

SHELL RIMULA R6 LME Plus



- Low emissions¹
- Maintenance saving
- Energy saving

¹Compatible with lower emissions engine technology.



YOU NEED THE ENGINES OF YOUR TRUCKS TO WORK RELIABLY AND EFFICIENTLY, WHETHER IN LONG-HAUL OPERATIONS OR THE SEVERE START-STOP DRIVING CONDITIONS OF SHORT-HAUL OPERATIONS. YOU ALSO WANT TO PROTECT THE PERFORMANCE OF YOUR EXHAUST EMISSION CONTROL SYSTEMS TO ENSURE THAT YOUR VEHICLES COMPLY WITH LEGISLATIVE REQUIREMENTS. WHEN YOUR ENGINE OIL IS DESIGNED TO MEET THESE CHALLENGES, IT CAN HELP YOU TO:

- Extend oil-drain intervals.
- Reduce fuel costs.
- Cut maintenance costs.

SHELL RIMULA R6 LME Plus IS FORMULATED WITH SHELL'S INNOVATIVE DYNAMIC PROTECTION PLUS TECHNOLOGY, WHICH PROVIDES OUTSTANDING ENGINE PROTECTION.



HIGH PERFORMANCE

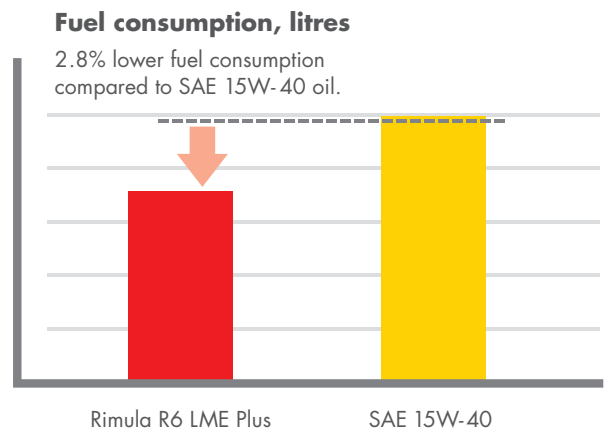
Shell Rimula R6 LME Plus features low sulphated ash, phosphorus and sulphur (SAPS) additive technology and a unique anti-wear system. Its protective power is enhanced by synthetic technology that delivers superior protection for engines², extended oil life³ and increased fuel economy.⁴ It is suitable for Euro 4, 5 and 6 vehicles.

Low emissions

- Low-SAPS formulation for exhaust system catalyst protection.
- Designed to reduce diesel particulate filter blocking.⁵

ENERGY SAVING/FUEL ECONOMY

- Shell Rimula R6 LME Plus 5W-30 gave over 2.8% fuel economy compared to an SAE 15W-40 oil.
- When compared to an SAE 10W-40 oil it can give up to 2% fuel economy.
- This can significantly help reduce Total Cost of Ownership (TCO). For example, if a fleet owner spends Euro 50K per year on fuel with a standard SAE 15W-40 lubricant. If they then switch to Rimula R6 LME Plus 5W-30, they can potentially save up to Euro 1400 per year on fuel- which is a substantial saving!



MEETING THE LATEST API SPECIFICATION

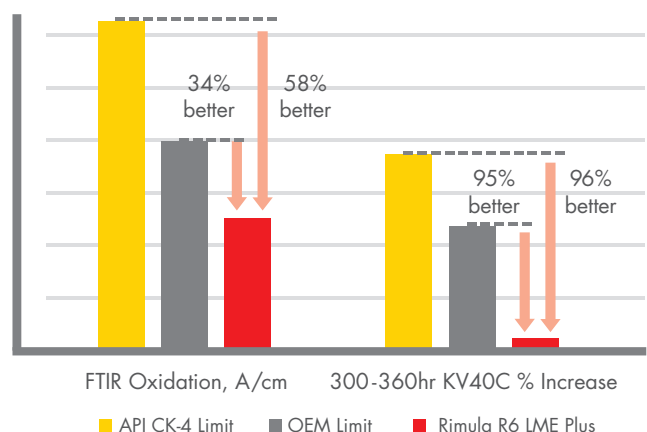
Advanced technologies and materials, and new operating conditions such as higher internal temperatures continue to improve engine efficiency. These engine changes place more stress on the oil, which has to lubricate, cool, clean and protect over extended oil-drain intervals.

As engine manufacturers create cleaner, more-fuel-efficient diesel engines, they need a new generation of high-performing diesel engine oils to protect them. Shell Rimula R6 LME Plus has been formulated to meet the latest API CK-4 specification, which has extended test limits in response to changes in engine hardware and operating conditions.

