

TO GET TO THE TOP IN THIS BUSINESS YOU NEED THE RIGHT ENGINE OIL



THE ENGINE OIL THAT WORKS
AS HARD AS YOU.

Shell Rimula



A photograph of a long line of heavy-duty trucks and a car on a winding road in a mountainous area. The trucks are of various colors, including yellow, red, and white. The road is paved and has a white line on the left. The background shows a steep, rocky hillside with some greenery and a cloudy sky.

SHELL LUBRICANTS. WORLD-CLASS TECHNOLOGY WORKING FOR YOU

Heavy loads, long distances, tough roads and tight deadlines. In these conditions, your operation needs a lubrication solution you can trust. After all, if your trucks don't run smoothly, neither does your business.

Shell driveline lubricants are developed by Shell, the world's No.1 lubricants supplier*. Our world-class product technology is underpinned by:

- **Innovation** of new technologies, products and services. With significant investments in Research & Development centres internationally, our world-class scientists work in the field and in the laboratory to create some of the most advanced lubricant products available.
- **Product application** by our field experts providing lubrication advice to deliver millions of dollars in savings across industries.

- **Partnerships** with leading OEMs, customers and research institutions. These collaborations allow us to test our products in some of the most demanding conditions, gaining knowledge that helps us to deliver innovative solutions to our customers' current and future challenges.

Our portfolio of world-class products is built around a deep understanding of the operation and lubrication needs of heavy-duty machines. And our engineers have developed a lubrication solution for the entire driveline: Shell Rimula heavy-duty diesel engine oils, Shell Spirax gear, axle and transmission oils and Shell Gadus heavy-duty greases.

So even under some of the toughest operating conditions, you can be sure that our lubricants will perform every step of the way.

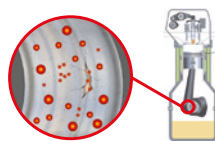
*Source: The tenth annual Kline & Company report on the global lubricants sector ("Global Lubricants Industry 2011: Market Analysis and Assessment").

TECHNOLOGY THAT PROTECTS

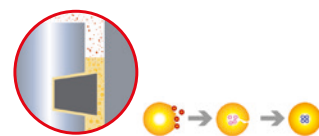
Shell Rimula heavy-duty diesel engine oils are ready for action when you need them. The technology in Shell Rimula lets you choose the level of protection you need in three critical areas – the areas that threaten engines most.

1. ACID CONTROL

Acids, formed when diesel fuel is burned, can escape into your oil, where they corrode parts of your engine, such as the bearings pictured here. Shell Rimula oils contain powerful neutralising agents that protect the engine from attack.



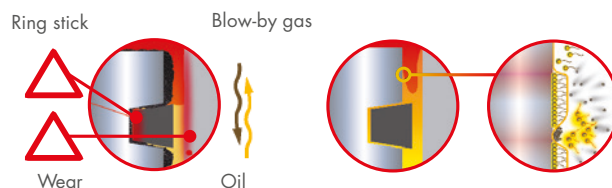
Acid attack on bearings can cause engine failure.



Oil neutralises exhaust gas acids as they flow past the piston and rings.

2. DEPOSIT CONTROL

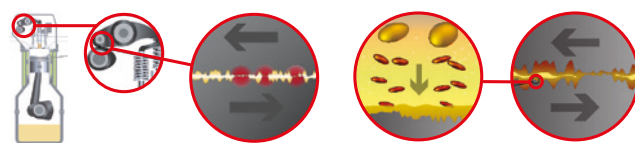
Build-up of excessive piston deposits can result in ring sticking and abrasion, and cylinder wear. This shortens engine life and increases oil consumption. Shell Rimula engine oils contain active molecules that prevent or carry away the particles that cause deposits.



Active molecules repel or capture carbon-forming deposits.

3. WEAR CONTROL

Keeping moving metal surfaces separated is a vital function of an oil. Failure can result in "hot spots" and wear. Shell Rimula oils contain molecules that transform into protective films that keep metal surfaces apart, preventing wear.



Hot spots when lubrication breaks down.

Protective films formed by anti-wear molecules in high-stress areas.

YOUR PROTECTION – OUR EXPERTISE

Our technologists understand how to design specific protection levels into an oil to meet specific engine and operating conditions. The Shell Rimula oils are the culmination of their expertise and skill – offering a full range of protection and performance possibilities to operators of transport equipment. The results of our technology mean Shell Rimula engine oils work better for you.

