

80 YEARS PERFORMANCE BY
RAVENOL

PRODUCT CATALOGUE



<i>Why RAVENOL?</i>	4
<i>A Westphalian success story</i>	6
<i>Worldwide</i>	7
<i>Quality assurance</i>	8
<i>Our range</i>	9
<i>USVO®</i>	10
<i>CleanSynto®</i>	12
<i>Biodiesel</i>	14
<i>TecDoc</i>	16
<i>Bag in Box</i>	17
<i>Packaging features</i>	18
<i>RAVENOL in Motorsport</i>	20
<i>Engine oil standards, requirements & classes</i>	22
<i>Engine oils for passenger cars – USVO®</i>	28
<i>Engine oils for passenger cars – CleanSynto®</i>	32
<i>Engine oils/Special engine oils</i>	38
<i>High Mileage</i>	40
<i>Oldtimer Classic engine oils</i>	42
<i>Natural gas engine oils</i>	44
<i>Rallye/Racing oils – USVO®</i>	46
<i>Rallye/Racing oils, CO₂ neutral with Biosyntolub®</i>	50

<i>Commercial Vehicle engine oils</i>	52
<i>Agricultural machinery oils</i>	59
<i>Motorbikes and accessories</i>	62
<i>2-stroke and 4-stroke petrol engines</i>	70
<i>Marine oils</i>	74
<i>ATF Professional Line & Dynamic Exchanger</i>	80
<i>ATF Standard</i>	91
<i>ATF Transmission fluids for commercial vehicles</i>	96
<i>Gear oils for manual gearboxes and drive axles</i>	98
<i>Power steering & special hydraulics</i>	104
<i>Hydraulic oils</i>	107
<i>Industrial oils, specialities</i>	112
<i>Lubricating greases</i>	117
<i>Additives and brake fluids</i>	122
<i>Accessories and workshop equipment</i>	126
<i>Care products and cleaners</i>	131
<i>New Cleaner Series</i>	134
<i>Sprays</i>	136
<i>Coolant + antifreeze</i>	138
<i>Coolant Product Finder</i>	144
<i>Winter chemicals</i>	148
<i>Manufacturer specifications</i>	150



10 GOOD REASONS TO CHOOSE RAVENOL



1 History and independence

RAVENOL has been an independent lubricant manufacturer since 1946 and can therefore decide for itself which ingredients to use.

2 Portfolio

RAVENOL offers a wide range of lubricants and operating fluids for every vehicle. RAVENOL was the first company in the world to receive a license from the American Petroleum Institute (API) for the viscosity SAE 0W-16.

3 Our plant

RAVENOL products are 100% MADE IN GERMANY and have the same quality worldwide. Both plants (Werther and Lubmin) are equipped with state-of-the-art laboratories where all incoming raw materials and finished products are tested for quality.

4 Highly specialised

Our specialization in automotive lubricants ensures high competitiveness and outstanding quality, proven in motorsport.

5 Low environmental impact and environmentally friendly Products

Environmental protection is a central task in our corporate principles, proven by the DIN EN ISO 14001:2015 certificate.

6 A quality product: PAO-based lubricants

Thanks to superior PAO technology, our lubricants are outstanding in many areas such as friction, cleaning and evaporation.

7 Sustainability

The "Fokus Zukunft" label ensures proper and legally valid handling of emissions offsetting. This enables us to transparently demonstrate our corporate strategy for avoiding and offsetting CO₂ emissions to international customers. RAVENOL has fulfilled the strict requirements of "Fokus Zukunft" for the products listed here.

8 Motorsport

RAVENOL is a technical partner in over 100 racing series and motorsport teams both nationally and internationally. RAVENOL provides technical support for the OEMs' motorsport commitments:

1. Development and use of lubricants for performance applications and customer sport with Mercedes-AMG Motorsport
2. Development project with BMW Motorrad
3. Equipping the vehicle delivery (starter kit) with RAVENOL engine & transmission oils: BMW M4 GT4, BMW M2 Racing GR Supra GT4
4. Development of the joint lubricants with Ralf Schumacher

9 Forgery-proof, innovative packaging

Our packaging is optimized for ease of use for our customers and is forgery-proof thanks to various security features.



A Westphalian success story

Over 80 years ago in Werther, East Westphalia, the foundations were laid for what would later become one of the most innovative companies in the field of lubricant production. Ravensberger Schmierstoffvertrieb GmbH with its RAVENOL brand is a producer of high-quality premium lubricants for a wide range of applications on land and at sea.

Over the decades, the RAVENOL brand has seen continuous development and transformed into a global player. In more than 100 countries worldwide, car drivers and companies in the automotive, mechanical engineering, steel and construction industries all benefit from RAVENOL's high-quality products, as do companies in the mining industry, the transportation sector and the farming sector. The extensive product portfolio now includes engine oils for passenger cars and trucks, racing oils, gear oils for automatic and manual gearboxes and drive axles, agricultural machinery oils, hydraulic oils, industrial oils, special products, greases, high-performance lubricants, vehicle maintenance products, cleaners, winter chemicals and coolants.

Outstanding products thanks to knowledge transfer

In line with its international focus, RAVENOL participates in all the significant international trade fairs in the automotive and motorcycle

sector, such as Automechanika in Frankfurt or the SAS in Switzerland.

In order to meet our own standards and the standards of the market, we work in close collaboration with vehicle manufacturers (OEM) during the product development process as well as various companies from the engineering industry. Numerous approvals from leading OEMs such as Mercedes-Benz, BMW, VW or Porsche are testament to the fact that we fulfil the most stringent requirements of the automotive industry.

As a pioneer in a wide variety of fields, innovative developments generally play a fundamental role for us. Various technologies such as USVO® or CleanSynto® technology are forerunners in their fields. For example, RAVENOL EFE OW-16 was the very first engine oil in the world to receive a licenced approval from the API (American Petroleum Institute). The oil offers clear fuel savings and reduced pollutant emissions.

Even after 78 years, the company has lost none of its family charm. Always endeavouring to offer the customer the best possible product and outstanding service, RAVENOL has never lost its sense of responsibility towards its employees. This is the only way to continue to achieve what has made us so successful over the past 78 years.

Simply the best technology, 100% 'Made in Germany'

Worldwide

Ravensberger Schmierstoffvertrieb GmbH is now a global player. RAVENOL products are premium "Made in Germany" products. They offer the highest level of product reliability and the best service from Germany.

RAVENOL "Made in Germany" products are renowned around the world as premium lubricants of the highest quality. Partners of Ravensberger Schmierstoffvertrieb GmbH value the strong product reliability and service from Germany. RAVENOL is now present in over 90 countries.

Our partners are located in places including the USA, Austria, Libya, the Netherlands, Italy, Luxembourg, Switzerland, Denmark, Spain, Poland, Greece, Macedonia, Korea, China, Taiwan, Malaysia, United Arab Emirates, South Africa, Egypt, Croatia, Lithuania, Estonia, Ukraine, Moldova, Paraguay, Namibia, Serbia, Malta, Finland, Czech Republic, Romania, Slovenia, Turkmenistan, Hong Kong, Singapore, Slovakia, Iceland,

Japan, Montenegro, Belgium, Lebanon, Bulgaria, Kyrgyzstan and Kazakhstan.



Quality assurance

For us, “Made in Germany” is more than just a phrase or a simple advertising message. We live by the philosophy behind this quality statement and we have set ourselves challenging goals and requirements for the quality and performance of our products.

Our internationally recognised quality management and the cooperation with a wide variety of renowned manufacturers and suppliers from the automotive industry guarantee the outstanding and consistent quality of the RAVENOL products. Numerous approvals from leading OEM (Original Equipment Manufacturers) and the certification according to IATF 16949 underpin the fulfilment of the highest requirements set by the automotive industry. This also includes the DIN EN ISO 9001 certification, which affords particular significance to documentation as well as customer-oriented processes and supplier relationships.

