



GRANIT

VDS SAE 15W-40



“ Premium, SHPD midSAPS engine oil for Euro IV+ emissions units; exceeds ACEA E9, API CJ-4

For Euro IV+ & EPA 2007+ HD engines running on low sulfur fuels; specially intended for engines requiring a VDS-4 level oil

GRANIT VDS SAE 15W-40 is a midSAPS heavy duty engine oil exceeding the requirements of ACEA E9, API CJ-4 and Volvo VDS-4 sequences that are specifically designed to provide confidence and reassurance to modern heavy duty fleet operators, as to the protection of their expensive turbochargers and exhaust after-treatment devices.

The stringent API CJ-4 & ACEA E9 specs include several, more severe, new engine tests as compared to API CI-4 or API CI-4 PLUS oils, thus GRANIT VDS oil will demonstrate a much more robust performance than other conventional SHPD SAE 15W-40 oils.

	Fuel economy	<input type="checkbox"/>
	Wear protection	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>
	Turbocharger protection	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>

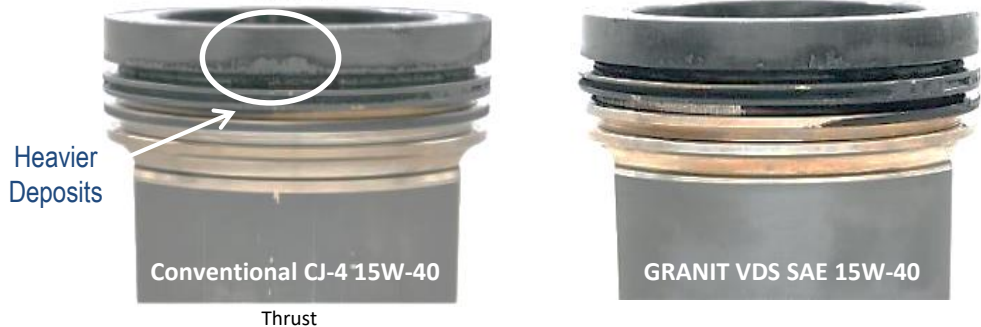
Try to remember

- ✓ Premium, top-tier HD engine oil ; **SAE 15W40**
- ✓ **TriboACT® Formula inside.**
- ✓ Strong demonstration of corrosive protection for rings and liners, in Cummins ISM, Mack T-13 and Caterpillar C-13 tests.
- ✓ Full exhaust after-treatment compatibility due to low sulphated ash, phosphorous and sulfur formulation.
- ✓ Over 30% less soot-induced oil thickening was measured at the 6.7% soot test limit of the severe Mack T-11 test.
- ✓ Significant improvements in wear protection, deposit control and resistance to breakdown under high temperatures, as compared to other SHPD API CI-4, ACEA E7, SAE 15W40 engine oils.



OEM	Approved
API	CJ-4 / CI-4+ / CI-4, SM/CF
ACEA	E9-08 #2,
Daimler	MB-Approval 228.31
Volvo	VDS-4
Renault Trucks	RLD-3
Mack	EO-O Premium Plus
MAN	M3575
MTU	Cat. 2.1
Deutz	DQC III-10LA
Cummins	CES 20081
Caterpillar	ECF-3, ECF-2
Detroit Diesel	DDC 93K218
Global	DHD-1
JASO	DH-2

Deposits evaluation (Caterpillar C13 Test)



CYCLON "tribological-action" empowering formula was developed to address the latest industry challenges and exceed the continuously evolving lubrication requirements of engine manufacturers.

What is it?

TriboACT® is an additive system that is based on the extra strong chemical interaction of various polarity ingredients included within.

What does it do?

The robust and synergistic ACTION of **TriboACT®** boosts the lubricant's critical tribological characteristics:

- **Oil film consistency in the valve train.**
- **Wear control in the piston and rings area, clean-ability in the turbocharger region.**
- **Fuel economy.**

The driving force behind **TriboACT®** is LPC's 35 years of accumulated know-how and substantial investments in formulating, testing and blending innovative and technologically superior lubricant products.

Contact Info:

LPC S.A.
124 Megaridos Av. GR-19300
switchboard
t: +30 210 8093900
orders
t: +30 210 8093949
customerservice@cyclon.gr
exports
t: +30 210 8093903
exports@lpc.gr
technical issues/services
t: +30 210 8093929
technical@cyclon.gr

www.cyclon-lpc.com

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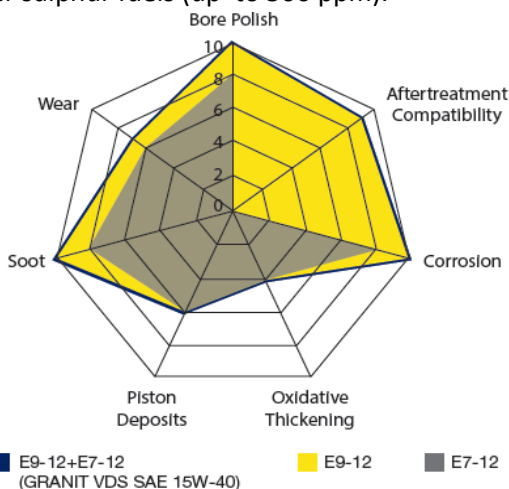
APPLICATION GUIDE



GRANIT VDS SAE 15W-40 is suitable for all types of diesel engines of Euro IV V, VI, US EPA 2007/2010 generation and on-/off-highway, stage IIIB and Tier IV, heavy duty units that require performance levels defined as by API CJ-4, API SM, ACEA E9 or E7 or/and operate with diesel fuel running on low sulphur fuel (<15ppm).

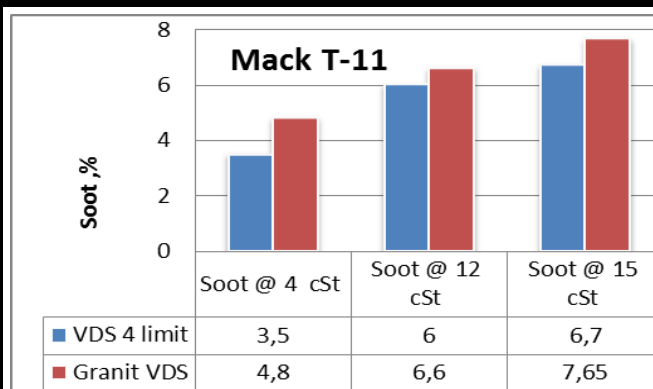
It is a versatile SHPD engine oil that is equally suitable for older generation engines (Euro II or Euro III) that run on higher sulphur fuels (up to 500 ppm).

In the spider diagram, the robust performance of GRANIT VDS SAE 15W-40, regarding soot thickening, bore polishing and corrosion is notably demonstrated.



SUPERIOR SOOT HANDLING ABILITY

GRANIT VDS SAE 15W-40 demonstrates outstanding performance and ability to handle soot in the severe Mack T-11 test, much higher than VDS 4 requirements. Mack T-11 test simulates soot loading conditions of HD diesel engines under "stop & go" operations.



IMPROVED WEAR PERFORMANCE

GRANIT VDS SAE 15W-40 demonstrates great reserves against abrasive wear, mainly caused by soot generation in EGR. Cummins ISM test is "key" for wear evaluation.