OXIDATION CONTROL

Shell Rimula R6 LME Plus offers improved oxidation control; it has over 95% improved viscosity control in the rigorous Volvo T-13 test compared with the API CK-4 limit. Excellent oxidation control helps to prevent oil thickening and harmful deposits in all areas of the engine.

- Volvo T13 is a new 360 hour engine test, introduced in the API CK-4 category to measure bulk oxidation properties of the oil.
- Shell Rimula R6 LME Plus 5W-30 provides outstanding oxidation control, 58% better than API CK-4 and 34% better than the more stringent OEM requirements.
- The viscosity control was also excellent showing plenty of oxidation 'reserve' of the oil. Over 95% improved viscosity control!



² Compared with the new, more-stringent MB 228.51 limit, as measured in the MB OM 646 LA engine test.

³ Compared with a typical 10W-40 oil over a 100,000-km oil-drain interval.

⁴ Compared with a standard 10W-40 oil.

⁵ Unique low-ash additive system designed to perform with diesel particulate filters.

EXCELLENT WEAR PROTECTION

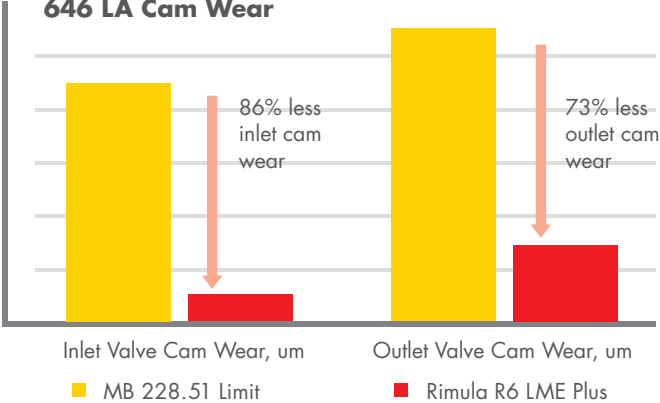
Engine wear protection is achieved through the addition of anti-wear additives that are designed to form protective films in metal-to-metal contacts when needed under different engine operating conditions. Shell Rimula R6 LME Plus also incorporates soot-dispersant additives to keep particles finely dispersed and to help prevent soot-induced wear.

Excessive wear of the cam lobes and tappets in an engine can result in a loss of power and increased engine emissions. Shell Rimula R6 LME Plus helps to prevent wear in an engine's most critical components.

In the Mercedes-Benz OM 646 LA engine test, Shell Rimula R6 LME Plus demonstrates more than 86% less wear in the inlet camshaft and over 73% better wear protection in the outlet camshaft compared with the more-stringent, new MB 228.51 limits.

- Shell Rimula R6 LME Plus provides excellent Cam Wear protection in the Mercedes-Benz OM 646 LA Engine Test.

