**DESCRIPTION:**

This oil is a high performance, dedicated heavy duty engine lubricant designed for use in modern high speed turbocharged diesel engines. It uses an exclusive additive formulation in conjunction with highly refined base oils to deliver longer life and enhanced protection relative to its predecessors. The product has been reformulated for severe duty service in engines specifically designed to meet 1998/euro 2 on-highway exhaust emission standards as being suitable for a wide range of heavy duty off-highway applications.

**APPLICATION:**

For all naturally aspirated and heavy duty turbocharged and intercooler diesel engines.

**PERFORMANCE LEVEL (API CH4/SJ)**

- CUMMINS CES 20076/77/78
- DEUTZ DQC-111
- MAN 3275
- MACK OE – M/PLUS
- VOLVO VDS-3
- MTU-Type 2,
- CATERPILLAR ECF 1A-Performance demonstrated
- GLOBAL DHD-1
- LLISON C4 LEVEL
- RENAULT TRUCK RLD-2,
- MERCEDES BENZ 228.3
- ACEA E7-04, JASO DH-1

**BENEFITS:**

Saves on fleet maintenance cost. The detergency/dispersancy level is specially balanced to provide both high temperature deposit control in a wide range of heavy duty and turbocharged diesel engines. Reduce Downtime and prolong engine life. Universal engine oil for cars, trucks and off-road applications.

**SPECIFICATIONS:**

<table>
<thead>
<tr>
<th>TYPICAL PHYSICAL CHARACTERISTICS</th>
<th>15W40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density @20 C KG L</td>
<td>0.888</td>
</tr>
<tr>
<td>Viscosity @ 40 C</td>
<td>106</td>
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<tr>
<td>Viscosity Cst @ 100 C</td>
<td>14-15</td>
</tr>
<tr>
<td>Viscosity Index</td>
<td>137</td>
</tr>
<tr>
<td>Pour Point C (Max)</td>
<td>-35</td>
</tr>
<tr>
<td>Flash Point C (Min)</td>
<td>230</td>
</tr>
<tr>
<td>TBN mg KOH / g</td>
<td>12</td>
</tr>
</tbody>
</table>
15W40 CI4/SL

DESCRIPTION:

High performance, heavy duty diesel engine oil formulated for use in a wide variety of European, Japanese and North American diesel and petrol engines operating under the most severe service conditions. Designed to provide improved engine protection and increased oil life. Compatible with low-emission engine technology used in road transport, construction, mining and many other industries.

APPLICATION:

Modern high power heavy duty diesel engines in mixes fleets of European, Japanese and North American manufacturers in both on-road and off-highway applications. Mixed fleets of diesel and petrol vehicles. High-tech, electronically controlled and low emission engines. Normally aspirated, turbocharged and supercharged engines with or without intercooling. EGR engines experiencing high soot loadings. Agricultural equipment, marine and stationary engines.

BENEFITS:

Excellent protection against engine wear and bore polishing. Improved engine cleanliness and reduced piston deposits. Extended oil drain intervals and less maintenance costs, even in older engines. Reduced downtime and prolonged engine life. Universal engine oil for cars, trucks and off-road applications.

PERFORMANCE SPECIFICATIONS:

- ACEA E7-04
- API CI-4, CG-4, CF-4, CF, SL
- JASO DH-1
- GLOBAL DHD-1
- ALLISON C4
- CATERPILLAR ECF 1A
- CUMMINS CES 20076, 20077, 20078
- DEUTZ DQC-III
- MACK EO-M, EO-M PLUS
- MAN M 3275
- MERCEDEZ BENZ 228.3
- MTU TYPE-2
- RENAULT TRUCK RLD-2
- VOLVO VDS-3

TYPICAL PHYSICAL CHARACTERISTICS:

<table>
<thead>
<tr>
<th>SAE Viscosity Grade</th>
<th>15W40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic Viscosity mm²/s 40 °C</td>
<td>ASTM D445</td>
</tr>
<tr>
<td>mm²/s 100 °C</td>
<td>14.7</td>
</tr>
<tr>
<td>Viscosity Index</td>
<td>138</td>
</tr>
<tr>
<td>Base Number; mgKOH/g</td>
<td>ASTM D2896</td>
</tr>
<tr>
<td>20 °C (ASTM D 2602)</td>
<td>11</td>
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<tr>
<td>Sulphated Ash; mass %</td>
<td>ASTM D874</td>
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<tr>
<td>Density @ 15 °C kg/l</td>
<td>ASTM D4052</td>
</tr>
<tr>
<td>Flash Point (COC) °C</td>
<td>ASTM D92</td>
</tr>
<tr>
<td>Pour Point °C</td>
<td>ASTM D97</td>
</tr>
<tr>
<td>ZINC; MASS %</td>
<td>ASTM D4951</td>
</tr>
<tr>
<td></td>
<td>0.12</td>
</tr>
</tbody>
</table>
SAE 20W50 SF/CD

DESCRIPTION

This engine oil is designed to be used for passenger cars, light trucks as well as farm equipment, especially where multi-grade oils are preferred. These oils contain inhibitors to combat acids, oxidation, and foam and have corrosion as well as ant-wear and dispersant / detergent additives.

