

TM



PRODUCT CATALOG



THE PROFESSIONAL'S CHOICE

A JOURNEY THROUGH TIME: THE VEEDOL STORY



The Veedol Brand created by an American Company - Tide Water Associated Oil.



Veedol Germany was founded.

Getty Oil acquires an interest in Tide Water Associated Oil Company.

Getty Oil gains control of Tide Water and Veedol brand.



1951



Veedol develops the first HD (Heavy Duty) engine oil for the German market.

French Grand Prix in Reims-Guaxon showing Veedol track side branding.



1913

1925

1930

1949

1954

1920

1940

1950

1960

1914

Veedol is the first engine oil chosen by Henry Ford for the world's first mass produced car, the Model T-Ford.



1931



The engine lubricant for the first non-stop flight across the Pacific Ocean in the "Miss Veedol" plane.

1950

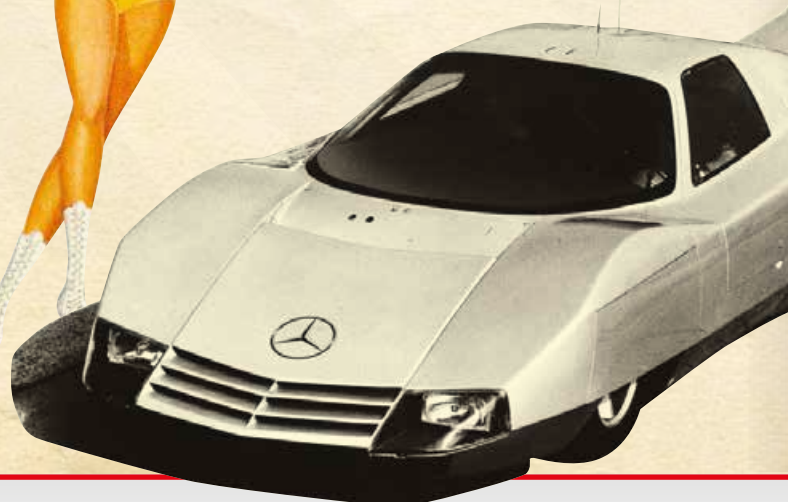
Construction of Veedol Delaware refinery producing 140,000 barrels per day in Delaware City USA, 50,000 in Mina Saud and 40,000 in Gaeta Italy.

1961

Veedol introduces their first semi-synthetic oil.

1928

The chosen engine lubricant for the first airship the Graf Zeppelin to fly around the world.





Tide Water Oil Co. (India) Ltd. acquires 100% shares of Veedol International Limited (VIL) from BP thereby obtaining the global rights to a wide portfolio of registered trademarks for the master brand - Veedol - and its associated product sub-brands and iconic logos.

Veedol acquires Granville Oil & Chemicals, U.K.

Veedol introduces their first SJ specification motor oil, Veedol Elite.

A Mercedes-Benz C111-III wins nine world records in diesel engine car category, using Veedol motor oil and achieves a record speed over 325 kph.



1973

Burmah Castrol acquires the rights to market the Veedol brand in the Middle East.

1979

Veedol synthetic oils are used for the flight of the Space Shuttle, Columbia, USA.

1986



Burmah Castrol completes the purchase of the world wide rights for Veedol lubricants.

1996

1999

Veedol launches a European based specialist academy, providing intensive employee and customer training.

2011

2012

Veedol International DMCC commences operations in the Middle East.

2016

1975

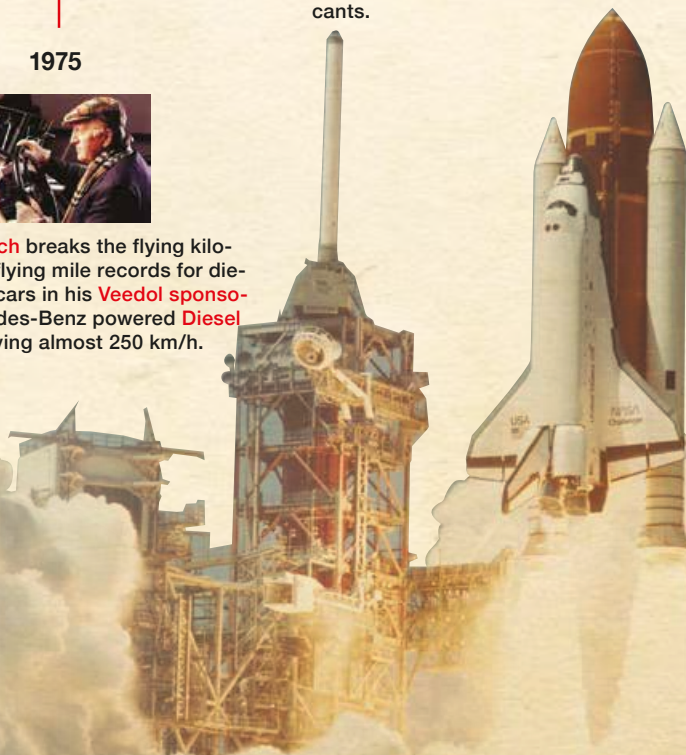


Fritz B Busch breaks the flying kilometer and flying mile records for diesel engine cars in his Veedol sponsored, Mercedes-Benz powered Diesel Star, achieving almost 250 km/h.

2013

Veedol Deutschland GmbH

Veedol International B.V.



TM



The Professional's Choice

Take advantage of the benefits of a great brand!

THE LEGEND VEEDOL

Since its founding in 1913, the Veedol brand stands for exceptional quality, high competence, and reliability. Our wide experience makes us an ideal partner when it comes to high quality lubricants and professional solutions.

From a humble beginning, the Veedol brand was chosen in 1914 by professionals for the world's first mass produced car, the Model T-Ford. As years passed by, acceptance and applications grew which lead to it being chosen for automobile, aviation and industrial applications. Heritage, premium quality, professionalism and evolution are some of the features that describes the Veedol brand.

Throughout the last century the brand was chosen by major OEM manufacturers due to the quality Veedol offered. The quality of the base oils, research & technology combined with the

best of the additives ensures that Veedol products are superior. The professional's choice in motor oil...

For over a century!

