

**TITAN**

**High-tech protection for engines**



Contact:



**Engine oils for passenger cars  
2/2013**

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*LUBRICANTS.  
TECHNOLOGY.  
PEOPLE.*



## **The right high-tech engine oil for every engine!**

TITAN engine oils are the result of the latest research and development by the world's largest independent lubricant specialist. Developed together with leading automobile manufacturers, tailored to satisfy the demands of today's high-tech engines: offering outstanding high-performance, fuel-economy and wear protection.

TITAN engine oils: Premium quality from the German automobile industry's leading lubricant OEM. Manufactured in the EU.



The information contained in this product information is based on the experience and know-how of FUCHS EUROPE SCHMIERSTOFFE GMBH in the development and manufacturing of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pre-treatment, possible external contamination, etc. For this reason, universally-valid statements about the function of our products are not possible. The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application.

We therefore recommend that you consult a FUCHS EUROPE SCHMIERSTOFFE GMBH application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care.

Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning. With the publication of this product information, all previous editions cease to be valid.

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**TTIAN**  
**GT1**  
SAE 0W-20

Premium performance engine oil with new XTL® technology in ground-breaking viscosity class and globally unique zinc-free additive technology, for high-performance cars with gasoline and diesel engines.

**XTL**  
TECHNOLOGY

- + maximum fuel-saving potential
- + specially developed for dynamic driving and the maximum of outstanding performance
- + excellent cold start-ups
- + outstanding performance reserves



**Specifications\*:**

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**Approvals\*:**

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**FUCHS recommendations:**

ACEA C2  
ACEA A5/B5  
API SL  
ILSAC GF-4

**TTIAN**  
**GT1 PRO FLEX**  
SAE 5W-30

Premium performance extreme fuel-economy engine oil with new XTL® technology. Specially developed for BMW, Mercedes-Benz and OPEL vehicles with exhaust after treatment and turbocharger.

**XTL**  
TECHNOLOGY

- + best characteristics cold start-up
- + significantly lower fuel and oil consumption
- + improved ageing stability
- + outstanding performance reserves



**Specifications\*:**

ACEA C3  
API SN/SM

**Approvals\*:**

BMW LONGLIFE-04  
dexos2™ (GB2C0209075)  
MB-APPROVAL 229.51  
VW 502 00/ 505 00/ 505 01

**FUCHS recommendations:**

ACEA A3/B4  
FORD M2C917-A  
supersedes GM-LL-A-025  
supersedes GM-LL-B-025

**TTIAN**  
**GT1 PRO C-3**  
SAE 5W-30

Premium performance extreme fuel-economy engine oil with new XTL® technology. Specially developed for BMW, VW and Mercedes-Benz vehicles with exhaust after treatment and turbocharger.

**XTL**  
TECHNOLOGY

- + best cold start-up characteristics
- + significantly lower fuel and oil consumption
- + improved ageing stability
- + outstanding performance reserves
- + rationalisation brand for car workshops



**Specifications\*:**

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**Approvals\*:**

BMW LONGLIFE-04  
MB-APPROVAL 229.51  
PORSCHE C30  
VW 504 00/ 507 00

**FUCHS recommendations:**

ACEA C3  
ACEA A3/B4  
FORD M2C917-A

**TTIAN**  
**GT1**  
SAE 5W-40

Premium performance fuel-economy engine oil with new XTL® technology. Specially developed for vehicles with exhaust after treatment and turbocharger.

**XTL**  
TECHNOLOGY

- + best cold start-up characteristics
- + significantly lower fuel and oil consumption
- + improved ageing stability
- + outstanding performance reserves for advanced engines with or without extended service intervals
- + with Porsche approval A40



**Specifications\*:**

ACEA C3  
API SN/SM/CF  
FORD M2C917-A

**Approvals\*:**

BMW LONGLIFE-04  
MB-APPROVAL 226.5/ 229.31  
PORSCHE A40  
RENAULT RN0700/RN0710  
VW 502 00/ 505 01

**FUCHS recommendations:**

ACEA A3/B4  
FIAT 9.55535-S2  
VW 505 00

**TITAN**  
**GT1 PRO C-1**  
**SAE 5W-30**

*Premium Performance extreme fuel-economy engine oil specially developed for vehicles with exhaust after treatment and turbocharger.*

