Self-Propelled Grain Cart Built From Mack Truck

"It gets grain out of the field fast and frees up a tractor," says Gerald Bruner, Conrad, Mont. He and his son, Brad, built a self-propelled grain cart using the frame of a 25-ton Mack "rock truck" used to haul rocks out of mines. It's equipped with a home-built 900-bu. hopper on back that measures 20 ft. long by 13 ft. wide. It travels at speeds up to 28 mph.

The cab came off an Elgin street sweeper, complete with dash, steering column, seat, heater and air conditioner. The 450 hp Cummins diesel engine, with Allison automatic transmission, was pulled from an old semi truck. The hood is off an old Versatile 950 4-WD tractor. The machine rides on 5 1/2-ft. tall wheels on back and 5-ft. tall wheels on front.

"We used it on our wheat and barley crops for the first time last fall. It worked great with no problems," says Bruner. "It'll unload the 900 bu. load in only about 5 min. with its 16-in. dia. auger.

"My son drives the combine and I haul the grain. In the past, every time I took off for the grain bin I knew that when I returned to the field the combine would be waiting for me. I didn't think adding another pull-type grain cart would be the answer because it's too slow and would need another person to operate it."

The two men lengthened the Mack truck frame 6 ft. on front and 4 ft. on back, using 3 by 2 and 2 by 2-in. sq. tubing to build a frame for the hopper. The sides were fashioned out of sheet steel from old fuel tanks. A pair of side by side, 12-in. dia. drag augers bring grain to the back. One auger discharges grain out a chute on one side of the hopper to load grain bins, and the other feeds grain into a 16-in. dia. fold-up auger that's used to load trucks. Both drag augers are covered by a series of trap doors that are connected together by a metal rod, allowing a hydraulic cylinder to open and close all the doors at the same time to adjust grain flow. Each door sets inside a separate compartment, making grain cleanout an easy job.

The grain cart has four hydraulic systems, which were designed by Big Sky Hydraulics of Great Falls, Mont. One system drives the twin augers at the bottom of the hopper; one drives the 16-in. dia. unloading auger; one opens and closes the trap doors; and one operates the machine's steering system.

"It's an awesome machine and works amazingly well. We spent about $40,000 to build it," says Bruner. "We scrounged most of the materials and worked on it for 3 winters. The Mack truck came with an awesome set of brakes, which is really important when hauling this much grain. We even made our own fire extinguisher system, mounting a 30-gal. water tank and 75-ft. hose reel on one side of the hopper. The water tank is pressurized off the Mack truck's air brakes.

"We also fitted the machine with 3 remote-controlled cameras – one on each side of the hopper and one on back – and they really come in handy," notes Bruner.

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Seed Boot Mounting Repair Kit

Craig Craft recently sent FARM SHOW photos of a kit he developed to solve a common problem with the seed boots on Deere 50, 60, and 90 Series no-till grain drills.

"Deere no-till drills use a pair of cast iron lugs on the main arm to mount the seed boot. The lugs don't have replaceable bushings. As the center seed boot mounting hole wears, the rear of the seed boot works loose and flexes upward, allowing seed to randomly miss the furrow," says Craft.

His solution to the problem involves drilling out the hole on the seed boot mounting lug, then installing a hardened full length bushing made from heat-treated aircraft grade alloy steel.

"Restoring the tight fit of the boots results in better stands and higher yields," says Craft. "The repair can be made with the mounting arms still mounted on the drill. The seed boots themselves require no modification. Only the seed boot and opener blade have to be removed."

The kit he developed includes a 2-piece drilling jig that's used to drill through the hole, and the hardened bushings. The bushings are driven into the worn-out holes in the mounting lugs using a simple driving tool that Craft designed.

"The new bushings allow the seed boot to pivot as originally designed," says Craft. "Thanks to our drilling jig, the holes are true and parallel to the original location. The kit actually lets you restore the seed boot mounting clearances to better than new tolerances. For example, factory new 50 Series drills have less than 3/4 in. total bearing surface for the seed boot mounting bolts, while drills repaired using our method have 2.125 in. of total bearing surface.

"The repair allows you to use OEM parts and hardware. Factory and aftermarket seed boots, mounting bolts, and leaf springs can be installed without modification."

A complete kit for 12-row drills sells for $475 plus S&H; 24-row drills, $595 plus S&H; 32-row drills, $695 plus S&H; 44-row drills, $795 plus S&H.

Craig Craft developed this kit to repair the seed boot mounting hole on Deere 50, 60, and 90 Series no-till grain drills.

Repair involves drilling out the hole on seed boot mounting lug, then installing a hardened full length bushing.

"Restoring the tight fit of the boots results in better stands and higher yields," says Craft.

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