In addition, as an employer we are always conscious of our responsibilities toward our employees and our environment. Having attained the DIN EN ISO 14001 certification, we fulfil the requirements for a secure working environment including the Promotion of health and performance, which also includes the goal of harmonious interaction with the environment. The competence of our testing laboratory is regularly verified, as is proven by our certification in line with DIN EN ISO/IEC 17025. Our consistently high-quality standards meet manufacturer requirements as well as the specifications of the automotive industry around the world. The international approvals granted by leading OEMs (Original Equipment Manufacturers) confirm the high quality standards of our products.

RAVENOL's OEM approvals:

We have approvals for our products from significant automotive manufacturers such as

- Mercedes Benz/Daimler Truck
- Chrysler
- VW
- BMW
- Porsche
- Ford
- Jaguar Land Rover
- MAN
- Volvo
- MTU
- Deutz
- ZF
- Cummins
- and many more.

Our high standard of quality claim is also confirmed by being listed by the API (American Petroleum Institute), NMMA (National Marine Manufacturers Association). For our racing kart



Better engine protection



Improved performance



Optimal engine cleanliness



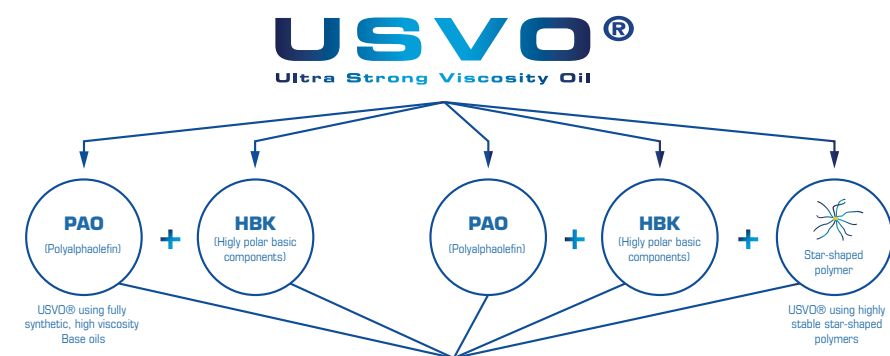
Extended oil change intervals

USVO®

We have set ourselves the task of mastering the challenges of the lubricants of the future using technology. This work has culminated in the development of USVO® technology.

What is USVO® technology?

The requirements of lubricants for modern vehicles continue to increase. Unwelcome viscosity changes can quickly cause serious problems. In order to combat this, we have developed our USVO® lubricant technology, meaning that we can ensure high viscosity stability at both low and high temperatures. USVO® stands for Ultra Strong Viscosity Oil. Only high-quality, fully synthetic base oils and additives are used in this process.



A comparison of oils with high operating properties to oils from traditional technologies

THANKS TO THE OPTIMAL COMBINATION OF COMPONENTS, WE HAVE CREATED FORMULATIONS WITH THE FOLLOWING BENEFITS:

• EXCELLENT HIGH TEMPERATURE VISCOSITY (HTHS AT 150 °C)

barely any shearing loss during operation, which means that the lubricant film is permanently maintained during operation.

• EXCELLENT PERFORMANCE AT LOW TEMPERATURES (CCS at -30 °C)

The lubricant is always able to flow so that direct engine lubrication is guaranteed even for cold starts.

• VERY GOOD OXIDATION STABILITY

Oxidation-stable lubricants have increased resistance against reacting with oxygen and temperatures. This increases the lubricant service life, which permanently prevents



deposits (sludge) and maintains the lubrication properties.

• VERY LOW EVAPORATION LOSSES

Only a few components of the oil evaporate at high operating temperatures. As a result, the engine oil level drops only slightly and the environment is not additionally polluted by exhaust gases.

• HIGH VISCOSITY INDEX

a high viscosity index illustrates a weak temperature-dependent viscosity change compared to a low viscosity index.

• VERY LOW POUR POINT

The pour point is the lowest temperature above

CleanSynto®
SPECIAL FORMULA



CleanSynto®

Tried-and-tested formulations fulfil today's minimum requirements for standard lubricants. The technical properties are usually adjusted in such a way that vehicle operation is guaranteed and the manufacturer requirements are covered. If we look at the service life of vehicles described in the following section, we can derive additional user requirements from this.

The requirements vary according to the area of application. In the process, the use of specific additives can influence the lubrication in many different ways.

Vehicle manufacturers help themselves by recommending special maintenance intervals for wearing parts (e.g. for changing the timing belt, spark plugs/glow plugs, engine oil, etc.). Thus, it would appear that consumers are extensively informed and educated.

If damage to the engine or other costly vehicle components occurs prematurely, the consumer is on his own and has to accept expensive repairs.

During vehicle operation, friction occurs between the moving engine parts, resulting in wear particles. These tend to deposit in combination with combustion residues and other soiling. These soot and dirt particles lead to blockages to the filter, oil passages (hoses and nozzles) and the pumps. This results in the engine becoming dirty. Efficiency decreases and the danger of engine failure increases.

BIODIESEL

Biodiesel

Biodiesel can lead to:

Thickening. Biodiesel is a unsaturated fuel and can cause the engine oil to thicken over time. This thickening can reduce the oil's ability to flow smoothly through the engine, leading to increased friction and wear on engine components.

Fuel Dilution. Biodiesel has different properties than conventional diesel fuel, and if it leaks into the engine oil, it can dilute the oil and reduce its effectiveness in lubricating and protecting engine components.

Degradation. Biodiesel can accelerate the degradation of engine oil by promoting oxidation and the formation of sludge and deposits. This can reduce the oil's ability to lubricate and protect the engine, leading to increased engine wear and potential damage.

Compatibility Issues. Biodiesel may not be compatible with certain engine oil formulations or additives, leading to chemical reactions that can degrade the oil and compromise engine performance.

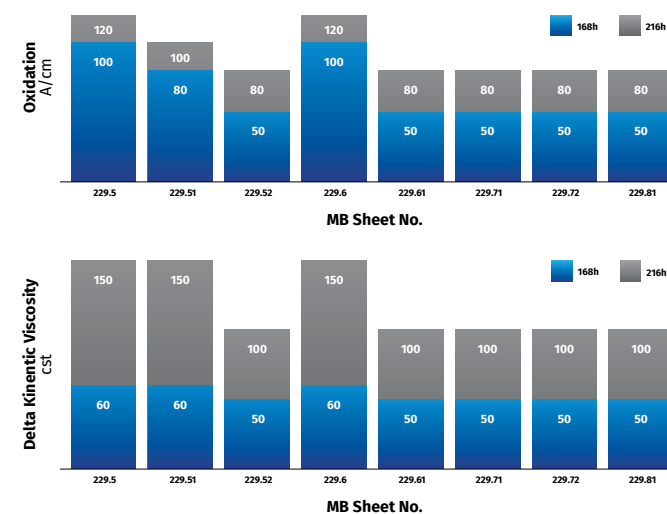
Filter Clogging. Biodiesel can increase the likelihood of filter clogging in the engine oil system due to its different chemical composition and potential for forming deposits.

To address the issues that could arise from the usage of biodiesel, the additional tests have been introduced by many organizations e.g ACEA and equipment manufacturer e.g Mercedes. One of the most known test is CEC L-109-12*. The CEC L-109 test is a lab-scale oxidation method that ages oil dosed with biodiesel fuel under carefully controlled conditions in laboratory glassware. Fresh diesel engine oil is treated with biodiesel in the presence of an iron catalyst used to accelerate the rate of reaction. The sample is heated to 150°C and aerated under controlled conditions for 216 hours. The samples are taken at 72, 144, 168, and 216 hours. The test duration could be 168 and 216 hours depends on the requirements, and it will indicate the end of test (EOT) duration. The viscosity increases are measured by

comparing Kinematic Viscosity at 100°C for the intermediate and EOT samples to the starting oil/ fuel start of test (SOT) mixture. Oxidation is measured with help of infrared spectroscopy technique for the same sample pairs. On the diagrams the limits for the viscosity increase and oxidation for different Mercedes specification are shown.