THE SHELL RIMULA RANGE:

Our product selection is easy to understand and use. Our portfolio of heavy-duty engine oils meet the requirements of on- and off-highway equipment, including the latest vehicles fitted with diesel particulate filters (DPF) and catalysts.

		QUALITY MONOGRADE OILS	
PROTECTION LEVEL	6		
	5		
	4		

*Exhaust gas recirculation **Diesel particulate filter

WHATEVER YOUR NEEDS, THERE’S A SHELL RIMULA OIL TO MEET THEM.



TRANSPORT AND LOGISTICS

Our family of oils has a solution that is right for every transport and logistics operator, from cost-effective routine maintenance products such as Shell Rimula R4 X, through to products that help minimise operating costs by extending maintenance or fuel-economy performance, such as Shell Rimula R6 M and Shell Rimula R6 ME.

And you’ll be ready for tomorrow with our latest low-emissions compatible engine oils that help keep the latest Euro IV and V trucks in peak condition, such as Shell Rimula R6 LME.



BUS AND COACH

As one of the leading suppliers of engine oil technology to bus and coach operators globally, we can help identify the right product to meet your operating needs. For example, Shell Rimula R6 LM is an ideal solution for operators of mixed diesel and CNG-powered vehicles – one oil for the whole fleet. It also protects your exhaust particulate filters.

ADVANCED MULTIGRADE OILS

LOW EMISSION ENGINE OILS

Shell Rimula R6 M, ME

- Maintenance Saving
- Energy Saving (R6 ME only)



BETTER
DEPOSIT
& WEAR
CONTROL
+ DPF**
PROTECTION

Shell Rimula R6 LM, LME

- Low Emissions ■ Maintenance Saving
- Energy Saving (R6 LME only)



BETTER DEPOSIT CONTROL

BETTER ACID, DEPOSIT
AND WEAR CONTROL

Shell Rimula R5 E, M

- Energy Saving



BETTER
DEPOSIT
& WEAR
CONTROL
+ DPF**
PROTECTION

Shell Rimula R5 LE

- Low Emissions
- Energy Saving



BETTER ACID & WEAR CONTROL

BETTER FUEL ECONOMY

Shell Rimula RT4 X

- Triple Protection
- Meets EGR* Requirements



BETTER
DEPOSIT
& WEAR
CONTROL
+ DPF**
PROTECTION

Shell Rimula RT4 L

- Low Emissions
- Extra Life – Improved Protection



TRACTOR, AGRICULTURE AND CONSTRUCTION

Shell's extensive experience in supplying heavy-duty engine oils to some of the world's leading tractor, agriculture and construction equipment manufacturers means you can be sure we'll have the right product to provide year-round protection and reliability.

With a wide range of approvals, products such as Shell Rimula R4 X are the ideal choice for heavy-duty protection for all your on- and off-highway equipment. And with approvals from leading OEMs such as Caterpillar, Cummins, Deutz and MTU, our new products – such as Shell Rimula R4 L – are ready for the next generation of off-highway engines.

Grades with suffices L, M, or E deliver the following value-added performance:

L = LOW EMISSIONS

Designed for low emission engines

M = MAINTENANCE SAVING

Meets long-drain requirements for many engine makers

E = ENERGY SAVING

Designed for low emission engines

WORLD-CLASS TECHNOLOGY: LOWERING YOUR COSTS AND DELIVERING VALUE TO YOUR OPERATION

Shell has undertaken lubrication research continuously for more than 70 years and has made significant investments in Research & Development centres internationally. Through millions of miles in field trials carried out every year and world-class scientists working in the field, in the laboratory and in collaboration with leading equipment manufacturers and industry bodies, Shell can create products that meet your needs and help you deliver fuel savings and equipment protection.

It is through this knowledge that Shell technologists developed the Shell Rimula range of heavy-duty diesel engine oils that help provide equipment protection and operational efficiency. The range of synthetic and semi-synthetic heavy-duty diesel engine oils – such as Shell Rimula R6 LME, Shell Rimula R6 ME, Shell Rimula R5 LE and Shell Rimula R5 E – can deliver improved wear performance and fuel economy. They contain high-quality low-viscosity synthetic base oils, combined with advanced additive technology. As a result, the engine doesn't have to work as hard, reducing the amount of fuel consumed, but still benefits from the high level of protection it needs from the oil.

