

NEXT GENERATION GEN-SETS



Kohler flips on the switch to the next phase of emissions with John Deere Final Tier 4 engines

Kohler Power Systems introduces two new non-emergency stationary and two mobile generator sets that meet Final Tier 4 emissions with the PowerTech 6.8L engine.

PowerSource is pleased to feature an interview with Beth Splittgerber, product manager for Kohler Power Systems in Mosel, Wisconsin. A longtime customer of John Deere Power Systems, Kohler offers John Deere engines on a range of mobile and stationary generator sets from 80 to 500 kWe. Recently the company launched 125 kWe and 150 kWe non-emergency and mobile generator sets that meet Final Tier 4 emissions with the John Deere PowerTech 6.8L engine. Splittgerber talks about the company's new and upcoming product offerings and meeting yet another emission tier with John Deere engines.

PowerSource: What do people tend to find most interesting about Kohler Power Systems?

Splittgerber: Kohler is one of the oldest privately held generator set manufacturers in the world with the first generator sets being sold in the 1920s. Kohler takes pride in being a full-system provider. We design, sell, and manufacture generators and controls as well as automatic transfer switches and switchgear, which allows us to test the complete system and ensure all the pieces work together.

PowerSource: Kohler has worked with John Deere through each level of emissions. Describe Kohler's relationship with John Deere Power Systems.

Splittgerber: John Deere has been an outstanding supplier to Kohler Power Systems for many years. The market has come to trust John Deere engines and relies on their durability.

PowerSource: What is Kohler's approach to meeting Final Tier 4 emissions?

Splittgerber: New diesel emissions requirements no longer allow Tier 3 or lower products to be used in non-emergency stationary or mobile applications. Tier 4 product is now required. So, Kohler Power Systems is developing gen-sets as quickly as Final Tier 4 engines become available. These new gen-sets meet the emissions requirements for non-emergency and prime-power applications.

PowerSource: What type of applications would we find these Final Tier 4 generator sets working in?

Splittgerber: Non-emergency applications with no access to utility power, such as rock crusher applications, hospitality buildings on islands, or pumping stations. Non-emergency also includes in-demand response applications where the generators are used for pairing up with a utility in peak shaving, distributed generation, or any other agreement with the utility that results in a financial benefit. Mobile generator sets — units that are relocated within a 12-month period, such as those that work at construction sites or large events — also require Final Tier 4 engines.

Gen-set type	Non-stationary (mobile) prime power	Stationary non-emergency gen-sets	Stationary emergency gen-set
Classification	A non-stationary (mobile) generator is relocated within a 12-month period.	A stationary generator that remains in the same location for more than 12 months.	A stationary generator used as the secondary source of power, backing up the utility.
Example of use	A generator used on a construction site, a well-service company, or for gas and oil field operations.	A generator used for primary source of power or for peak shaving, interruptible rate and/or other utility agreements for financial benefit.	A generator mounted outside of a facility for the purpose of providing backup power when utility power is interrupted.
FT4 status	Must meet FT4 emissions regulations as of 2015.	Must meet FT4 emissions regulations as of 2015.	Exempt from FT4 due to emergency status.

PowerSource: Will these Final Tier 4 units also be used for emergency stationary applications?

Spittgerber: The EPA does not require Final Tier 4 engines for emergency stationary applications; however, these gen-sets can be used in such applications to meet “best available technology” requests.

PowerSource: Kohler’s first Final Tier 4 sets feature the PowerTech 6.8L engine. What are some of the results of the performance tests so far?

Spittgerber: Power density has not been affected by the Tier 4 technology. For the size of the engine, the power is superb. Fuel efficiency is the same or slightly better than the Tier 3 counterpart even with the addition of the diesel exhaust fluid. As for power ratings, Tier 4 is still capable of one-step load acceptance.

PowerSource: Did the generator set package size increase in size?

Spittgerber: Package size for the Final Tier 4 products that have already been released are very comparable to the Tier 3 products even with the additional equipment such as the DEF tank, diesel oxidation catalyst, and diesel particulate filter. As a result, we were able to keep a similar footprint to the Tier 3 product.

PowerSource: How would you describe the noise level?

Spittgerber: Noise level is also good. Those working on the units have commented on how quiet it is. Along with a

newly designed enclosure, we were able to reduce the noise level by 2 to 3 decibels. We actually hit better sound levels on the Final Tier 4 gen-sets than what we have on the Tier 3 counterparts.

PowerSource: Did John Deere Power Systems offer engineering assistance during the transition to Final Tier 4?

Spittgerber: Yes, our project engineer, William Gysi, said that the John Deere application engineering team had been pivotal on a daily basis to the success of the Tier 4 integration. Their knowledge knows no bounds, and they are quick in response to inquiries. When an issue arises, they do all they can to assist and drive to a solution for both companies.

PowerSource: Will Kohler export these generator sets?

Spittgerber: We anticipate selling some outside of North America where they are asking for “best available technology” because they simply want the better emissions.

PowerSource: Is the global John Deere dealer network important to your company?

Spittgerber: Yes, we are a global company with additional headquarters in India, Singapore, and China so we value their continued support in all our regions we cover.

PowerSource: Next in line are the generator sets with the PowerTech 4.5L Final Tier 4 engine, correct?



Beth Spittgerber, product manager for Kohler Power Systems

Spittgerber: Yes, the Final Tier 4 4045 engines will be used on our 80REOZJ4 and 100REOZJ4 stationary gen-sets and 90REOZT4 and 120REOZT4 mobile gen-sets. We are targeting their release late this fall.

PowerSource: What do you anticipate regarding the overall reliability and durability of the Final Tier 4 engines?

Spittgerber: Kohler has used John Deere engines in our products for years, and John Deere has established itself as a manufacturer of very reliable and durable engines. Based on the extensive reliability and quality testing that John Deere puts its engines through, we have no reason to expect any less out of the Tier 4 engines.