STEEL BARS "BITE" INTO TRACK BETTER THAN ORIGINAL RUBBER DRIVERS

Modified Cat Challenger Runs On Steel "Drivers"

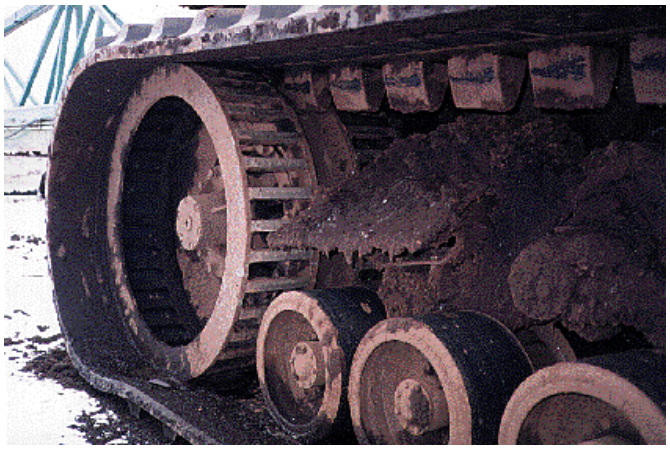
By Bill Gergen,
Associate Editor

Problems with slippage on wet ground with his Cat Challenger tractor prompted a frustrated Canadian farmer to remove the original rubber drivers on the tracks and replace them with home-built steel drivers.

"I have three Caterpillar Challenger tractors - a 45, 65, and 75C - and I'm pleased with them for the most part. However, whenever our organic peat muck soils are wet they get very slippery and the tracks slip. The more they slip, the more the rubber drivers wear down. All the power goes to one side of the tractor so if the operator tries to turn on wet soil the track just spins and he loses control," says Boris Horodynsky of Churchill, Ontario.

"Caterpillar's rubber drivers have only 24 rubber bars while my steel drivers have 36 bars. The more bars, the more 'edges' that can bite into the track," says Horodynsky. "The edges of the steel bars don't wear down as fast as rubber, and because the bars stick 1/8 in. beyond the rim they provide a better grip. Another advantage is that my bars are narrower than the rubber bars so mud cleans out quicker. The rubber bar design squeezes mud out to the side whereas with my steel bar design mud is squeezed out through the center of the wheel."

Horodynsky welded thirtysix 1 1/4-in. wide steel bars onto outside part of original driver wheel rim. Bars extend 1/8 in. beyond rim to provide a better grip.



Steel bars don't wear as fast as rubber and are narrower so mud cleans out quicker.

To build the drivers Horodynsky cuts off the outside part of the original driver wheel rim. He then forms a 1 1/4-in. wide steel ring and welds it onto the inside part of the rim. Then he welds 36 1 1/4-in. wide steel bars onto the outside, positioning the bars so they extend 1/8 in. beyond the rim.

"I tested my first set of steel bar drivers on my Challenger 65 last spring. They worked so well I recently built one more set for my 75C. I also built two drivers for Caterpillar so they can test them.

"Before I built my steel drivers, Caterpillar sent me a set of their own experimental steel drivers but they didn't work well on our organic soils."

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3,100-GAL. TANK ON TRACKED CARRIAGE

"World's Biggest Sprayer" Has A 150-Ft. Boom

"As far as I know it's the biggest sprayer ever built. It lets us cover as many as 200 acres between refills and mounts on rubber tracks so it has great flotation," says Boris Horodynsky, Churchill, Ontario, who built a 150-ft. sprayer with a 3,100-gal. stainless steel tank. He uses a Caterpillar Challenger to pull it.

The 14-ft. long, 9-ft. wide spray tank mounts on top of Caterpillar's 116 Mobile Trac System. When loaded, the tank weighs about 18 tons but exerts only about 8 psi on the ground, keeping compaction to a minimum. The tracks are 20 in. wide and 116 in. long from hub center to center. A platform on top of the tank makes filling easy. The platform, which is surrounded by steel hand rails, was made by welding hog slats together.

"We now make only half the tracks that we made with the 75-ft. sprayer we used before. Fewer tracks has greatly increased yields on the onions and other crops that we grow," says Horodynsky. "For example, we figure that for every sprayer track we eliminate we get about 10,000 more bags of onions so the sprayer quickly paid for itself. If I'm spraying at low rates I can cover 200 acres at a time before I have to refill," says Horodynsky, adding that the boom hydraulically folds forward for transport.

Horodynsky says he spent about $130,000 to build the big sprayer.

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Boom hydraulically folds forward for transport. Platform on top of tank makes filling easy.

Fertilizer Spreader Mounts On Challenger 75C Tractor

"I built it because I wanted to keep big, heavy fertilizer trucks out of my fields. It can carry six tons of fertilizer and weighs about 45,000 lbs. when loaded but exerts only about 6 psi on the ground," says Boris Horodynsky, Churchill, Ontario, who built a 3-pt. mounted fertilizer spreader for his Challenger 75C tractor.

The hydraulically-powered unit spreads fertilizer in a pattern about 50 ft. wide. Horodynsky uses either a forklift or a truck-mounted auger to load the stainless steel hopper. To compensate for the extra weight on back he mounted 2,200 lbs. of weights on front of the tractor, which is equipped with 35-in. wide rubber tracks.

"It'll go through the wettest fields with no problems and without leaving ruts," says Horodynsky. "We had been using big fertilizer trucks which left 3 to 4-ft. deep ruts in our peat soils in a wet spring. I did a plywood mockup before I built it because I wanted to make sure I brought the weight as far forward as possible."

Horodynsky says he spent about $12,000 to build the spreader.

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