Made It Myself

(Continued from previous page)

Combine Converted To 4-WD

A Manitoba farmer who converted his 1982 New Holland TR85 combine to 4-WD says he'll never again be slowed down by wet conditions at harvest.

Brian Yokimas says that 3 out of the last 15 years have been so wet equipment couldn't get into the field. So even though the last two years have been dry, he decided to make the conversion so he'd be ready for the next wet season.

He first looked at a Deere conversion kit but it cost $13,680, not including wheels and tires. He decided to come up with his own 4-WD conversion package.

The first step was to convert the machine's standard transmission to hydrostatic drive. Yokimas bought a used Deere hydrostatic unit for $1,600 from a combine salvage yard and a new set of drive belts. Then he bought the wheel-drive units from the same salvaged combine for $5,500. Before settling on the Deere drive system, he carefully studied all makes of combines with driven rear axles. "I wanted the Deere drive axle because of its cam lobe hydraulic motor," he says. "All the other bands use a hydraulic motor to run a gear reduction unit. The cam lobe has one large, slower turning motor which forms the inner hub. There are 12 pistons working on 15 lobes for continuous power, plus it freewheels instantly when disengaged.

"One thing I really like is that the Deere axle can engage without slowing the combine suddenly. I hardly feel it when it engages. The hubs have a small pump which parks the pistons, allowing the axle to freewheel. This way it doesn't cost a lot of fuel just dragging it around."

To mount the new wheel-drive components, Yokimas first had to build a new rear axle. He used two 4 by 6-in. square tube beams with 3/4-in. thick steel plates welded to the ends. The hydraulic drive hub assemblies attached to these plates. He made the axle wider than the original NH axle.

Two main hydraulic lines run from each wheel motor, and these four lines run to a shift control valve mounted on the side of the combine. The valve, which turns the axle on and off, is engaged by an electric solenoid operated by a simple on-off dash switch. Two main hydraulic lines run from the valve to existing ports on the combine's "new" hydrostatic drive unit.

Yokimas fitted the combine with the larger size tires - 16.9 by 26 - compared to the 14.9 by 24 tires that he found available on most drive axles. "I'm ready for the worst that can happen. In 1985, we had to give up and shut down. I don't want that to happen again," he says.

As a finishing touch, Yokimas replaced the single steering cylinder with a set of matching Deere steering cylinders, providing an extra steering boost.

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"Remote Control" 3-Pt. Quick Hitch

The addition of a power window motor from a '76 Buick to his Deere quick hitch lets George Wiemers, Greenview, Ill., hook up to 3-pt. mounted implements without getting out of his tractor cab.

Wiemers also replaced the top link on his 3-pt. with a 3 1/2 by 12-in. hydraulic cylinder which allows him to tilt the quick hitch back and forth to more easily line up with implements.

"The cylinder makes hookups a lot easier. You don't have to get the tractor perfectly lined up or hurt your back trying to jockey the equipment into position," says Wiemers, who says the two 3-pt. hitch improvements save him a lot of time hooking and unhooking.

Both ends of the cylinder are pinned to shop-made yokes. The cylinder, which replaced the existing turnbuckle, is extended or retracted at hookup to match the tilt of resting equipment. It could also be tilted back and forth when using a rear-mounted bale fork, bucket or other equipment.

The electric window motor mounts sideways on the top cross member of the quick hitch. It pulls on ropes that latch the implement in place. "It was tricky getting it positioned just right but once it was in place, it works great. I couldn't find anything on the market that would do what this hitch does," says Wiemers.

A short lever attached to the sprocket of the window lift mechanism attaches to ropes running to latches on either side of the quick hitch. It pulls on both ropes at once. To unhook, Wiemers activates the motor to pull the rope to unlatch the implements, drops the implement to the ground, and then extends or retracts the top link cylinder so the 3-pt. can drop freely away from the implement.

Wiemers is obtaining a patent on the device, which he hopes to develop commercially.

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Nifty Wire Stretcher

"I've used this wire stretcher for 20 years. My father made it but I don't know where he got the idea and no one I've met has ever seen one before," says John Fuqua, Waynoka, Okla., about the home-built wire stretcher he uses to splice barbed and smooth wire fence.

"It makes quicker and tighter splices than any power puller or conventional wire stretcher. It's made from two 1-in. pieces of pipe connected by a 1-in. elbow. One piece - the 'handle' - is 16 in. long and the other is about 8 in. long. A 5/16-in. hole is drilled into the 8-in. long piece about 2 in. out from the elbow.

"When you have a broken fence wire, simply make a loop in each end of the broken wire and then insert a length of smooth wire into one loop and tire it. Then slip the other end of the smooth wire through the second loop and then insert the end into the hole in the pipe stretcher. Then you turn the handle on the stretcher until the fence wire is as tight as you need, and back off to tie it. This stretcher totally eliminates the slack you get with conventional stretchers and makes long lasting, tight splices. It also costs next to nothing to make and is easy to use.

"I hope other FARM SHOW readers can get as much good use out of this idea as I have."

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12-Row Front-Fold IH Planter

"It folds easily for transport and cost only $15,000 to build," says Art Doyle, Hampton, Ontario, who turned two International 8-row straight-frame planters into a 12-row front-fold model.

Doyle copied the folding design of Deere's 7000 planter to build his own front-fold frame which is equipped with one 4-row center section and two 4-row wings. Two hydraulic cylinders fold the wings forward. He used the hoppers and row units from the two 8-row planters. Each hopper serves 6 rows. He pulls a Deere air seeder behind the planter to blow dry starter fertilizer up to the planter.

Doyle uses the planter for custom work only. "I had been planting with two 1982 IH 8-row planters and decided I wanted a 12-row planter in order to save a man and a tractor. However, a new IH 900 12-row planter would have cost about $58,000. Also, I don't like the rear-fold design on IH planters because there are too many moving parts. I built my front-fold frame for just $2,300.

"It really folds slick. The tongue is built in two sections, with one section sliding inside the other when the planter is folded out for field position. The tongue is 16 ft. long in field position and 32 ft. long in road transport position. The planter has eight lift assist wheels - four on the center section and two on each wing. Each lift assist wheel is equipped with a hydraulic cylinder. An automatic leveling device allows each wing to float up and down independently."

Doyle got the second IH 8-row planter from a neighbor who had junked it. He rebuilt some of the row units. He used 7-in. sq., 3/8-in. wall steel tubing to build the planter frame and 7- and 6-in. sq., 1/2-in. wall steel tubing to build the tongue. Six hydraulic lines and four monitor lines are protected inside a flexible plastic tube mounted on top of the tongue. When the wings are folded out into field position the tube is automatically folded in half over a mechanical hinge device.

A pto-operated hydraulic pump mounted behind the tractor operates the blower fans on the planter, and the tractor's hydraulics operate hydraulic cylinders mounted on the lift assist wheels and planter markers, and also the blower on the air seeder. The markers are operated by a separate remote outlet on the tractor, allowing Doyle to operate them independently of lift assist wheels.

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