

# Engines and Engine Components



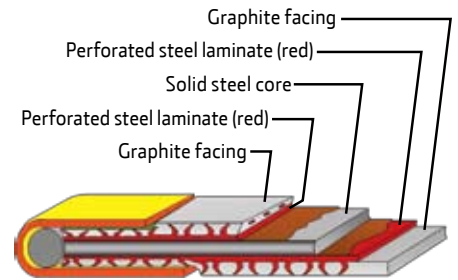
Ensure performance with genuine  
John Deere parts and service



# Genuine John Deere parts

## Job-proven performance

There's a reason why John Deere engines and equipment have such a strong reputation: quality. Other companies claim their repair parts "meet or exceed OEM specifications for John Deere equipment." But the only real way to ensure performance is to use engine parts designed by John Deere for John Deere engines. Genuine John Deere parts and service restore the original quality and performance of your machines.



## John Deere head gaskets — Superior design for a reason

Five-layer design provides all-around performance.

- Two graphite layers provide surface sealing
- Two perforated steel layers internally bond the gasket together
- Solid core provides support against high pressures



## John Deere piston rings — Thicker for a reason

Wider phosphate coating saves you time and money.

- Longer life reduces premature replacements
- Increased thickness provides proper sealing after initial wear of the rings
- Designed to last for the life of the power cylinder



## John Deere cylinder liners — Precise specifications for a reason

Consistent microstructures of metals result in higher liner strengths. Inconsistent or random metal structures can lead to:

- Liner flaking
- Poor surface finish
- Lower overall performance



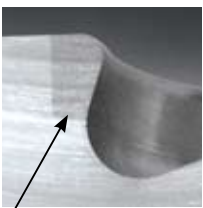
Random and even graphite distribution

## John Deere pistons — Stronger for a reason

### Fiber reinforced bowl lip

Improve your engine's reliability, durability, and uptime.

- Fiber-reinforced bowl lip provides 50 percent higher fatigue strength
- Design of the John Deere bowl lip dissipates combustion heat more quickly.



Fiber reinforced bowl lip

### Bore offset

Our bore is offset from center to increase engine performance and service life by reducing vibration, mechanical stress, and surface wear.



John Deere offset bore  
Center bore



## John Deere overhaul kits — Genuine for a reason

Our genuine John Deere kits include:

- Rod, main, and thrust bearings
- Thrust washers
- Oil pan split gasket
- Factory assembled piston/liner kits
- Liner packings
- Front and rear seals
- Overhaul gasket sets
- Snap rings

Viton lower packing material is used for longer life. Rear seals are made with Teflon wear surfaces to limit heat buildup and extend life. Cylinder liners are hardened to increase wear and provide longer engine life.

Expanded engine overhaul kits include the contents of the genuine John Deere overhaul kit plus rod bolts and bushings, piston pins, and camshaft bushings and are available for many John Deere engines.

All John Deere overhaul kits come with a 1-year/1,500 hour warranty.

## John Deere camshafts — Smoother for a reason

John Deere cam lobes increase performance and reliability.

- Provides proper valve opening and closing to deliver optimal combustion
- Lobe taper design reduces wear
- Valve acceleration prevents valve and valve seat damage



## Don't forget the engine damper

When torque is applied, engines generate harmful vibrations. A damper reduces these vibrations, which extends belt life and reduces gear wear. Our engine damper consists of an inertia ring, elastic member, and hub assembly attached to the crankshaft.

John Deere recommends changing the damper whenever an overhaul or engine replacement is performed.



# Maintenance — oils, filters, and more

John Deere maintenance products are all designed to keep your engine operating at peak performance.

## Engine fluid analysis



Monitoring fluid condition is critical for detecting any abnormalities that may contribute to poor performance and costly repairs. John Deere offers solutions for testing fuel, oil, and coolant — providing you with knowledge and confidence that your investment is protected.

Consistent fluid sampling generates valuable data for trend analysis. If something is out of range, determining the root cause of the abnormality and taking action to address it results in preventing premature and catastrophic failure, saving money and downtime in the long run. Contact your John Deere authorized service dealer today!

## John Deere coolants



Cool-Gard II is a fully formulated summer coolant and winter antifreeze that delivers premium protection.

- Protects against corrosion, cavitation, foaming, rust, and scaling
- Meets cooling demands of advanced engine technology
- Compatible with all John Deere engines
- Extends service intervals as much as 20 percent
- 6-year/6,000-hour service life
- Provides superior performance in all liquid cooling systems
- Nitrite-free
- Contains Bitrex to help discourage accidental ingestion



## John Deere oils

Plus-50 II premium engine oil is designed to provide advanced lubricant performance in all current diesel engines, as well as all legacy diesel engines that have used the original proven Plus-50 formula for years. Plus-50 II premium oil is also recommended for use in today's modern low-emission engines, and is designed to meet the requirements of heavy-duty off-highway applications and light-duty applications, including on-highway vehicles.

