

## Massey-Ferguson 4-WD Tractor Repowered With Detroit Diesel Engine Out Of A Semi

When the 200 hp Caterpillar diesel engine in his 1975 Massey Ferguson 1805 4-WD tractor wore out, Bill Juhnke, Parkston, S. Dak., replaced it with a 318 hp, V-8 Detroit diesel engine out of a semi tractor.

"It gave the tractor a lot more power so we can do more with it than ever before. I paid \$2,000 for the engine and spent a total of less than \$4,000," says Juhnke, who put the new engine in last winter with the help of his son Barry.

He bought the engine, which originally powered a 1972 International cab-over semi truck, at a local salvage yard. He used the truck's rear motor mounts as well as the dual exhaust stacks, air cleaner, radiator, and intake pipes. He had to lengthen the tractor frame about 6 in. to make room for the new engine. After he put the new engine in, there wasn't room under the hood for the 15-gal. hydraulic oil tank so he relocated it behind the tractor cab.

He had a machine shop make a new fly-wheel drive plate and also a telescoping "dog bone" that belt-drives a pair of hydraulic pumps on back of the engine. "The dog bone makes it much easier to change the belts - instead of having to slide the engine ahead we can just loosen the dog bone and slip it ahead 3/4 of an inch or so," says Juhnke.

The tractor's original radiator was designed with top and bottom tanks that bolt together. The radiator didn't have enough cooling capacity for the new engine so he had a radiator shop make it bigger and also increase the number of cooling tubes. The radiator has seven rows of offset tubes - a total of 312 compared to the original 150.

He mounted the semi truck's two exhaust



**Bill and Barry Juhnke replaced the 200 hp Cat diesel in their MF 1805 4-WD with a 318 hp, V-8 Detroit diesel. "The extra horsepower lets us do more with the tractor than ever before," they say.**

pipes on front of the tractor and mounted the truck's air cleaner, as well as its vertical air intake pipe, alongside the cab. A length of 6-in. dia. steel auger tubing connects the air cleaner to the engine. Lengths of smaller diameter flexible tubing, positioned at an angle, connect the exhaust manifolds to the exhaust pipes.

"We put a lot of time and work into the project but it paid off because now this old tractor pulls like you can't believe," says Juhnke. "I enjoyed doing the work and wouldn't be afraid to do it again. I paid about \$900 for the radiator and \$300 for a new drive plate and dog bone.

"The original 3208 Cat engine is a nice one for a 2-WD tractor, but I think it's too small for a 4-WD tractor. The new engine has about 100 more horsepower than the old one. We use it mainly to pull a 7-shank subsoiler and a 21-ft. chisel plow. We may change the fuel injectors from 65 centimeters to 75 centimeters which would boost horsepower to about 350."

## Oliver Repowered With Cat 3208 Diesel

Juhnke and his son Barry also replaced the Caterpillar 3150 engine in his 1972 Oliver 2255 tractor with a Caterpillar 3208 out of an old New Holland 70 Twin Rotor combine. "We made the conversion after the original engine wore out. It boosted the horsepower from 150 to 200 or so," says Juhnke. "The 3208 engine starts much better than the old one and has a lot of power for a 2-WD tractor. I paid \$2,000 for the engine.

"The conversion didn't require a lot of modification work because the engines are quite similar. The main difference is that the new engine is about a half inch longer. As a result the front motor mount for the old engine wouldn't fit so we had to use the one from the 3208 instead. Also, the engine's water outlet to the radiator wouldn't fit under the hood so we had to cut and weld it at a different angle.

"The throttle linkage rod had to be straightened out and rebent in order to reach the new fuel pump on the 3208 engine and we had to slightly restroke the linkage. We



**The Juhnke's replaced the Cat 3150 in their Oliver 2255 with a Cat 3208 out of an old NH 70 Twin Rotor combine.**

also added two more V-pulleys to the engine crankshaft in order to operate a Gresen TB 12 Hydro Pump. We use the pump to operate a pair of seed drums on our International 500 16-row, 22-in. corn planter.

"We bought the tractor used. The owner had already equipped it with two exhausts outside the frame in order to keep too much heat from building up under the oil pan."

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**One side of hopper can be folded down, allowing you to use a forklift to set two 2,500-lb. bulk seed bags or two "Pro Boxes" into hopper.**

## Seed Handling System Works With Bulk Containers, Bags, Or Boxes

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folded down, allowing you to use a forklift to set two 2,500-lb. bulk seed bags or two "Pro Boxes" into the hopper.

"It works much like the way a tailgate opens on a pickup," says Friesen.

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Sells for \$5,200 (Canadian).

Contact: FARM SHOW Followup, Haul-All Industries, Rt. 1, Box 121, Morris, Manitoba, Canada R0G 1K0 (ph 204 746-8260).



**Swinging conveyor allows you to fill up to a 20-ft. planter without having to move unit. Conveyor mounts at base of steel hopper that mounts on any trailer or truck flatbed.**

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Mark Newhall, Editor

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