***DID YOU KNOW THAT VEEDOL WAS
THE ENGINE OIL FOR THE FIRST MASS
PRODUCED CAR, THE MODEL T-FORD!***



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PASSENGER CAR MOTOR OILS



PREMIUM

Meets the highest standard from the world's leading automobile manufacturers, with exceptional engine protection.

SINTRON V 0W-20**PREMIUM****Description**

Veedol Sintron V 0W-20 is a fuel economy SAE 0W20 motor oil, developed according the most recent technology, based on specially selected synthetic base oils and a well balanced choice of advanced additives to obtain the following properties:

- High fuel economy
- High and stable viscosity index
- Good resistance against shearing
- Very fast cold start, even at very low temperatures
- Safe lubrication film at very high temperatures
- Very good detergency and dispersion power
- Very strong protection against wear, corrosion and foaming

Application

A fuel economy, specially formula-ted engine oil suitable for petrol and diesel engines of Volvo cars where the manufacturer prescribes a product that meets the specification VCC RBS0-2AE with viscosity SAE 0W20.

Performance specifications

ACEA A1/B1-12

Approval

Volvo VCC RBS0-2AE

**SINTRON P 0W-30****PREMIUM****Description**

Veedol Sintron P 0W-30 is a fuel saving oil, specially designed for Peugeot vehicles requiring the PSA B 71 2312 oil specification. It is a blend of specially selected synthetic base oils with advanced additives, giving the following benefits:

- Very fast cold start
- Safe lubrication film at high temperatures
- Extended oil drain intervals
- Very good detergency and dispersion
- All round protection against wear, corrosion and foaming

Application

Veedol Sintron P 0W-30 is recommended for use in modern petrol and diesel engines, with or without turbocharging, in passenger cars and delivery vans. Due to its low SAPS content, this product can be applied in vehicles with modern three-way catalytic converters and diesel particle filters.

Performance specifications

ACEA C2-12

Meets the requirements of:
PSA B 71 2312

**SINTRON V 0W-30****PREMIUM****Description**

Veedol Sintron V 0W-30 is a fully synthetic motor oil produced with advanced new technology additives to obtain the following properties:

- Lower fuel consumption
- Very high viscosity index
- High resistance against shearing
- Fast cold start
- Safe lubrication film at high temperatures
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

This fuel saving, fully synthetic motor oil is specially developed for use in petrol and diesel engines of VW passenger cars and delivery vans with extended oil drain intervals. This oil is also applicable in those engines, where the specifications as stated below are requested.

Warning: *This oil is not applicable in those cases, where a VW-Norm 503.01 is requested.*

Performance specifications

ACEA A1/B1-04,
A5/B5-04

Meets the requirements:
VW 503.00/
506.00/506.01

**SINTRON ULTRA 0W-30****PREMIUM****Description**

Veedol Sintron Ultra 0W-30 is a sophisticated full-synthetic fuel economy universal motor oil produced with high quality synthetic base oils with a high viscosity index and a well-balanced choice of advanced additives to obtain the following properties:

- Lower fuel consumption
- High and very stable viscosity index
- High resistance against shearing
- Fast cold start
- Safe lubrication film at very high temperatures
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

This universal, fuel economy synthetic motor oil is recommended for use in petrol- and diesel engines, with or without turbo-charging, in passenger cars and delivery vans with the specifications as stated below.

Performance specifications

API SN/CF
ACEA A3/B4-12

Meets the requirements of:
MB 229.3/226.5
VW 502.00/505.00
BMW Longlife-01
Renault RN0700



SINTRON ULTRA 0W-40

PREMIUM

Description

Veedol Sintron Ultra 0W-40 is a modern universal full-synthetic motor oil produced with high quality synthetic base oils and a well balanced choice of advanced additives to obtain the following properties:

- High and very stable viscosity index
- High resistance against shearing
- Fast cold start
- Safe lubrication film at very high temperatures
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

This universal synthetic motor oil is recommended for use in petrol- and diesel engines, with or without turbo-charging, in passenger cars and delivery vans with the specifications as stated below. Its low viscosity enables the use of this motor oil under extreme conditions.

Performance specifications

API SN/CF
ACEA A3/B4-12

Meets the

requirements:
MB 229.3/226.5
VW 502.00/505.00
BMW Longlife-01
Renault RN0700/
RN0710
Porsche A40



SINTRON LONGLIFE III 5W-30

PREMIUM

Description

Veedol Sintron LongLife III 5W-30 is a fuel economy, universal motor oil, developed according to the most recent technology, based on specially selected synthetic base oils and a well balanced choice of advanced additives to obtain the following properties:

- Lower fuel consumption
- Mid SAPS content
- Suitable for modern catalysts
- Fast cold start
- Safe lubrication film at high temperatures
- Extended oil drain intervals
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

Veedol Sintron LongLife III 5W-30 is a specially composed motor oil recommended for use in petrol and diesel engines, with or without turbo-charging, in passenger cars and delivery vans with extended oil drain intervals. This motor oil also contributes to the extension of the lifetime of particle filters. Due to its special composition it is possible to apply this product for the latest VW 504.00/507.00 requirements, in practice also called VW Longlife III oils.

Performance specifications

API SN
ACEA C3-12

Approval

MB-Approval
229.51
Approved under
VW 504.00/507.00
BMW Longlife-04
Porsche C30



SINTRON C3 5W30

PREMIUM

Description

Veedol Sintron C3 5W-30 is a universal, synthetic fuel economy motor oil developed according to the most recent technology. This is formulated using specially selected synthetic base oils with high viscosity index and a well-balanced choice of advanced additives. This helps achieve the following:

- Improved fuel efficiency
- High and shear stable viscosity index
- Oil with excellent low temperature fluidity ensuring easy cold start
- Effective lubrication at very high temperatures
- Unique detergent/dispersion additive system ensuring high engine cleanliness with negligible sludge
- Reduced formation of combustion ashes
- Very strong protection against wear, corrosion and foaming

Application

Veedol Sintron C3 5W-30 is specially developed for passenger car unit injector diesel engines. Moreover this lubricant is very suitable for use in petrol and diesel engines, with or without turbo-charging. This product meets the requirements of several OEM's and thus has a wide application.