- + optimum formulation for today's cars and vans with or without extended service intervals
- + reduced start-up wear due to improved cold-start capability
- + radically reduced contaminant emissions – a plus for the environment



**Specifications\*:**  
ACEA C1

**Approvals\*:**  
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**FUCHS recommendations:**  
ACEA A5/B5  
JASO DL-1  
FORD WSS-M2C934-B  
MAZDA

**TITAN**  
**GT1 PRO C-2**  
**SAE 5W-30**

*Premium Performance extreme fuel-economy engine oil specially developed for PSA vehicles with exhaust after treatment and turbocharger.*

- + optimum formulation for today's cars and vans with or without extended service intervals
- + reduced start-up wear due to improved cold-start capability
- + radically reduced contaminant emissions – a plus for the environment



**Specifications\*:**  
ACEA C2  
API SN/SM/CF

**Approvals\*:**  
PSA B 71 2290  
RENAULT RN0700

**FUCHS recommendations:**  
ACEA A5/B5  
FIAT 9.55535-S1  
HONDA  
SUBARU  
SUZUKI  
TOYOTA

**TITAN**  
**GT1 PRO C-4**  
**SAE 5W-30**

*Premium Performance extreme fuel-economy engine oil specially developed for RENAULT vehicles with exhaust after treatment and turbocharger.*

- + optimum formulation for today's cars and vans with or without extended service intervals
- + reduced start-up wear due to improved cold-start capability
- + radically reduced contaminant emissions – a plus for the environment



**Specifications\*:**  
ACEA C4

**Approvals\*:**  
MB-APPROVAL 226.51  
RENAULT RN0720

**FUCHS recommendations:**  
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**TITAN**  
**GT1 PRO B-Tec**  
**SAE 5W-30**

*Premium Performance extreme fuel-economy engine oil specially developed for Mercedes-Benz Diesel vehicles with exhaust after treatment and turbocharger.*

- + optimum formulation for today's cars and vans with or without extended service intervals
- + optimum cold starting characteristics
- + lower oil consumption
- + minimized exhaust emissions



**Specifications\*:**  
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**Approvals\*:**  
MB-APPROVAL 229.52

**FUCHS recommendations:**  
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**TITAN**  
**Supersyn**  
**LONGLIFE PLUS**  
**SAE 0W-30**

*Ultra High Performance extreme fuel-economy engine oil formulated with fully-synthetic base oils. Specially developed for VW Longlife Technology.*

- + suitable for gasoline and diesel car engines with or without unit injector technology
- + highly stable lubricating film and thus outstanding lubrication at high temperatures such as in stop-and-go traffic in hot summers
- + excellent fuel economy and significantly reduced cold-start wear



**Specifications\*:**

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**Approvals\*:**

VW 503 00/ 506 01

**FUCHS recommendations:**

ACEA A5/B5  
 BMW LONGLIFE 01-FE  
 VW 506 00

**TITAN**  
**Supersyn**  
**LONGLIFE**  
**SAE 0W-30**

*Ultra High Performance, extreme fuel-economy engine oil for a variety of vehicles with or without extended service intervals.*

- + excellent cold starting characteristics
- + lower oil consumption



**Specifications\*:**

ACEA A3/B4  
 API SL

**Approvals\*:**

MB-APPROVAL 229.5

**FUCHS recommendations:**

BMW LONGLIFE-01

**TITAN**  
**Supersyn**  
**LONGLIFE**  
**SAE 0W-40**

*Ultra High Performance, fuel-economy engine oil for a variety of vehicles with or without extended service intervals.*