THE THREE KEY AREAS WHERE OUR TECHNOLOGY DELIVERS VALUE ARE:

FUEL ECONOMY

Our range of synthetic and semi-synthetic heavy-duty engine oils are designed to deliver increased fuel economy.




MAINTENANCE SAVINGS

Our high quality oils help minimise wear, and help to cut down on maintenance costs.

LOWER EMISSIONS

Designed for low emission engines.



SHELL RIMULA PRODUCTS	SPECIFICATION & APPROVALS	VALUE
 <p>Shell Rimula R6 LME 5W-30</p> <ul style="list-style-type: none"> ■ Low Emissions ■ Maintenance Saving ■ Energy Saving 	<p>ACEA: E6, E7; Cummins: CES 20077; Mack: EO-N; MAN: M3477; MB Approval: 228.51; MTU: Category 3.1; Renault Trucks: RLD-2; Deutz: DQC IV-10LA; Volvo: VDS-3</p>	<p>DELIVERS UP TO 2.0% FUEL SAVINGS*</p>
 <p>Shell Rimula R5 LE 10W-30</p> <ul style="list-style-type: none"> ■ Low Emissions ■ Energy Saving 	<p>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: M3575; MTU: Category 2.1; JASO: DH-2; MB Approval: 228.31; Volvo: VDS-4; Renault Trucks: VI RLD-3; Deutz: DQC III-10-LA</p>	<p>DELIVERS UP TO 1.6% FUEL SAVINGS**</p>
 <p>Shell Rimula RT4 X 15W-40</p> <ul style="list-style-type: none"> ■ Triple Engine Protection ■ Meets EGR Requirements 	<p>API: CI-4, CH-4, CG-4, CF-4, CF, SL; ACEA: E7, E5, E3; JASO: DH-1; Global: DHD-1; Caterpillar: ECF-1-A, ECF-2; Cummins: CES 20078, 77, 76, 75, 72, 71; DDC: 93K215; DEUTZ: DQC III-10; Mack: EO-M, EO-M+; MAN: M3275-1; MB Approval: 228.3; MTU: Category 2; Renault Trucks: RLD-2; Volvo: VDS-3</p>	<p>UP TO 30% IMPROVEMENT IN WEAR PROTECTION†</p>

INCREASING VALUE

*Compared to a typical 10W-40 oil. **For highway cycles, compared to a typical 15W-40 oil. † Compared to basic API CI-4 oils. ‡ Compared to basic API CF-4 oils.

1. FUEL ECONOMY

REDUCING FUEL CONSUMPTION

Whether you own one, five or a whole fleet of trucks or buses, fuel is always a significant running cost for your business. And in the current economic environment, reducing fuel consumption has never been more relevant. Combine this with environmental concerns and the growth of emission regulations such as Euro V, Euro VI and US 2010, and it's never been so important to start making your fleet more fuel efficient.

Lubricants can sometimes be overlooked as an important factor in the delivery of fuel economy. They are critical to the effective operation and longevity of almost all engine parts. Lower viscosity (thinner) lubricants can also help to lower fuel consumption by reducing the energy loss caused by friction, provided that they also give the right level of engine protection.

Shell has been at the forefront of development of fuel economy lubricants. Working in our laboratories and with leading companies and original equipment manufacturers, we have clearly demonstrated the savings that our high quality oils can bring. Shell Rimula's advanced technology gives outstanding wear protection with reduced viscosity for improved fuel economy.

MEASURING FUEL ECONOMY

To test the fuel efficiency of its new trucks, Daimler set up Record Run 2011: a journey from Rotterdam in the Netherlands to Szczecin in Poland and back, which was repeated seven times. During the 10,000km journey, the three trucks, an Actros Euro V, an Actros Euro VI and an Actros, were exclusively fuelled by Shell FuelSave Diesel and lubricated with Shell Rimula R6 LME engine oil. The Actros Euro V achieved fuel savings of 7.6% and the Actros Euro VI achieved fuel savings of 4.5% compared with the Actros.





SHELL RIMULA R6 LME SAVES UK SUPERMARKET MORRISONS 2.0% ON FUEL

THE CHALLENGE

Morrisons wanted to reduce their fuel consumption and carbon emissions in line with their corporate environmental targets. Shell's challenge was to deliver increased fuel economy without compromising vehicle reliability and component protection.

THE SOLUTION

The Shell Lubricants team recommended Morrisons' vehicles switch to Shell Rimula R6 LME, a low viscosity engine oil designed specifically to deliver fuel economy. Shell Spirax synthetic gear and axle oils were also used on the trucks.

