



# Shell ROTELLA® T4 Triple Protection® 15W-40

- Protection from wear, deposits and oil breakdown.

## Triple Protection Technology - Heavy Duty Diesel Engine Oils

Shell ROTELLA® T4 Triple Protection® heavy duty engine oil has been formulated to provide Triple Protection technology against wear, deposits and oil breakdown.

Shell ROTELLA® T4 Triple Protection® oil uses advanced additive technology to protect under the most severe engine conditions found in modern, low-emission engines. Recommended by a wide range of OEMs, suitable for both the latest low-emissions and older model equipment.



## Performance, Features & Benefits

### • Outstanding wear protection

Demonstrated over millions of miles of on & off highway field trials, Shell ROTELLA® T4 Triple Protection® provides significantly better wear protection than previous generation oils to maximize engine efficiency and prolong engine life.

### • Exceptional engine cleanliness

Formulated for enhanced deposit protection to help keep engines cleaner over the oil drain interval.

### • Emissions system compatibility

The exclusive low ash formulation helps protect the exhaust catalysts and particulate filters found on the latest low emission vehicles.

### • Outstanding shear stability

Enhanced shear stability performance for viscosity control and optimal oil pressure in your engine.

### • Off-highway applications

Suitable for use in agricultural, mining, logging, and construction applications, even with high levels of fuel Sulfur.

### • Hard working diesel and gasoline engines

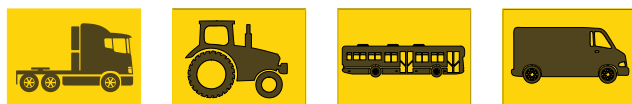
Suitable for use in pick-up trucks, sport-utility vehicles (SUVs), mini-vans and motorcycles.

## Specifications, Approvals & Recommendations

- API CK-4, CJ-4, CI-4 PLUS, CI-4, CH-4
- ACEA E9
- JASO DH-2, MA, MA2
- Caterpillar ECF-2, ECF-3
- Cummins CES 20086, 81
- Detroit Fluids Specification (DFS) 93K222, 93K218
- Deutz DQC III-10 LA
- MACK EOS-4.5, EO-O Premium Plus
- MAN M3575
- MB-Approval 228.31
- MTU Category 2.1
- Allison TES-439
- Volvo VDS-4.5, VDS-4
- Ford WSS-M2C171-F1

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

## Main Applications



### • Severe duty heavy duty diesel engines

Provides outstanding protection for virtually all heavy duty diesel engines, including the latest emission controlled engines using EGR and containing a Diesel Particulate Filter.

## Typical Physical Characteristics

Properties			Method	Shell ROTELLA T4 Triple Protection 15W-40
Kinematic Viscosity	@40°C	mm <sup>2</sup> /s	ASTM D445	118
Kinematic Viscosity	@100°C	mm <sup>2</sup> /s	ASTM D445	15
Viscosity Index			ASTM D2270	133
Density	@15°C	kg/l	ASTM D4052	0.878
Sulfated Ash		%	ASTM D874	1.0
Total Base Number		mg KOH/g	ASTM D2896	10.1
Flash Point (COC)			ASTM D92	204
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 ROTELLA® T4 Triple Protection® 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 Material Safety Data Sheet, which can be obtained from your Shell representative.

### • 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.