- + excellent cold starting characteristics
- + lower oil consumption



**Specifications\*:**

ACEA A3/B4  
 API SN

**Approvals\*:**

MB-APPROVAL 229.5  
 PORSCHE A40

**FUCHS recommendations:**

AMG  
 ASTON-MARTIN  
 BMW LONGLIFE-01  
 FORD M2C937-A

**TITAN**  
**Supersyn**  
**LONGLIFE**  
**SAE 5W-40**

*Ultra High Performance, fuel-economy engine oil for a variety of vehicles with or without extended service intervals.*

- + good cold start-up characteristics
- + minimal oil consumption



**Specifications\*:**

ACEA A3/B4  
 API SN/SM/CF

**Approvals\*:**

BMW LONGLIFE-01  
 MB-APPROVAL 226.5  
 MB-APPROVAL 229.5  
 PORSCHE A40  
 RENAULT RN0700/RN0710  
 VW 502 00/ 505 00

**FUCHS recommendations:**

GM-LL-B-025  
 HYUNDAI



**TITAN**  
**GT1 LONGLIFE III**  
**SAE 5W-30**

Premium motor oil specially developed for VW vehicles with exhaust after treatment and turbocharger.

- + specifically developed for the latest generation of petrol and diesel passenger car and light commercial engines equipped with exhaust treatment devices such as particulate filters, catalytic converters and EGR
- + excellent viscosity-temperature behaviour
- + protection of exhaust treatment devices
- + outstanding fuel economy



**Specifications\*:**

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**Approvals\*:**

VW 504 00 / 507 00

**FUCHS recommendations:**

ACEA C3  
 ACEA A3/B4  
 FORD M2C917-A

**TITAN**  
**Supersyn F ECO-B**  
**SAE 5W-20**

Ultra High Performance, fuel-economy engine oil for all FORD engines with EcoBoost-Systems.

- + good cold start-up characteristics
- + minimal oil consumption



**Specifications\*:**

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**Approvals\*:**

FORD M2C948-B

**FUCHS recommendations:**

ACEA A1/B1  
 FORD M2C925-B

**TITAN**  
**Supersyn F ECO-DT**  
**SAE 5W-30**

Ultra High Performance, fuel-economy engine oil for all FORD engines with DuraTorq diesel engines.

- + good cold start-up characteristics
- + minimal oil consumption



**Specifications\*:**

ACEA A5/B5  
 FORD M2C913-C  
 FORD M2C913-D (Approval pending)

**Approvals\*:**

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**FUCHS recommendations:**

ACEA A1/B1  
 FORD M2C913-A  
 FORD M2C913-B  
 IVECO 18-1811  
 JAGUAR M2C913-B

**TITAN**  
**Supersyn F**  
**SAE 5W-30**

Ultra-high-performance motor oil. Specially developed for Ford engines.

- + good cold start-up characteristics
- + minimal oil consumption



**Specifications\*:**

ACEA A5/B5  
 API SL/CF  
 FORD M2C913-C

**Approvals\*:**

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**FUCHS recommendations:**

ACEA A1/B1  
 FORD M2C913-A  
 FORD M2C913-B  
 IVECO 18-1811  
 JAGUAR M2C913-B

**TITAN**  
Supersyn G  
SAE 5W-30

High performance motor oil specifically designed for the latest generation of GM/OPEL/VAUXHALL petrol and diesel engines with ECO Service Flex technology.

- + Proven lower fuel consumption, reduced emissions, faster warm-up after cold start and extended service intervals
- + provides excellent protection against wear due to reduced oiling time after start up and complete reliable lubrication even under high temperature and on-going speed motorway operation

**TITAN**  
Supersyn  
SAE 5W-40

Ultra High Performance fuel-economy engine oil for a variety of vehicles with or without extended service intervals.

- + good cold start-up characteristics
- + minimal oil consumption

**TITAN**  
Supersyn  
SAE 10W-60

Ultra-high-performance fuel economy motor oil for various car engines.

- + good cold start-up characteristics
- + highly stable lubricating film and oil pressure

**TITAN**  
SYN MC  
SAE 10W-40

Super High Performance fuel-economy engine oil based on MC-synthesis base oils for a variety of gasoline and diesel engines.

