



JOHN DEERE

Construction Applications

Diesel Engines



Go further with
John Deere

BEYOND THE BOUNDARIES

More satisfaction!

John Deere is a leader in the off-highway market

For nearly 60 years our job has been to design and build diesel engines. Today, with over five million engines made in our factories in Saran (France), Waterloo, Iowa (United States), Torréon (Mexico), Pune (India) and Rosario (Argentina), John Deere is the number 1 producer in the off-highway market. Nothing more said!



Before the product reaches the market, our specialists talk to our specialists!

John Deere introduced a global partnership work system in order to satisfy its customers' needs, opening up direct communication between its development engineers and its designers.

With John Deere, your satisfaction begins long before the product reaches the market. Design, analysis and digital simulation, engine performance, electronic control and tests: these are the different steps we take before manufacturing our engines.

Our engine production plants allow us to efficiently respond to the different needs of our customers by offering them personalized solutions. Our French factory was one of the first French businesses to be awarded the ISO 9001:2000 certification, which includes a customer satisfaction evaluation, management of process-based activities and a continuing improvement concept. Our research department finds ways to satisfy even the most rigorous design standards, most notably in terms of noise and emission regulations. These standards, which are becoming increasingly strict, inspired us to make important investments, particularly concerning gas analyzers, sample and particle weighing systems and the creation of a gas calibration network (which guarantees the highest possible measurement precision). In addition, we have an application monitoring system in place which allows us to guarantee proper installation and operation of the engine in the machine on site.

Daily use

John Deere engines provide off-highway machines with all the power that they require, no matter what the task.

Our engines create a perfect balance between high performance, fuel economy and adherence to emission standards, all while responding to our customers' specific needs: the five million engines we have produced are proof of this!

Customer service

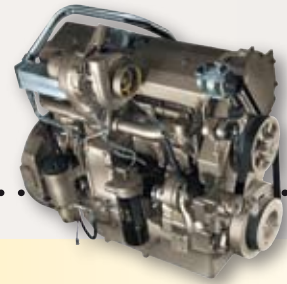
With John Deere, you benefit from a worldwide network which features more than 4,000 service locations, all of which are ready to help you maintain the high performance of your engines in any working condition. Our dealerships and distributors are your best allies in terms of service, technical advice and parts. This involves using technical maintenance manuals, operator manuals and spare parts catalogues. Thanks to a highly successful continuous training program, our after-sales technicians are always at the cutting edge of new technologies and maintenance techniques.



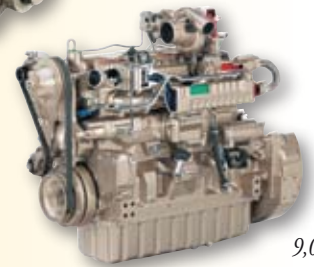
*We have more than
4,000 service locations
throughout the world, ready
to lend a hand!*



More choice!



13,5l



9,0l

John Deere engines meet the off-highway emission standards applicable in the European Union and the United States. John Deere also produces engines which meet the Tier 1/Stage I and Tier 2/Stage II standards in the countries which do not require Tier 3/Stage III A emission standards.

To meet the Tier 3/Stage III A standards, John Deere worked alongside manufacturers in order to identify the technology which best suited their use. We quickly became aware that no single technology would satisfy the diverse needs of our off-highway customers. This is why we created three solutions: PowerTech M™, PowerTech E™ and PowerTech Plus™.



2,4l



3,0l



4,5l



6,8l

Tier 3/Stage III A Industrial ratings

										6135	PowerTech Plus™
										6090	PowerTech Plus™
										6068	PowerTech Plus™
										6068	PowerTech E™
										4045	PowerTech Plus™
										4045	PowerTech E™
										4045	PowerTech M™
										5030	PowerTech E™
										4024	PowerTech E™
										4024	PowerTech M™

Heading for Tier 4/Stage IV with PowerTech engines

The EPA and European Union have already implemented rigorous emission standards for the next generation of off-highway diesel engines. The PowerTech range is the cornerstone of John Deere's evolving solutions for reducing emissions. We are currently studying the technologies that will meet the future Tier 4/Stage IV standards – most notably in-cylinder and after-treatment solutions – which will be implemented in all existing Tier 3/Stage III A platforms. Some John Deere PowerTech engines already function at the EPA Interim Tier 4 level and will fully meet the standards before they begin to be enforced.

More technology!

PowerTech M™



Following a simple design, **PowerTech M™** engines use **mechanical controls** for optimal performance, while maintaining the qualities of the Tier 2/Stage II level. They are equipped with a new mechanical injection system which generates **high injection pressures**, improving combustion efficiency. These engines are perfectly matched to tasks which have few constraints. Available from 34 kW (46 hp), they meet the future Tier 3 and the EPA's Interim Tier 4, as well as the EU's Phase III A standards.

