



Heavy-duty poly pad installs between hitch and drawbar to reduce wear and tear, says Agassiz Fabrication.

Poly Pads Extend Life Of Metal Wear Parts

“Our high strength UHMW poly products are a cost-effective way to reduce wear on high stress metal such as drawbars, hitches and chain guides,” says Paul Leedahl of Agassiz Fabrication. “UHMW has been used on fifth wheel plates for many years and now we’re making 3/8, 1/2, 3/4 and 1-in. thick pieces ranging in price from \$7 to \$20. They can be stacked on drawbars that carry heavy loads to prevent gouging and metal fatigue caused by turning and dust on the hitches. They’re a small price to pay for good hitch protection.”

Leedahl says that recently farmers have been adding the wear pads to grain cart

hitches. “One fellow told me that by using the pads, he can get an accurate reading on his cart scale by just stopping in the field after he’s filled, and not having to stop and back up like he did without them. The pads eliminate just enough stress so the scale settles quickly. That’s a real time-saver in the field because he’s hauling many cartloads a day.”

Agassiz also makes chain guides that provide better alignment and reduce wear on Deere 7100, 7300, 1710 or similar planters. Leedahl says, “FARM SHOW ran a story about that product 7 years ago and it’s amazing. We’re still getting calls from that. People



Poly chain guides provide better alignment and reduce wear on planters.

must never throw your magazine away! (Vol. 37, No. 3).”

Agassiz sells a kit that guides the chain on a polyethylene wear slide. The kit includes two slides that expertly align chain movement to eliminate sway that can gouge and damage planter tires. The \$170 kit installs easily using existing holes and extends chain life many times over, Leedahl says.

“Metal subjected to moving chains wears quickly, even if the chain is lubricated, so our Mod kit really protects the chain guide and the chain in addition to the tires,” Leedahl says.

Agassiz also makes custom OEM wear parts on contract for equipment manufacturers and is now starting to make protective hose and tube guides. “Those guides have typically been made of metal, but the metal degrades and rusts and eventually eats into hoses, especially on fertilizer equipment,” Leedahl says. “The UHMW material we use isn’t affected by corrosion.”

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Eric Nordell upgraded his horse-drawn cultivator by adding a hydraulic lift powered by a solar panel, battery, and 12-volt hydraulic pump.

Hydraulic Lift For Horse-Drawn Cultivator

Eric Nordell loves his McCormick-Deering straddle-row riding cultivator, but he loves it even more with the addition of a hydraulic lift. He appreciated the flexibility and efficiency of the century-old cultivator. What he didn’t like was raising and lowering it by hand. Nordell detailed his solution in a recent article in Rural Heritage magazine and shared an overview with FARM SHOW.

“The long lever on the right side of the McCormick requires reaching above shoulder height to lift the gangs into transport position,” says Nordell. “Although the lift spring can be adjusted to minimize the effort, repeatedly reaching overhead is not the best for the shoulder. Lowering the gangs can be even less ergonomically correct. Over the years, this repetitive motion can strain the shoulder, wrist and elbow.”

Nordell uses the cultivator repeatedly throughout the season, cultivating 3 acres of vegetables, forming and renovating planting beds, marking rows for direct seeding and transplanting, hilling potatoes, no-tilling and harvesting garlic and most primary tillage. With most rows running only 380 ft., that’s a lot of up and down motions.

It took a health emergency for Nordell and his wife Anne to upgrade the cultivator with hydraulics. They recognized doing it was a necessity if they were going to continue

farming.

“We contacted Jonathon Beiler at Crossroads Cultivator in Brogue, Penn.,” says Nordell. “He offered to build us a prototype hydraulic system for the cost of materials.”

Brackets, solar panel, battery and 12-volt hydraulic pump and cylinder came to \$963. Nordell went with a non-spillable, deep cycle marine battery. While it adds significant weight, it powers the hydraulic pump even in cloudy weather. Once installed, a push of a button raises and lowers the cultivator gangs.

“Even if we added the fair cost of labor and profit, it still would be one of our best investments in horse-drawn equipment,” says Nordell. “Our only regret is waiting so long to make this first-of-its-kind improvement.”

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Hydraulic pump and reservoir.



DynaCERT says adding a HydraGEN unit to diesel-powered equipment can result in to 15 percent fuel savings, along with improved diesel engine performance.

Add-On Hydrogen Units Reduce Diesel Use Up To 15 Percent

“Customers who add a HydraGEN™ unit to pickups, farm equipment, or semi-tractor diesel engines can expect a 5 to 15 percent fuel savings along with cleaner and smoother running engines with an ROI typically in 12 months or less,” says Ed Cordeiro, Americas Director of Sales at dynaCert. “A HydraGEN unit safely creates hydrogen on-demand by splitting water into hydrogen and oxygen gasses as needed by the engine. There’s no on-board storage of hydrogen gas, which eliminates the need for pressure vessel tanks, making the system very safe.”

Cordeiro says the HydraGEN system improves combustion by providing hydrogen and oxygen gasses to a diesel engine’s air intake through a proprietary electrolysis process. Those gasses aid fuel economy and reduce carbon emissions by nearly 50 percent and NOx up to 88 percent.

Engine performance data is gathered by the company’s HydraLytics Telematics analytics software from the engine’s OBD port and can be monitored from a smartphone app or computer.

Cordeiro notes that the farming community has been impacted by carbon taxes and the added complexity and cost of pollution control equipment like DPF filters and DEF.

The known benefits of adding hydrogen to enhance diesel engine performance has been studied since the 1960’s and Cordeiro says dynaCERT has spent 16 years and more than \$60 million Canadian on research and development to bring their product to market.

Their HG1 model is suitable for 10-15L displacement semi-tractor or farm tractor engines. It retails for \$6,500 U.S. plus installation. The smaller HG2 unit is suitable for 1-8L displacement engines.

The HydraGEN unit runs on 12-volt or 24-volt DC power and consumes 100 to 120W of power for the electrolysis system, heaters and climate controls. The unit needs to be refilled with 2 liters of distilled water after 50 to 80 hrs. of operation. Electrolytes need to be flushed and replaced once a year by a dealer, which typically takes less than an hour.

Cordeiro says both HydraGEN models can operate in temperatures from -40F to +122F because they have built-in heating and cooling systems that run automatically. Dealer locations are available on the company website.

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