THE RESULT

Morrisons were able to save 600 litres of fuel and over 1,500 tonnes of CO₂ across the fleet using the recommended products. Engine inspection showed that the condition of the components was excellent, with no visible wear or deposits after 100,000km.

The savings indicated are specific to the calculation date and 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.

2. MAINTENANCE SAVINGS

WEAR PROTECTION

High-pressure contact points – such as gearboxes and engine valve trains, are where wear protection is especially crucial. Low quality oils often fail to keep these components apart, resulting in hot spots and excessive wear. This ultimately leads to high maintenance costs.

Shell Rimula diesel engine oils have been developed with this in mind. With adaptive molecules which react under heat and pressure to form a protective film, they're designed to protect your engine and reduce wear.

EXTENDED OIL DRAIN INTERVALS

Shell know that oil drain intervals have a huge impact on the maintenance costs for your fleet. That's why we use different aspects of applied molecular science to create additives that minimise deposits and neutralise corroding acids. In doing this, we've increased the longevity and protective qualities of our oils to help extend oil drain intervals.

EQUIPMENT PROTECTION

'Shell's synthetic oils have a high viscosity index, which means that the oils change less with temperature. They adapt to perform better in hot and cold conditions...by staying thin enough to flow when cold...and thick enough to protect at high temperatures.' Jason Brown – Shell Technologist

Shell lubricants are also designed to ensure that your engine is well protected across a wide range of operating temperatures. So from cold starts to hot climates, Shell's high quality synthetic products such as Shell Rimula R6 LME, with its advanced additive technology, are well positioned to deliver best in class engine protection.



SHELL RIMULA R6 LM/LME HELPS GERMAN BUS COMPANY BERLINER VERKEHRSBETRIEBE TO EXTEND DPF CLEANING INTERVALS BY 50%

THE CHALLENGE

Berliner Verkehrsbetriebe (BVG), Berlin's largest bus company, wanted to increase the maintenance intervals of the diesel particulate filters (DPFs) in its fleet. Shell's challenge was to address the high concentrations of soot and ash residues in the DPFs.

THE SOLUTION

Shell recommended a trial of Shell Rimula R6 LM and Shell Rimula R6 LME, two fully synthetic and low-SAPS technology oils, on 15 buses.

THE RESULT

Conversion to Shell Rimula R6 LM and Shell Rimula R6 LME lengthened BVG's DPF cleaning intervals by 50% and provided excellent wear protection, even at extended oil-drain intervals. The company reported an annual saving of US\$188,200.

The savings indicated are specific to the calculation date and 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.

3. LOWER EMISSION

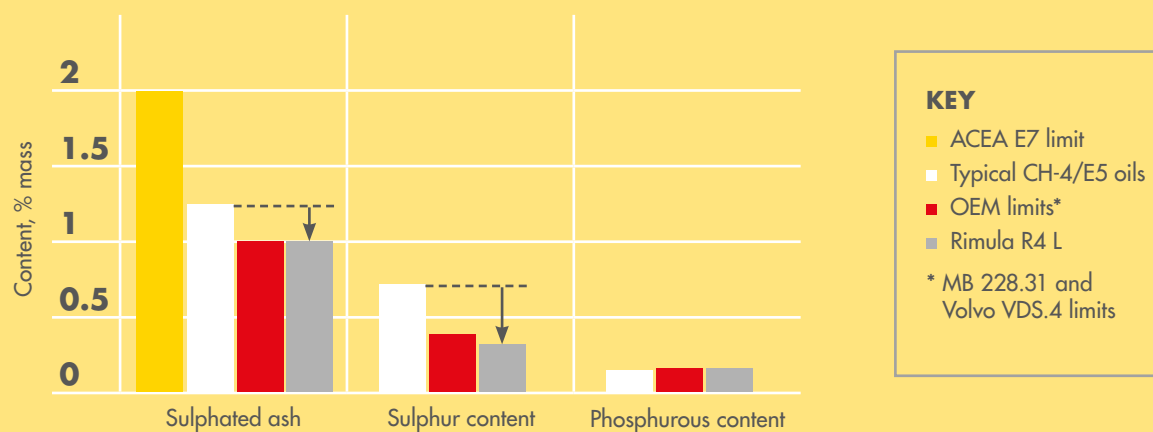
BETTER EMISSION CONTROL

By protecting the performance of your exhaust emissions control system, you're not just ensuring that your vehicle meets legal requirements, but you'll also help it run more efficiently. Using an oil such as Shell Rimula R6 LME with low SAPS (Sulphated Ash, Phosphorous, Sulphur) technology can help you and your fleet to do your bit for the environment and save money in the long run.

