ROSNEFT

MAGNUM

INNOVATIVE TECHNOLOGIES
FOR YOUR ENGINE

Rosneft Magnum
A new engine oil product line

Rosneft is a leading producer of oil and petroleum products in Russia, a manufacturer of high-quality petrochemicals, and a pioneer of innovative technologies. Rosneft's presence is continuously expanding in the international market. It is now the world's largest publicly traded petroleum company which exports to more than 100 countries. The strong foundation of the company lies in both scientific and material resources – more than 10 R&D institutions as well as base oils of its own production.

Today Rosneft's lubricant business is implementing a large-scale strategy to promote technological breakthroughs and enhance the overall quality of production. In response to the constantly changing consumer demands, the company has proposed a new product concept in the engine oil market.

In 2017 Rosneft launched a brand-new product line called the Rosneft Magnum. The engine oils of this new line are produced with Rosneft's own high-quality synthetic base stocks. In addition, modern technologies and top-tier additives have made these products superior in performance compared to the exisitng mass-market products.

The Rosneft Magnum was developed based on a comprehensive market research, which focused not only on analyzing the car fleet, but also on identifying the clients' needs. Through the launch of the Rosneft Magnum, Rosneft has aimed to become more responsive to the customer needs. Furthermore, the new line has widened the customer range by offering more diversified products. Consumers, from the owners of the newest cars to those of the high-mileage cars, can enjoy the benefits of Rosneft's client-oriented approach.

The biggest strength of the Rosneft Magnum is that each product is highly customized. Every customer has a distinctive demand for a particular application. The products have been created to maximize the particular functions ideally suited for the operational conditions. Each product's optimal features were supported by the large-scale laboratory and bench tests. Consumers can make the best choice from the Rosneft Magnum depending on their desired performance features.

Rosneft Magnum includes five types of engine oils:

- **Rosneft Magnum ULTRATEC**
  for brand-new cars' engines with top-tier performance
- **Rosneft Magnum COLDTEC**
  for engines operating at low temperatures
- **Rosneft Magnum RUNTEC**
  for engines requiring increased oil drain intervals
- **Rosneft Magnum MAXTEC**
  for high-mileage engines requiring maximal protection
- **Rosneft Magnum CLEANTEC**
  for +10 years old engines requiring cleanliness

These innovative products were launched in a new canister design, representing the company's core values: reliability, efficiency and excellence.

ULTRATEC

Maximum Engine Protection

Synthetic engine oil

Viscosity grades:
SAE 5W-30, 5W-40, 10W-40

Approvals and specifications:
FE SAE 5W-30: API SN/CF, ILSAC GF-5

A3 SAE 5W-40: API SN/CF, ACEA A3/B4, A3/B3, MB-Approval 229.5, MB 226.5, VW 502.00/505.00, Renault RN 0700/0710, Porsche A40, BMW Longlife-01, GM-LL-B-025, Fiat 9.55535-N2/Z2, PSA B71 2296

SAE 5W-30: API SL/CF, ACEA A5/B5, Ford M2C-913C, Renault RN 0700

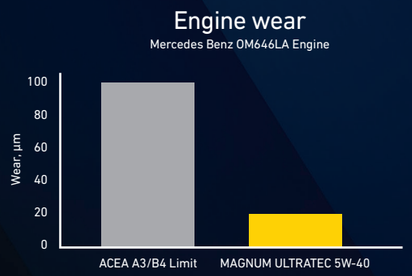
SAE 5W-40: API SN/CF, ACEA A3/B4, A3/B3, MB 229.3, 229.1, 226.5, VW 502.00/505.00, Renault RN 0700/0710, GM LL-A/B-025, Fiat 9.55535-H2/M2/N2, PSA B71 2294, AvtoVAZ

SAE 10W-40: API SN/CF, ACEA A3/B4, A3/B3, MB 229.3, 229.1, 226.5, VW 502.00/505.00, Renault RN 0700/0710, GM LL-A/B-025, Fiat 9.55535-G2, PSA B71 2230, AvtoVAZ

Rosneft Magnum ULTRATEC is a fully synthetic engine oil specially developed for the cars of the leading global automakers including Mercedes-Benz, Volkswagen, Renault, Ford, GM, Fiat and Peugeot-Citroen. A salicylate additive package included in the product provides superior engine protection against high- and low-temperature deposits.

Tests

- Mercedes Benz OM646LA test measures oil's efficiency to control and prevent engine wear;
- Volkswagen TDI test measures oil's efficiency to prevent deposit formation in the piston rings area.



Compliance tests for the requirements of the leading car manufacturers and the international standards were conducted in the certified testing centers in Europe and USA by using the engines of the manufacturers such as Mercedes-Benz, Volkswagen, Renault and Ford.