Performance specifications

API SN
ACEA C3-12

Approval

MB-Approval
229.51 / 229.52
Approved under
VW 502.00/
505.00/505.01
BMW Longlife-04



SINTRON C1 5W-30

PREMIUM

Description

Veedol Sintron C1 5W-30 is a fuel economy, universal motor oil, developed according to the most recent technology and based on specially selected synthetic base oils. By applying advanced additives the exceptional performance of this low SAPS motor oil is accentuated.

- Lower fuel consumption
- Suitable for modern catalysts
- Low combustion ash building (low SAPS)
- Fast cold start
- Safe lubrication film at high temperatures
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

Veedol Sintron C1 5W-30 is recommended for use in petrol and diesel engines, with or without turbo-charging, in passenger cars and delivery vans. Due to its special composition this product can be applied in vehicles with modern three way catalysts and diesel particle filters. Due to its low SAPS content this motor oil contributes to the extension of the lifetime of particle filters for diesel engines

Warning: These oils have the lowest SAPS limits and may be unsuitable for use in some engines.

Performance specifications

ACEA C1-12

Meets the

requirements of:
Ford WSS-
M2C934-B
Jaguar Land Rover
STJR.03.5005



SINTRON C4 5W-30

PREMIUM

Description

Veedol Sintron C4 5W-30 is a fuel economy, universal motor oil, developed according to the most recent technology, based on specially selected synthetic base oils. By applying advanced additives the exceptional performance of this low SAPS motor oil is accentuated.

- Lower fuel consumption
- Suitable for modern catalysts
- Low combustion ash building (low SAPS)
- Fast cold start
- Safe lubrication film at high temperatures
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

Veedol Sintron C4 5W-30 is recommended for use in petrol and diesel engines, with or without turbo-charging, in passenger cars and delivery vans. Due to its special composition this product can be applied in vehicles for which the Renault specification RN0720 is asked and are equipped with modern three way catalysts and diesel particle filters. Due to its low SAPS content this motor oil contributes to the extension of the lifetime of particle filters for diesel engines.

Warning: *These oils have the lowest SAPS limits and may be unsuitable for use in some engines.*

Performance specifications

ACEA C4-12

Approval

Renault RN0720

Meets the requirements of:
MBI 226.51



SINTRON F 5W-30

PREMIUM

Description

Veedol Sintron F 5W-30 is a modern synthetic fuel economy motor oil produced with special selected synthetic base oils and a well-balanced choice of advanced additives to obtain the following properties:

- Lower fuel consumption
- High and stable viscosity index
- High resistance against shearing
- Fast cold start
- Very strong resistance against oxidation
- Safe lubrication film at high temperatures
- Very good detergency and dispersion power
- Very strong protection against wear, corrosion and foaming

Application

Veedol Sintron F 5W-30 is recommended for use in petrol and diesel engines, with or without turbo-charging, in passenger cars and delivery vans with the specifications below. This motor oil is specially developed for those cars that ask for motor oils that fulfill the recent requirements of the OEMs. This oil is fully backwards compatible with Ford M2C 913-A, B and C.

Performance specifications

API SL/CF
ACEA A1/B1-12,
A5/B5-12

Meets the requirements of:
Ford WSS-M2C913-D
Renault RN0700
Jaguar Land Rover STJR.03.5003



PROFESSIONAL

Meets the latest international specifications, with optimal engine protection.

POWERTRON F 5W-20

PROFESSIONAL

Description

Veedol Powertron F 5W-20 is a fuel economy synthetic engine oil specially developed to meet the requirements of the latest Ford Eco-boost gasoline engines. It is developed using the most recent additive technology in combination with specially selected synthetic base oils with a high natural viscosity index. This resulted in a well-balanced engine oil where the following properties are obtained:

- Lower fuel consumption
- High and very stable viscosity index
- High resistance against shearing
- Fast cold start
- Safe lubrication film at very high temperatures
- Reduced formation of combustion ashes
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

Veedol Powertron F 5W-20 is based on synthetic base oils specially developed for the Ford Ecoboost gasoline engines. This engine oil can also be used where an ACEA A1/B1 or API SN product is recommended by the car manufacturer.

Performance specifications

API SN
ACEA A1/B1-12

Meets the requirements of:
Ford WSS-M2C948-B
Jaguar Land Rover STJR.03.5004



POWERTRON C3 5W-30

PROFESSIONAL

Description

Veedol Powertron C3 5W-30 is a universal synthetic motor oil based on the officially approved additives and high quality base oils to obtain the following properties:

- Very good detergency and dispersion
- Powerful action against wear, corrosion and foaming
- Lower fuel consumption
- Good resistance to oxidation
- DPF compatible

Application

This universal synthetic motor oil is suitable for use in petrol and diesel engines, with or without turbo-charging. Moreover this lubricant is also very suitable for passenger car diesel engines with a pump-injector-unit. This product is compatible with Diesel Particulate Filter and meets the requirements of several OEM's and thus has a wide application.

Performance specifications

API SN
ACEA C3-12
Meets the requirements of:
MB 229.51/229.52
VW 502.00/
505.00/505.01
Dexos 2
BMW Longlife-04



POWERTRON C2 5W-30**PROFESSIONAL****Description**

Veedol Powertron C2 5W-30 is a fuel economy universal motor oil, developed according to the most recent technology, based on specially selected synthetic base oils to which advanced additives are added to obtain the following properties:

- Lower fuel consumption
- Suitable for modern catalysts
- Fast cold start
- Safe lubrication film at high temperatures
- Extended oil drain intervals
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

Veedol Powertron C2 5W-30 is recommended for use in petrol and diesel engines, with or without turbo-charging, in passenger cars and delivery vans with extended oil drain intervals. Due to its low SAPS content this product can be applied in vehicles with modern three way catalysts and diesel particle filters.

Performance specifications

API SN/CF
ACEA C2-12

Meets the requirements of:
Renault RN0700
Fiat 9.55535-S1

**POWERTRON ULTRA 5W-40****PROFESSIONAL****Description**

Veedol Powertron Ultra 5W-40 motor oil is developed according to the most recent technology and based on specially selected base oils with a high natural viscosity index. With the addition of a well-balanced choice of advanced additives the following properties are obtained:

- High resistance against shearing
- Fast cold start
- Safe lubrication film at very high temperatures
- Reduced formation of combustion ashes
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

Veedol Powertron Ultra 5W-40 motor oil is specially developed for passenger car unit injector diesel engines. Moreover this lubricant is very suitable for use in petrol and diesel engines, with or without turbo-charging. This product meets the requirements of several OEMs and thus has a wide application.

