



# Shell ROTELLA® T engine oil with Triple Protection™ technology

## Shell's most advanced formulation for your most advanced protection.

New Shell ROTELLA T engine oil with Triple Protection technology is our most significant advancement in heavy-duty engine oil in 30 years. It meets or exceeds API CJ-4 requirements and is designed to provide extra performance while helping to maximize equipment utilization and minimize the costs of operation and lubricant purchases. And new Shell ROTELLA T engine oil with Triple Protection technology performs well in both old and new engines.

- On average, 50%\* less wear in seven key industry tests
- Up to 38% reduction in wear in over 5.5 million miles of on-road testing in current engines
- 30% increase in active ashless performance chemistry to help protect against deposits and sludge
- Designed to protect and maintain exhaust after-treatment systems on new trucks

## Performance beyond expectations.

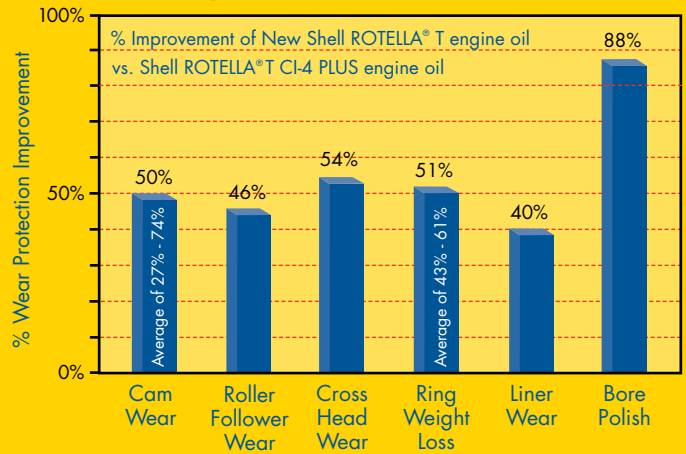
Triple Protection technology builds on the traditional strengths of Shell ROTELLA T heavy-duty engine oil – namely, wear protection and engine cleanliness – but now it is also formulated to protect diesel particulate filters (DPFs) against buildup of harmful deposits and to provide outstanding viscosity control and performance reserve. This new technology has been proven in over 5.5 million miles of durability testing.

## Proven in the lab.

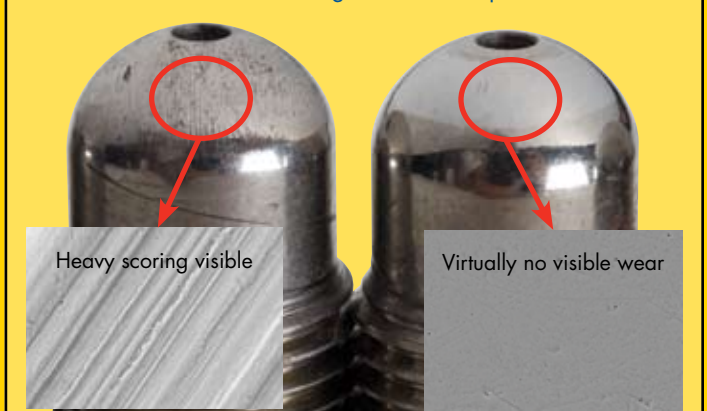
New Shell ROTELLA T engine oil with Triple Protection technology provides, on average, 50%\* reduced wear in industry-recognized engine tests. In seven out of seven tests

designed to measure wear in six key areas of the engine, we see significantly improved wear protection (see chart below).

### Improved Wear Protection



**Visibly reduced wear.** Injector screws from the Cummins ISM engine test shows outstanding protection against valve train wear with Shell ROTELLA T engine oil with Triple Protection.



CJ-4 Passing Oil

Shell ROTELLA T heavy-duty engine oil

\*Range of 27% - 88%

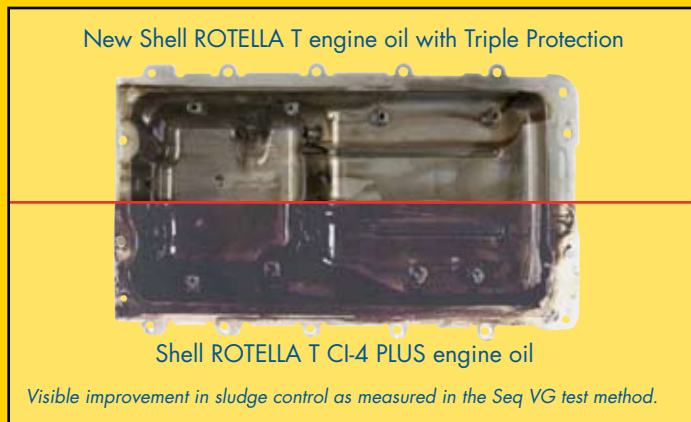


## Proven on the road.

Just as important as any lab test, Shell ROTELLA® T engine oil with Triple Protection™ has proven itself where our customers say it matters most – on the road. In 5.5 million miles of on-highway testing with some of our leading fleet customers, this new formulation has demonstrated it provides significantly improved wear protection, with individual results of up to 38% reduction in engine wear.

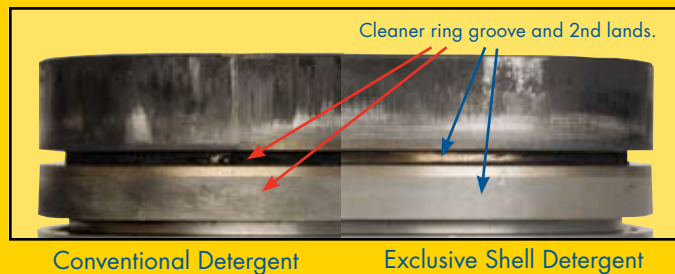
## Deposit and sludge control.

Shell ROTELLA T engine oil with Triple Protection contains 30% more active ashless performance chemistry, for greater deposit and sludge control. Our new formula contains more dispersant molecules designed to control sludge, and more antioxidant molecules to help control deposits, as demonstrated in the laboratory and in the field.



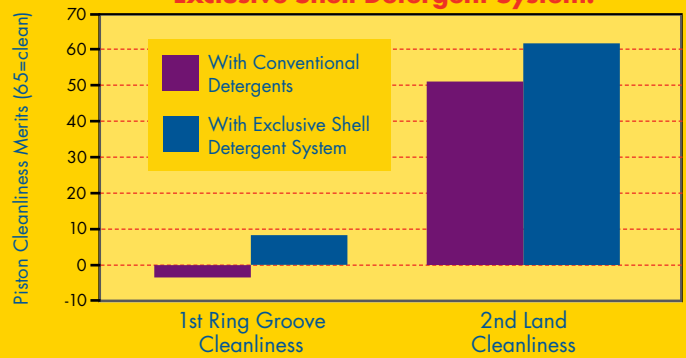
## Piston cleanliness.

Shell's new Triple Protection technology features an exclusive detergent system specifically designed to control piston deposits in the hotter environments of the new 2007 engines, and to provide exceptional piston cleanliness in older engines.



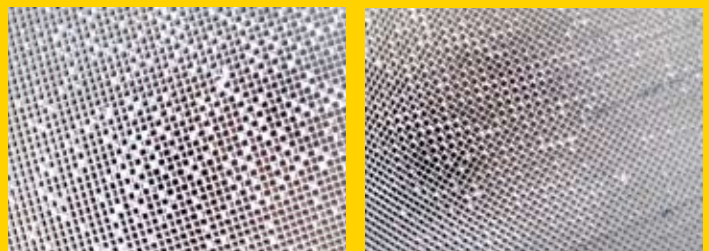
Shell's unique detergent system is formulated to deliver superior piston and groove cleanliness in proprietary tests designed to evaluate the performance of detergents in engine oils.

## Demonstrated Piston Cleanliness with the Exclusive Shell Detergent System.



## Emissions control.

New Shell ROTELLA T engine oil with Triple Protection helps control vehicle emissions in two ways: 1) by reducing the rate of lubricant-related DPF blockage compared to API CI-4 PLUS oils, and 2) by helping to reduce wear and improve cleanliness, allowing engines to remain in peak condition for efficient combustion. Minimizing DPF blockage also helps maintain fuel economy, thus further controlling exhaust emissions.



L: Section of DPF showing channels blocked by lube-ash deposits from high ash oil (white areas); R: Similar section from engine using ~1% ash oil, such as New Shell ROTELLA T heavy-duty engine oil, showing less blockage (fewer white areas).

## The future of engine oil is here.

New Shell ROTELLA T engine oil with Triple Protection technology offers a unique formulation to significantly improve engine wear and durability, cleanliness, and engine-emission control. New Shell ROTELLA T heavy-duty engine oil – cutting edge technology that provides the performance and protection you demand.

**Shell ROTELLA T 15W-40 Engine Oil with Triple Protection meets the requirements of:** API CJ-4, CI-4 PLUS, CH-4, CG-4, CF-4, SM, SL; ACEA E7; Caterpillar ECF-3, ECF-1; Cummins CES 20081; Detroit Diesel 93K218; Mack EO-O Premium Plus; Mercedes-Benz 228.3; Volvo VDS-4

For more information, please contact: