Rotating Rock Picker Gets Rid Of Dirt, Debris

"It's actually fun to run it. It's like playing Pac-Man," says inventor Kent Roessler about what he calls his Robo Rock Picker.

The rock picker attaches to the front of a skidsteer. It tilts down to pick up rocks and then up to spin off dirt and debris. It picks up rocks 2 in. in dia. and larger and is strong enough to dig out partially buried rocks.

The Anoka, Minn., farmer invented the rock picker out of frustration. The rock bucket he had been using picked up a lot of debris and dumped good topsoil on rock piles where grass thrived. He sells rocks to area landscapers so he ended up moving rocks twice just to get them clean.

Roessler's home-built rock picker has a 3-ft. dia., 1-in. steel plate on the back with 5-ft. long, 1-in. cold rolled steel bars welded 2 in. apart. A no. 50 roller chain is driven by a hydraulic motor. The 400-lb. unit has a quick hitch for easy mounting. The rock picker works well on any medium-size skidsteer.

"There is really no maintenance to the machine. There's a bearing to grease every 50 hours and a little lube on the roller chain every 12 hours," Roessler says.

Unlike expensive windrow rock pickers that require level fields and have a short window of time to use, the picker can be used whenever there's free time.

"You can literally pick rock after chisel plowing in fall," Roessler says. "We pick right up until frost chunks won't screen out. In spring you can get in earlier because mud pushes through the bars."

Robo also holds 30 percent more rock than a rock bucket. After months of farm testing, three prototypes, and obtaining a patent, Roessler says he would like to talk to anyone interested in purchasing the royalty rights or partnering as a manufacturer. He estimates Robo would sell for about $4,000. He also has an upgraded version using HR400 steel.

Besides being a good tool for farmers, the rock picker works well for landscapers and construction workers who need to clean up roots and debris.

Roessler is just starting to get the word out about his invention, but Robo has been on YouTube since last November (www.youtube.com/watch?v=qMH_uq3Qf8Y). Even if you aren't in the market for a rock picker, it's worth checking out.

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Rock picker attaches to front of skid steer loader and tilts down to pick up rocks. After it's tilted back up, unit rotates to spin off dirt and debris.

Machine picks up rocks 2 in. in dia. and larger. It's strong enough to dig out partially buried rocks.

"Bigger, Better" Thresh Bars Boost Rotor Efficiency

Ron Kile came up with his patent pending thresh bars for AFX/specialty rotors in Case IH combines to improve threshing efficiency. He knew what was needed because he runs the rotors on his own farm.

"These bars work well in all crops, especially hard threshing crops, without over-threshing," he points out.

Kile Machine and Mfg. Inc. makes the thresh bar with several unique features.

Kile uses a "grasp and rasp" design for his high performance AFX/Specialty rotors bars. They have a 50 percent larger surface area per bar than OEM bars, and the Kile bar ramps boast a surface area that's 2.2 times larger than OEM bars, according to the inventor.

The wider ramp and face area of the Kile bars creates more contact on the concave. In addition, Kile bars have a 40 degree ramp angle which enhances the separation of material for a cleaner tank sample.

"Threshing is the act of material rubbing on material, and the thresh bar is the part that feeds the rotor, making it aggressive," Kile explains. "Because the Kile bars have a wider block than others on the market, they do a better job of feeding the crop to the concave, and perform a more complete thresh."

With a straight lead in, and the combination of standard and reverse rasps on each bar, the material is "managed" for a more complete thresh over the concave, as the cage transport vanes move the crop through the threshing/separating system. The alternating angles feed and comb material in opposite directions (for more efficient "rubbing") without retarding the flow.

The new thresh bars are made of cast chrome alloy and have high impact resistance for excellent wearability, says Kile.

"Our introductory price for the K 505 BI Thresh Bar, including mounting hardware, is $21.75 each, plus S&H," Kile says. "You can see them, along with the other types of bars we manufacture, on our website.

"We have dealers in the majority of U.S. states and many of the provinces in Canada," he says. New dealer inquiries are welcome.

Contact: FARM SHOW Followup, Kile Machine and Manufacturing, Inc., 401 Squires Road, Rosalia, Wash. 99170 (ph 509 569-3814; info@kilemfg.com or kmminc@juno.com; www.kilemfg.com).

High performance thresh bars are designed for AFX/specialty rotors in Case IH combines. "They work especially well in hard threshing crops," says inventor Ron Kile.

System Injects Water & Ethanol To Create Cleaner, Cheaper Fuel

CleanFlex Power Systems cuts fuel costs and extends engine life with a water/ethanol/diesel fuel mix in diesel engines. The patented dual fuel system can run diesel engines on a mix of 5 percent diesel fuel and 95 percent 120-proof ethanol. That's 5 gal. of diesel fuel, 57 gal. of pure ethanol and 38 gal. of water for every 100 gal. of the mix.

"We can go to such a high percentage of 120-proof ethanol without worrying about lubricity for two reasons," explains Ron Preston, president, CleanFlex Power Systems. "We bypass the injector pumps, which is where most of the lubrication is needed, and when the ethanol/water is injected into the combustion chamber, the water turns to steam, which has a lubrication effect of its own. In fact, today's low sulfur fuel is a dry fuel, and a lot of engines are being affected. We believe our system will extend engine life."

Preston says the CleanFlex technology can reduce fuel consumption by 10 to 30 percent and boost horsepower that much as well.

The system uses a separate tank for the ethanol/water mix and a delivery system that sends water to the cylinders through the air intakes. It's in the cylinders that the higher energy diesel fuel mixes with the lower energy ethanol/water mix. The result is a slower, cooler and more complete burn with the additional power provided by water turning to steam.

CleanFlex engineer Kevin Kenney equates the system to putting a steam engine inside a diesel engine.

The combination of a cleaner burn, more power and lower fuel costs has attracted the attention of the Burlington Northern Santa Fe and Canadian National railroads and the Environmental Protection Agency (EPA).

"Third party independent tests completed on a diesel locomotive provided by one of the railroads went very well," says Preston. "We saw expected reductions of up to 50 percent in nitrous oxides, but particulate matter reductions were more significant than expected."

Preston says some alterations were made for the giant diesels, but the system was essentially the same as is run in farm tractors.

"We are also working with the EPA for approval of our system for on-road trucks," says Preston. "We are in the process of getting certified. We believe we are a piece of the answer for meeting Tier 4 emissions standards."

Preston explains that most Tier 4 technology is designed to treat pollutants after they have been produced in the engine. CleanFlex, he says, is actually a pretreatment, preventing the pollutants from ever being produced.

"We think we are very close to meeting their requirements and getting approval to convert existing diesels to meet Tier 4 standards," says Preston.

Meanwhile CleanFlex is continuing to expand its market in Canada and the U.S. with farm equipment dealers. Preston says a website is under development to help direct buyers to established dealers. In the meantime, he refers inquiries himself.

Installing a system takes approximately half a day and costs between $5,000 and $7,500, depending on the engine. It's what Preston calls a "non-invasive" install, but he recommends that it be done only by a professional mechanic.

"If you ever need to run pure diesel, simply shut off our system, and it will operate the way it did when it left the factory," says Preston.

Contact: FARM SHOW Followup, CleanFlex Power Systems, 4827 Pioneer Blvd., Lincoln, Neb. 68506 (ph 402 858-1800).