Performance specifications

API SN/CF
ACEA C3-12

Approval
MB-Approval 229.51
Approved under VW
502.00/505.00/505.01
BMW Longlife-04

Meets the requirements of:
MB 229.31/226.5
Ford M2C917-A
Porsche A40
Renault RN0700/
RN0710; Dexos 2
Fiat 9.55535-S2

**POWERTRON P 5W-30****PROFESSIONAL****Description**

Veedol Powertron P 5W-30 is a fully synthetic motor oil, developed according to the most recent technology. It is specially designed to give:

- Lower fuel consumption
- Fast cold start
- Safe lubrication film at high temperatures
- Extended oil drain intervals
- Very good detergency and dispersion
- Excellent protection against wear, corrosion and foaming

Application

Veedol Powertron P 5W-30 is recommended for use in petrol and diesel engines, with or without turbo-charging, in passenger cars and delivery vans. Due to its lower SAPS content this product can be applied in vehicles with modern three way catalysts and diesel particle filters. Specially designed for Peugeot vehicles requiring PSA B 71 2290 oil specifications.

Performance specifications

ACEA C2-12,
A5/B5-12
API SN

Meets the requirements of:
PSA B71 2290

**POWERTRON PLUS 5W-40****PROFESSIONAL****Description**

Veedol Powertron Plus 5W-40 is an extremely modern, synthetic, universal motor oil based on specially selected synthetic base oils with a high viscosity index and a well balanced choice of advanced additives to obtain the following properties:

- High and very stable viscosity index
- High resistance against shearing
- Fast cold start
- Very strong resistance against oxidation
- Safe lubrication film at very high temperatures
- Very good detergency and dispersion
- Very strong protection against wear, corrosion and foaming

Application

Veedol Powertron Plus 5W-40 is recommended for use in petrol and diesel engines, with or without turbo-charging, in passenger cars and delivery vans for which the most modern specifications are required.

Performance specifications

API SN/CF
ACEA A3/B4-12

Approval
MB-Approval 229.3
Approved under VW
502.00/505.00

Meets the requirements of:
Renault RN0700/
RN0710
Fiat 9.55535-M2
Porsche A40
BMW Longlife-01
GM LL-B-025
MB 226.5



POWERTRON M 5W-30**PROFESSIONAL****Description**

Veedol Powertron M is specially developed to protect critical engine parts in higher mileage vehicles (with more than 120.000 km usage). The composition of this motor oil is based on special base oils with Seal Protector agents and additives that extend lifetime, reduce sludge and prevent deposits in the engine. Based on this special composition, the oil has the following benefits:

- Suitable for vehicles with engines driven more than 120.000 km
- Slows down the engine aging process
- Improved wear protection
- High resistance to oxidation
- Very good cleaning power
- Good cold start properties
- Minimum oil consumption
- Improved seal condition and leakage protection

Application

Recommended for gasoline engines of passenger cars and light commercial vehicles driven more than 120000 km. Has special Base Oils and Seal Protector agents to prevent leakage in older engines and to keep them clean - even in the toughest driving conditions. Reduces oil consumption while protecting the engine.

Performance specifications

ACEA A3-98,
B3-98
API SJ/CF

**POWERTRON M 10W-40****PROFESSIONAL****Description**

Veedol Powertron M is specially developed to protect critical engine parts in higher mileage vehicles (with more than 120.000 km usage). The composition of this motor oil is based on special base oils with Seal Protector agents and additives that extend lifetime, reduce sludge and prevent deposits in the engine. Based on this special composition, the oil has the following benefits:

- Suitable for vehicles with engines driven more than 120.000 km
- Slows down the engine aging process
- Improved wear protection
- High resistance to oxidation
- Very good cleaning power
- Good cold start properties
- Minimum oil consumption
- Improved seal condition and leakage protection

Application

Recommended for gasoline engines of passenger cars and light commercial vehicles driven more than 120000 km. Has special Base Oils and Seal Protector agents to prevent leakage in older engines and to keep them clean - even in the toughest driving conditions. Reduces oil consumption while protecting the engine.

Performance specifications

ACEA A3-98,
B3-98
API SJ/CF

**POWERTRON RACING 10W-60****PROFESSIONAL****Description**

Veedol Powertron Racing 10W-60 is a universal full-synthetic motor oil, produced with high quality synthetic base oils and a well balanced choice of advanced additives to obtain the following properties:

- High and very stable viscosity index
- Good resistance against shearing
- Fast cold start
- Safe lubrication film at very high temperatures
- Very good detergency and dispersion power
- Very strong protection against wear, corrosion and foaming

Application

Veedol Powertron Racing 10W-60 is a universal synthetic motor oil, recommended for use in high power petrol and diesel engines, with or without turbo-charging, in passenger cars. It is excellent for high load and racing engines.

Performance specifications

API SN/CF
ACEA A3/B4-12



THESE ENGINE OILS MEET THE REQUIREMENTS OF MODERN ENGINES

PERFORMANCE

Meets key specifications at an excellent price-performance ratio, with high engine wear protection.

MULTIGRADE SUPER 10W-40

Description

Veedol Multigrade Super 10W-40 motor oil is based on a combination of high quality solvent refined mineral and synthetic base oils. By adding a well balanced choice of additives the following properties are obtained:

- High and stable viscosity index
- Fast cold start
- Strong resistance against oxidation
- Good detergency and dispersion
- Safe lubrication film at high temperatures
- Strong protection against wear, corrosion and foaming

Application

Veedol Multigrade Super 10W-40 is recommended for use in petrol and diesel engines, with or without turbo-charging, in passenger cars and delivery vans.