EXTENDED FILTER CLEANING INTERVALS

Many new trucks come fitted with after-treatment devices such as diesel particulate filters. The ash formed when conventional oils burn can block these filters and lead to additional maintenance costs. That's why Shell has developed low SAPS products such as Shell Rimula R4 L. These oils are specifically designed to protect after-treatment devices and help you comply with environmental requirements too.

LOWER SAPS* FOR REDUCED EXHAUST SYSTEM IMPACT



*Sulphated Ash, Phosphorous, Sulphur
Source: www.shell.com



SHELL RIMULA R4 L HELPS RUSSIAN TRANSPORT COMPANY MOSTRANSAVTO TO EXTEND OIL DRAIN INTERVAL BY 80%

THE CHALLENGE

Monstransavto, a state-owned passenger transport company, wanted to increase the oil drain interval of its fleet of 6000 buses and coaches from 10,000km.

THE SOLUTION

The company invited lubricant suppliers to take part in a tender that involved field trials on the buses equipped with Caterpillar engines. The Shell Lubricants experts provided Shell Rimula R4 L 15W-40 for the trial.

THE RESULT

Samples of used oils from the different suppliers were analysed by an independent laboratory. Shell Rimula R4 L 15W-40 increased Monstransavto's oil-drain interval by 80% to 18,000km, providing an annual saving of US\$803,171.

The savings indicated are specific to the calculation date and 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.

DID YOU KNOW?

DID YOU KNOW?

Working with Daimler, Shell Lubricants developed Shell Rimula R6 LME – delivering the triple benefits of low emissions, maintenance savings and fuel economy of up to 2%.*

*Compared to a typical 10W-40 oil.



DID YOU KNOW?

The Shell Group invests nearly US\$1.1 billion in technology each year, amongst the highest of any international oil company, so we can better anticipate our customers' future challenges.

DID YOU KNOW?

Shell has world-class research and development centres and cutting-edge laboratories focusing on lubricant technology in the US, Germany, UK and Japan (35% Shell owned). Shell's first Lubricants Technical Service Centre opened in Zhuhai, Guangdong Province in 2011. This service will be extended via an additional planned centre in Shanghai which will open in late 2013.



DID YOU KNOW?

Shell Rimula has technical relationships with some of the world's leading engine and vehicle manufacturers; the knowledge that we gain from these collaborations helps us to develop products that benefit all our customers.

TECHNICAL SERVICES: HELPING TO MAXIMISE THE BENEFITS OF EFFECTIVE LUBRICATION

Shell Lubricants Technical Services are all designed to help our customers with their lubricant-related needs in three key areas:

- **Choosing** the right products for their specific needs
- **Using** the lubricant to get the maximum benefits
- **Monitoring and improving** their operations

Shell LubeMatch

A web tool for instant lubricant recommendations for a wide variety of vehicles and equipment. Available free of charge and without the need for user names and passwords 24 hours a day at www.shell.com/lubematch

Shell LubeAdvisor

Technical advice to help you choose the right product to meet the needs and working conditions of your equipment. Includes support from our help desks as well as audits and surveys conducted by our highly experienced field staff.

Shell LubeAnalyst

Oil and equipment condition monitoring giving early indication of potential lubricant or component issues, reducing the risk of breakdowns and the costs of maintenance and repairs as well as helping to optimise lubricant management.

Shell LubeCoach

Shell LubeCoach provides relevant training on topics such as storage and handling of lubricants, lubricant cleanliness, application and good maintenance practices plus Health and Safety.

Shell LubeControl

Shell LubeControl offers stock management support and Vendor Managed Inventory services helping you to avoid lubricant shortages.

Shell LubeExpert

Shell LubeExpert provides specialist on-site technical application support from our field experts, bringing their experience and knowledge to bear on your equipment issues. Detailed inspections also allow them to identify improvement opportunities, helping you to run your operation more efficiently and apply best practices that save you time and money.

Shell LubeVideoCheck

Shell LubeVideoCheck allows you to inspect inside your engines without having to dismantle them, checking for deposits or wear that can cause performance problems or breakdowns.

PRODUCT PERFORMANCE

The Shell Rimula range of oils has products to meet virtually all the requirements and approvals of the world's leading manufacturers of heavy-duty engines, including Caterpillar, Cummins, Mercedes-Benz, Volvo and many others.