Here we see the supreme oxidation performance and cleanliness of our product in presence of biodiesel. The oxidation and thickening at 168h check point are 2,8 times and 2,9 times respectively away from the limit. More severe check at the 216h shown similar picture. The oxidation and thickening at 216h (EOT) check point are 2,3 times and 3,8 times respectively away from the limit. The products that was developed to deal with malicious effect of the biodiesel are listed below with corresponding approvals by Mercedes.

*CEC L-109-12 Oxidation Test – with Fuel Dilution 7% B100@150°C (FAME fr.OM646 Biodiesel Test)



Packaging feature – the canister



Packaging feature – the label

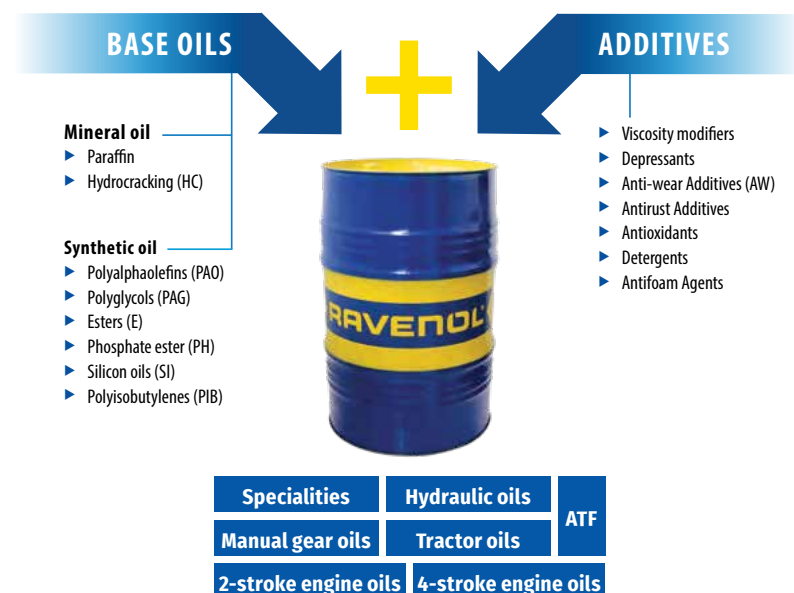


Standards, specifications & classes of RAVENOL lubricants

The suitability of a RAVENOL lubricant to provide a solution to a particular lubrication task must be clarified with the relevant machine manufacturers and plant manufacturers, as well as the technical lubricant services of mineral oil companies.

Lubricants are used for lubrication purposes and serve to reduce friction and wear and tear as well as for power transmission, cooling, vibration damping, sealing effect and corrosion protection. A distinction is made between liquid lubricants (lubricating oils), pasty lubricants (lubricating greases) and solid lubricants as well as gaseous lubricants (air).

Synthetic oils	Miscibility with mineral oils
Polyalphaolefins (PAO)	excellent
Polyglycols (PAG)	bad
Ester oils (E)	good
Phosphate esters (PH)	bad
Silicon oils (SI)	bad



Viscosity classification of engine oils in accordance with SAE J300

The basis for this classification are the SAE viscosity grades of the Society of Automotive Engineers Inc. New York for engine oils and gear oils, in the version dated January 2015.

A basic distinction is made between summer oils and winter oils. Multi-grade oils (e.g. SAE 10W-40) fulfil the requirements of the cold-flow characteristics of a winter grade (SAE 10W) and have a kinematic viscosity at 100°C which corresponds to a SAE grade without additional letters (e.g. SAE 40 = summer).

The greater the difference between the minimum and maximum value of the SAE grade, the broader the temperature range in which the oil used can be deployed.

SAE grade	Cold Cranking (CCS)	Cold Pumping (MRV)	Kinematic viscosity, 100 °C		HTHS, 150 °C
	(cP @ T °C)	(cP @ T °C)	(cSt)	(cSt)	(cP)
	Maximum	Maximum	Minimum	Maximum	Maximum
0W	6.200 @ -35	60.000 @ -40	3,80	–	–
5W	6.600 @ -30	60.000 @ -35	3,80	–	–
10W	7.000 @ -25	60.000 @ -30	4,10	–	–
15W	7.000 @ -20	60.000 @ -25	5,60	–	–
20W	9.500 @ -15	60.000 @ -20	5,60	–	–
25W	13.000 @ -10	60.000 @ -15	9,30	–	–
8	–	–	4,00		

ACEA E for Heavy Duty Diesel engine oils

E4	Stable, stay-in-grade oil providing excellent control of piston cleanliness, wear, soot handling and lubricant stability. It is recommended for highly rated diesel engines meeting Euro I, Euro II, Euro III, Euro IV and Euro V emission requirements and running under very severe conditions, e.g. significantly extended oil drain intervals according to the manufacturer's recommendations. It is suitable for engines without particulate filters, and for some EGR engines and some engines fitted with SCR NOx reduction systems. However, recommendations may differ between engine manufacturers so driver manuals and/or dealers shall be consulted if in doubt.
E6	Category is removed with ACEA 2022 Oil Sequences and replaced by ACEA E8!
E7	Stable, stay-in-grade oil providing effective control with respect to piston cleanliness and bore polishing. It further provides excellent wear control, soot handling and lubricant stability. It is recommended for highly rated diesel engines meeting Euro I, Euro II, Euro III, Euro IV and Euro V emission requirements and running under severe conditions, e.g. extended oil drain intervals according to the manufacturer's recommendations. It is suitable for engines without particulate filters, and for most EGR engines and most engines fitted with SCR NOx reduction systems. However, recommendations may differ between engine manufacturers so driver manuals and/or dealers shall be consulted if in doubt.
E8	Stable, stay-in-grade oil providing excellent control of piston cleanliness, wear, soot handling and lubricant stability. It is recommended for highly-rated diesel engines meeting Euro I, Euro II, Euro III, Euro IV, Euro V and Euro VI emission requirements and running under very severe conditions, eg significantly extended oil drain intervals according to the manufacturer's recommendations. It is suitable for EGR engines, with or without particulate filters, and for engines fitted with SCR NOx reduction systems. E8 quality is strongly recommended for engines fitted with particulate filters and is designed for use in combination with low-sulphur diesel fuel. However, recommendations may differ between engine manufacturers, so driver manuals and/or dealers must be consulted if in doubt.
E9	Category is removed with ACEA 2022 Oil Sequences and replaced by ACEA E11!
E11	Stable, stay-in-grade oil providing effective control with respect to piston cleanliness and bore polishing. It further provides excellent wear control, soot handling and lubricant stability. It is recommended for highly rated diesel engines meeting Euro I, Euro II, Euro III, Euro IV, Euro V and Euro VI emission requirements and running under severe conditions, e.g. extended oil drain intervals according to the manufacturer's recommendations. It is suitable for engines with or without particulate filters, and for most EGR engines and for most engines fitted with SCR NOx reduction systems. E11 is strongly recommended for engines fitted with particulate filters and is designed for use in combination with low-sulphur diesel fuel. However, recommendations may differ between engine manufacturers so driver manuals and/or dealers should be consulted if in doubt.
F01	Stable "STAY IN GRADE" oils with lowered HTHS (High-Temperature, High Shear) viscosity of ≥ 2.9 to ≤ 3.2 and high potential for reducing fuel consumption. Except for the lower HTHS viscosity, the requirements of the F01 category essentially correspond to the E11 category with regard to laboratory and engine tests.

