Technical Data Sheet

- Triple Protection

Shell **Rimula** *R4 X 15W-40*

Heavy Duty Diesel Engine Oil

Shell Rimula R4 X is designed to provide Triple Protection to improve engine and oil durability. It helps to lower maintenance and increase reliability of vehicles. It's suitable for most heavy-duty diesel engines for on and off highway applications.

DYNAMIC PROTECTION

Performance, Features & Benefits

- **Acid and Corrosion Control**

  Shell Rimula R4 X shows excellent control of acids by reducing the accumulation of acids and chemical corrosion of engine bearings. Harmful acids from fuel combustion are controlled by using selected detergent additives to neutralise them and help to prevent corrosion of metal surfaces.

- **Reduced Engine Wear**

  Shell Rimula R4 X offers high levels of engine wear protection in the critical areas of the valve train, piston ring and cylinder liners. This wear control 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, and by the use of soot dispersant additives to keep soot particles finely dispersed to help prevent wear.

- **Deposit Control**

  Shell Rimula R4 X helps to prevent oil thickening and the formation of harmful deposits in all areas of the engine, including sludge and piston deposits. The optimised detergent and dispersant additive system for Shell Rimula R4 X keeps engines cleaner than previous-generation Shell Rimula R3 products.

Main Applications

- **Severe duty heavy duty diesel engines**

  Shell Rimula R4 X provides demonstrated protection and performance in the latest high power heavy-duty diesel engines from European, US and Japanese manufacturers

- **High Technology Low Emission Engines**

  Shell Rimula R4 X is suitable for most modern low emission engines meeting Euro 5, 4, 3, 2, and US 2002 emission requirements.

- Shell Rimula R4 X is suitable for use with biodiesel per the OEM recommended oil drain intervals.

- For the latest low emissions engines especially those fitted with exhaust diesel particulate filters (DPF), we recommend the use of our low-emissions products, Shell Rimula R4 L or Shell Rimula R5 LE.

Specifications, Approvals & Recommendations

- API CI-4, CH-4, SL
- ACEA E7, E5, E3
- Global DHD-1
- JASO DH-1
- Caterpillar ECF-2, ECF-1A
- Cummins CES 20078, 77, 76, 75, 72, 71
- Deutz DQC III-18
- Detroit Fluids Specification 93K215
- Mack EO-N, EO-M Plus, EO-M
- MAN M 3275-1*
- DTFR 15B110
- MTU Category 2
- Renault Trucks RLD-2
- Volvo VDS-3
- CNH MAT 3520 (meets specification)
- IVECO 18-1804 Class T2 E7

  * meets the requirements of

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

in both on-highway and off-highway applications. Helpdesk

Typical Physical Characteristics

Properties			Method	Shell Rimula R4 X 15W-40
Kinematic Viscosity	@40°C	mm^2/s	ASTM D445	109
Kinematic Viscosity	@100°C	mm^2/s	ASTM D445	14.7
Dynamic Viscosity	@-20°C	mPa s	ASTM D5293	6 700
Viscosity Index			ASTM D2270	139
Total Base Number		mgKOH/g	ASTM D2896	10.5
Sulphated Ash		%	ASTM D874	1.45
Density	@15°C	kg/l	ASTM D4052	0.881
Flash Point (COC)		°C	ASTM D92	230
Pour Point		°C	ASTM D97	-36

These characteristics are typical of current production. Whilst future production will conform to Shell's specification, variations in these characteristics may occur.

Health, Safety & Environment

- **Health and Safety**

  Shell Rimula R4 X is unlikely to present any significant health or safety hazard when properly used in the recommended application and good standards of personal hygiene are maintained.

  Avoid contact with skin. Use impervious gloves with used oil. After skin contact, wash immediately with soap and water.

  Guidance on Health and Safety is available on the appropriate Safety Data Sheet, which can be obtained from https://www.epc.shell.com

- **Protect the Environment**

  Take used oil to an authorised collection point. Do not discharge into drains, soil or water.

Additional Information

- **Advice**

  Advice on applications not covered here may be obtained from your Shell representative.