The Enhancer – The Propane Injection System That Works!

"Injecting a little propane into diesel engines correctly will provide more power and a cleaner burn," says Craig Ridgway of RMR Pro-Diesel Technology. Continued research and development efforts have resulted in RMR's newest product, the Enhancer II. The Enhancer II is a two-stage valve that works like a 4-barrel carburetor which enables RMR to utilize this valve with propane and also with CNG (compressed natural gas). The Enhancer II works excellent with natural gas also.

Craig states his Enhancer, a patented progressive fuel valve, is catching on fast. He's installed the system on turbo-powered semis, field tractors, and even pickups.

"The secret to using propane is to deliver the right amount at the right time," says Ridgway. RMR's valves are activated by the engine's turbo boost pressure. As the boost pressure increases, more vapor propane is fed into the air intake, giving the engine only the amount of propane needed to maximize efficiency. Each installation of the valve is specific to that particular engine.

RMR's in-house dynamometer enables them to analyze test results to increase performance and achieve maximum efficiency. "If you can't come to us, we provide a suggested setting based on our records of installations on the same engine in similar situations. Once installed, it can be fine tuned to get the optimum flow."

RMR has installed the Enhancer propane

valve on more than 1,000 engines over the past 9 years with zero engine failures due to propane. RMR promotes an increase of 1 1/2 to 2 1/2 miles per gallon on over the road diesel trucks. Ridgway says he likes to be conservative in estimates. Actual results reported by Ridgway, as well as customer reported results, point to much higher returns. "Overall, my Duramax has gone from 14-16 mpg to 24-27 mpg and motor homes have seen 3-5 mpg increases," Craig says.

Ridgway has also installed RMR's Enhancers on his own field tractors and bulldozers. He reports his 8640 John Deere burned 16 gph pulling a 30-ft. chisel plow. Injecting only 1 1/2 - 2 gal. of propane per hour dropped diesel use to 9.2 gph. The increased power also let him double ground speed. Ridgway says he can literally see the difference on his 8640 John Deere. "When I am burning straight diesel, I can see the shadow of the exhaust on the ground," he says. "When I turn on the propane, the shadow goes away."

He says the propane simply helps burn diesel fuel more efficiently. Typically, he explains, only 75 percent of diesel used is burned. With the propane injected, efficiency jumps to 98 percent. "That's where we get our increased power," says Ridgway. "We turn that wasted fuel into energy. Burning the diesel more completely reduces carbon buildup in an engine for longer engine life. It also cleans up the exhaust."



Propane Enhancer injects a little propane into diesel engines for faster speeds, more power, and a cleaner burn in tractors and trucks.

Ridgway says, "When you put a pencil to it, you'll be surprised how quickly it pays for itself in fuel savings and extra power." He also states, "There are other propane injection systems out there that may be cheaper to purchase, but you get what you pay for. In other words, if you want a system that works AND you want to have service after the sale you want the Enhancer. The Enhancer comes with a lifetime warranty and 24 hr. customer service."

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New Uses For Biochar

Char Energy is working with Minnesota's Agricultural Utilizations Research Institute (AURI) to find new markets and uses for biochar, says the company's Curtis Borchert.

One promising use is as an absorbent for spilled oil. An ounce of Char Energy's biochar made with sugar beet pulp soaks up 20 grams of oil, but won't absorb water. An oil company is now testing it for use in the North Dakota oil fields.

"We think we could run the oil-soaked biochar back through the process, burn off the oil and retain the original biochar," says Borchert. "You can also burn biochar in a charcoal grill in place of charcoal briquettes."

The AURI researchers also discovered that not all biochar is the same. While sugar beet pulp-based biochar is great for absorbing oil, wood biochar isn't. It has only a 1:4 absorption ratio. However, wood biochar may be better for use as a soil amendment because sugar beet biochar appears to lock up phosphorous in the soil.

Borchert says they're also exploring the use of biochar as a soil amendment, the reason he first tried making it. "The idea to make it came when my wife wanted to try some in her garden," says Borchert. "It is thought to enhance microbial colonies in the soil and increase soil quality and crop yields."

Borchert has tested it on apple trees. He sterilized the soil around some trees before adding biochar to the soil. "The trees with biochar leafed out 2 weeks ahead of those without," he says. "Last year, we planted 2 pumpkin plots with biochar and harvested more than 800 lbs. of pumpkins from them. We even put some in our chicken nesting boxes. Ammonia levels were reduced, and they quit eating their own eggs."

People wanting to try the baked biochar can order it direct from the company website or by phone. Sugar beet pulp biochar is their first product. It is priced at \$50 for 5 gal. or



Biochar can be made from such products as sugar beet pulp and wood and has many promising uses, including as a soil amendment or as an absorbent for spilled oil.

\$15/gal.

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