API S for GASOLINE ENGINES

SP	Current: Introduced in May 2020, designed to provide protection against low-speed pre-ignition (LSPI), timing chain wear protection, improved high temperature deposit protection for pistons and turbochargers, and more stringent sludge and varnish control. API SP with Resource Conserving matches ILSAC GF-6A by combining API SP performance with improved fuel economy, emission control system protection and protection of engines operating on ethanol-containing fuels up to E85.
SN	Current: For 2020 and older automotive engines.
SM	Current: For 2010 and older automotive engines.
SL	Current: For 2004 and older automotive engines.
SJ	Current: For 2001 and older automotive engines.
SH	Obsolete: For 1996 and older engines.
SG	Obsolete: Not suitable for use in most gasoline-powered automotive engines built after 1993. May not provide adequate protection against build-up of engine sludge, oxidation or wear.
SF	Obsolete: Not suitable for use in most gasoline-powered automotive engines built after 1988. May not provide adequate protection against build-up of engine sludge.
SE	Obsolete: CAUTION: Not suitable for use in gasoline-powered automotive engines built after 1979.
SD	Obsolete: CAUTION: Not suitable for use in gasoline-powered automotive engines built after 1971. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SC	Obsolete: CAUTION: Not suitable for use in gasoline-powered automotive engines built after 1967. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SB	Obsolete: CAUTION: Not suitable for use in gasoline-powered automotive engines built after 1951. Use in more modern engines may cause unsatisfactory performance or equipment harm.
SA	Obsolete: CAUTION: Contains no additives. Not suitable for use in gasoline-powered automotive engines built after 1930. Use in more modern engines may cause unsatisfactory performance or equipment harm.

DIESEL ENGINES

API FA-4	Current: describes certain XW-30 oils specifically formulated for use in select high-speed four-stroke cycle diesel engines designed to meet 2017 model year on-highway greenhouse gas (GHG) emission standards. These oils are formulated for use in on-highway applications with diesel fuel sulfur content up to 15 ppm. Refer to individual engine manufacturer recommendations regarding compatibility with API FA-4 oils. API FA-4 oils are blended to a high temperature high shear (HTHS) viscosity range of 2.9cP-3.2cP to assist in reducing GHG emissions. These oils are especially effective at sustaining emission control system durability where particulate filters and other advanced aftertreatment systems are used. API FA-4 oils are designed to provide enhanced protection against oil oxidation, viscosity loss due to shear, and oil aeration as well as protection against catalyst poisoning, particulate filter blocking, engine wear, piston deposits, degradation of low- and high-temperature properties, and soot-related viscosity increase. API FA-4 oils are not interchangeable or backward compatible with API CK-4, CJ-4, CI-4 with CI-4 PLUS, CI-4, and CH-4 oils. Refer to engine manufacturer recommendations to determine if API FA-4 oils are suitable for use. API FA-4 oils are not recommended for use with fuels having greater than 15 ppm sulfur. For fuels with sulfur contents greater the 15 ppm, refer to engine manufacturer recommendations.
CK-4	Current: describes oils for use in high-speed four-stroke cycle diesel engines designed to meet 2017 model year on-highway and Tier 4 non-road exhaust emission standards as well as for previous model year diesel engines. These oils are formulated for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm. However, the use of these oils with greater than 15 ppm sulfur fuel may impact exhaust aftertreatment system durability and/or oil drain interval. API CK-4 oils are especially effective at sustaining emission control system durability where particulate filters and other advanced aftertreatment systems are used. API CK-4 oils are designed to provide enhanced protection against oil oxidation, viscosity loss due to shear, and oil aeration as well as protection against catalyst poisoning, particulate filter blocking, engine wear, piston deposits, degradation of low- and high-temperature properties, and soot-related viscosity increase. API CK-4 oils exceed the performance criteria of API CJ-4, CI-4 with CI-4 PLUS, CI-4, and CH-4 and can effectively lubricate engines calling for those API Service Categories. When using CK-4 oil with higher than 15 ppm sulfur fuel, consult the engine manufacturer for service interval recommendations.
CJ-4	Current: For high-speed four-stroke cycle diesel engines designed to meet 2010 model year on-highway and Tier 4 nonroad exhaust emission standards as well as for previous model year diesel engines. These oils are formulated for use in all applications with diesel fuels ranging in sulfur content up to 500 ppm (0.05% by weight). However, the use of these oils with greater than 15 ppm (0.0015% by weight) sulfur fuel may impact exhaust aftertreatment system durability and/or drain interval. CJ-4 oils are especially effective at sustaining emission control system durability where particulate filters and other advanced aftertreatment systems are used. Optimum protection is provided for control of catalyst poisoning, particulate filter blocking, engine wear, piston deposits, low- and high-temperature stability, soot handling properties,oxidative thickening, foaming, and viscosity loss due to shear. API CJ-4 oils exceed the performance criteria of API CI-4 with CI-4 PLUS, CI-4, CH-4, CG-4 and CF-4 and can effectively lubricate engines calling for those API Service Categories. When using CJ-4 oil with higher than 15 ppm sulfur fuel, consult the engine manufacturer for service interval.

DIESEL ENGINES

CI-4	Current: Introduced in 2002. For high-speed, four-stroke engines designed to meet 2004 exhaust emission standards implemented in 2002. CI-4 oils are formulated to sustain engine durability where exhaust gas recirculation (EGR) is used and are intended for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, CG-4, and CH-4 oils. Some CI-4 oils may also qualify for the CI-4 PLUS designation.
CH-4	Current: Introduced in 1998. For high-speed, four-stroke engines designed to meet 1998 exhaust emission standards. CH-4 oils are specifically compounded for use with diesel fuels ranging in sulfur content up to 0.5% weight. Can be used in place of CD, CE, CF-4, and CG-4 oils.
CG-4	Obsolete: Introduced in 1995. For severe duty, high-speed, four-stroke engines using fuel with less than 0.5% weight sulfur. CG-4 oils are required for engines meeting 1994 emission standards. Can be used in place of CD, CE, and CF-4 oils.
CF-4	Obsolete: Introduced in 1990. For high-speed, four-stroke, naturally aspirated and turbocharged engines. Can be used in place of CD and CE oils.
CF-2	Expired Introduced in 1994. For severe duty, two-stroke-cycle engines. Can be used in place of CD-II oils.
CF	Expired Introduced in 1994. For off-road, indirect-injected and other diesel engines including those

Engine oils for passenger cars –

USVO®

With our RAVENOL USVO® technology, we offer particularly high-quality and durable oils. Our USVO® lubricants are characterised by their exceptional formulations and ingredients, providing a continuous protective film even under high thermal and mechanical strain. They have extremely high shear and oxidation stability and, due to their low evaporation loss and the associated reduced pollutant emissions, they are gentle on the environment.



RAVENOL EFS Eco Fullsynth

SAE 0W-20 | SN Plus, SP (RC) | ACEA C5

PAO (Polyalphaolefin) based, fully synthetic low friction motor oil with special USVO® and proven CleanSynto® technology for passenger car petrol and diesel engines with and without turbo-charging and direct injection.

ILSAC GF-6A, BMW Longlife-17 FE+, VOLVO VCC RBS0-2AE 0W-20- Service Fill, MB 229.71, MB 229.72, Chrysler MS-13340, Opel OV 040 1547 - A20, Honda, Nissan, Mazda, Suzuki, Toyota, VOLVO, Geely, Lynk & Co, Polestar

Art. No.: 1111105





RAVENOL SSV Fuel Economy

SAE 0W-30 | API SP | ACEA A5/B5

PAO (Polyalphaolefin) based, fully synthetic low friction motor oil with special USVO® and proven CleanSynto® technology for passenger car petrol and diesel engines with and without turbo-charging and direct injection.

VOLVO VCC 95200377, MB 229.6

Art. No.: 1111145



RAVENOL Super Synthetik Öl SSL

SAE 0W-40 | API SP/SN Plus/CF | ACEA A3/B4

PAO (Polyalphaolefin) based, fully synthetic low friction motor oil with special USVO® and proven CleanSynto® technology for passenger car petrol and diesel engines with and without turbo-charging and direct injection.