- + greater performance plus high lubrication reserves compared to conventional mineral oil-based engine oils. Fuel-economy quality at a favourable price
- + minimal oil consumption



**Specifications\*:**  
ACEA A3/B4  
API SL/CF

**Approvals\*:**  
GM-LL-A-025  
GM-LL-B-025

**FUCHS recommendations:**

**Specifications\*:**  
API SN/SM/CF

**Approvals\*:**  
MB-APPROVAL 229.3  
PORSCHE A40  
PSA B71 2296  
RENAULT RN0700/RN0710  
VW 502 00/505 00

**FUCHS recommendations:**  
ACEA A3/B4  
BMW Longlife-98  
FIAT 9.55535-H2/M2/N2/Z2

**Specifications\*:**  
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**Approvals\*:**  
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**FUCHS recommendations:**  
ACEA A3/B3  
API SL/CF  
FIAT 9.55535-H3

**Specifications\*:**  
ACEA A3/B4  
API SL/CF

**Approvals\*:**  
MB-APPROVAL 229.1

**FUCHS recommendations:**  
BMW SPEZIAL  
FIAT 9.55535-D2/G2  
VW 500 00/505 00

# How to find the right motor oil.



There are all sorts of motor oils available which fulfil all manner of specifications. This should explain what the most important motor oil specifications mean.

SAE: The viscosity of an motor oil is described by its SAE Grade (SAE = Society of Automotive Engineers). In the case of an SAE 0W-30 motor oil, the first number describes how thin the oil is at low temperatures. The smaller this number, the better the oil flows at low temperatures and the faster the oil reaches important bearings in the engine. The second figure describes the flow-ability of the oil at high temperatures.

**ACEA** The ACEA engine oil specifications for gasoline and diesel engines differentiate between the Ax/Bx classifications and the Cx classifications with limits in the sulfated ash, phosphorus and sulfur contents.

## Car gasoline and diesel engines - High SAPS

- A1/B1** Category for Fuel Economy engine oils with especially low High Temperature High Shear viscosity. HTHS of 2.6 to 3.5 mPas applies to XW-20, 2.9 to 3.5 mPas for all others. Corresponds to the old A1 and B1 specifications with some new engine tests. High content of Sulfated Ash.
- A3/B3** Category for high-performance and Fuel Economy engine oils. Exceeds ACEA A1/B1 with regard to Noack (evaporation losses), and sludge prevention. Not for DI-Diesel. Extended oil change intervals possible. High content of Sulfated Ash.
- A3/B4** Same as A3/B3 but also for direct injection diesel engines. High content of Sulfated Ash.
- A5/B5** Category for high-performance engine oils. For Gasoline and TDI engines with Fuel Economy Performance, with reduced HTHS (2.9 to 3.5). Extended oil change intervals possible. High content of Sulfated Ash.

## Car gasoline and diesel engines - Low SAPS

- C1** Largely based on the ACEA A5/B5. Strict limitation of SAPS content. Low HTHS viscosity of >2.9 mPas. Maximum FE>3%.
- C2** Same as C1 but with higher Sulphated Ash content permissible (as with C3 <0.8%). High FE>2.5%.
- C3** Same as C2 expect for HTHS > 3.5% and reduced Fuel Economy performance >1%. Low Minimum-TBN.
- C4** Sulphated Ash content as C1, HTHS viscosity and FE as C3. Low Minimum-TBN.
- API SN** For all automotive engines currently in use. Introduced in 2010. SN is designed to provide improved high temperature, deposit protection for pistons, more stringent sludge control, and seal compatibility. Matches ILSAC GF-5 by combining API SN performance with improved fuel economy, turbocharger protection, emission control system compatibility, and protection of engines operation on ethanol containing fuels up to E85.
- API SM** Introduced in 2004. Successor of API SL with additional requirements like lower SAPS-content, energy conserving and emission system protection. Precondition for ILSAC GF-4. Valid from 10/2004 for engines until 2010.
- API SL** Successor of API SJ and precondition for ILSAC GF-3. Valid from 2001 for engines until 2001.
- API SJ** Successor of API SH with additional requirements concerning evaporation loss. Valid from 10/1996 for engines until 2001.
- API CJ-4** Introduced in 2006. Designed to meet 2007 model year-on-highway exhaust emission standards. For use in all applications with diesel fuels ranging in sulphur content up to 500 ppm (0.05% by weights) CJ-4 oils are effective at sustaining emission control system durability.
- API CI-4** Introduced in 2002. 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 sulphur content up to 0.5% weight.
- API CH-4** Introduced in 1998. Compounded for use with diesel fuels ranging in sulphur content up to 0.5% weight. Replaces CG-4.



