carts to unload on-the-go from our International 1680 combine but that tied up two men and two tractors. We also had trouble with the carts getting stuck and they left deep ruts.

"The self-propelled shuttle works much faster than tractors and carts. It travels across

fields at 35 to 40 mph unless it's real bumpy. You can go a half mile to a truck parked on the road, unload, and be back before the combine fills up again. It'll unload the 350 bu. in only 2 min. with its 12-in. dia. auger. The unloading auger is controlled by the truck's throttle. To operate the auger the operator simply throws the pto in gear and adjusts the throttle. A hydraulic-controlled gate at the back of the box controls the flow of grain to the auger. We usually keep the gate wide open. The rubber conveyor is powered by its own hydraulic motor.

"I cut a small window in front of the box so the operator can easily see into it. We use 2-way radios so I can tell the operator whether to speed up or slow down as I unload. Once I turn the combine unloading auger on I never look out.

"I had the auger custom-built for about \$800 and spent about \$200 to raise the sides. Once we had it running, we sold our two grain carts. After we're done harvesting, we rent the grain shuttle out to other farmers.

"I can convert the truck back to a fertilizer spreader by removing the auger and motor and putting the spinners back on," says Thompson.

Contact: FARM SHOW Followup, Mike Thompson, 10729 11th Ave. N.E., Rochester, Minn. 55906 (ph 507 281-3417).



Thompson removed spinner spreaders on back and replaced them with a 12-in. dia. auger that's powered by hydraulic motor.

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