



INDIAN MINING COMPANY EXTENDS OIL-DRAIN INTERVALS WITH SHELL RIMULA R4

TOTAL ESTIMATED ANNUAL CUSTOMER SAVING

US\$427,428



COUNTRY: Mining company

COUNTRY: India

APPLICATION: Heavy-duty diesel engines

SAVING: US\$427,428 estimated annual customer saving

KEY EDGE: Shell Rimula R4, Shell LubeAnalyst

A leading Indian mining company operates a range of heavy-duty equipment, including items from Hyundai, Ashok Leyland, Volvo and Schwing Stetter, in challenging working conditions. The company was using an engine lubricant that gave a maximum oil-drain interval of 350 hours and wanted a lubricant with a longer oil-drain interval, ideally 500 hours, to increase equipment availability and production time.

The mining company worked with Shell Lubricants to identify a solution, and decided to change to Shell Rimula R4. The company also chose to take advantage of the Shell LubeAnalyst service to monitor the oil's condition. After trials, it was established that the new lubricant could be used for up to 600 hours, providing the equipment was well maintained.

As a result of changing to Shell Rimula R4, the mining company has increased its oil-drain interval by 70% from 350 to 600 hours. Because fewer oil changes are required, the company has reduced its lubricant consumption and extended the maintenance intervals, which has resulted in lower maintenance costs. There is also a benefit from increased production time and a lower lubricant inventory. The company recognises the value of Shell's lubricant solution and has estimated a total annual saving, across numerous machines, of US\$427,428.



1

CHALLENGE

A leading Indian mining company operating heavy-duty equipment in challenging working conditions wanted an engine lubricant that would give it a longer oil-drain interval to increase equipment availability and production time.

2

SOLUTION

The company decided to change to Shell Rimula R4. It also took advantage of the Shell LubeAnalyst service to monitor the oil's condition. After trials, it was established that the new lubricant could be used for up to 600 hours.

3

OUTCOME

By changing to Shell Rimula R4, the company has increased its oil-drain interval by 70% from 350 to 600 hours. Fewer oil changes are required and the company has extended the maintenance interval and increased production time.

4

VALUE

As a result of reduced lubricant consumption and lower maintenance costs, the company has reported a total estimated saving of US\$427,428 per year.¹

¹The savings indicated are specific to the calculation date and mentioned site. These calculations may vary from site to site and from time to time, depending on, for example, the application, the operating conditions, the current products being used, the condition of the equipment and the maintenance practices.



SHELL RIMULA R4

MULTIGRADE HEAVY-DUTY DIESEL ENGINE OILS

Shell Rimula R4 Energised Protection oil uses exclusive combinations of the latest high-performance additives to ensure that the oil adapts and helps to protect under the full range of pressures and temperatures found in modern engines – from the high temperatures in the pistons to the extreme loads found in the valve trains. Featuring extra-active additives designed to control and sweep away the harmful soot and particles found in high-performance engines, Shell Rimula R4 delivers excellent soot and viscosity control, and outstanding protection against wear. It also offers exceptional versatility; fleets with multiple engine makes need only one oil.



Applications

- Severe-duty diesel engines. Shell Rimula R4 provides demonstrated protection and performance in the latest high-power, heavy-duty diesel engines from European, US and Japanese manufacturers in both on- and off-highway applications.
- High-technology, low-emission engines. Shell Rimula R4 is suitable for most modern low-emission engines meeting Euro 2, 3 and 4, and US 2002 emission requirements.
- For the latest low-emission engines, especially those fitted with exhaust diesel particulate traps, we recommend the use of our low-emission products: Shell Rimula R4 L or Shell Rimula R6 LM/LME.

Performance features and benefits

- Outstanding protection. Featuring an exclusive additive system designed to promote maximum soot handling, Shell Rimula R4 delivers excellent

wear protection and long oil life in Euro 3, US 2002 and other advanced engines.

- Demonstrated performance for all applications. Shell Rimula R4 has been tested and proven in real-life applications, from severe-duty operation in mining and construction operations to heavy-duty haulage in some of the world's severest environments.
- Improved engine cleanliness. The exclusive additive system delivers improved engine cleanliness and protection against piston deposits, which enables Shell Rimula R4 to exceed the demanding requirements of most equipment manufacturers.

Specifications and approvals

API CI-4, CH-4, CG-4, CF-4 and CF; ACEA E7, E5 and E3; Global DHD-1; Caterpillar ECF-1-A; Cummins CES 20078, 77, 76, 75, 72 and 71; DDC 93K215; MACK EO-M and EO-M+; MAN M3275-1; MB Approval 228.3; Renault Trucks RLD-2; and Volvo VDS-3

Complementary products

Application	Lubricants
Gear oils	Shell Spirax S2 G, Shell Spirax S3 G, Shell Spirax S6 GXME
Axle oils	Shell Spirax S2 A, Shell Spirax S3 AX, Shell Spirax S6 AXME
Transmission oils	Shell Spirax S4 ATF HDX, Shell Spirax S6 ATF VM, Shell Spirax S6 ATF UM
Greases	Shell Gadus S2 V220, Shell Gadus S2 V220AC, Shell Gadus S3 V220C, Shell Gadus S3 V460D, Shell Gadus S4 V45AC