

Media Backgrounder - KOHLER KDI Diesel

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KDI Overview

KOHLER Direct Injection (KDI) Engines are Tier 4 Final emission-compliant engines that achieve clean combustion without the use of a diesel particulate filter (DPF).

Developed by Kohler and **Lombardini** – a KOHLER Company based in Italy – the KDI engines are ideal for a variety of heavy-duty applications, including excavators, skid steers and articulating loaders. The line is currently in production in two displacements – 1.9 L and 2.5 L – each available in mechanical and turbo-charged common rail configurations.

KDI Engines – How they Work

Achieving the toughest emissions standards (Tier 4 Final) without a DPF is possible through the efficient use of the engine's components. Features include KOHLER's direct injection system, cooled exhaust gas recirculation (EGR) and diesel oxygenated catalyst (DOC). A high pressure common rail system (CSR) is also integrated, which utilizes pressures at 2000 bar (29,000 PSI) to deliver better atomization of fuel, improved fuel consumption and a reduction in emission particulates. An Electronic Control Unit (ECU) with fuel mapping program monitors and manages the engine's power output. The KDI features an efficient turbocharger and 4-valve cylinder head with special combustion chamber design.

User Benefits

Fuel Savings

- By utilizing direct injection, KDI engines deliver ultra-efficient performance, which results in savings at the pump.
- Engines with DPFs require frequent regeneration, a process that requires additional fuel to burn off particulates. KDI engines don't require regeneration, saving end users even more fuel.

Maintenance Savings

- Without a DPF, there is no need for costly and time-consuming DPF maintenance.
- Innovative technology for cleaner combustion leads to extended oil change intervals.

Quiet, Efficient Performance

- KDI engines are engineered to be Kohler's quietest diesel ever.
- Engine design with no DPF means better heat management.

Maximum Power

- An integrated turbo charger delivers 221 ft.-lb. (300 Nm) of torque @ 1500 rpm – making KDI engines powerful enough for heavy-duty jobs.
- KDI engines offer more power in a more compact package than Tier 4 Final diesel engines that use a DPF, which gives equipment manufacturers more flexibility in design and engine integration.

Source: Kohler Co.