PRODUCT	VISCOSITY GRADES	KEY BENEFITS	SPECIFICATIONS AND APPROVALS
SHELL RIMULA R6 LME	5W-30	<ul style="list-style-type: none"> Low Emissions Maintenance Saving Energy Saving 	ACEA: E6, E7; Cummins: CES 20077; Mack: EO-N; MAN: M3477; MB Approval: 228.51; MTU: Category 3.1; Renault Trucks: RLD-2; Deutz: DQC IV-10LA; Volvo: VDS-3
SHELL RIMULA R6 LM	10W-40	<ul style="list-style-type: none"> Low Emissions Maintenance Saving 	ACEA: E7, E6; API: CI-4, CH-4, CG-4, CF-4, CF; Caterpillar: ECF-1-A; Cummins: CES 20077, 72, 71; DAF: Meets ACEA E6; Deutz: DQC IV-10LA; Mack: EO-N; MAN: M3477, M3271-1; MB Approval: 228.51, 226.9; MTU: Category 3.1; Renault Trucks: RLD-2; Volvo: CNG, VDS-3; JASO: DH-2
SHELL RIMULA R6 ME	5W-30	<ul style="list-style-type: none"> Maintenance Saving Energy Saving 	ACEA: E4; API: CF; DAF: HP-1/2; MAN: M3277; MB Approval: 228.5; MTU: Category 3; Volvo: VDS-2, IVECO Standard TFE (Meets)
SHELL RIMULA R6 M	10W-40	<ul style="list-style-type: none"> Maintenance Saving 	ACEA: E7, E4; API: CF; Cummins: CES 20072; Deutz: DQC IV-10; MAN: M3277; MB Approval: 228.5; Mack: EO-M+, EO-N; MTU: Category 3; Renault Trucks: RXD; Volvo: VDS-3; IVECO: T3 E4 (Meets)
SHELL RIMULA R5 E	10W-40	<ul style="list-style-type: none"> Energy Saving 	API: CI-4, CH-4, CG-4, CF-4, CF; ACEA: E7, E5, E3; Global: DHD-1; Cummins: CES 20078, 77, 76, 72, 71; Mack: EO-M, EO-M+; MAN: M3275-1; MB Approval: 228.3; Renault Trucks: RLD-2; Volvo: VDS-3, VDS-2
SHELL RIMULA R5 LE	10W-30	<ul style="list-style-type: none"> Low Emissions Energy Saving 	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: M3575; MTU: Category 2.1; JASO: DH-2; MB Approval: 228.31; Volvo: VDS-4; Renault Trucks: VI RLD-3; Deutz: DQC III-10-LA
SHELL RIMULA R5 M	10W-40	<ul style="list-style-type: none"> Maintenance Saving 	MAN: 3277; MB Approval: 228.5; ACEA: E4; IVECO: T3 E4 (Meets Iveco specification)
SHELL RIMULA RT4 L	15W-40	<ul style="list-style-type: none"> Low Emissions Extra Life – Improved Protection 	API: CJ-4, CI-4+, CI-4, CH-4, CG-4, CF-4, CF (SM/SL/SJ/SH); ACEA: E9, E7; Caterpillar: ECF-2, ECF-3; Cummins: CES 20081, 77, 72, 71; Deutz: DQC III-10LA; DDC: 93K218; Mack: EO-O Premium Plus; JASO: DH-2; MAN: M3575; MB Approval: 228.31, 228.3; MTU: Category 2.1; Renault Trucks: RLD-3; Scania: LDF-LA; Volvo: VDS-4, VDS-3; IVECO: T2 E7 (Meets)
SHELL RIMULA RT4 X	15W-40	<ul style="list-style-type: none"> Triple Engine Protection Meets EGR Requirements 	API: CI-4, CH-4, CG-4, CF-4, CF, SL; ACEA: E7, E5, E3; JASO: DH-1; Global: DHD-1; Caterpillar: ECF-1-A, ECF-2; Cummins: CES 20078, 77, 76, 75, 72, 71; DDC: 93K215; DEUTZ: DQC III-10; Mack: EO-M, EO-M+; MAN: M3275-1; MB Approval: 228.3; MTU: Category 2; Renault Trucks: RLD-2; Volvo: VDS-3

Specifications and approvals may vary with viscosity grade.



GEAR & AXLES



ENGINE



GREASES

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

www.shell.com