Advantages

- Complies with the requirements of the leading global car manufacturers
- Ensures reliable protection of the engine against wear
- Contains modern salicylate additives

COLDTEC

Reliable Cold Start

Synthetic engine oil

Viscosity grades: SAE 5W-30, 5W-40
Approvals and specifications:
SAE 5W-30: API SN/CF, ILSAC GF-5, AvtoVAZ
SAE 5W-40: API SN/CF, AvtoVAZ

One of the most common requirements for the engine oil in countries with severely cold winters is a reliable cold start.

What is actually happening

Oil tends to have a higher viscosity at low temperatures. Thus, it takes additional time to pump oil through the main oilways. At this stage, the engine goes into oil starvation period and the battery experiences an increased load.

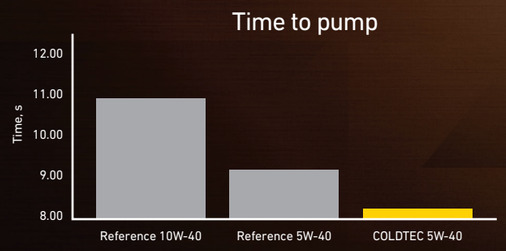
Oil requirements

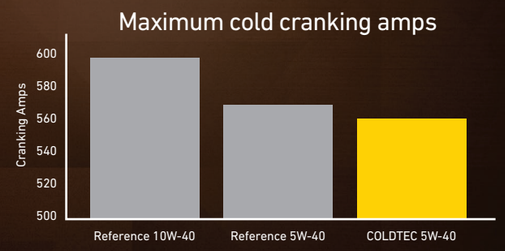
Important conditions for a reliable cold start are preservation of required viscosity at low temperatures and creation of a stable oil film, which protects the engine during low-temperature cranking.

Tests

- **Cold Cranking Simulator (CCS)** measures oil's viscosity at low temperatures and high shear, conditions similar to engine start-up;
- **Cold Crank Test (Cold box)** measures oil pressure and pumping time after car is soaked in Cold Box at -25 °C for 24 hours;
- **Mini-Rotary Viscometer (MRV)** measures oil pumpability by simulating oil pumping at low temperatures.

Rosneft Magnum COLDTEC was created based on thorough understanding of the cold cranking process and the certified tests. It gives a stable protection for your engine at low temperatures, has a lower pour point and lower viscosity during an engine start-up, and creates required pressure in the oil system more quickly than most other products in the market.





Advantages

- Facilitates the engine start-up at low temperatures
- Protects the engine during cold start
- Reduces battery load and extends its service life

RUNTEC

Extended Oil Drain Intervals

Synthetic engine oil

Viscosity grades: SAE 10W-40, 20W-50
Approvals and specifications: API SN/CF, AvtoVAZ

Under the standard operational conditions car manufacturers have created unified specifications on the oil drain intervals. However, the actual conditions can significantly differ. As a consequence, this discrepancy could cause a reduction in the oil drain intervals. For this reason, a lot of the car owners are looking for an engine oil which can not only keep its performance within the specified intervals but also increase these intervals without affecting the engine.

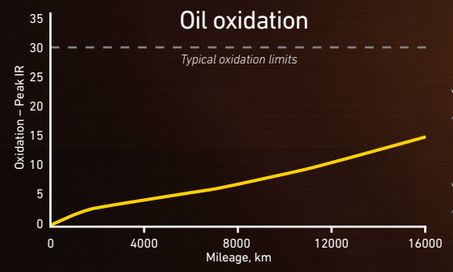
What is actually happening

When engine oil is consumed, oxidation process inevitably creates a certain amount of deposits on the engine parts, such as cylinder-piston group, crankcase and cylinder head. As a result, this leads to sludge, deposit and lacquer formation and crankshaft bearings wear. Furthermore, compression loss could eventually cause engine failure.

Oil requirements

There are several components essential for extending engine's service intervals. First, engine oil should possess superior anti-oxidant properties which can be maintained throughout the additional operational period. It should also contain more detergent and dispersing additives which will prevent accumulation of harmful deposits.

Tests



- **Mileage Accumulation Dynamometer Test (MAD)** is a bench test on Toyota Corolla with 16 000 km oil drain interval. Oil samples were taken every 2 000 km to measure wear traces and anti-oxidant properties;
- **Pressure Differentiation Scanning Calorimetry (PDSC)** measures oil resistance against thin-film oxidation. This test is conducted in a setting similar to combustion chamber, in which the oil film is exposed to high temperatures in the presence of oxygen;
- **Thermo-Oxidation Engine Oil Simulation Test (TEOST 33C)** simulates the tendency of engine oil to oxidize and form deposits, especially in high-temperature areas, such as engine turbocharger;
- **TEOST MHT-4** is a modified 33C test which measures engine oil behavior in the piston-cylinder area.