MB 229.3, MB 229.5, MB 226.5, VW 502 00 / 505 00, BMW Longlife-01, Porsche A40, Renault RN0700 / RN0710, Fiat 9.55535-M2, Chrysler MS-12633, Chrysler MS-10725, Ford WSS-M2C937-A

Art. No.: 1111108



RAVENOL High Fuel Economy HFE

SAE 5W-16 | API SN

PAO (Polyalphaolefin) based, fully synthetic low friction motor oil with special USVO® and proven CleanSynto® technology for passenger car petrol and diesel engines with and without turbo-charging and direct injection.

Honda 08215-99974, 08216-99974, 08232-P99S1LHE, Honda Ultra Next, Ultra Green, Hybrid Engine, Nissan KLANM-01A04 Extra Save X Eco, Mitsubishi MZ102661, MZ102662, Mitsubishi DiaQueen ECO Plus, Toyota 08880-11005

Art. No.: 1111104



RAVENOL VMP

SAE 5W-30 | API SN | ACEA C3

PAO (Polyalphaolefin) based, fully synthetic low friction motor oil with special USVO® and proven CleanSynto® technology for passenger car petrol and diesel engines (including DPF and TWC). Extended oil change intervals. Meets EURO IV and EURO V standard for emission reduction. Multi-Oil.

BMW Longlife-04, VW 504 00 / 507 00, MB 229.51, MB 229.31, Porsche C30 (currently valid for PORSCHE Diesel cars, Cayenne V6 and all PORSCHE Hybrid cars), Fiat 9.55535-S1, Audi/Volkswagen G 052 195 M2, G 052 195 M4, G 052 195 M6, BMW 83 21 0 398 507, BMW/Mini 83 21 0 398 508, Mercedes Benz 000 989 89 01 10, Chrysler MS-11106, Audi Motorsport V31 748 026

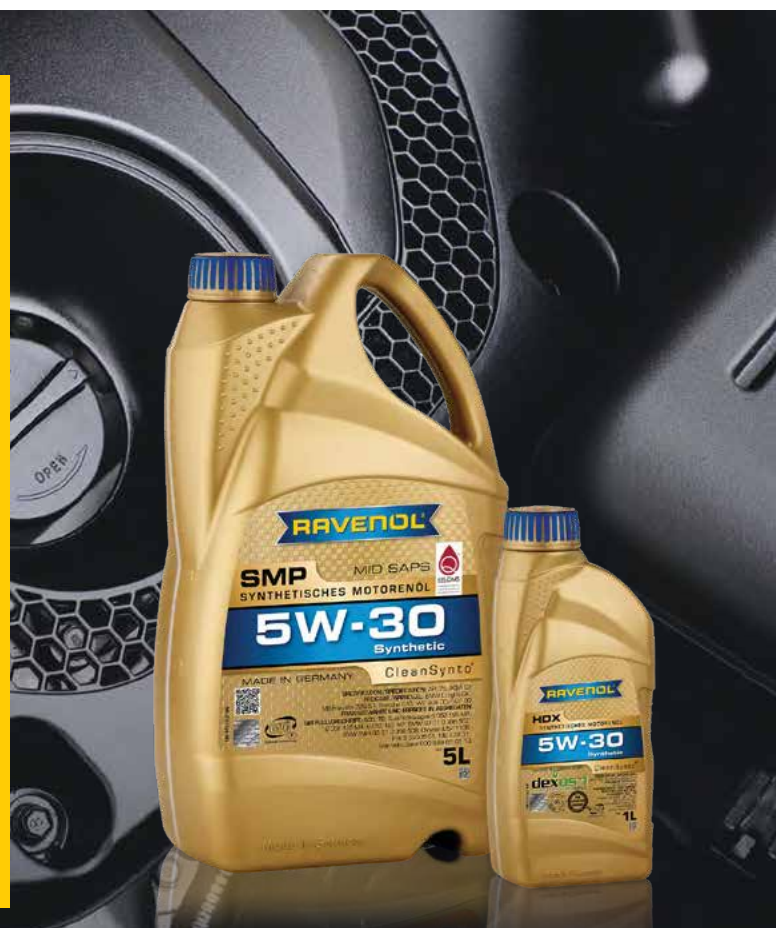
Art. No.: 1111122



RAVENOL VollSynth Turbo VST

Engine oils for passenger cars – CleanSynto®

A high level of expertise, technical development and high-quality components are what makes RAVENOL engine oils stand out. Our exclusively “100% Made in Germany” oils fulfil all of the requirements which lubricants must deliver for the latest vehicles. Manufactured according to internationally recognised quality standards in our modern production facility and equipped with our CleanSynto® technology, we ensure that our engine oils offer lubrication and functionality, thus extending the service lives of cars. The quality of our oils is also demonstrated through the numerous approvals we have been granted by car manufacturers.



RAVENOL FEH

SAE 0W-16 | API SP(RC) | ILSAC GF-6B

Synthetic high performance motor oil with CleanSynto® technology and PAO content for passenger car petrol and diesel engines with and without turbo-charging and direct injection.

Honda 08215-99974, 08216-99974, 08232-P99S1LHE, Honda Ultra Next, Ultra Green, Hybrid Engine Nissan KLANM-01A04 Extra Save X Eco, Mitsubishi MZ102661, MZ102662, Mitsubishi DiaQueen ECO Plus, Toyota 08880-11005

Art. No.: 1112115



RAVENOL RNF

SAE



RAVENOL GFE

SAE 5W-20 | API SP(RC),
API SN Plus

Synthetic, low-friction engine oil with CleanSynto® technology for passenger car gasoline and diesel engines, with and without turbocharging and direct injection.

ILSAC GF-6A, GM dexos1™ Gen 3, Chrysler MS-13340, MS-6395; Ford WSS-M2C945-B1, Ford WSS-M2C960-A1

Art. No.: 1111111



RAVENOL FO

SAE 5W-30 | SL/CF | ACEA A5/B5

Engine oil suitable for fuel-saving year-round use in modern gasoline and diesel engines in cars, vans and similar vehicles from FORD, RENAULT, Toyota, Hyundai, KIA, Mazda, Honda, Nissan and Mitsubishi.

Fiat 9.55535-G1; FORD WSS-M2C913-D (supersedes 913-A/-B/-C); JAGUAR LAND ROVER STJLR.03.5003; MB 229.6; RENAULT RN0700

Art. No.: 1111115



RAVENOL SMO

SAE 5W-30 | API SN(RC)

Synthetic, low-friction engine oil with CleanSynto® technology for passenger car gasoline and diesel engines, with and without turbocharging and direct injection.

ILSAC GF-5 ,Ford WSS-M2C929-A, Ford WSS-M2C946-A, Chrysler MS-6395, GM 6094M, Fiat 9.55535-CR1, Nissan, Subaru, Toyota, Ford, Chrysler, Lexus, Mazda

Art. No.: 1111151



RAVENOL HCL

SAE 5W-30 | API SN/CF | ACEA A3/B4

Synthetic low friction motor oil with CleanSynto® technology for passenger car and van petrol and diesel engines with and without turbo-charging and direct injection.

MB 229.5, BMW Longlife-01, BMW Longlife-01 FE, VW 502 00 / 505 00 / 501 01

Art. No.: 1111118



RAVENOL HPS

SA



RAVENOL SHL

SAE 0W-40 | API SN/CF | ACEA A3/B4

HC (Hydrocrack) and PAO (Polyalphaolefin) based, fully synthetic motoroil with CleanSynto® technology for passenger car petrol and diesel engines with and without turbo-charging and direct injection.

BMW Longlife-01; Ford WSS-M2C937-A, MB 229.5, Renault RN0710; Porsche A40; VW 502 00, VW 505 00

Art. No.: 1111127



RAVENOL HDX

SAE 5W-30 | API SP (RC), SN Plus

Synthetic, low-friction engine oil with CleanSynto® technology for car gasoline engines, with and without turbocharging and direct injection, such as Turbo-GDI and direct injection.