Plus-50 II premium engine oil provides these distinct advantages:

- Formulated specifically to inhibit oxidation, deposit, corrosion, and wear with superior soot control
- Provides maximum sludge and varnish control
- Excellent low-temperature fluidity reduces engine wear in cold weather
- Reduces maintenance costs and downtime, plus extends engine life
- Exceeds API CJ-4 performance level for diesel engines
- Exceeds API SM performance level of gasoline engines
- Drain intervals may be increased to a total of 500 hours when used in John Deere engines with John Deere oil filters and extended drain oil pan (see your John Deere dealer for details)

We strongly recommend that all John Deere iT4 engines use Plus-50 II (CJ-4/E9) oil to ensure optimal performance, including extended drain interval options.

Plus-50 II may be used as a full fleet solution with use in Mack, Cummins (15W40), Mercedes Benz, Volvo, MAN, MTU, Detroit Diesel (15W40), Renault, Caterpillar engines. John Deere is not affiliated with these companies.

## John Deere diesel fuel conditioners

Our diesel fuel conditioners are factory-designed and approved to improve performance in any diesel-powered equipment. Available in summer and winter formulas, they can be used with both diesel or biodiesel blends.



### Summer formula

- Optimizes fuel economy, prevents deterioration of emissions performance, and removes moisture from your fuel
- Stabilizes fuel, prevents sludge and sediment, and minimizes microbial growth
- Reduces fuel pump and injection wear while maintaining pump warranty



### Winter formula

- Delivers all the benefits of the summer formula with additional functions
- Helps prevent fuel gelling and fuel filter plugging from wax and ice
- Helps maintain power and improves fuel lubricity



## FUELSAVER

FUELSAVER, a Dow Chemical product from John Deere, is an effective antimicrobial agent and an EPA-approved biocide and fuel additive for today's biodiesel and ultra-low sulphur fuels:

- 100 percent fuel soluble so the active ingredients kill microbes throughout all components of a fuel system
- Maintains fuel economy and decreases fleet-operation costs
- FUELSAVER should be added to new fuel tanks to prevent contamination
- Contaminated fuel tanks require a “shock dose”
- For each subsequent tank, a “maintenance dose” is recommended

## John Deere filters

### Fuel filters

Genuine John Deere fuel filters capture harmful debris and moisture before it can cause damage to fuel-system components. These top-quality filters are designed by John Deere for John Deere fuel systems.



### Engine filters

- Robust construction for airtight seal
- Advanced cellulose media for maximum filtration performance
- High-grade seals and components provide superior durability and corrosion protection
- Proprietary flow technology for optimum particle and water removal

### Fuel storage filtration

It's very important to employ adequate filtration on fuel storage and transportation tanks, and our bulk fuel storage tank filters perform exceedingly well. It is also necessary to replace the filter element in fuel storage and transport tanks at least once — preferably several times — each year. John Deere fuel filters always provide high-quality fuel system protection.

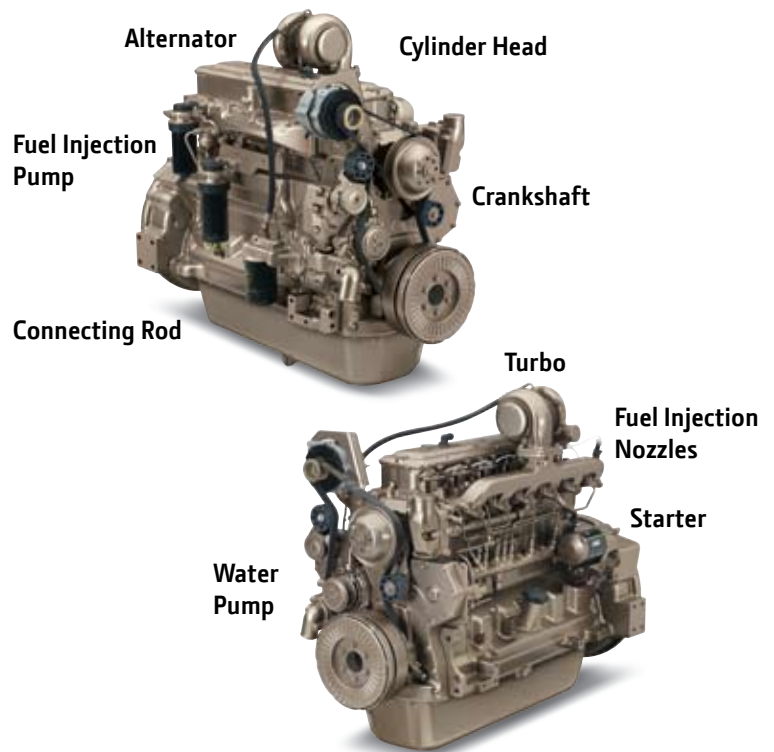
# John Deere Reman

## John Deere Reman parts deliver reliability and performance

With John Deere remanufactured engines and components, you can rest assured you're getting like-new performance and the highest level of quality and reliability. That's because they're remanufactured to our original specifications and standards, using only genuine John Deere approved parts and John Deere engineered manufacturing processes.

