# ABOUT ENERGISED PROTECTION

You need to know your oil will protect your engine under all conditions. No matter how hot, cold, steep, dusty, muddy or extended your operations, you demand protection.

The Energised Protection of Shell Rimula heavy duty diesel engine oils provide 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 R3 MV, a modern high power oil, features a multi-component system to help provide off highway engine protection against wear and deposits and is designed to resist breakdown by heat.

# PROTECTIVE POWER

Shell Rimula

Using innovative technology solutions, Shell Rimula R3 MV is specially designed for demanding applications such as those found in construction, mining and quarrying.

PROTECTIVE POWER			
	Acid/corrosion	Dirt and deposits	Wear
Shell <b>Rimula R4 L</b> Low emissions	<b>/ /</b>	<b>///</b>	111
Shell <b>Rimula R3 MV</b> • Off Highway - High Power Use	<b>//</b>	//	11
Shell <b>Rimula R2 Extra</b> Turbocharger performance	$\sqrt{J_2}$	<b>/ /</b>	✓

# CONTROLLING ENGINE WEAR

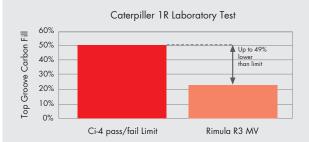
With over 20,000 hours of carefully monitored "real world" field test experience, Shell Rimula R3 MV has proven its ability to control engine wear. In trials with Caterpillar engines, Shell Rimula R3 MV performed well in helping to prevent iron wear and to protect iron based components and bearing metal (see graph\*).

\*Based on field trial and laboratory test. Performance levels may vary depending upon the application, operating conditions, current product being used, the condition of the vehicle, and maintenance and services practices adopted.



## **REDUCED ENGINE DEPOSITS**

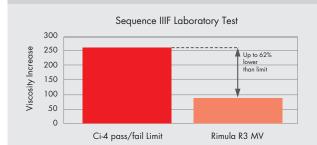
Shell Rimula R3 MV has demonstrated excellent sludge and deposit control. Up to 49% lower than the maximum Cl-4 limit allowed for carbon deposits in the top groove of the piston were measured in Caterpillar engines\* at high temperature.



\*Based on laboratory test. Performance levels may vary depending upon the application, operating conditions, current product being used, the condition of the vehicle, and maintenance and services practices adopted.

## **RESISTS BREAKDOWN BY HEAT**

Protection against breakdown by heat means the oil continues to help protect against deposits, even under severe conditions, helping to deliver longer engine life. Shell Rimula R3 MV has demonstrated exceptional resistance to breakdown by heat in laboratory tests, with up to 62% lower viscosity\* than the API CI-4 viscosity limit (see graph).



\*Based on laboratory test. Performance levels may vary depending upon the application, operating conditions, current product being used, the condition of the vehicle, and maintenance and services practices adopted.

For more information, please contact

# SHELL RIMULA R3 MV - APPLICATION GUIDE





A modern high power oil, Shell Rimula R3 MV is particularly suitable for use in severe duty off highway equipment. Also suitable for US 2002/Euro3 low emission engines.\*



\*For engines fitted with exhaust after-treatment devices such as particulate traps, we recommend using Shell Rimula R4 L.

#### **SPECIFICATIONS AND APPROVALS**

# **SAE Viscosity Grade: 15W-40**

API: CI-4, CH-4, CG-4, CF-4,CF; ACEA: E3; Caterpillar: ECF-1A, ECF-2; Cummins: CES 20078, 72, 71; Mack: EO-M Plus; MTU: Category 2, MB 228.3 (Meets), DDC 93K215.

### **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.

### **HEALTH AND SAFETY**

For information on correct handling, application and disposal of this product, please contact your Shell customer service centre or visit www.shell.com.

