



Articulated Loader Tractor

"It works better than a conventional skid steer loader," says Jack Zulkoskey, Prince Albert, Sask., about his articulated mini loader tractor that looks like a conventional skid steer at first glance but has a number of unusual features.

The tractor is divided into two parts with a single hydraulic cylinder between the two halves that bends them back and forth for steering, controlled by a hydraulic valve in the cab.

"The main benefit of this design, as compared to a normal skid steer, is that it doesn't dig up the soil when turning," notes Zulkoskey.

The basic frame was made from 5 by 3 1/2 in. by 3/8-in. angle iron. Front and back halves of the frame are joined by a 1 1/2 in. dia. pin that allows the driveshaft to run from the engine in back to the two transmissions in front. One transmission is used for speed selection and the other to run in forward or reverse.

The tractor mounts on two Ford Comet automotive differentials which were narrowed up to 44 in. "These differentials are strong and quite easy to shorten up. I

flipped the rear differential over to make it run in the opposite direction so it could be connected directly to the front differential. I also mounted the rear differential on leaf springs to add flexibility and improve traction.

"The tractor's powered by an 18-R Toyota 4-cyl. engine which has a hydraulic clutch that allows the operator to control it with a hand lever from the cab. The bucket cylinders are operated by foot pedals which are connected by rods and cams to hydraulic valves under the seat. As a safety feature, the pedals can be locked in a neutral position before entering or exiting.

"In an effort to control vibration and noise, I mounted the cab on rubber isolators and mounted the motor on its original rubber mountings. When side panels are removed the engine is completely exposed for ease of maintenance.

"One drawback of the design is that it can be difficult to drive in a straight line because of the tendency to oversteer."

Contact: FARM SHOW Followup, Jack Zulkoskey, Rt. 2, Prince Albert, Sask. S6V 5P9 Canada (ph 306 764-8581).

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Some of the best new products we hear about are "made it myself" innovations born in farmer's workshops. If you've got a new invention or favorite gadget you're proud of, we'd like to hear about it. Send along a photo or two, and a description of what it is and how it works. Is it being manufactured commercially? If so, where can interested farmers buy it? Are you looking for manufacturers, dealers or distributors? (Send to FARM SHOW, Box 1029, Lakeville, Minn. 55044)

Mark Newhall, Editor

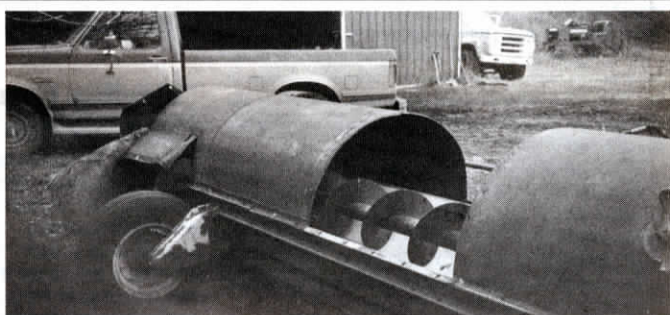


Photo shows part of shield removed on Guleson's windrower to show auger mounted behind flails. A set of fans throws stalks out discharge at left side of auger.

He Turned A Flail Chopper Into A Big Capacity Cornstalk Windrower

"If I'd known this was going to work out so well, I'd have bought a newer chopper to make it out of," says Rutland, N. Dak., farmer Grant Guleson about an old flail chopper he turned into a big capacity corn stalk windrower.

"I was looking for a practical way to put up corn stalks for cattle feed, but I wanted to pick up a lot more than one or two rows at a time," Guleson explains.

He bought an old Lundell 15-ft. wide flail chopper and removed the original hood over the flails and discarded it. He mounted a 12-in. dia. auger behind flails to carry stalks to the left side of the chopper. Then Guleson replaced the last 2 ft. of flighting on the auger with two fan blades 6-in. wide by 2-ft. long. The blades blow stalks out the back of the machine to form the windrow.

He cut up a big barrel to make a new hood over the flails and auger. Cut in half

lengthwise and bolted in place, the barrel hood has 1 1/2-ft. more clearance than the original hood. He cut a flap in the hood on the discharge end where stalks exit the windrower.

Making the discharge just the right size was the trickiest part of the project, according to Guleson.

"We wanted the windrow to be a little less than 2 ft. wide so the combined double windrow after two passes wouldn't be more than 4 ft. wide, the width of our Case-IH 3640 baler," he explains.

By making two passes Guleson can combine 12 (30-in.) rows into one big windrow for baling.

"We built the windrower last summer and we baled stalks with it last fall," he says. "It worked great."

Contact: FARM SHOW Followup, Grant Guleson, R.R., Box 17, Rutland, N. Dak. 58067 (ph 701 724-6201).

"We've hauled at least 400 tons of material with it and about all we've had to do to the bus is change the oil and tune it up," he says.

Contact: FARM SHOW Followup, Raymond Heer, 3783 Brinkerhoff Rd., Syracuse, N.Y. 13215 (ph 315 673-2044).



Schoolbus Anhydrous Nurse Tank

Old schoolbuses make great anhydrous ammonia nurse tank haulers, says Raymond Heer who mounted a 1,000-gal. tank on a stripped down 1966 International bus.

"We custom-apply anhydrous and about 10 years ago we needed a new running gear for our nurse tank wagon," explains Heer, Syracuse, N.Y. "A new running gear would have cost \$800 or more so we modified this old schoolbus we'd bought from a local bus garage for \$150."

To begin converting the full-size bus, which is powered by a straight 6-cyl. engine, Heer took off the roof of the bus from just behind the driver's seat by drilling out the pop rivets holding it on. He did the same

just ahead of the rear bubble and emergency door.

Heer next removed the seats and sheet metal sides, keeping the 3/4-in. thick plywood flooring.

He moved the rear bubble and emergency door forward to form a cab and bolted and riveted it into place. The emergency door gives him easy access to the tank.

Heer then welded 2-in. channel iron across the frame and bolted springs to it for a 1,000-gal. anhydrous tank to ride on. A 5 hp Briggs & Stratton motor behind the tank transfers material from the tank to applicator.

The whole setup cost just under \$2,000 including a new tank.