### Great benefits come from the leader

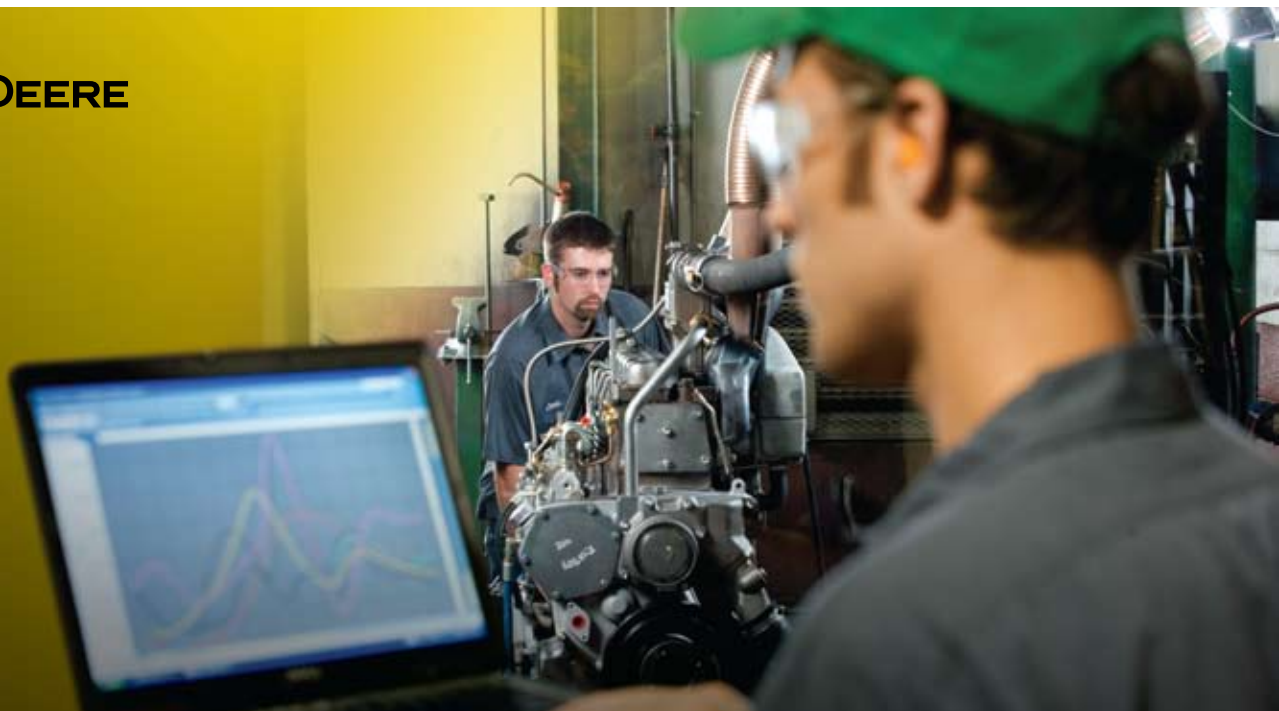
- Remanufactured, not rebuilt or repaired — built with the latest design specifications and performance improvement updates
- Reduced downtime — gets you back to work as much as 50% faster
- Best warranty in the business — as good as or better than an equivalent new part
- Greener option — puts good material back into service instead of a landfill



For additional information about John Deere Reman, visit [www.JohnDeere.com/Reman](http://www.JohnDeere.com/Reman).



**JOHN DEERE**  
**REMAN**



# There is no substitute for genuine

This guide was designed to make you aware of the variety of maintenance products as well as engine repair options available when you choose genuine John Deere parts and service.

Whether your engine powers an agricultural, construction, forestry, consumer/commercial product, or OEM machine, you don't want to compromise when it comes to quality and reliability. For honest value and reliable performance, demand the best — genuine John Deere parts and service.

All genuine John Deere parts meet the same standards set by the engineers who design John Deere equipment. They know trust is earned, and John Deere has been earning customers' trust for more than 170 years.

So when you're choosing an engine repair option, remember, only genuine John Deere parts and service have what it takes to ensure the quality and reliability you demand.

For additional parts information or to find the nearest John Deere Distributor or Service Dealer, visit: [www.JohnDeere.com](http://www.JohnDeere.com)

## Worldwide locations

### North America and Caribbean

John Deere Power Systems  
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P.O. Box 5100  
Waterloo, IA 50704-5100  
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Phone: +1 319 292 6060 (Canada)  
Fax: +1 319 292 5075  
E-mail: [jdpower@JohnDeere.com](mailto:jdpower@JohnDeere.com)

### Mexico, Central America, and South America

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