Performance specifications

API SL/CF
ACEA A3/B4-12

Approval

MB-Approval 229.1

Meets the requirements of:
VW 502.00/505.00

PERFORMANCE



MULTIGRADE PLUS 15W-40

Description

Veedol Multigrade Plus 15W-40 is a modern multifunctional motor oil, produced with high quality solvent refined base oils and modern additives to obtain the following properties:

- Strong detergency and dispersion power
- Strong resistance against oxidation
- Strong protection against wear
- Strong protection against corrosion and foaming
- High and stable viscosity index
- Low tendency to evaporation

Application

Veedol Multigrade Plus 15W-40 is recommended for use in petrol, diesel, and LPG engines, with or without turbo-charging, in passenger cars and delivery vans.

Performance specifications

API SL/CF
ACEA A3/B4-12

Approval

MB-Approval 229.1

PERFORMANCE



MULTIGRADE SPECIAL 10W-40

Description

Veedol Multigrade Special 10W-40 is a motor oil based on high quality mineral and synthetic base oils. By adding a well balanced choice of additives the following properties are obtained:

- High and stable viscosity index
- High resistance against oxidation
- Fast cold start
- Safe lubrication film at high temperatures
- Good detergency and dispersion
- Strong protection against wear, corrosion and foaming

Application

Veedol Multigrade Special 10W-40 This motor oil is recommended for use in petrol- and diesel engines, with or without turbo-charging, in passenger cars and delivery vans.

Performance specifications

API SL/CF
ACEA A3/B4-12

Meets the requirements of:
MB 229.1
VW 502.00/505.00

PERFORMANCE



THESE ENGINE OILS MEET THE REQUIREMENTS OF MODERN ENGINES





HEAVY DUTY DIESEL ENGINE OILS



OUR LATEST GENERATION OF HIGH PERFORMANCE ENGINE OILS MEETS THE HIGHEST DEMANDS AND REQUIREMENTS

PREMIUM

Meets the highest standard from the world's leading automobile manufacturers, with exceptional engine protection.

MARATRON ULTRA LSP 5W-30

PREMIUM

Description

Veedol Maratron Ultra LSP 5W-30 is a top quality fuel economy diesel engine oil based on the latest additive technology combined with very special base oils. This engine oil has the following properties:

- Very powerful detergency prevents deposits in the engine
- Very strong dispersion that prevents from precipitation and sludge formation
- Powerful activity against wear, corrosion and foaming
- High and stable viscosity index
- Low sulphated ash number
- Prolonged oil drain intervals
- Lower fuel consumption

Application

This fuel saving motor oil has mainly been developed for heavy diesel engines even under the toughest operating conditions and all year round use. This product is very suitable for Euro 4, Euro 5 and Euro 6 engines in combination with diesel fuel with a low sulphur content. This engine oil is also suitable for application in engines with or without particulate filters and exhaust catalysts. This motor oil is one of the group "Low SAPS" lubricants.

Performance specifications

API CJ-4/SN
ACEA E6-12, E7-12, E9-12

Approval

MB-Approval 228.51
MAN M 3677/M 3477/M 3271-1
Volvo VDS-4/VDS-3
Mack EO-O Premium Plus/EO-N
Renault VI RLD-3/RLD-2

Meets the requirements of:

MTU Type 3.1
Renault VI RXD/RGD
Mack EO-M Plus
Cummins CES 20081
Cat ECF-3
Deutz DQC IV-10 LA
JASO DH-2
Detroit Diesel 93K218
Scania Low Ash
MB 228.31



MARATRON EXTRA LSP 10W-40

PREMIUM

Description

Veedol Maratron Extra LSP 10W-40 is a top quality diesel engine oil based on the latest additive technology combined with very special base oils. This engine oil has the following properties:

- Very powerful detergency prevents deposits in the engine
- Very strong dispersion that prevents from precipitation and sludge
- Reduced tendency to form particles therefore increasing the lifetime of the particulate filters
- Powerful activity against corrosion and foam
- High and stable viscosity index
- Low sulphated ash, phosphor and sulphur content (Low SAPS)
- Powerful activity against wear, resulting in strongly reduced wear of piston rings and cylinder liners
- Reduced maintenance costs

Application

This lubricant has mainly been developed for heavy diesel engines even under the toughest operation conditions and for all year round use. This product is very suitable for Euro 4, Euro 5 and Euro 6 engines in combination with diesel fuel with a low sulphur content. This engine oil is also suitable for application in engines with or without particle filters and exhaust catalysts. This motor oil is one of the group of "Low SAPS" lubricants.

Performance specifications

API CI-4
ACEA E6-12, E7-12

Approval

MB-Approval 228.51
MAN M 3477/M 3271-1
Volvo VDS-3
Mack EO-N
Renault VI RLD-2

Meets the requirements of:

DAF Long Drain
MB 226.9
Renault VI RXD
MTU Type 3.1
Deutz DQC III-10 LA
JASO DH-2
Cummins CES 20076/20077



MAX-PRO ULTRA 5W-30**PREMIUM****Description**

Veedol Max-Pro Ultra 5W-30 is an advanced fuel economy diesel engine oil based on the latest additive technology, combined with very special base oils.

This engine oil has the following properties:

- Very powerful detergency prevents deposits in the engine
- Very strong dispersion that prevents from precipitation and sludge
- Powerful activity against corrosion and foaming
- High and stable natural viscosity index
- High sulphated ash number
- Powerful activity against wear resulting in strongly reduced wear of piston-rings and cylinder-liners
- Lower fuel consumption

Application

This fuel saving lubricant has mainly been developed for heavy diesel engines even under the toughest operation conditions and all the year round.

This product is very suitable for Euro 3, 4 and 5 engines in combination with diesel fuel with a relatively low sulphur content. This engine oil is also developed to allow (in keeping with the official standards) extended oil drain intervals.

Performance specifications

API CI-4
ACEA E4-12, E7-12

Approval

MB-Approval 228.5
MAN M 3277
Volvo VDS-3
Mack EO-N
Renault VI RLD-2

Meets the requirements of:

DAF HP1/HP2
Cat ECF-2
Cummins 20076/20078
Deutz DQC IV-10
Mack EO-M Plus
MTU Type 3
Renault VI RXD
Global DHD-1
JASO DH-1
Scania LDF
MAN M 3377



OUR LATEST GENERATION OF HIGH PERFORMANCE ENGINE OILS MEETS THE HIGHEST DEMANDS AND REQUIREMENTS

PROFESSIONAL

Meets the latest international specifications, with optimal engine protection.

