

He Burns Natural Gas In Diesel Tractors

"We have natural gas fumigation systems on a pickup and on our Deere 2-WD and 4-WD diesel tractors, and they work great," says Warsaw, Ohio, farmer Ed Jones. "Burning natural gas with diesel boosts horsepower by about 30 percent, helps the engines run cleaner and saves us money on fuel." They have natural gas wells on their farm so the product is readily available. They capture gas from the line with a compressor that fills tanks on the equipment.

Jones says his 4-WD tractor has two storage tanks that are equivalent to about 25 gal. of diesel fuel. The 2-WD tractor has four tanks mounted on the front of the tractor frame. His truck uses a CNG tank that he hauls in the box. In the fall, he uses that same system on his Deere 7720 Combine.

All of his systems feed natural gas from the canisters through a valve and regulator into the air intake between the air cleaner and the turbocharger. The tractors and truck start on diesel fuel and switch to CNG after the engine warms up to about 140 degrees. Vacuum created in the air pipe as the engine load increases pulls in the CNG. Jones says it's an economical and trouble-free system.

"In the tractors we usually can run a full day on one fill, depending on the work we're doing. I can really notice the difference in power output on the 4-WD and in the combine when we're using CNG," Jones says.

He's also saving fuel with a CNG system on a 4640. "When that tractor runs at wide open throttle it uses a lot of fuel," Jones says, "even though it's not pulling a full load. We switch it over to CNG for baling and spraying and save a lot on fuel costs."

Jones figures his cost for CNG is only about 50 to 60 cents a gallon because they're compressing gas from their own wells. "If we had to buy it from a station it would be considerably more, but still economical," Jones says.

His 2005 Dodge pickup with a Cummins diesel engine also runs on CNG and Jones is pleased with the results. "I took it on a road trip to Indianapolis and got 54 miles per gallon. I think it's safe to say we're doubling our fuel economy and getting 30 percent more horsepower," Jones says.

A neighbor who hauls grain and lime for Jones is using a CNG system on his diesel semi-tractor and getting 10 to 14 mpg compared to 6.5 to 7 mpg with straight diesel. "We were concerned about engine heat when we first installed these systems," Jones said, "so we put exhaust temperature gauges on to make sure everything was okay. We compared the temperature with plain diesel and with CNG pulling the same implement. The engine temperature was actually cooler

running on CNG."

Jones cautions anyone running a CNG system not to overload the engine. "With the extra power it puts out it might be possible to overload the cooling system, so a person shouldn't get greedy with that power," he says.

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Ed Jones mounted CNG canisters on front of his Deere 4640 tractor. He says burning CNG boosts horsepower by 30 percent.



How To Stop Center Pivot Ruts Before They Start

Here's a new concept in center pivot irrigation – spraying water behind the wheels to avoid deep wheel ruts.

Ryan McConnell's new Auto Dry Track System stops ruts before they start by using half nozzles to spray a half circle of water to the sides of the towers and behind the tires.

"A second advantage is that you don't spray water on gearbox seals or center drive seals, which extends their life. And you can harvest without deep tracks, which extends the life of field equipment," says McConnell.

He sells a complete package ready for installation that includes galvanized parts and brass solenoid valves, which attach to the pivot's frame. The system is electrically wired into the forward/reverse contacts of each tower, with no structural changes to the tower.

The system waters 100 percent of your farm ground and works automatically in both directions. "It automatically switches directions when your pivot changes directions. No manual switching is necessary," says McConnell.

The system can be used on all pivots – full circles, half circles, wiper and linear systems – and installed on all makes and models of new or existing pivots.



Auto Dry Track System stops ruts before they start by using half nozzles to spray water to the sides and back of tires.

The Auto Dry Track System sells for about \$800 installed per tower.

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