APPLICATION

Suitable for all petrol and naturally aspirated diesel engines of passenger cars, light commercial vehicles and farm equipment for which multi-grade viscosity grade oils are specified.

BENEFITS:

- Provides excellent lubrication
- Keeps engine clean
- Prolongs Engine life

PERFORMANCE LEVELS

MEETS OR EXCEEDS:

- API SF/CD
- MIL – L – 46152
- CRC L – 38 BEARING TEST
- SABS 1361

<table>
<thead>
<tr>
<th>KEY PROPERTIES</th>
<th>SAE 20W50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density at 20 °C g/mls</td>
<td>0.894</td>
</tr>
<tr>
<td>Viscosity at 100 °C mm²/s</td>
<td>17.8</td>
</tr>
<tr>
<td>Viscosity at 40 °C mm²/s</td>
<td>144</td>
</tr>
<tr>
<td>Viscosity Index Min.</td>
<td>136</td>
</tr>
<tr>
<td>Flash Point C.O.C. Min.</td>
<td>250</td>
</tr>
<tr>
<td>Pour Point °C</td>
<td>-18</td>
</tr>
</tbody>
</table>
5W30 SM/CF

DESCRIPTION

This is a semi-synthetic motor oil providing superior performance. It holds excellent viscosity retention and superior engine protection under all modern driving conditions.

APPLICATION

All aspirated, fuel injected, turbocharged and multi-valve passenger car engines fuelled by either gasoline, diesel or LPG.

PERFORMANCE FEATURES

- Excellent engine protection

Provides excellent protection in today’s efficient passenger car engines.
- Catalyst and turbo proven

Exceeds industry standards.
- Fuel efficient

Helps to improve fuel efficiency
- Suitable for extended drain intervals

Meets latest industry standards for use in applications where extended oil drain intervals are required.
- Reduced chlorine content

To meet environmental requirements – safer used oil disposal.

PERFORMANCE SPECIFICATIONS

MEETS OR EXCEEDS:
- API SM/CF
- ACEA A3 / B4-04
- JAPANESE ENGINES Qualified
- FORD MOTOR Co. M2C-153E
- VW NORM 502.00, 505.00
- PEUGEOT-CITROEN – Meets requirements of PSA E-98 (level 2 for extended drain application)
- ROVER GROUP Registered
- MERCEDES-BENZ Sheet 229.3

TYPICAL PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>SAE Grade</th>
<th>5W30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic Viscosity</td>
<td></td>
</tr>
<tr>
<td>@ 40 °C</td>
<td>70</td>
</tr>
<tr>
<td>@ 100 °C</td>
<td>12</td>
</tr>
<tr>
<td>Viscosity Index</td>
<td>180</td>
</tr>
<tr>
<td>Density @ 15 °C</td>
<td>0.85</td>
</tr>
<tr>
<td>Flash Point °C (PMCC)</td>
<td>225</td>
</tr>
<tr>
<td>Pour Point °C</td>
<td>-48</td>
</tr>
</tbody>
</table>
DESCRIPTION

This is a semi-synthetic motor oil providing superior performance. It holds excellent viscosity retention and superior engine protection under all modern driving conditions.

APPLICATION

All aspirated, fuel injected, turbocharged and multi-valve passenger car engines fuelled by either gasoline, diesel or LPG.

PERFORMANCE FEATURES

- Excellent engine protection
- Provides excellent protection in today’s efficient passenger car engines.
- Catalyst and turbo proven
- Exceeds industry standards.
- Fuel efficient
- Helps to improve fuel efficiency
- Suitable for extended drain intervals
- Meets latest industry standards for use in applications where extended oil drain intervals are required.
- Reduced chlorine content
- To meet environmental requirements – safer used oil disposal.