PowerTech E™



PowerTech E™ engines are equipped with, among other things, an **HPCR fuel injection system** (4,5 l and 6,8 l), electronic pumps (2,4 l and 3,0 l), a two-valve cylinder head and integrated electronic control. The engine's performance is about equal to the Tier 2/Phase engines. The HPCR fuel injection system **increases the fuel pressure, thereby improving combustion**. **PowerTech E™** engines are built on platforms similar to their Tier 2/Stage II equivalents and can therefore integrate very easily into the engine compartment.

PowerTech Plus™



PowerTech Plus™ engines benefit from proven technology, **high performance and optimal fuel consumption**. The main difference between the models in this range is the emission control technology that is used. Like the **PowerTech E™** engines, the **PowerTech Plus™** engines use an HPCR fuel injection system and electronic controls. Also, they are equipped with a **cooled exhaust gas recirculation system (EGR)**, a **variable geometry turbocharger (VGT)** and a four-valve cylinder head in order to guarantee high performance, fuel efficiency and reliability.

Easy maintenance

We design our engines in order to facilitate easy maintenance. The interchangeable wet sleeves enable better temperature control in the combustion chamber and optimize engine performance.

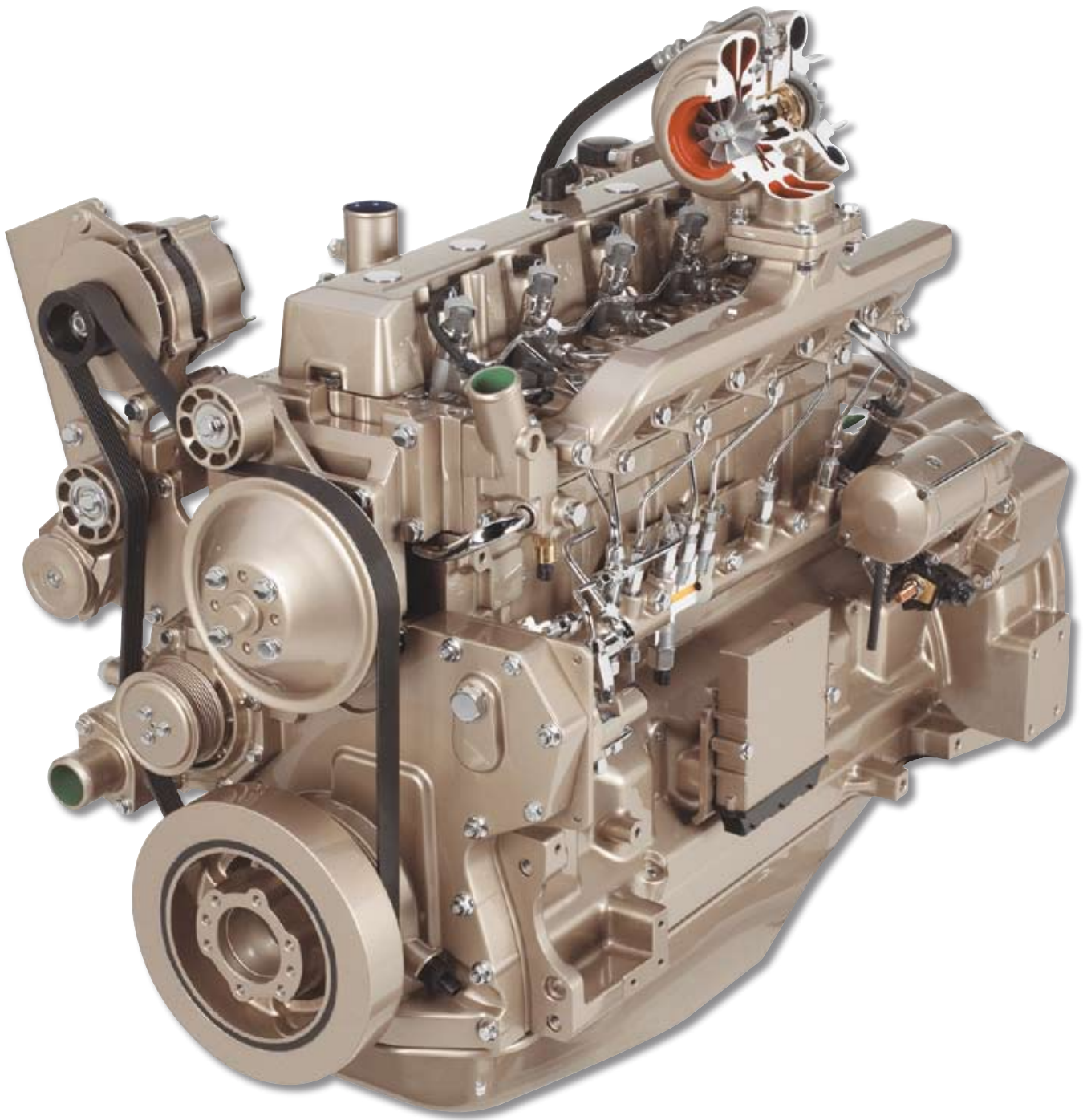
They can be replaced on site without having to remove the engine, thus minimizing the machine's downtime and maintenance costs. By using helical-cut gears, noise is reduced along with maintenance costs. The crankshaft bearings, camshafts and cylinder heads are also interchangeable.

