



The PowerTech EWX 4.5L engine meets Final Tier 4/Stage IV emissions using a wastegated turbocharger designed to develop more airflow at lower engine speeds, as well as a diesel oxidation catalyst and diesel particulate filter (shown here). ▶



PRIMED FOR EMISSIONS COMPLIANCE

Xylem greets 2015 with a fleet of Godwin pumps that meet Final Tier 4/Stage IV standards

Just as a plant's xylem draws water from its roots to grow, Xylem Inc. is in the business of moving water using industry-leading technologies that are helping make our world a greener place. A global manufacturer of pumps, Xylem Inc. is taking an environmental lead in the clean air effort by offering the Godwin range of diesel-driven portable pumps with John Deere Final Tier 4 engines.

The Godwin NCI50 Dri-Prime pump now meets Final Tier 4/Stage IV emissions with a 55-kW (74-hp) PowerTech EWX 4.5L engine. The portable pump is suitable for both sewage and clean water applications. ▶



More than a clean-water pump

Godwin Dri-Prime pumps have the ability to self-prime completely from dry with long suction lines, making them ideal for a variety of dewatering and pumping applications. Built simple and rugged, Godwin pumps have the solids-handling capability to continuously pump sewage and debris-laden wastewater.

Mike Ramos, director of operations and engineering for Xylem's Godwin brand, says he's been working closely with John Deere engine distributor Bell Power Systems to develop Final Tier 4 pumping units. Two years ago, Xylem developed a Godwin HL225M pump with a PowerTech PSS 9.0L engine. During the last quarter of 2014, the company began offering the PowerTech EWX 4.5L engine on several models of Dri-Prime pumps, including Godwin's flagship model, the 6-inch CD150M. Other pumps powered by this engine include the NC150 non-clogging sewage pump, the HL80M high-head pump, and the hydraulic-submersible Heidra range.

Built with smarts

Electronically governed, the PowerTech EWX 4.5L replaces the mechanical PowerTech M 4.5L Interim Tier 4 engine, which previously powered these pumps. Ramos explains that while the move to Final Tier 4 increased the overall size and price of the pumping unit, there are advantages. He says today's clean-air engine technologies led to advances in engine electronics, which have improved the communication of its pumping units.

Godwin pairs the Final Tier 4 engines with a PrimeGuard controller, a fully programmable microprocessor-engine-control system that offers auto-throttling of the engine rpm in response to changing pressure, level,

and flow. "It's really about matching pump performance to the requirements of the application. In a lot of applications, the performance requirements of our pumps can change from hour to hour, depending on the conditions," explains Ramos. "The ECU gives us the opportunity to vary pump speed in response to these changes, which improves fuel economy."

Xylem also recently introduced Field Smart Technology (FST) that works in conjunction with the PrimeGuard Controller. FST allows customers to constantly monitor and control equipment remotely to ensure optimum performance.

Using cellular combined with redundant satellite technology, off-site operators can monitor the amount of soot accumulation in Final Tier 4 engine systems, as well as fluid pressures, temperatures, and fuel consumption.

Ramos says the transition to Final Tier 4 required teamwork between Bell Power Systems and Godwin suppliers. "Bell Power Systems supplied 3-D drawings of the engine for the incorporation into our package. They worked with our suppliers to make sure that those pieces all fit together and worked together," says Ramos.

During extensive testing at the company's test facility, the CD150M was placed under various load conditions. "Bell Power helped us fine-tune the ECU setting to ensure that we were getting the required horsepower out of the engine," says Ramos. "As a result, the engine is very responsive to changes in load and speed. It also did well on the regeneration and performed as expected, even under very lightly loaded conditions."

A legacy continued

Mike Delzingaro, vice president and director of sales, says he expects the PowerTech EWX 4.5L engine to deliver the same solid performance as its predecessors. "We've started with the 4039D, migrated to the 4045D, and finished with the 4045T over the past 20 years. We know it will be reliable, efficient, and the technology is proven. John Deere offers a broad range of engines, and the John Deere support network is second to none. That's why we've bought thousands of their engines over the past two decades."

According to Delzingaro, all future sales of the Godwin Dri-Prime model CD150M 6-inch pumps will include John Deere Final Tier 4/Stage IV engines. Xylem will strategically place the new pumping units into the company's rental fleet in order to serve large metropolitan cities like Chicago, New York, and Philadelphia that require Final Tier 4/Stage IV engines.

"We've adopted the technology, we've been using it, and we've embraced it," says Delzingaro. "Reducing emissions is more sustainable for our future, and for our kids. That's the most important thing."

📷 Engine distributor: Bell Power Systems in Essex, Connecticut. www.bellpower.com



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