PERFORMANCE SPECIFICATIONS

MEETS OR EXCEEDS:

- API SM/CL
- ACEA A3 / B4-04
- JAPANESE ENGINES Qualified
- FORD MOTOR Co. M2C-153E
- VW NORM 502.00, 505.00
- PEUGEOT-CITROEN – Meets requirements of PSA E-98 (level 2 for extended drain application)
- ROVER GROUP Registered
- MERCEDES-BENZ Sheet 229.3
- GM-LL-B-025

TYPICAL PHYSICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>SAE Grade</th>
<th>5W30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic Viscosity @ 40 °C</td>
<td>70</td>
</tr>
<tr>
<td>@ 100 °C</td>
<td>12</td>
</tr>
<tr>
<td>Viscosity Index</td>
<td>180</td>
</tr>
<tr>
<td>Density @ 15 °C</td>
<td>0.85</td>
</tr>
<tr>
<td>Flash Point ° C (PMCC) Pour</td>
<td>225</td>
</tr>
<tr>
<td>Point ° C</td>
<td>-48</td>
</tr>
</tbody>
</table>
**DESCRIPTION**

10W40 is the ultimate, fully synthetic diesel engine oil exceeding the most demanding European specifications and meeting the increasing market demand for “fuel-efficient” oils. It features a unique developed formulation that is recognized by leading engine builders as offering the best performance available for modern European diesel engines.

**APPLICATION**

**Ultimate European Diesel Engine Oil Performance**
Outstanding performance in automotive high-speed heavy duty diesel engines built in Europe and particularly suited for use in Daimler Chrysler and MAN EURO 2 and EURO 3 engines.

**Commercial Road Transport Operations**
Designed for use in the latest highly rated turbocharged 4-stroke diesel engines under all operating conditions. Optimized for EURO 2 and EURO 3 engine technology.

**PERFORMANCE FEATURES AND BENEFITS**
- A cleaner engine
- Low wear-Extended engine life
- Shear stable
- Low volatility

Low oil top-up rates between recommended service intervals.
- Lower operating costs

Makes a significant contribution towards reducing the operating cost of a vehicle through:
- Reduces downtime
- Longer service intervals (approved by all leading OEMs)
- Sustained high performance for the life of the vehicle
- Fuel economy
- Low oil consumption
- Better cold starting

10W40 allows quicker cold starting than conventional 15W40 oils. This means less wear on batteries and starter motors as well as less engine wear.

**PERFORMANCE SPECIFICATIONS**

MEETS OR EXCEEDS:
- GM-LL-B-025
- API SM/CF
- ACEA A3 / B4-04
- MERCEDES-BENZ 229.1
- MAN M 3277

<table>
<thead>
<tr>
<th>TYPICAL PHYSICAL CHARACTERISTICS SAE GRADE (J 300)</th>
<th>10W40</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic Viscosity @ 40°C</td>
<td>98</td>
</tr>
<tr>
<td>@ 100°C (ASTM 445)</td>
<td>14.3</td>
</tr>
<tr>
<td>Viscosity Index (ISO 2909)</td>
<td>148</td>
</tr>
<tr>
<td>Density @ 15°C (ASTM D 4052)</td>
<td>0.86</td>
</tr>
<tr>
<td>Flash Point COC °C (ISO 3016)</td>
<td>230</td>
</tr>
<tr>
<td>POUR POINT °C (ISO 3016)</td>
<td>-30</td>
</tr>
<tr>
<td>TBN mg KOH/g (ISO 3771)</td>
<td>9.7</td>
</tr>
<tr>
<td>SULPHATED ASH % (ISO 3987)</td>
<td>1.3</td>
</tr>
</tbody>
</table>
SAE 75W90 GL5 GEAR OIL (Synthetic)

DESCRIPTION

EP SAE 75W90 GL5 Gear Oil contains extreme pressure additives, which reduce wear in synchromesh transmissions of passenger cars and commercial vehicles operating under moderate service conditions. EP SAE 75W90 GL5 Gear Oil is suitable for spur and helical gear units where high levels of extreme pressure additives are not required. EP SAE 75W90 GL5 Gear Oil may also be used in hypoid axles, under moderate operating conditions.

SPECIAL PROPERTIES

- Improved load carrying abilities
- Enhanced lubricant performance
- Manufactured to SABS quality standards
- Selected additive package, providing
- Anti-wear
- Anti-oxidation at high temperatures

PERFORMANCE LEVELS

- API GL5
- ZF TE-ML 02/08
- MAN 341 (EOD)
- BMW – REAR AXLES

<table>
<thead>
<tr>
<th>TYPICAL PHYSICAL CHARACTERISTICS</th>
<th>TEST METHOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kinematic Viscosity @ 40 °C</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Density @ 20 °C</td>
<td>0.89</td>
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<tr>
<td>Viscosity Index</td>
<td>175</td>
</tr>
<tr>
<td>Pour point °C</td>
<td>-27</td>
</tr>
<tr>
<td>Flash Point</td>
<td>195</td>
</tr>
</tbody>
</table>