Reliability

Our sturdy, compact engine blocks are the basis of our products' longevity. But John Deere is also the guarantee of numerous technological assets, which themselves are synonymous with reliability. For example, the dynamically balanced moving parts, such as the track rod and crankshaft, make the engine quieter and limit vibrations, while the automatic belt tightener minimizes maintenance costs and increases belt life. In addition, several functions, such as the thermostat box and the intake air collector, have been built into the cylinder head to limit the risk of leakage.

Easy installation

The engine is installed into the machine by using the engine block's front and side mounts. We offer several options and variants in order to ensure our engines' perfect integration and guarantee easy access to the service points for the entire service life of the engine.



Quality

Our continuing Research and Development efforts are the key to the constant improvement of John Deere engines. The commitment to technological excellence and a rigorous manufacturing process are the best guarantees of each John Deere engine's precision. Performance, fuel efficiency, reliability and easy installation, in keeping with environmental standards, are the key words that characterize our engines. They are also the keys to your satisfaction.

More service!

The power of a worldwide network

Our network is active in more than 160 countries and made up of John Deere certified specialists who are trained by us and equipped with the latest technologies. More than 4,000 service locations throughout the world guarantee your peace of mind, as with John Deere, you never have far to go to find assistance and expert advice. Log on to <http://dealerlocator.deere.com> to find the service center nearest you.

At your side no matter where you are!



The public works, forestry and agricultural machinery dealers, as well as the John Deere engine dealers, will ensure the maintenance of your original equipment. Our spare parts are built according to the strict specifications set by John Deere. Our dealers stock most of these parts, and our central warehouses use our FLASH parts shipping system, which means you will never have long to wait before receiving an order. Using this cutting edge system, any spare part that is not available on site can be located and shipped without delay.

Our commitment

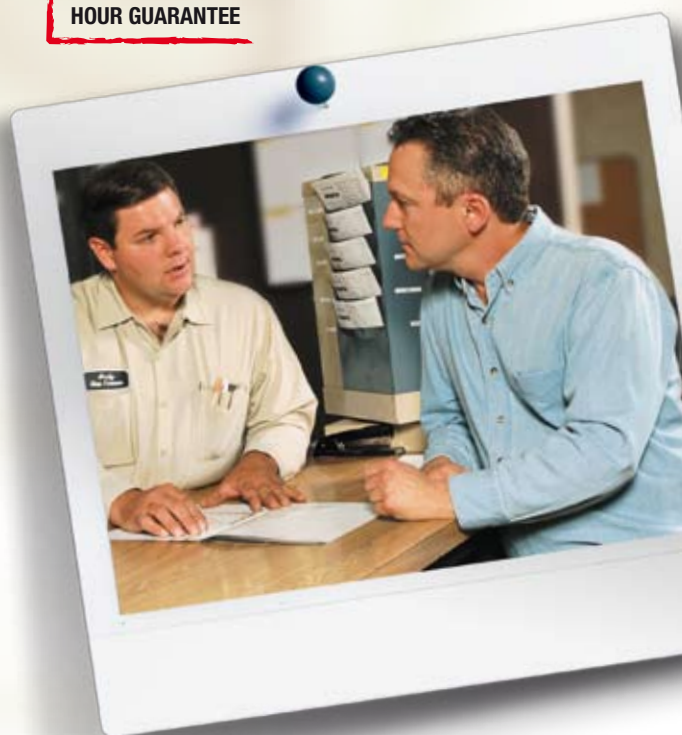
Our customer service program is based on a system of guarantees that comes up to our engines. This is why we offer:

- A 2 year/2,000 hour or 1 year/unlimited hour guarantee.
- A guarantee that takes effect the date that the machine begins operation.
- The possibility of extending the guarantee*.
- Each John Deere engine is shipped with a guarantee that is valid throughout the world.

** Under certain conditions.*



**UP TO 2-YEAR
2000 HOURS
OR
1 YEAR
UNLIMITED
HOUR GUARANTEE**



More applications!

Several hundred OEM manufacturers have chosen John Deere to equip nearly 500 construction and industrial equipment models. The numbers speak for themselves: John Deere is undoubtedly the off-highway machine specialist.

Portable compressors, gen sets, loaders, excavators, crushers, drills, rollers, forklifts, etc. – John Deere is present in a wide variety of markets.



Loader equipped with a 3,0 l PowerTech™ engine



Compressor powered by a 6,8 l PowerTech™ engine

Excavator equipped with a 4,5 l engine



Asphalt paver powered by a 12,5 l PowerTech™ engine



Pile driver equipped with a 4,5 l PowerTech™ engine



Crusher powered by a 4,5 l PowerTech™ engine



Drill equipped with a 6,8 l PowerTech™ engine

Forklift equipped with a 4,5 l PowerTech™ engine



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Want more information?

Please request our brochures.