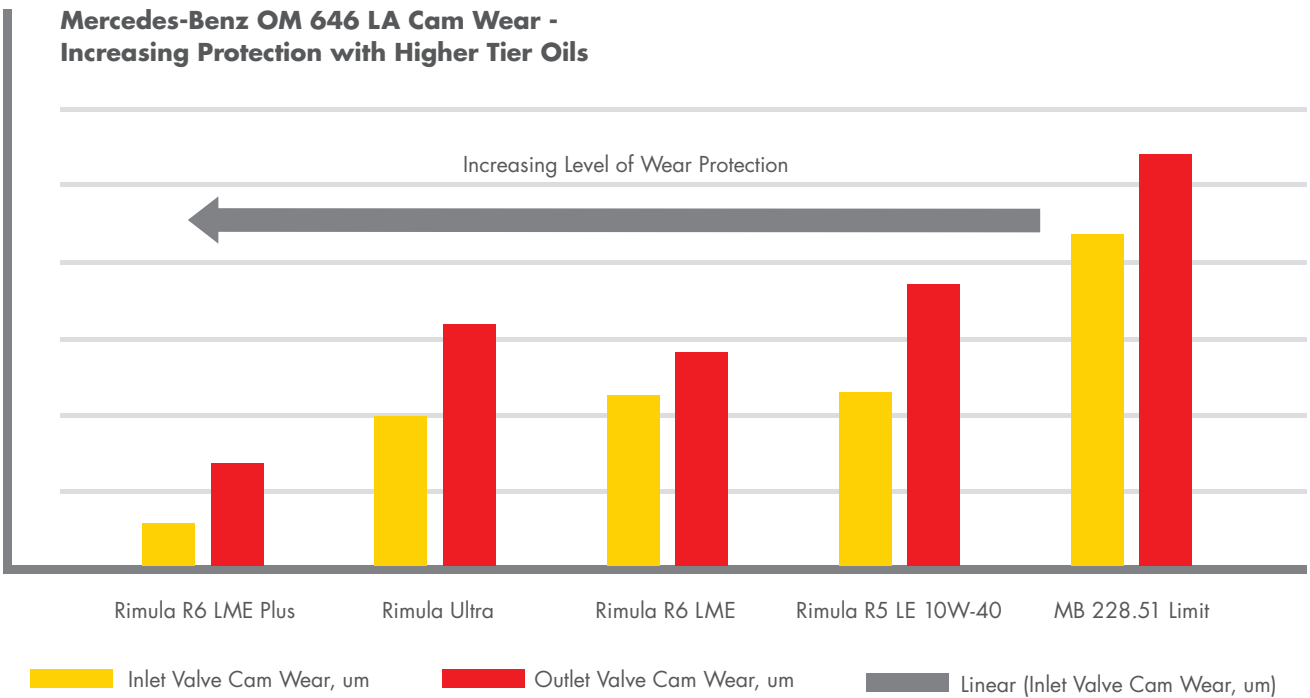
Mercedes-Benz OM 646 LA Cam Wear



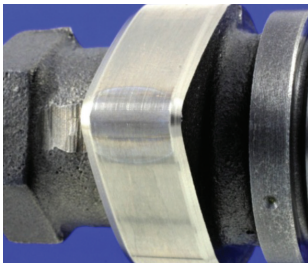
- Increased level of Cam Wear protection can be seen in the below chart as we increase the performance of the Shell Rimula products.

- Shell Rimula R6 LME Plus shows excellent inlet and outlet cam wear compared to MB 228.51 Limits.

Mercedes-Benz OM 646 LA Cam Wear - Increasing Protection with Higher Tier Oils



Used cam



New cam



DEPOSIT CONTROL

Turbocharger Deposits – MB 228.51 - OM 501 LA Engine Test

- Compared to a borderline oil, Shell Rimula R6 LME Plus 5W-30 showed virtually no deposits.
- Again demonstrating exceptional cleanliness.



Shell Rimula R6
LME Plus 5W-30

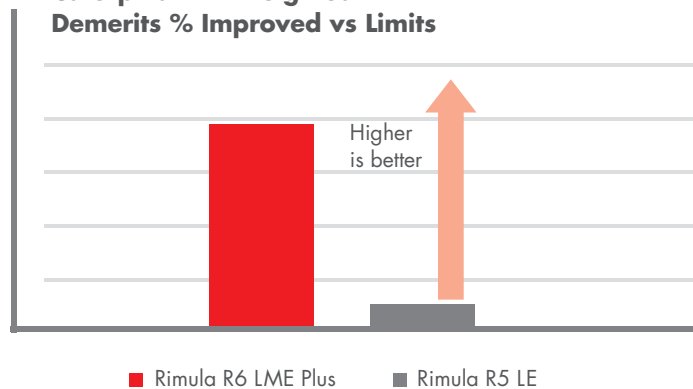


Minimum Passing
Performance (2.0 rating)

Caterpillar 1N Deposit Control Comparison

- Caterpillar 1N weighted demerits verses the limits.
- Shows an improvement in deposit control as we move to higher tier product.

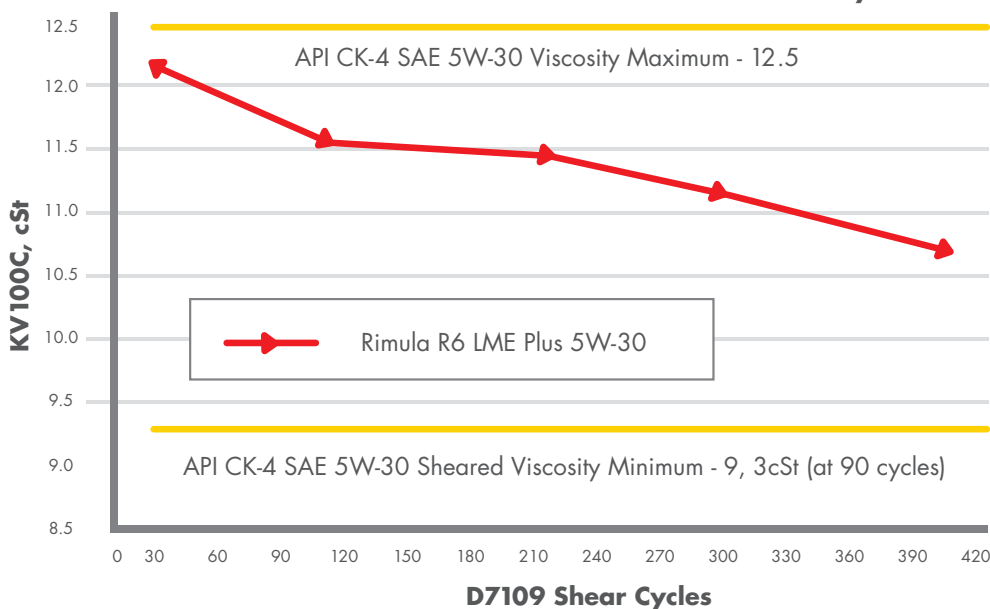
Caterpillar 1N Weighted Demerits % Improved vs Limits



