



Hernke built a frame and fastened two wheelbarrows with piano hinges for a low impact hauler he moves with his zero-turn mower.

Double Wheelbarrow Is A Handy Hauler

Al Hernke uses his latest time and labor-saving invention almost every day around his farmyard, and on several occasions over the last two years, it's also been a handy helper in his church's cemetery.

"People couldn't believe it when they saw two wheelbarrows being pushed by a zero-turn lawn mower in the middle of the cemetery," Hernke says. "Then again, they've come to expect unusual things built in our farm shop."

Hernke came up with the clever idea as an easy-to-handle and lighter alternative to a skid steer loader. "Our cemetery committee was resetting nearly 100 sagging headstones and we started using a skid steer to move rock and gravel to shore them up," Hernke says. "It was too heavy, tore up grass and left deep tracks. I had two old wheelbarrows sitting

around, so I built a cart frame to hold them side by side."

Hernke removed the front wheels from the tubs but left the handles in place. He fastened the tubs to the cart frame using piano hinges so material could be easily dumped out. The cart has a sturdy axle and two old wagon wheels in front. He attaches it to his 37 hp. Husky zero-turn mower with a ball hitch.

"The wheelbarrows and mower are a lot lighter than the skid steer, so they didn't leave any tracks between the headstones," Hernke says. "I could maneuver the cart anywhere to lay down gravel fill or haul away sod and dirt."

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Power Take Off Remover, Installer

As he grew older, Tony Bunniss grew tired of trying to disconnect the pto from his Deere 420 Garden Tractor.

"When I was young, I had no problem pushing the ring back and collapsing the spring on the pto, which allows the steel balls to move out of the groove on the engine shaft so that the implement shaft could be slid off," he says.

"But over time, it got harder for me to collapse the spring. In fact, it became almost impossible, and I couldn't get down and lay alongside the mower at all."

His solution was to build a device that improved his grip. He used miscellaneous metal, shoulder bolts, springs, bolts, and nuts he found in his shop.

Before making his new device, taking the pto off - or putting it on - could take Bunniss over half an hour. Now he can do so in a matter of minutes.

His device is green on one side and yellow on the other because the handles are detachable and only used when removing the driveshaft. They aren't needed to install the shaft, but only to install the tool by pinching it until the notched locks are engaged. After that point, the spring gets compressed and dislodged while it's pushed on.

"I also machined a small dimple into both sides of the knuckles to keep the set screw in place when I removed the shaft," says Bunniss.

To remove the pto shaft, Bunniss installs the handles based on their color-coding. He then puts the tool on the knuckle, ensuring that the set screw is in the dimple, and pushes the handles forward until the notched bar locks the compressed spring and slides the knuckle off the pto shaft.

He's the first to admit it's an elaborate system for a relatively simple problem. "I know this is equivalent to swatting a fly with a baseball bat, but with age, I have to do things a lot different from when I was young."



Bunniss made a pto tool to make it easier to change implements. His tool helps move the spring with less effort and better grip than doing it by hand.



As with all his inventions, Bunniss is happy to share his experience with anyone interested. You can contact him directly for more details and access to blueprints for building your own pto remover and installer.

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Adding an application of tungsten carbide wire provides good backup to reduce wear on drills, augers and paddles.

Enhanced Tungsten Adds Hardness To Metal Parts

Larry Schmedding, owner and founder of Agri-Tool & Supply in Spokane Valley, Wash., has developed different methods of applying hard surfacing components.

To improve the process, Schmedding and Agri-Tool & Supply researched, tested and upgraded equipment lines including stick electrodes, wire products, powders and TIG torch rods.

"The old style of applying hard surface was braising," says Schmedding. "We use a tungsten carbide product combined with nickel, applied with powder torches. Powders are pre-mixed to determine what hardness you want, and then you powder braise it on. I've also got a real good stick electrode made in Germany along with a .045 in. diameter tungsten carbide bearing wire. Both are excellent products."

He says many people use a solid tungsten carbide chip on the leading edge of their seed drill points. An application of tungsten carbide wire provides an excellent backup to put behind the chip, keeping wear down.

Schmedding recommends the hard surfacing applications for farm, construction and

logging equipment, and explains it works on anything that wears. He creates online videos posted to the Agri-Tool website teaching hard surfacing techniques.

"I just show them how to do it and what product to use. It's simple once you learn the basics. People can braise it, using a welder or powder torch to add it themselves. The wire feed is self-explanatory. Anyone can do it."

"I've used other methods over the last 40 years, but this outdoes anything I've ever done. It doesn't chip or break off; the nickel binder does a terrific job of holding all the particles in place."

Schmedding prefers customers call for a customized price as the tungsten carbide along with nickel can be somewhat expensive. "It's worth it though," he says. "What it does far outweighs the cost. It saves a lot of extra wear. Downtime is the invisible profit killer for heavy equipment."

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Transfer system can move weight from the center of a planter to the wings to relieve down pressure on the carrying wheels and help ensure uniform planting depth.

Weight Transfer System For Large Planters

Planters are getting larger and larger with more weight on center-carrying wheels. Martin Industries has designed a weight transfer system to evenly distribute weight across the full width of planter toolbars. Made for Deere 1770, 1790 and 1795 12 or 16-row planters, the Martin system has bolt-on brackets, a pressure-relieving control valve and an in-cab control box for easy operation.

The Martin system transfers weight from the center of the planter to the wings, which relieves down pressure on the carrying wheels and helps ensure uniform planting depth. The valve and control system responds quickly to pressure changes so that weight transfer occurs immediately when the planter

encounters changing terrain.

Martin Industries says that weight transfer across the full width of a planter bar will reduce pinch row compaction that often leads to shorter, stunted plants and restricted root growth. The compaction also leads to poor germination, reduced nutrient uptake and ultimately lower yields in the pinch rows. The company cites Practical Farm Research data that shows an average of 12.6 bu./ac. yield loss on center-fill planters without weight transfer systems.

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