Rosneft Magnum RUNTEC consists of the latest generation additives and fully synthetic base oils. Runtec enables your engine not only to operate throughout the entire period set by the car manufacturers but also to retain a significant amount of reserves by the end of the oil drain intervals. These features make you confident that your engine is well-protected even after 16 000 km.

Advantages

- Provides extended oil drain intervals
- Reduces maintenance costs
- Protects the engine even after 16 000 km

MAXTEC

Extended Engine Life

Semi-synthetic engine oil

Viscosity grades: SAE 5W-30, 5W-40, 10W-40
Approvals and specifications: API SL/CF, AvtoVAZ

The average length of car ownership has been steadily increasing worldwide. In other words, more car owners are keen to choosing an engine oil which can extend their engine's lifespan. In this way, it is important to consider how much protection each engine oil can offer.

What is actually happening

After several years of operation, engine performance starts to gradually deteriorate. It is mainly because of engine wear, which increases gaps in friction pairs, and deposit formation, which eventually leads to clogging of oilways, ring sticking and compression loss. Consequently, excessive amount of fuel and lubricants could be consumed by the engine. Moreover, these problems could cause engine failure.

Oil requirements

For high-mileage cars, it is necessary to use strong engine oils particularly developed for the advanced protection. These oils effectively protect the engines by preventing further engine wear and minimizing deposit formation.

Tests

- **Daimler Oxidation Test** measures oil resistance against bulk oxidation in the crankcase. This test demonstrates the quality of base oils, which predominantly determine oil resistance;
- **Pressure Differentiation Scanning Calorimetry (PDSC)** measures oil resistance against thin-film oxidation. This test is conducted in a setting similar to combustion chamber, in which the oil film is exposed to high temperature in the presence of oxygen;
- **Thermo-Oxidation Engine Oil Simulation Test (TEOST 33C)** simulates the tendency of engine oil to oxidize and form deposits, especially in high-temperature areas, such as engine turbocharger.

After conducting a comprehensive study of the processes which occur during an extended car operation, Rosneft succeeded in applying innovative technologies to **Rosneft Magnum MAXTEC**. By giving efficient protection to your high-mileage engine, Maxtec will facilitate a smoother operation.

Daimler Oxidation Test

Reference | MAXTEC 10W-40

Advantages

- Extends the engine's service life in post-warranty period
- Reduces deposit formation in cylinder-piston group area
- Ensures smooth engine operation

CLEANTEC

Effectively Clean Engine

Synthetic engine oil

Viscosity grades: SAE 10W-40
Approvals and specifications: API SJ/CF, AvtoVAZ

Naturally aspirated engines of the cars older than 10 years operate at lower loads compared to modern gasoline engines. In addition, those old engines had different lubricant requirements when they were produced. Running an old engine with outdated lubricants could substantially shorten the engine's lifespan. Thus, it is important for the car owners to choose an engine oil that can help maintaining a clean engine.

What is actually happening

Mineral oils meeting obsolete API specifications (SG or lower) have moderate anti-oxidant and detergent properties. However, if additives fail to adequately prevent oxidation of mineral base oils, deposits will accumulate on the engine parts. As a result, engine will not function properly.

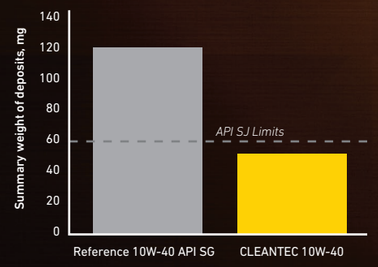
Oil requirements

When car owners want to keep a clean engine with minimal deposits, engine oil's key components matter. These components include high-quality additives and synthetic base oils with superior anti-oxidant properties.

Tests

- **Daimler Oxidation Test** measures oil resistance against bulk oxidation in the crankcase. This test demonstrates the quality of base oils, which predominantly determine oil resistance;
- **Pressure Differentiation Scanning Calorimetry (PDSC)** measures oil resistance against thin-film oxidation. This test is conducted in a setting similar to combustion chamber, in which the oil film is exposed to high temperature in the presence of oxygen;
- **Thermo-Oxidation Engine Oil Simulation Test (TEOST 33C)** simulates the tendency of engine oil to oxidize and form deposits, especially in high-temperature areas, such as engine turbocharger.

TEOST 33C



Rosneft produces synthetic base components with its own sophisticated technologies. In addition, the company has many years of experience cooperating with domestic automakers. All these advantages have contributed to developing **Rosneft Magnum CLEANTEC**, which will keep your engine parts clean at an affordable cost.

Advantages

- Reduces deposit and sludge formation
- Ensures trouble-free operation of high-mileage engines
- Suitable for vehicles older than 10 years

ROSNEFT
LUBRICANTS

Hotline: **+7-800-200-1070**
en.magnum.rosneft-lubricants.ru