ABOUT ENERGIZED PROTECTION

You need to know your oil will protect your engine under all driving conditions. No matter how hot, cold, steep, dusty, muddy or extended your operations, you demand protection.

The Energized Protection of Shell Rotella® heavy duty diesel-engine oils provides protection in three critical areas:

1. Acid control — helps protect against corrosion from acids formed as fuel burns and as the oil ages
2. Deposit control — helps keep engine clean for optimum performance and long life
3. Wear control — helps keep moving metal engine surfaces apart for long life

Shell Rotella® T6 Full Synthetic oil features an advanced multi-functional, low-ash additive technology in a synthetic base oil designed to provide highly responsive protection that continuously adapts to your driving conditions. Use of selected low-viscosity synthetic base oils further energizes the oil’s protective capability that promotes fuel-economy performance with no compromise in durability. Shell Rotella® T6 can contribute in many ways:

- Extended-drain capable
- Energy saving fuel-economy performance*
- Excellent engine cleanliness and wear protection
- Excellent extreme high/low-temperature protection
- Improved low-temperature flow*

Shell Rotella® T6 builds on our commitment to providing innovative solutions to meet the technical and operational needs of your equipment.

*Compared with Shell Rotella® T Triple Protection® SAE 15W-40 engine oil.

PROTECTIVE POWER

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SPECIFICATIONS AND APPROVALS

SAE Viscosity Grade: 5W-40

API CI-4, CI-4 PLUS, CI-4, CH-4, SM, SL, SH, ACEA E9; Caterpillar ECF-3, ECF-2; Cummins CES 20081; DDC 93K218; Ford WSS M2C171-E; JASO DH-2, MA; Mack ECO-O Premium Plus; MB Approval 228.31; Volvo VDS-4
Shell Rotella® T6 delivers **34% better wear performance** on average compared to the previous API CI-4 PLUS 5W-40 formulation. **In seven out of seven industry-standard**, diesel-engine **wear test measurements**, Shell Rotella® T6 outperformed the previous formulation.

,**LOW EMISSIONS**

Protecting the performance of your exhaust-emissions control systems is not only important for your vehicles to comply with legislative requirements, but also to promote efficient operations. For instance, blocked diesel particulate filters (DPF) can actually increase fuel consumption. Shell Rotella® T6 is **formulated with reduced levels of ash, phosphorous and sulfur to help maintain the efficiency** of the latest vehicle-emissions technologies. Meeting the ash, phosphorous and sulfur requirements of API CJ-4, Shell Rotella® T6 has been tested and proven to protect your vehicle.

**IMPROVED HIGH/LOW-TEMPERATURE PROTECTION**

Shell Rotella® T6 provides extra protection against breakdown by heat and offers up to **70% better oxidation resistance**, compared to conventional Shell Rotella® T3 15W-40 API CJ-4 oil.

Shell Rotella® T6 5W-40 provides **excellent low-temperature flow**, even at -30°F.

**ENERGY SAVINGS**

Shell Rotella® T6 can help improve the fuel efficiency of your vehicles. Developed in close cooperation with leading engine and vehicle makers, it not only offers possible fuel-economy benefits, but also meets the durability and performance demands of the latest low-emissions equipment.

**Shell Rotella® T6 offers customers fuel economy savings up to 1.5%** as demonstrated in 2009 on-the-road field testing in medium-duty trucks. (For 5W-40 viscosity grade only, highway cycles, compared to Shell Rotella® T Triple Protection® 15W-40). For a typical truck* covering 100,000 miles per year, that’s a saving of approximately 250 gallons of diesel fuel. **At $2.50 a gallon, that’s a saving of $625 per truck per year.**

* Assumes fuel consumption of 6 miles/gallon

**Relative Oxidation Protection**

![Graph showing relative oxidation protection for Shell Rotella® T6, API CJ-4, and API CI-4 PLUS](graph)

**Shell Rotella® T6 - Reduced “SAPS” for enhanced catalyst/filter compatibility**

![Bar chart showing reduced Sulfated ash, Sulfur, and Phosphorus content](chart)
MAINTENANCE SAVINGS

At lower temperatures, using Shell Rotella® T6 5W-40 can help your engine start more easily than using a 15W-40 viscosity-grade product. Shell Rotella® T6 5W-40 can help protect the durability of the starter and battery in harsh winter climates.

UNSURPASSED SHEAR STABILITY

Shell Rotella® T6 5W-40 provides unsurpassed protection against shear-stability degradation, compared to the leading competitive API CJ-4 5W-40 products. An extremely shear-stable product helps maintain consistent viscosity and oil pressure in the engine.

![Shear Stability Graph](image)

YOUR PROTECTION – OUR EXPERIENCE

Shell Rotella® T6 has special molecules that resist compression to keep moving parts separated, reducing wear. The anti-wear booster provides extra protection against wear in highly stressed areas of the engine.

PROTECTION AGAINST SOOT

Shell Rotella® T6 helps control the impact of soot on your engine through increased levels of high-performance ashless chemistry that keeps soot particles apart — up to 36% improvement in soot control at typical engine-oil soot levels.* This helps keep the oil free flowing for good startup and continued energy efficiency, and helps prevent sludge, deposits and wear.

*Compared to Shell Rotella® T Triple Protection® 15W-40 at typical end-of-drain soot levels, based on MACK T-11 soot-test analysis.

![Mack T-11 Soot-Control Test](image)

Poorly dispersed soot

Well-dispersed soot

Special molecules separate soot particles

Hot spots form when lubrication breaks down.
shell lubricants also offers a complete portfolio of lubricants for every part of your equipment, including shell spirax® gear and axle oils, shell donax® transmission fluids, shell retinax® greases, shell rotella® elc extended life coolant, and shell hd antifreeze/coolant.

our complementary range

shell rotella® t6 oil is unlikely to present any significant health or safety hazard when properly used in the recommended application, and when good standards of industrial and personal hygiene is maintained.

avoid contact with eyes, skin or clothing. use impervious gloves with used oil. after skin contact, wash immediately with soap and water.

for further guidance on product health & safety, refer to the appropriate shell material safety data sheet or visit www.epc.shell.com.

protect the environment: take used oil to an authorized collection point. do not discharge into drains, soil or water.

advice: advice on applications not covered in this leaflet may be obtained from your shell lubricants representative.

for more information, contact your local shell lubricants representative or visit www.ROTELLA.com.

the term “shell lubricants” collectively refers to the companies of royal dutch shell plc that are engaged in the lubricants business.

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