## Approvals by manufacturer's.



Apart from the specifications listed, a number of manufacturers still demand tests on their own engines.

<i>BMW-specification</i>	<i>Application area</i>
<b>BMW LONGLIFE-98</b> (list closed)	Oils for special gasoline engines from 1998 on.
<b>BMW LONGLIFE-01</b>	Oils for special gasoline engines from 09/2001 on.
<b>BMW LONGLIFE-01FE</b>	Oils for special gasoline engines from 2001 on.
<b>BMW LONGLIFE-04</b>	Quality same as Longlife 01 expect with lower HTHS for better fuel ecomoy. For gasoline engines and diesel enginges with fiters from 2004 on.

<i>FORD-specification</i>	<i>Application area</i>
<b>M2C 912-A1</b>	Factory-fill and service oil from 1996. Quality level: ACEA A1/B1. Meets ILSAC GF-2.
<b>M2C 913-C</b>	Introduced in 2009. Backwards compatible with M2C 913-A and -B with fuel economy. Meets ACEA A5/B5.
<b>M2C 913-D</b>	For all diesel engines, especially developed for the 2,2 L-I-Diesel-Duratorq-TDCI-diesel engine (built-in Ford Transit 2012.75 (04/2012 -) or Ranger) except Ka 2009 (08/2008 -) Galaxy 1995 (02/1995 - 03/2000), Galaxy 2000.75 (04/2000 - 02/2006) with 1,9 L diesel engine. Introduced in 2011.
<b>M2C 917-A</b>	Equates to VW specification 505.01 and meets ACEA A3/B4/C3. For diesel and gasoline engines of series Ford Ka.
<b>M2C 925-A</b>	Service oil for gasoline and diesel engines. Used in Jaguar and Landrover models. Similar to ACEA A1/B1 ACEA A5/B5 and ILSAC GF-3.
<b>M2C 925-B</b>	For all diesel and gasoline engines except series Ford ka. Viscosity SAE 5W-20. Meets ACEA A5/B5. If not available, M2C 913-B may be used instead (viscosity 5W-30).
<b>M2C 934-A</b>	For diesel engines with DPF, meets ACEA C1.
<b>M2C 937-A</b>	Viscosity SAE 0W-40, special for Ford Focus RS.
<b>M2C 948-B</b>	Viscosity SAE 0W-40, special for Ford Focus RS. Developed and required for the 1.0 and 1.6 L EcoBoost R engines (expect Ford Ka, Focus ST and Focus RS).

<i>MB-specification</i>	<i>Application area</i>
<b>MB-APPROVAL 229.1</b>	Engine oil for car gasoline and diesel engines. More stringent than ACEA A2/A3 and B2/B3.
<b>MB-APPROVAL 229.3</b>	Engine oils for cars with extended oil change intervals (30,000 km).
<b>MB-APPROVAL 229.31</b>	Engine oils for cars with exhaust gas after treatment. Low ash content required.
<b>MB-APPROVAL 229.5</b>	Fuel Economy engine oil for even longer oil change intervals (vehicles from 2002 on) with service indicators. Special, stricter requirements than ACEA A3/B3. For use in all car gasoline and diesel engines. This oil also complies with 229.1 and 229.3.
<b>MB-APPROVAL 229.51</b>	Very high performance oil for engines with diesel particle filters and extended oil change intervals. Better fuel economy than MB 229.5.
<b>MB-APPROVAL 229.52</b>	Especially for the new BlueTec engines (OM 642; emission standard EURO 6). Highest requirements on oxidation stability and fuel economy. Backwards compatible with 229.51.
<b>MB-APPROVAL 226.5</b>	Engine oil for cars, especially for four-cylinder gasoline engines based on RENAULT technology. Meets ACEA A3/B4.
<b>MB-APPROVAL 226.51</b>	Engine oil for cars, especially developed for the diesel engine OM 607 (only in W176 and VAN-engines (Citan)) based on Renault technology. Meets ACEA C4.