ILSAC GF-6A, GM dexos1™ Gen 3, Chrysler MS-6395, MS-13340, Fiat 9.55535-CR1, Ford WSS-M2C946-A/-B1, Ford WSS-M2C929-A, Honda/Acura HTO-06, Opel OV 040 1547 - G30

Art. No.: 1111125



RAVENOL SMP

SAE 5W-30 | API SN | ACEA C3

Mid SAPS low friction motor oil with CleanSynto® technology for passenger car petrol and diesel engines (including DPF and TWC). Extended oil change intervals. Meets EURO IV and EURO V standard for emission reduction.

BMW Longlife-04, MB 229.51, MB 229.31, VW 504 00 / 507 00 (for Europe and North America), Porsche C30, Fiat 9.55535-S1, Audi/Volkswagen G 052 195 M2, G 052 195 M4, G 052 195 M6, BMW 83 21 0 398 507, BMW/Mini 83 21 0 398 508, Mercedes Benz 000 989 89 01 10, Chrysler MS-11106

Art. No.: 1111126



RAVENOL HST

SAE 5W-40 | API SP | ACEA A3/B4

Motor oil with CleanSynto® technology

Engine oils/ Special engine oils

Our passenger car engine oil classics. Solid mineral single and multigrade engine oils which are suitable for many vehicles with petrol and diesel engines and a wide variety of areas of application.



RAVENOL Formel Extra

SAE 20W-50 | API SF/CD | ACEA A2/B2

Mineral multigrade motor oil used in petrol and diesel engines with and without turbo charging in passenger cars and trucks.

MB 227.1, MIL-L-46152 B, MIL-L-2104 D, CCMC G4

Art. No.: 1113120



RAVENOL Super Turbo

SAE 20W-50 | API SL/CF/CH-4 | ACEA A3/B4, E2

Mineral multigrade motor oil used in petrol and diesel engines with and without turbo charging in passenger cars.

Cummins CES 20071; Deutz DQC II-10; Mack EO-M; MAN 271; MB 228.1, MB 229.1; MTU Typ 1; Volvo VDS; VW 501 01/505 00

High Mileage

Thanks to the unique formulations which have been specially developed and optimised for high mileage vehicles, RAVENOL high mileage engine oils fulfil all the requirements of high mileage petrol and diesel vehicles for a high-quality lubricant.



RAVENOL



RAVENOL SVT Standard Viscosity Turbo Oil

SAE 10W-40 | API SM/CF | ACEA A3/B4

Semi-synthetic low friction multigrade engine oil for vehicles with petrol and diesel engines with or without turbocharging and high mileage.

MB 229.1, BMW Special Oil, VW 505 00/ 501 00, VW 502 00 / 500 00

Art. No.: 1116103



RAVENOL HVE High Viscosity Ester Oil

SAE 10W-50 | API SN/CF | ACEA A3/B4

Fully synthetic high performance low friction engine oil for vehicles with petrol and diesel engine with or without turbocharging and direct injection and high mileage. Minimization of friction, wear and fuel consumption.

Oldtimer Classic engine oils

Vintage cars and more recent classics enjoy a constantly growing fan base. Some of these vehicles have history. Engines often have quite different requirements of lubricants than their modern relatives. RAVENOL has specifically developed Oldtimer Classic engine oils for this purpose. In order to guarantee the best possible engine protection, the formulations for the Classic oils have been adapted and structured according to the construction years. The Oldtimer Classic 1 single grade engine oils offer different viscosities for vehicles with a construction year prior to 1930 (Oldtimer Regular) and vehicles from 1930 to 1951 (Oldtimer Classic). In addition, RAVENOL offers various multigrade engine oils with vehicles from the construction years 1951 to 1979 with its Oldtimer Classic 2 series.



RAVENOL Oldtimer Classic

SAE 30 | API SB | Classic 1

Alloyed single grade engine oil for use in classic vehicles. Manufactured using carefully selected pure mineral raffinates and well chosen additives.

Car engines up to model year 1951.

Art. No.: 1118113



RAVENOL Oldtimer Classic

SAE 40 | API SB | Classic 1

Alloyed single grade engine oil for use in classic vehicles. Manufactured using carefully selected pure mineral raffinates and well chosen additives

Natural Gas Engine Oils

Modern gas engines operate at high power concentrations as well as high efficiencies. To ensure functionally safe and reliable operation of gas engine systems, only extremely high performance oils can be used. In addition, the fuel gases used today require the gas engine oils to have special qualities. Only this way it is possible to achieve reliable engine operation with the maintenance outlay requirement as low as possible, such as sensible, cost-effective use.

RAVENOL has developed corresponding quality gas engine oils for these special cases and offers a full range of high-quality lubricants tailored to the special requirements of modern gas engines.

All products are distinctive thanks to their future-oriented performance and are subject to constant ongoing development.



RAVENOL VEG

SAE 5W-40 | API SP/SN Plus | ACEA A3/B4

Fully synthetic high alloyed motor oil for natural gas engines.

Natural gas engines

Art. No.: 1131100



RAVENOL TEG Gasmotorenöl

SAE 10W-40 | API SL/CF | ACEA A3/B3

Semi synthetic high alloyed motor oil for natural gas engines.



RAVENOL RSS Racing Sport Synto

SAE 10W-60

Fully synthetic multigrade engine oil with USVO® Technology based on the highest quality Ester and Poly-Alpha Olefin technology. Recommended for all Motorsport applications requiring a thicker grade of oil. Uses latest low friction technology to ensure maximum release of power.

Areas of application: ADAC GT masters, FIA F3 EUROPEAN Championship
Racetrack partnership: HOCKENHEIMRING, Nürburgring

Art. No.: 1141100



RAVENOL RFS Racing Formel Sport

SAE 15W-50

Synthetic multigrade engine oil with USVO® Technology based on the highest quality Ester and Poly-Alpha Olefin technology. Specially formulated for use in Motorsport applications providing maximum release of power with ultimate engine protection.

Racetrack partnership: Nürburgring Tested, Hockenheim Premium Partner, recommended by Ralf Schumacher, Opel Motorsport

Art. No.: 1142105



RAVENOL RHV Racing High Viscosity

SAE 20W-60

Fully synthetic multigrade engine oil with USVO® Technology based on the highest quality Ester and Poly-Alpha Olefin technology. Recommended for all Motorsport applications requiring a thicker grade of oil. Uses latest low friction technology to ensure maximum release of power.

Racetrack partnership: Nürburgring Tested, Hockenheim Premium Partner, recommended by Ralf Schumacher, Opel Motorsport

Art. No.: 1141101



RAVENOL Racing Castor 2T

Two-stroke Kart oil with castor technology and ester synthetic additives for 2-stroke engines with methanol and ethanol as fuel, e.g. Kart engines and Speedway engines. Miscible with petrol, methanol and ethanol. Do not mix with mineral and synthetic two-stroke motor oils. Recommended mixing ratio 20:1.

FIA-CIK Homologation

Art. No.: 1144101



RAVENOL Racing Brake Fluid R 325+

Very heavy-duty high-performance brake fluid with a very high wet boiling point especially developed for Motorsport (cars and motorcycles) and similar high temperature applications.

Exceeds the requirements FMVSS 116 DOT 4, DOT 5.1, SAE J1703, SAE J1704

Art. No.: 1350604



RAVENOL Racing Gear Oil

API GL-5+LS



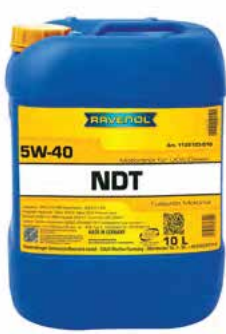
RAVENOL EDT Extra Duty Truck

SAE 5W-30 | API CK-4/SN | ACEA E6, E7, E9

Synthetic fuel economy “Low SAPS” year-round multigrade diesel engine oil based on the latest additive technology combined with very special base oils. Suitable for use in heavy diesel engines even under the toughest operation conditions and all the year round.

