

Repowered IH 4-WD Uses 50% Less Fuel

When the V-8 diesel engine on David and Ken Bense's 1985 IH 4786 4-WD tractor wore out, the rest of the tractor was still in good shape. The Hope, Ind., farmers replaced it with a 6-cyl. Cummins 855 diesel engine out of an IH 4070 cab-over semi tractor.

"It was a lot of work, but the repowering job made it a good tractor again," says David. "We already had the truck, which we had bought used several years earlier. The wiring in the truck's chassis was worn out so we sold the truck for scrap but kept the engine. It had about 100,000 miles on it but had been overhauled recently so it was still in good shape."

They lengthened the tractor frame and hood 14 in., making the cut up front so the new engine wouldn't sit directly over the welded-together part of the frame. A local machinist bent sheet metal for the hood. The new engine bolted to the tractor's 10-speed transmission without any modifications.

They made new engine mounts and had a plate made to adapt the tractor's hydraulic pump to the engine. The bolt pattern on the

Cummins matched up perfectly with the original bell housing.

The tractor was originally equipped with a muffler that came straight up through the middle of the hood. They fitted the repowered tractor with a side-mount muffler they made out of a 10-in. dia. pipe off an old grain leg. They welded disk blades on top and bottom of the pipe and also fitted it with a chrome rain cap. A chrome guard over the pipe keeps anyone from getting burned as they climb into the cab. To connect the muffler to the engine they bought new 5-in. dia. muffler pipe.

The air cleaner on the other side of the engine came off the semi truck, with the air cleaner's stainless steel pipe reworked to fit the tractor.

"We even removed some gauges from the truck dash and installed them in the cab," says David. "Larry Thayer, a retired neighbor who worked in the trouble-shooting department at Cummins, helped us do the work. We were able to sell parts off the old IH engine for about \$1,000. Our total cost was about \$16,000, which was a lot less than buying a



David and Ken Bense replaced the V-8 diesel engine on their 1985 IH 4786 4-WD tractor with a 6-cyl. Cummins 855 diesel engine out of an IH 4070 cab-over semi tractor.

newer tractor with a bigger engine. The tractor's original engine is high maintenance and parts for it are very expensive.

"We use the tractor for most of our tillage work including chisel plowing and disking. The Cummins engine has about the same

horsepower as the tractor's original engine. However, it uses only about half as much fuel."

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Bale Handling Truck Loads, Hauls, And Stacks

Richard Weber's home-built bale-hauling truck can pick up and load 10 big round bales nearly as fast as he can drive through the field.

Weber and his brother Dennis designed the unique truck in the late 1980s. Weber had a part-time bale-hauling business, using a 1-ton dually pickup, a 38-ft. gooseneck trailer, and a tractor at both ends to load and unload the bales. He decided he could save a lot of time and haul more bales if he had a machine that would load, haul, and unload the bales.

He explained what he wanted to his brother, an engineer, and the two of them decided what materials were needed to build such a machine.

It's built around a 1972 Chevrolet C-50 cab-over truck and chassis.

Up front is a bale fork that can be moved side-to-side by a hydraulic motor. To pick up and load a bale, two hydraulic motors raise the fork up a rack-and-pinion type curved

track mounted on each side of the cab. At the top of the cab, the bale fork releases the bale onto a table that sits behind the cab.

When Weber has loaded two bales side-by-side onto this table, the table lowers hydraulically and sets the pair of bales onto a chain apron on the truck bed. Hydraulic motors move the tracks back 5 ft. while Weber drives to the next bale.

Weber's truck will handle 10 bales at a time. He can fill it up in about 10 minutes if the bales aren't spaced too far apart on the field. The bed tilts to unload the bales. Weber says they slide off so that they are lined up snugly end-to-end.

Weber says one of the toughest parts of building the truck was making the tracks for the fork. His brother Dennis made the arc from rectangular steel tubing by cutting small sections, bending them together, and welding them in place. Then he cut a 4-in. wide



Bale-hauling truck designed by Richard and Dennis Weber is built around a 1972 Chevrolet C-50 cab-over truck. It can load up 10 big round bales on-the-go.

strip out of the inside of each tube and installed the rack inside.

Weber says they worked at the track in their spare time, so it took about a year to get it all together. Once they took it to the field, a few bugs showed up that had to be fixed before everything would work correctly.

The truck allowed him to build up his part-time business into a full time job and now has more than 130 customers.

Weber figures he spent around \$25,000 on materials to make the bale loader and flatbed. That doesn't include the truck itself.

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Tillage Tool Rebuilds Ridges In One Pass

It took four years of trial and error, but Don Ohlman and his son Kevin, Central City, Nebraska, have come up with what they feel is the ultimate ridge-till tool.

"It's a one-pass tool that cuts and mixes residue into the soil as it rebuilds ridges," Kevin says.

The implement, which they have trademarked as the "Row Wrangler"™, does several different operations at once. Up front, a six or eight-blade chopper sits over the ridge. As the chopper cuts crop residue at the ridge, 22-in. banded coulters slice through crop residue at the bottom of the furrow at a constant depth. Behind and to the side of the banded coulters are scalping discs that scalp the side of the ridge, eliminating weeds and rebuilding the ridge. Following those are ripper sweeps that help relieve soil compaction and further mixes crop residue and soil. At the back there's a mulcher which further mixes crop residue and firms the ridge for planting.

All components are mounted on the toolbar using parallel linkages and down-pressure springs.

The Ohlman's received a patent on the Row Wrangler and have been selling it for a year now. Final assembly of the units is done in the Ohlman shop, but they've contracted with



Tool has 6 or 8-blade choppers up front and ends with harrow sections on back.

outside suppliers for components. Current available sizes range from 4-row, 36 in. up to a 10-row, 30 in.

Ohlman says each unit requires 20 to 25 hp, so a 150-hp tractor can pull a 6-row Row Wrangler. The list price ranges from \$13,133 for the 4-row, 36-in. configuration to \$30,633 for the 10-row, 30-in. machines. The Ohlman's are working with dealers but are also selling the machines direct.

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"It cuts and mixes residue into the soil as it rebuilds ridges," say Don and Kevin Ohlman, who came up with what they say is the ultimate, one-pass ridge-till tool.