<i>OPEL-specification</i>	<i>Application area</i>
<b>GM-LL-A-025</b>	Oils for gasoline car engines, Fuel Economy.
<b>GM-LL-B-025</b>	Oils for diesel car engines, Fuel Economy.
<b>dexos2™</b>	GM specification for the aftermarket for gasoline and diesel engines.

## **PEUGEOT-specification**   **Application area**

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<b>PSA B71 2290</b>	Mid SAPS engine oil with lower HTHS viscosity for vehicles fitted with particle filters. For service use aligned to ACEA C2. SAE 5W-30.
<b>PSA B71 2294</b>	HighSAPS mineral oil-based engine oil with medium performance for service use (PSA level 2) aligned to ACEA A3/B3. SAE xW-40/50.
<b>PSA B71 2296</b>	HighSAPS engine oil for service use (PSA level 3) aligned to ACEA A3/B4 or A5/B5 performance, therefore also with lower HTHS viscosity. SAE xW-30/40.
<b>PSA B71 2297</b>	LowSAPS engine oil for service use aligned to ACEA C3. SAE xW-30/40.
<b>PSA B71 2300</b>	HighSAPS engine oil for service use (PSA level 2) aligned to ACEA A3/B4. SAE xW-40/50.

## **PORSCHE-specification**   **Application area**

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<b>A40</b>	For all Porsche gasoline engines (SAE 0W-40, 5W-40/50) and VW gasoline engines without Longlife-Service (SAE 0W-40, 5W-40).
<b>C30</b>	For all gasoline engines of VW make with and without Longlife-Service and for all VW-Diesel engines (always SAE 5W-30). Identical to VW 504 00 / 507 00.

## **RENAULT-specification**   **Application area**

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<b>RN0700</b>	For gasoline engines, corresponds to ACEA A3 B4 and A5/B5.
<b>RN0710</b>	For diesel engines without particle filters, SAE 5W-40, corresponds to ACEA A3/B4.
<b>RN0720</b>	For diesel engines with particle filters, SAE 0/5W-30/40, corresponds to ACEA C4. An additional RENAULT engine test is required.

## **VW-specification**   **Application area**

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<b>VW 502 00</b>	Low viscosity oils for gasoline engines and difficult operating conditions. Normal service intervals. Replaces VW 501 01 and VW 500 00.
<b>VW 503 00</b>	New specification for gasoline car engines with extended service intervals (30,000 km or 2 years). Surpasses the requirements of 502 00. (HTHS 2.9 mPas). Meets ACEA A1. SAE 0W/5W-30.
<b>VW 503 01</b>	Specification for turbocharged gasoline car engines with extended service intervals, e.g. Audi S3, TT. (HTHS > 3.5 mPas).
<b>VW 504 00</b>	For all gasoline engines with extended service intervals. Replaces VW 503 00 and 503 01.
<b>VW 505 00</b>	All-season motor oils for diesel engines with or without turbo charging. Normal service intervals.
<b>VW 505 01</b>	All-season engine oils especially for Unit Pump diesel engines. Normal service intervals. Meets ACEA B4.
<b>VW 506 00</b>	Specification for diesel engines with extended service intervals (50,000 km or 2 years), (HTHS 2.9 mPas).
<b>VW 506 01</b>	Specification for Unit Pump diesel engines with extended service intervals.
<b>VW 507 00</b>	For almost all diesel engines with extended service intervals, unitary injector pumps and Unit Pumps. Retrospectively compatible back to 2000. Excludes V10 and R5 engines built before 2006.