MAX-PRO EXTRA 10W-40**PROFESSIONAL****Description**

Veedol Max-Pro Extra 10W-40 is a modern diesel engine oil based on advanced additive technology combined with special synthetic base oils. This results in the following properties for this engine oil:

- Very powerful detergency which prevents deposits in the engine
- Very strong dispersion that prevents precipitation and sludge formation
- Powerful action against corrosion and foaming
- High viscosity index
- High sulphated ash number
- Powerful activity against wear resulting in strongly reduced wear of piston rings and cylinder liners
- Longer oil drain intervals

Application

This lubricant has mainly been developed for heavy duty diesel engines even under the toughest operation conditions and for all year round use. This product is very suitable for Euro 2 to Euro 6 engines in combination with different diesel fuel qualities. This engine oil is also suitable for application in engines with or without exhaust catalysts.

Performance specifications

API CF
ACEA E4-12, E7-12
MAN M 3277

Approval

MB-Approval 228.5
Scania LDF-3
Volvo VDS-3
Renault VI RLD-2
Mack EO-N

Meets the requirements of:

Renault VI RXD



MAX-PRO PLUS 10W-40**PROFESSIONAL****Description**

Veedol Max-Pro Plus 10W-40 is a top quality diesel engine oil based on the latest additive technology combined with very special base oils.

This engine oil has the following properties:

- Very powerful detergency prevents deposits in the engine
- Very strong dispersion that prevents from precipitation and sludge formation
- Powerful activity against wear, corrosion and foaming
- High and stable viscosity index
- Low sulphated ash number
- Prolonged oil drain intervals

Application

This lubricant has been developed for heavy diesel engines under the toughest operating conditions and for use all the year round. This product is very suitable for Euro 4 and Euro 5 engines without particulate filters and for most engines with exhaust gas emission systems. This engine oil is also developed to (in keeping with the official standards) allow very long extended oil drain intervals and to prevent "bore-polishing".

Performance specifications

API CI-4
ACEA E4-12, E7-12

Approval

MB-Approval 228.5
MAN M 3377/M 3277

Meets the requirements of:

Volvo VDS-3
Renault VI RLD-2, RXD
Mack EO-N
MTU Type 3
Deutz IV-10
Mack EO-M Plus
Cummins CES 20078
Global DHD-1
Detroit Diesel 93K215

**MAX-PRO SPECIAL LSP 10W-40****PROFESSIONAL****Description**

Veedol Max-Pro Special LSP 10W-40 is a Heavy Duty engine oil formulated with unique low SAPS high performance additives in combination with special selected base oils. This multigrade engine oil fulfills the latest requirements of OEM's for use in high speed four stroke diesel engines of the latest models and has the following properties:

- Meets or exceeds the requirement of the nowadays low emission standards
- Excellent cold start properties
- Very good shear stability
- Improved oxidation resistance
- Very strong dispersion, therefore the deposits and sludge are restricted to a minimum
- Excellent properties against wear, corrosion and foaming

Application

This Heavy Duty engine oil is suitable for use in both on-road and off-highway applications. This engine oil contributes to low exhaust emission and particle levels which increases the lifetime of emission control systems. This product complies with and exceeds the requirements of API CJ-4. By meeting the requirements of OEM's in Europe and North America this product has a wide choice of application possibilities. This product can be applied in Euro 5 and Euro 6 engines with SCR exhaust gas system and in Euro 3 and Euro 4 engines when indicated by the manufacturer.

Performance specifications

API CJ-4/SM
ACEA E7-12, E9-12

Meets the requirements of:

MB 228.31
MAN M 3575
Cat ECF-2/ECF-3
Cummins CES 20081
Detroit Diesel 93K218
MTU Type 2.1
Deutz DQC III-10 LA
Volvo VDS-4
Renault VI RLD-3
Global DHD-1
JASO DH-2
Mack EO-O Premium Plus

**MAX-PRO SPECIAL LSP 15W-40****PROFESSIONAL****Description**

Veedol Max-Pro Special LSP 15W-40 is a Heavy Duty engine oil formulated with unique low SAPS high performance additives in combination with special selected base oils. This multigrade engine oil fulfills the latest requirements of OEM's for use in high speed four stroke diesel engines of the most recent models and has the following properties:

- Meets or exceeds the requirement of the current lowest emission standards
- Excellent cold start properties
- Very good shear stability
- Improved oxidation resistance
- Very strong dispersion, therefore the deposits and sludge are restricted to a minimum
- Excellent properties against wear, corrosion and foaming
- Lower oil consumption

Application

This Heavy Duty engine oil is suitable for use in both on-road and off-highway applications. This engine oil contributes to lower exhaust emission and particulate levels, improving the lifetime of emission control systems. This product complies with and exceeds the requirements of API CJ-4. By meeting the requirements of OEM's in Europe and North America this product has a wide choice of application possibilities. This product can be applied in Euro 5 engines with SCR exhaust gas system and in Euro 3 and Euro 4 engines when indicated by the manufacturer.

Performance specifications

API CJ-4/SM
ACEA E7-12, E9-12

Approval

Volvo VDS-4
Renault VI RLD-3
Mack EO-O Premium Plus

Meets the requirements of:

MB 228.31
MAN M 3575
Cat ECF-2/ECF-3
Cummins CES 20081
Detroit Diesel 93K218
JASO DH-2
Global DHD-1
MTU Type 2.1
Deutz DQC III-10 LA



PERFORMANCE

Meets key specifications at an excellent price-performance ratio, with high engine wear protection.

DIESEL STAR ULTRA 10W-40

Description

Veedol Diesel Star Ultra 10W-40 is a diesel engine oil, formulated with synthetic base oils and a well balanced choice of additives. This engine oil has the following properties:

- Very powerful detergency minimizing deposits in the hot zone of the engine
- Very strong dispersion that restricts deposits and cold sludge to a minimum
- Powerful protection against corrosion and foaming
- High and stable viscosity index
- Low sulphated ash number
- Powerful activity against wear resulting in strongly reduced wear of piston-rings and cylinder-liners

Application

This engine lubricant is applicable to gasoline and diesel engines (normal or turboaspirated) even under the toughest operating conditions and all year round use. This engine oil has a special additive system and may therefore be used, when fuels with relatively high sulphur contents are involved. This special quality engine oil is mainly developed to allow extended oil drain intervals and to prevent "bore polishing" (=cylinder wear) in diesel engines. This product is also suitable for application in Euro 4 and Euro 5 engines.

Performance specifications

API CI-4/SL
ACEA A3/B4-12, E7-12
Meets the requirements of:
MB 228.3/229.1
MAN M 3275
Volvo VDS-3
Renault VI RLD/RLD-2
MTU Type 2
Cummins CES 20076/20077/20078
Mack EO-N/EO-M Plus
Global DHD-1
Cat ECF-1-a/ECF-2
Deutz DQC III-10
ZF TE-ML 07C
Detroit Diesel 93K215

PERFORMANCE



DIESEL STAR EXTRA 15W-40

Description

Veedol Diesel Star Extra 15W-40 is a new generation gasoline and diesel engine oil, formulated with solvent refined base oils and a well-balanced choice of additives. This engine oil has the following properties:

- Very powerful detergency which guards deposits in the engine
- Very strong dispersion that guards against precipitation and sludge
- Powerful activity against corrosion and foaming
- High and stable viscosity index
- Low sulphated ash number
- Powerful activity against wear resulting in strongly reduced wear of piston-rings and cylinder-liners

Application

This engine lubricant is applicable to gasoline and diesel engines (normally or turbo-aspirated) under even the toughest operating conditions and all the year round. This engine oil has a special additive system and may therefore be used with fuels of a relatively high sulphur content. This special quality of engine oil is mainly developed to allow extended oil drain intervals and to prevent "bore polishing" (=cylinder-wear) in diesel engines. This product is suitable for application in Euro 4 and Euro 5 engines.

Performance specifications

API CI-4/SL
ACEA A3/B4-12, E7-12
Approval
MB-Approval 228.3
Volvo VDS-3
Renault VI RLD-2
Mack EO-N
Meets the requirements of:
Cat ECF-1-a/ECF-2
MAN M 3275-1
Cummins CES 20076/20077/20078
Deutz DQC III-10
Mack EO-M Plus
MTU Type 2
Renault VI RLD
Global DHD-1
MB 229.1
Detroit Diesel 93K215,
ZF TE-ML 07C

PERFORMANCE



DIESEL STAR PLUS 15W-40

Description

Veedol Diesel Star Plus 15W-40 is a universal multigrade engine oil produced with specially selected solvent refined base oils and additives.

This engine oil has the following properties:

- Very good detergency which prevents deposits in the engine
- Very good dispersion that reduces precipitation and sludge
- Powerful action against wear, corrosion and foaming
- Stable viscosity index
- Suitable for extended drain intervals
- Low ash contents

Application

This universal lubricating oil is suitable for gasoline or diesel engines, with or without super-charging. It is suitable for use in mixed fleets.

Performance specifications

API CH-4/SJ
ACEA A3/B3-98, E2-96
Approval
MB-Approval 228.1
Meets the requirements of:
MAN 271
Volvo VDS-2
Mack EO-M Plus
Cummins CES 20076
Cat ECF-1-a
MTU Type 1
Renault VI RD/RD-2
ZF TE ML 04C/07C

PERFORMANCE



DIESEL STAR SPECIAL 15W-40**PERFORMANCE****Description**

Veedol Diesel Star Special 15W-40 is based on the officially approved formulas, using the same high-quality additives, but with equivalent alternative base oils. It is therefore a equivalent product in terms of quality, with a performance level corresponding to the originally approved products. However no field test has been conducted to validate the performance and therefore it is claimed only to 'meet the requirements of' as stated.

Application

This universal lubricating oil is suitable for gasoline or diesel engines, with or without super-charging. This motor oil is suitable for application in mixed fleets.

Performance specifications

API CH-4/SJ
ACEA A3/B3-98, E2-96

Meets the requirements of:

MB 228.1
MAN 271
Volvo VDS-2
Mack EO-M Plus
Cummins CES
20071/20076
Cat ECF-1-a
MTU Type 1
ZF TE ML 04C/07C
Renault VI RD/RD-2

**DIESEL STAR FLEET 15W-40****PERFORMANCE****Description**

Veedol Diesel Star Fleet 15W-40 is based on the officially approved formulas, using the same high-quality additives, but with equivalent alternative base oils. It is therefore a equivalent product in terms of quality, with a performance level corresponding to the originally approved products. However no field test has been conducted to validate the performance and therefore it is claimed only to 'meet the requirements of' as stated.

Application

This engine lubricant is used for gasoline and diesel engines (normally or turboaspirated) even under the toughest operation conditions and all the year round. This engine oil has a special additive system and may therefore be used when fuels with relatively high sulphur contents are involved. This special quality of engine oil is mainly developed to allow extended oil drain intervals and to prevent "bore polishing" (=cylinder wear) in diesel engines. Also this product is suitable for application in Euro 4 and Euro 5 engines.

Performance specifications

API CI-4/SL
ACEA A3/B4-12, E7-12

Meets the requirements of:

MB 228.3/229.1
Volvo VDS-3, RVI RLD/RLD-2
Mack EO-N/EO-M Plus
Cummins CES
20076/20077/20078
MAN M 3275
Cat ECF-1-a/ECF-2
Deutz DQC III-10
MTU Type 2
Detroit Diesel 93K215
Global DHD-1
ZF TE-ML 07C

**DIESEL STAR FLEET HS 10W-40****PERFORMANCE****Description**

Veedol Diesel Star HS Fleet 10W-40 is based on the officially approved formulas, using the same high-quality additives, but with equivalent alternative base oils. It is therefore a equivalent product in terms of quality, with a performance level corresponding to the originally approved products. However no field test has been conducted to validate the performance and therefore it is claimed only to 'meet the requirements of' as stated.

Application

This engine lubricant is used for gasoline and diesel engines (normally- or turboaspirated) even under the toughest operation conditions and all the year round. This engine oil has a special additive system and may therefore be used when fuels with relatively high sulphur contents are involved. This special quality of engine oil is mainly developed to allow extended oil drain intervals and to prevent "bore polishing" (=cylinder-wear) in diesel engines. This product is suitable for application in Euro 4 and Euro 5 engines.

