



Lubricants Report



Product Data Sheet from Shell Lubricants

PDS# 1.11.00

ROTELLA® T

Heavy-duty motor oil with Triple Protection™ technology



"The Genuine Million Mile Oil"

PRODUCT LINE

Shell Rotella T motor oil with Triple Protection technology is a unique, latest generation premium heavy-duty motor oil that meets or exceeds the service requirements of virtually all diesel engine manufacturers – for both the latest 2007-emission compliant and older engines. It is especially suitable for virtually all on-highway service applications, and is also suitable for off-highway applications.

APPLICATIONS

- Heavy-duty diesel engines in all types of over-the-road service, including the latest emission controlled engines with EGR and diesel particulate filters using Ultra-Low Sulfur Diesel fuel (<15 ppm sulfur) (ULSD) and Low Sulfur Diesel (LSD).
- Suitable for diesel powered equipment including those powered by Caterpillar, Cummins, John Deere, Detroit Diesel, Mack, Mercedes-Benz, International, and Volvo engines in all types of service where fuel sulfur levels are below 500 ppm.
- Off-highway applications where a premium quality engine oil is desired, such as construction, mining, logging and agricultural service where fuel sulfur levels are below 500 ppm.
- Hard working diesel and gasoline engines and engines used in pick-up trucks, sport-utility vehicles (SUVs), and mini-vans.
- Suitable for use as a top-off oil in virtually all diesel engine applications.
- Always follow the engine manufacturers' recommendations for motor oil performance, viscosity grade and oil change interval as these may vary depending on ambient temperature, fuel sulfur composition (LSD or ULSD) and vehicle model year.

FEATURES AND BENEFITS

- Meets or exceeds requirements of today's high-performance, low-emission diesel engines while providing excellent performance in older engines allowing operators use of one oil for many engines.
- Provides significantly improved wear protection, deposit and viscosity control and oxidation resistance compared to API CI-4 PLUS oils.

- Product is covered by a limited warranty and meets virtually all US equipment manufacturers' warranty requirements, helping to minimize operators' risk.
- Exceptional protection and durability demonstrated in control of valve train wear and piston ring and liner wear, helping to maximize engine life.
- Unique additive chemistry with improved soot control and exclusive detergent system for outstanding engine cleanliness.
- Exceptional low-temperature flow properties helps speed cold starts.
- Reduced fuel consumption, compared to single-grade oils, can help lower operating costs.
- Demonstrated performance-reserve throughout the oil drain interval for protection and lubrication throughout the oil drain interval.
- A continued heritage of outstanding shear stability for viscosity control.

SPECIFICATIONS AND APPROVALS

API	CJ-4, CI-4 PLUS, CI-4, CH-4, CG-4, CF-4, CF	Mack	EO-O Premium Plus '07*
API	SM, SL, SJ	MAN	M3275*
ACEA	E9*, E7*	Mercedes-Benz	228.31; 228.3*
Caterpillar	ECF-1A*, ECF-2, ECF-3	Volvo	VDS-4, VDS-3*, VDS-2*
Cummins	CES 20081*	JASO	DH-2*; MA*
Detroit Diesel	93K218*; 75E270*	MTU	Type 2*

* SAE 15W-40 grade only

TYPICAL PROPERTIES

PRODUCT CODE SAE GRADE	431-434	431-435
	10W-30	15W-40
Density at 15° C, kg/m ³	871	888
Color, ASTM	3.5	4.0
Pour Point, ° C	-42	-36
Flash Point, COC, ° C	249	229
Viscosity: Kinematic		
- cSt at 40° C	81	120
- cSt at 100° C	12.0	15.7
Cold Cranking Simulator:		
cp at -20° C	-	6300
cp at -25° C	6500	-
Viscosity Index	131	139
Borderline Pumping Viscosity,		
cp at -25° C	-	20460
cp at -30° C	20800	-
Sulphated Ash, %wt	1.0 max	1.0 max
Neutralization Value - TBN (D-2896) Mg KOH/g	10.1	10.1

[Visit](#) your nearest Shell Associate or Reseller for more details.

Need more product information? Please contact the [Shell Customer Service Centre](#) at 1-800-661-1600 or e-mail us at questions@shell.com

MSDS requests? Please call 1-800-661-1600 or fax your request to (403) 691-3997

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