SHEAR STABILITY

Shear stability is a measure of an oil's ability to resist mechanical degradation under severe stress. Being sheared into smaller parts can reduce an oil's viscosity, which may result in failure to protect vital engine parts. In the ASTM D7109 test, Shell Rimula R6 LME Plus demonstrates strong shear stability.

Shell Rimula R6 LME Plus 5W-30 Extended Shear Stability



- Shell Rimula R6 LME Plus remains well within the SAE 30 range even after 400 passes through the Bosch Shear Stability test.



DYNAMIC PROTECTION PLUS

Shell Rimula R6 LME Plus is formulated with Dynamic Protection Plus Technology that combines synthetic base oil technology and our Adaptive Additive Technology to provide outstanding engine protection:

- Its adaptive technology protects against engine wear across all terrains and weather conditions, and offers proven start-up capabilities at extreme temperatures.

- It fights against acid and deposit build-up so that the engine is protected under various conditions.
- It is designed to protect engines in many different environments, which results in longer oil-drain intervals⁶ and longer engine life.

⁶ Proven to deliver 150,000 km oil-drain intervals based on MB 228.5 or 228.51



RELATIVE PROTECTION			
	Acid/ corrosion	Dirt and deposits	Wear
Shell Rimula R6 LME Plus	✓✓✓	✓✓✓✓	✓✓✓✓
Shell Rimula R5 LE	✓✓✓	✓✓✓✓	✓✓✓
Shell Rimula R4 L	✓✓	✓✓✓	✓✓✓

Performance is a relative indication only

SHELL RIMULA R6 LME Plus PROTECTIVE POWER IS ENHANCED BY SYNTHETIC TECHNOLOGY THAT DELIVERS SUPERIOR PROTECTION FOR ENGINES.

EMISSION CONTROL

Shell Rimula R6 LME Plus low-SAPS formulation helps to protect the exhaust system catalysts and filters used on the latest vehicles. This enables your vehicles to comply with legislative requirements and supports efficient operations.

SHELL RIMULA R6 LME Plus – SUITABLE FOR:



BETTER PROTECTION FOR ENGINES WITH EGR

Exhaust Gas Recirculation (EGR) introduces some exhaust gas into the inlet air charge to reduce peak combustion temperatures, which lowers nitrogen oxide emissions. The exhaust gases contain acids and soot particles that can have a detrimental effect on oil performance in terms of corrosion and soot-induced wear. EGR also leads to higher oil temperatures, which stress the oil further.

Shell Rimula R6 LME Plus with Dynamic Protection Plus technology shows excellent performance in the severe tests on engines equipped with EGR that were introduced into the API CJ-4 specification, i.e., Mack T-12 (lead corrosion and piston ring and cylinder liner wear) and Cummins ISB (valve train wear under high soot conditions).

SPECIFICATIONS, APPROVALS AND RECOMMENDATIONS

- ACEA E6, E7, E9 • Cummins CES 20086, 20081
- Deutz DQC IV-10 LA • MTU Category 3.1
- Mack EO-S 4.5, EO-O Premium Plus
- MAN M 3677 • MB-Approval 228.51
- Renault Trucks RLD-3 • Volvo VDS-4.5, VDS-4
- API CK-4, CJ-4, CI-4 Plus, CI-4, CH-4, SN
- Caterpillar ECF-3, ECF-2 • JASO DH-2
- Detroit Fluids Specification 93K222, 93K218

*For a full listing of equipment approvals and recommendations, please consult your local Shell Technical Helpdesk.



For more information, please contact



shell.com/lubricants