Performance specifications

API CI-4/SL
ACEA A3/B4-12, E7-12

Meets the requirements of:

MB 228.3/229.1
MAN M 3275, Volvo VDS-3
Renault VI RLD/RLD-2, MTU Type 2
Cummins CES
20076/20077/20078
Mack EO-N/EO-M Plus
Global DHD-1
Cat ECF-1-a/ECF-2
Deutz DQC III-10
Detroit Diesel 93K215
ZF TE-ML 07C



DIESEL STAR SUPERIOR MOTOR OIL 20W-50**PERFORMANCE****Description**

Veedol Diesel Star Superior Motor Oil 20W-50 is a multi-functional motor oil, produced with high quality solvent refined base oils and additives to obtain the following properties:

- Strong detergency and dispersion power
- Strong resistance against oxidation
- Strong protection against wear
- Good protection against corrosion and foaming
- High and stable viscosity index
- No negative effect on exhaust gas catalyst

Application

A multifunctional motor oil, recommended for use in petrol, LPG, and diesel engines, with or without turbo-charging, in passenger cars and delivery vans. This oil is with the specifications as stated.

Performance

specifications
API SG/CD
CCMC G4

**DIESEL STAR MOTOR OIL 20W-50****PERFORMANCE****Description**

Veedol Diesel Star Motor Oil 20W-50 is produced with high quality solvent refined base oils and a number of additives, to obtain the following properties

- High detergency and dispersion power
- Strong resistance against oxidation
- Effective in preventing wear, corrosion and foaming
- High and stable viscosity index

Application

Suitable lubricating oil for gasoline engines under light service conditions. Also suitable for diesel engines of passenger cars and for light delivery vans under light service conditions. Not applicable for turbo-charged diesel engines for which a minimum API CD level oil is required.

Performance

specifications
API SF/CC
CCMC G2/D1







GEAR OILS

PREMIUM

Meets the highest standard from the world's leading automobile manufacturers, with exceptional gearbox protection.

TRANSMISSION SYNTHETIC LS 75W-90

Description

Veedol Transmission Synthetic LS 75W-90 is a universal full-synthetic gear oil based on high quality synthetic base oils and special EP additives to obtain the following properties:

- Excellent activity against high temperature load
- Very strong activity against wear, corrosion and foaming
- Low pour point
- Very high EP-properties
- Excellent "Limited Slip" properties
- Widely usable

Application

This universal gear oil is developed for manual transmissions and hypoid differentials in passenger cars, delivery vans and heavy trucks. This so called "Total Drive Line" oil is a widely usable universal product. This product also contains excellent "Limited Slip" properties.

Performance specifications

API GL-4/GL-5/MT-1
Mil-L-2105D/Mil-PRF-2105E, SAE J2360

Meets the requirements of:

MAN 3343 Typ S
Scania STO 1:0
Volvo 97310
ZF TE-ML 02B/05C/07A/
12B/16F/17B/19C/21C

PREMIUM



TRANSMISSION SYNTHETIC LD 75W-90**PREMIUM****Description**

Veedol Transmission Synthetic LD 75W-90 is an universal full-synthetic gear oil based on high quality synthetic base oils and special EP additives to obtain the following properties:

- Excellent protection against high temperature loads
- Very strong activity against wear, corrosion and foaming
- Low pour point
- Very special extreme pressure properties
- Widely usable

Application

This universal gear oil is developed for manual transmissions and hypoid differentials in passenger cars, delivery vans and heavy trucks. This so called "Total Drive Line" oil is widely usable as a universal product.

Performance specifications

API GL-3/GL-4/GL-5/MT-1
Mil-L-2105D/Mil-PRF-2105E,
SAE J2360

Approval

ZF TE-ML 02B/
05B/07A/12L/12N/16F/
17B/19C/21B

Meets the requirements of:

MB 235.8
MAN 341 Typ Z2/E3, 342
Typ M3
MAN 3343 Typ S
DAF
Scania STO 1:0
Volvo 97312
Ford M2C200-B/C
Mack GO-J
Iveco
Eaton Europe
ArvinMeritor 076-N
ZF TE-ML 08

**PROFESSIONAL**

*Meets the latest international specifications,
with optimal gearbox protection.*

GEAR OIL SPECIAL HD 75W-90**PROFESSIONAL****Description**

Veedol Gear Oil Special HD 75W-90 is a semi-synthetic lubricating oil for mechanical transmissions, formulated with high quality solvent refined and synthetic base oils and special EP additives to obtain the following properties:

- Excellent resistance against oxidation
- Very high activity against wear, corrosion and foam
- Low pour point
- Very good EP-properties
- Good clutch-switch performance at low temperatures
- Fuel economy

Application

This gear oil is used in gearboxes under very heavy duty conditions and should be used in gearboxes where mineral EP gear oils give switch problems.

Performance specifications

API GL-4/5
Mil-L-2105

Meets the requirements of:
VW 501.50

**GEAR OIL SPECIAL MP 75W-90****PROFESSIONAL****Description**

Veedol Gear Oil Special MP 75W-90 is a semi-synthetic lubricating oil for mechanical transmissions, formulated with high quality solvent refined synthetic base oils and special EP-additives to obtain the following properties:

- Good resistance against oxidation
- Good rust preventing, anti-corrosion and foam inhibiting properties
- Low pourpoint
- Good Extreme Pressure (EP-) properties
- Good clutch-switch performance at low temperatures
- Fuel economy

Application

This multipurpose gear oil should be used in hypoid differentials, gearboxes and other transmissions for which an EP transmission oil is advised and which give switch problems.

Performance specifications

API GL-4/MT-1



GEAR OIL LD 75W-80**PROFESSIONAL****Description**

Veedol Gear Oil LD 75W-80 is a synthetic lubricating oil for mechanical transmissions, formulated with high quality synthetic base oils and special EP additives to obtain the following properties:

- Excellent thermal stability
- Very high activity against wear, corrosion and foam
- Low pour point
- Very high quality EP-properties
- Good clutch-switch performance at low temperatures
- