

Shell Rimula R5 LE

- Low emissions
- Energy Savings



Shell Rimula
ENERGISED PROTECTION



ABOUT ENERGISED 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 Energised Protection of the semi-synthetic, Shell Rimula R5 LE heavy-duty diesel engine oils provides protection in three critical areas:

1. **Acid control** — protects against corrosion from acids formed as fuel burns.
2. **Deposit control** — keeps engine clean for optimum performance and long life.
3. **Wear control** — keeps moving metal engine surfaces apart for long engine life.

Shell Rimula R5 LE Energised Protection oil meets API CJ-4 specifications for increased compatibility with the latest exhaust-emissions control systems while delivering fuel economy. Shell Rimula R5 LE is designed to protect under the full range of pressures and temperatures found in modern engines to meet the needs of operators of heavy duty on and off-highway vehicles.

PROTECTIVE POWER

The combination of synthetic and conventional base oils and advanced additive components delivers excellent protection, even at low temperatures where the enhanced cold flow properties help protect your engine against wear. Shell Rimula R5 LE is formulated and designed to energise the oil's performance, provide improved low temperature flow and to deliver an advanced 'Low-SAPS' formulation which helps control the blocking or poisoning of exhaust after treatment devices.

RELATIVE PROTECTION

	Acid/corrosion	Dirt and deposits	Wear
Shell Rimula R6 LME ■ Low emissions ■ Maintenance saving ■ Energy Saving	✓✓✓	✓✓✓✓	✓✓✓✓
Shell Rimula R5 LE ■ Low Emissions ■ Energy Saving	✓✓✓	✓✓✓✓	✓✓✓
Shell Rimula R4L ■ Low emissions ■ Extra Life-Improved Protection	✓✓	✓✓✓	✓✓✓

Performance level is a relative indication only.



TECHNOLOGY LEADERSHIP

Shell Rimula R5 LE, a semi-synthetic lubricant, uses a unique technology that adapts chemically and physically to meet the changing needs of your engines. Shell Rimula R5 LE is an innovative heavy-duty engine oil designed to deliver fuel economy savings, extended drain capability, enhanced engine cleanliness, and excellent wear protection.

Shell Lubricants is one of the first companies to offer semi-synthetic SAE 10W-30 and SAE 10W-40 viscosity grade products that meet some of the most stringent heavy-duty engine oil specifications globally, such as API CJ-4, ACEA E9, and Volvo VDS-4. Shell Lubricants is committed to being the technical leader in heavy-duty engine oil product innovation.

FUEL ECONOMY BENEFITS



Shell Lubricants continues to be a leader in the development of fuel-economy-enhancing lubricants, providing real fuel savings that can help lower operation and maintenance costs. In 2009, we conducted a large scale trial of medium-duty trucks based on city and highway driving patterns.

Use of Shell Rimula R5 LE 10W-30 viscosity grade demonstrated fuel savings of up to 1.6% in medium-duty trucks (for highway cycles, compared to conventional SAE 15W-40 engine oil).

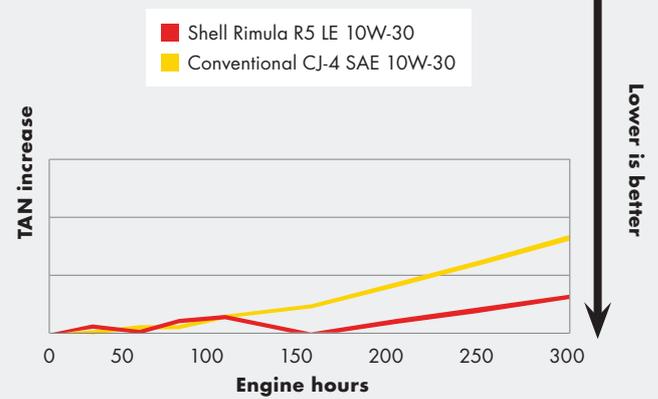


MAINTENANCE SAVINGS

Optimise oil drain intervals

Shell Rimula R5 LE provides protection against acid buildup that can contribute to corrosive wear, as demonstrated through Total Acid Number (TAN) increase and lead corrosion in several industry standard engine tests. By controlling TAN increase, Shell Rimula R5 LE can help equipment owners optimise oil drain intervals.

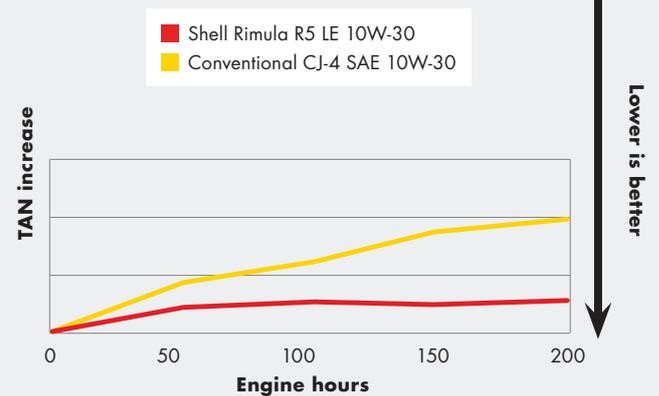
Mack T-12 Total Acid Number (TAN) increase



Low temperature performance

At lower temperatures, using Shell Rimula R5 LE 10W-30 or 10W-40 can help your engine start more easily than using a 15W-40 viscosity grade product. Use of Shell Rimula R5 LE 10W-30 or 10W-40 can also help protect the durability of the starter and battery in harsh winter climates.

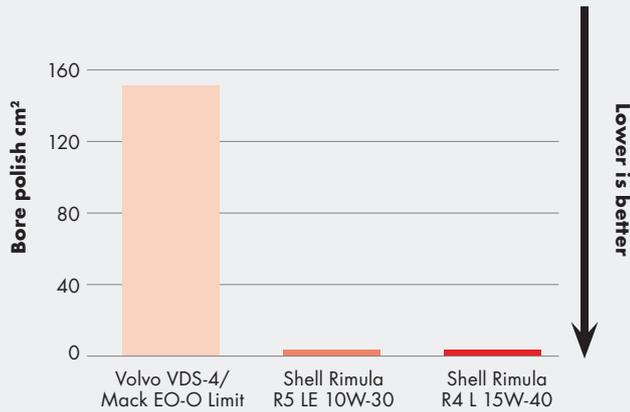
Cummins ISM Total Acid Number (TAN) increase



WEAR PROTECTION/DEPOSIT CONTROL

Shell Rimula R5 LE provides excellent wear control; particularly in preventing bore polish in the cylinder liners. Bore polish in the cylinder liners can result in a loss of fine manufactured honing lines, which can lead to excessive liner wear and an increase in oil consumption. Control of bore polish can be measured through the stringent Volvo D-12D engine tests. As shown below, Shell Rimula R5 LE does an excellent job controlling bore polish in this engine test at a performance level comparable to 15W-40 viscosity grade products.

Shell Rimula R5 LE 10W-30 provides protection against bore polish as well as a conventional 15W-40 oil.



Comparison of a new camshaft to a used camshaft after using Rimula R5 LE 10W-30.



Shell Rimula R5 LE also provides wear and deposit control to help prevent wear of an engine's most critical components. Excessive wear of the cam lobes and tappets in an engine can result in a loss of power and increased engine emissions. Control of wear in the valve train components is measured in the stringent Mercedes-Benz OM-646 LA engine test.

As we can see from the pictures above, there is minimal wear in the used camshaft after running for 300 hours using Rimula R5 LE 10W-30.

CLEANLINESS/DEPOSIT CONTROL

Shell Rimula R5 LE provides exceptional piston deposit control, exceeding the MB228.51 performance levels for piston cleanliness control in the OM-501 LA engine test, one of the most demanding tests in the industry. Excessive deposits on the piston can lead to bore polish and scuffing on the cylinder liner, which can result in increased oil consumption. Even after running for 300 hours in the OM-501 LA test with Shell Rimula R5 LE, there are minimal deposits in the top ring and second land.

Shell Rimula R5 LE - visibly cleaner pistons (OM 501 LA test - comparison with high reference)



SHELL RIMULA R5 LE – APPLICATION GUIDE



Shell Rimula R5 LE meets the specifications and is approved by a wide range of engine manufacturers for use in current and legacy engines. It is an excellent choice for operators of vehicle fleets in locations with large ambient temperature ranges – one oil to protect, whatever the season. Suitable for modern low emission heavy-duty engines, especially those with exhaust after treatment devices, in place of an SAE 15W-40 engine oil.



Shell Rimula R5 LE delivers enhanced performance and protection of the latest low emission engines, especially those fitted with exhaust diesel particulate filters (DPF).



SPECIFICATIONS AND APPROVALS

	SAE Viscosity Grade	
	10W-40	10W-30
API CJ-4, CI-4 Plus, CI-4, CH-4, CG-4; ACEA E9, E7; Caterpillar ECF-3, ECF-2; Cummins CES 20081; MAN: M 3575; MTU Cat 2.1; JASO DH-2; MB Approval: 228.31; DDC 93K218; Volvo: VDS-4; Renault RLD-3, Mack EO-O Premium Plus	✓	
API CJ-4, CI-4 Plus, CI-4, CH-4, CG-4; ACEA E9, E7; Caterpillar ECF-3, ECF-2; Cummins CES 20081; Mack: EO-O premium plus; MAN: M 3575; MTU Cat 2.1; JASO DH-2; MB Approval: 228.31; Volvo: VDS-4, Renault VI RLD-3		✓

OUR COMPLEMENTARY RANGE

In addition to the full range of Shell Rimula heavy-duty engine oils, Shell Lubricants also offers a complete portfolio of lubricants for every part of your equipment, including Shell Spirax gear, axle and transmission fluids and Shell Gadus greases.

For more information, please contact

shell.com/lubricants

HEALTH, SAFETY AND ENVIRONMENT

Health and safety

Shell Rimula R5 LE oils are 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 are 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 and Safety, refer to the appropriate Shell Material Safety Data Sheet.

Protect the environment

Take used oil to an authorised 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. obtained from your Shell Representative.