Caterpillar ECF-3; Cummins CES20086; Detroit Diesel 93K222; Deutz DQC IV-18 LA; Ford WSS-M2C213-A; JASO DH-2; Mack EOS-4.5; MAN M3677, MAN M 3477, MAN M 3775, MAN M 3271-1; MB 228.51, MB 228.52; MTU Typ 3.1; Scania LDF-4; Renault VI RLD-3, Volvo VDS-4.5, DTFR 15C110, DTFR 15C120

Art. No.: 1121106



RAVENOL NDT Nord Duty Truck

SAE 5W-40 | API CJ-4/SM | ACEA E9, E7

All-season multigrade engine oil for use in heavy duty commercial vehicle diesel engines with optimized exhaust systems. Extended oil change intervals.

Volvo VDS-4, Renault RLD-3, Mack EO-O Premium plus, MTU Typ 2, Cummins CES 20081, Detroit Diesel Corporation (DDC) DFS93K218, DFS93K215, DFS93K214, Chrysler MS-10902, Ford WSS-M2C171-E

Art. No.: 1122103



RAVENOL Low Emission Truck

SAE 15W-40 | API CJ-4/SN | ACEA E7, E9, E11

Semi Synthetic multi grade truck engine oil with highest performance. For use in EURO 5 engines with exhaust systems (EGR, SCR, DPF, DPD, DPR), EURO 3 and EURO 4 engines. Enhanced performance and cleanness of the engines.

MB 228.31, Volvo VDS-4, Mack EO-O Premium Plus, Renault VI RLD 3, DFS 93K214, DFS 93K218, Cummins CES 20081, Ford WSS-M2C171-E, TATRA TDS 30/12, MAN M3575, MAN M 3477, MAN M 3271-1, MTU Typ 2.1, Caterpillar ECF-2/-3, JASO DH-2, Japan Ultra-Low PM Emission Diesel, EURO IV und EURO-V, U.S. EPA Tier 3 emissions regulation, Chrysler MS-10902, John Deer JDQ-78X Oxidations Test, DTFR 15C100 (MB 228.31)

Art. No.: 1123100



RAVENOL TRE Truck Resource Conserving

SAE 10W-30 | API FA-4

Semi-Synthetic Fuel Economy Longlife multigrade engine oil with an HTHS viscosity of between 2.9 cP and 3.2 cP which has been specially developed for the latest generation of turbodiesel commercial vehicle engines.



RAVENOL STOU

SAE 10W-30 | API SF/CG-4, GL-4,
HLP ISO VG 68 | ACEA E3

Special oil type STOU for agricultural machines, excavators and construction equipment. For use in engines, transmissions, hydraulic systems and compressors.

Engine Oil: SAE 10W-30, API CG-4/SF, ACEA E3, MB 227.1, MB 228.1, MB 228.3, New Holland / Ford ESN-M2C-134 B/C/D, -159B/86B, MIL-L-2104 D, DTFR 15B110 (MB 228.3); Transmission Oil: SAE 80W, API GL-4, Allison C-4, Caterpillar TO-2, ZF TE-ML 03A, 05K, 06B, 07B, 07D, MAN 270; Hydraulic Oil: HLP ISO VG 68; Special Tractor Oil: John Deere J 27, Massey-Ferguson M1135, M1139, M1144; Compressor Oil: Holman Compair Kompressor, Atlas Copco Kompressor

Art. No.: 1310100



RAVENOL STOU

SAE 15W-30 | API CE/SF, GL-4, HLP ISO VG
68 | ACEA E1/E2

Special oil type STOU for agricultural machines, excavators and construction equipment. For use in engines, transmissions and hydraulic systems.

SAE 80W, API GL-4, MIL-L-2105, Allison C4, Caterpillar TO-2, ZF TE-ML 06B, 07B, HLP ISO VG 68, Vickers-Pumpentest, Ford-Pumpentest, Denison HF 2, John Deere J27 A, J



RAVENOL Motobike 4-T Mineral

SAE 20W-40 | API SN | JASO MA2

High performance motor oil with excellent additives to meet the demanding requirements of motorcycle engines with wet clutches or oil lubricated clutches.

JASO MA2 T903:2016, Yamaha, Kawasaki, Honda, Aprilia, BMW, Suzuki, Ducati, Triumph, Moto-Guzzi

Art. No.: 1173123



RAVENOL Motobike 4-T Mineral

SAE 20W-50 | API SN | JASO MA2

High performance motor oil with excellent additives to meet the demanding requirements of motorcycle engines with wet or oil lubricated clutches.

JASO MA2 T903:2016, Yamaha, Kawasaki, Honda, Aprilia, BMW, Suzuki, Ducati, Triumph, Moto-Guzzi

Art. No.: 1173122



RAVENOL Motobike 4-T Standard

SAE 20W-50 | API SL | JASO MA2

High performance mineral motor oil to meet the demanding requirements of motorcycle engines with wet or oil lubricated clutches.



RAVENOL Motogear

SAE 10W-40 | API GL-4

Semi-synthetic special multigrade gear oil based on synthesis technology and special esters for easily switching also under extremely hard operating conditions.

Art. No.: 1250101



RAVENOL Scooter Gear Oil

SAE 80W-90 | API GL-5/GL-4

Synthetic-based scooter gear oil with with special effective high-pressure additives for manual transmissions.

MIL-L-2105 D

Art. No.: 1222202



RAVENOL QUAD 4T

SAE 10W-40 | API SL | JASO MA2

Semi-synthetic motoroil for Quads and ATV.

4-stroke Quad-engines of KAWASAKI, YAMAHA, BOMBARDIER, SUZUKI, HONDA, u.a.

Art. No.: 1152160



RAVENOL Air Filter Oil Spray

Spray oil for all foam material air filters of off-road and street motorcycles and Quads.

Art. No.: 1360301



RAVENOL Air Filter Clean Spray

Degreases and cleans all foam material air filters of off-road and street motorcycles and Quads thoroughly.

Art. No.: 1360302



RAVENOL Kettenöl Off Road Spray

Especially for chain lubrication of off-road motorcycles and Quads.

Art. No.: 1360303



RAVEN



**RAVENOL Scooter
4-Takt Teilsynth.**

SAE 10W-40 | API SL

Semi-synthetic high performance green colored motor oil for 4-stroke small engines.

Yamaha, Honda, Aprilia, Suzuki, Kawasaki, Peugeot, Arctic Cat, Bombardier, Argo, Dinli, Polaris, Piaggio

Art. No.: 1152155



**RAVENOL Scooter
4-T 10W-30**

SAE 10W-30 | JASO MB

Synthetic 4-stroke engine oil with specially selected additives, designed for demanding use in scooters and motorcycles.

Art. No.: 1152156



**RAVENOL Snowmobiles
Fullsynth. 2-Takt**

API TD, ISO-L-EGD | JASO FD

Fully synthetic motor oil for snowmobiles. Recommended mixture: max. 1:100.

Yamaha, Suzuki, Bombardier, Kawasaki, Arctic Cat, Rotax 253

Art. No.: 1151310



**RAVENOL Schneefräse
4-Takt**

SAE 0W-30 | API SL | ACEA A3/B4

Fully synthetic 4-stroke motor oil, especially for 4-stroke snow blowers.

Ariens, Briggs&Stratton, Caiman, Canadiana, Craftsman, Cub



RAVENOL Marineoil Diesel SHPD

SAE 20W-50 | API CI-4 | ACEA E7/B4

Motor oil for use in marine diesel engines.

Volvo VDS-3, VETUS DEUTZ, Steyr, MTU, VOLVO PENTA, Caterpillar, IVECO, MAN, Mercruiser, PERKINS, NANNI Diesel, Yanmar, Detroit Diesel, SULZER, SKL

Art. No.: 1163110



RAVENOL Marineoil Diesel SHPD

SAE 25W-40 | API CF

Modern mineral based high additive treated marine engine oil with special additives. It is suitable for inboard marine diesel engines

VETUS DEUTZ, MTU, Steyr, Caterpillar, MAN, PERKINS, NANNI Diesel, Detroit Diesel, Mercruiser, IVECO, SKL, SULZER, VOLVO PENTA

Art. No.: 1163215



RAVENOL Marineoil Diesel SHPD Synthetic

SAE 25W-40 | API CI-4/CF | ACEA E7, B4

Synthetic engine oil with unconventional and



RAVENOL Outboardoil 4T

SAE 10W-40 | API SM | NMMA FC-W (CAT)

Semi-synthetic specifically formulated Outboard 4-stroke motor oil acc. to NMMA FC-W (CAT).

NMMA FC-W (CAT)® FC-11298X, NMMA FC-W, Mercury Verado, Yamaha, Suzuki, Honda, Johnson/Evinrude, Tohatsu/Nissan

Art. No.: 1153204



RAVENOL Outboardoil 4T

SAE 15W-40 | NMMA FC-W

Mineral specifically formulated Outboard 4-stroke motor oil acc. to NMMA FC-W.

NMMA FC-W® FB-83138, Mercury Verado, Yamaha, Suzuki, Honda, Johnson/Evinrude, Tohatsu/Nissan

Art. No.: 1153205



RAVENOL Outboardoil 4T

SAE 25W-40 | API SM | NMMA FC-W (CAT)

Mineral specifically



RAVENOL DTF-1

Fully synthetic gear lubricant for the latest generation of electronically controlled active transfer box.

Land Rover IVK500010, ATF TF-0753, ATF TF-0870, MB 239.41 Torque-on-Demand (TOD) Transfer case in Type 167 GLE, Type 463 G-Class, Type 470 X-Class, Type 471 with engine OM642; Mopar 68049954AA for Borg Warner 44-40 transfer Box; Nissan 999MP-TF0870P, KLD22-00001EU for Transfer Case ATX90A Porsche 000.043.301.36 Cayenne 9PA/9PA1 955 / 957 (from 2002 to 2010) Transfer Case PL72 ATC (NV325), 000.043.305.63 Porsche Macan 95B (from 2014) and Cayenne 92A / 958 (Petrol-Motors from 2010 to 2018) Transfer Case Hang-On PL72 ATC; VW G052515A2 (former: G055515A2) for Transfer Case 0AD and 0BV for Touareg, Q7; VW G052536A2 for Transfer Case 0BU for Touareg, Amarok and Audi Q7; VW G052533A2 for Transfer Case 0C7 for Amarok; BMW DTF-1 83222409710, 83222397244, 83220306816 for Transfer Case xDrive: ATC 300, ATC350, ATC400, ATC450, ATC500, ATC700; Genesis (USA) G90 3.3 T-GDI und 5.0 GDI AWD (ab Bj. 2016); KIA (EU) Stinger 2.2 CRDI und 3.3 T-GDI AWD (ab Bj. 2017); Mopar 68049954AA for BorgWarner 44-40 transfer case; Nissan 999MP-ATFD3MP



RAVENOL ATF MM SP-III Fluid

Universal ATF (Automatic-Transmission-Fluid) for MITSUBISHI, HYUNDAI und KIA-automatic transmissions. Can replace SP and SP-II Fluids.

Mitsubishi 4024610, 4024401, ACH1ZC1X05, MZ320159, MZ320160, MZ320162, MZ320216, ATF SP-III, ATF SP-3, Hyundai 04500-00100, 04500-00400, 04500-00A00, 00232-19012, Chery B110AX4004011SP10; Chery CHR2015CVT001; Chery CVT 019CHA/019CHB

Art. No.: 1212103



RAVENOL ATF RED-1

Synthetic ATF for special 5-speed automatic transmissions of KIA and Hyundai.

ATF RED-1, KIA UM040-CH020, 04500-00140, Hyundai 04500-00140

Art. No.: 1211117

</



RAVENOL CVT Fluid

Synthetic automatic transmission fluid for CVT-automatic transmissions.

BMW CVT EZL 799A, Ford EU WSS-M2C928



RAVENOL ATF Dexron II E

GM-Specification: Dexron® II E

High performance synthetic ATF (Automatic-Transmission-Fluid) for automatic transmissions, torque converters and power shifts.

MB 236.8, MB 236.5, Voith 55.6336.3x Extended Drain (G1363), Allison C4-32652009 (ATF II E), MAN 339 Typ Z2, MAN 339 Typ V2, ZF TE-ML 04D, 09X, 14B, 16L, Cat. TO-2, DTFR 13C150 (MB 236.8)

Art. No.: 1211103



RAVENOL ATF Dexron D II

GM-Specification: Dexron® II D

High performance mineral transmission fluid for automatic gearboxes, hydraulic steering, power converters and transmissions.

MB 236.6, MB 236.7, ZF TE-ML 03D, 04D, 05L, 11A, 14A, 17C, VOITH H55.6335.xx, MAN 339 Typ Z1, Ford SQM-9010B, Ford M2C-138 Cj, 166H, 185A, Cat. TO-2, MERCON, RENK DOROMAT, CVT, Allison C3/C4.

Art. No.: 1213102





RAVENOL GEAR TRANS SYNTH GTS

SAE 75W-90 | API GL-4/GL-5/MT-1 | MIL-PRF 2105 E, SAE J2360

Axle gear oil based on the latest fully synthetic components for commercial vehicles, particularly suitable for Daimler specification 235.8.

Arvin Meritor 076-N, DAF,





RAVENOL Hydrauliköl TS 22

ISO VG 22 | HLP | DIN 51 524 Teil 2, ISO 6743-4 HM

Mineral hydraulic oil. Wide range of industrial applications.

AFNOR NFE 48 603 (HM); ASTM D6158; Bosch Rexroth RE 90220; CETOP RP 91H HM; Cincinnati Milacron P-68, 69, 70; Danieli Hydraulics; DENISON HF-2 und HF-0; FZG-Test A 8,3/90: 12th load level is reached; GB 11118.1 L-HL; ISO 11158 HM; Metso; MIL-H 24 459; SAE MS1004 Typ HM; Sauer-Danfoss 520L0463; Swedish Standard SS 155434; VDMA 24318; Vickers-pump-test

Art. No.: 1323103



RAVENOL Hydrauliköl TS 32

ISO VG 32 | HLP | DIN 51 524 Teil 2, ISO 6743-4 HM

Mineral hydraulic oil. Wide range of industrial applications.

Vickers-Pump-test, FZG-Test A 8,3/90: 12th load level is reached, AFNOR NF E 48-603 HM, ASTM D6158, GB 11118.1 L-HM (conventional), ISO 11158 HM, JCMAS HK, MIL-PRF-17672E, SAE MS1004 HM, SEB 181 2



RAVENOL Hydrauliköl TS AF 32

ISO VG 32 | HLP | DIN 51 524 Teil 2

High quality zinc-and ash-free hydraulic oil, alloyed on sulfur / phosphorus-basis, which has been designed specifically for use in the metal industry.

32: DIN 51 524-2, AFNOR NF E 48-603 HM, ASTM D6158, GB 11118.1 L-HM, ISO 11158/6743-4 HM, SAE MS1004 HM, US Steel 127/136; Denison HF-0, HF-1, HF-2; Eaton Vickers I-286-S, M-2950-S; Fives Cincinnati P-38, P-68; FZG-Test A 8,3/90: The 12th load level is easily achieved; GM LH-03-1-04; MAN N 698; Müller Weingarten; 46, 68: SEB 181.222, 181.226; Thyssen TH-N256-142; Timken-Test nach DIN E 51434; Vickers-PumpentestSEB 181.222, 181.226, Vickers-Pumptest, Timken-Test acc. to DIN E 51434, MAN N 698, FZG-Test A 8,3/90: 12. Loadstep

Art. No.: 1323124



RAVENOL Hydrauliköl TS AF 46

ISO VG 46 | HLP | DIN 51 524 Teil 2

High quality zinc-and ash-free hydraulic oil, alloyed on sulfur / phosphorus-basis



RAVENOL

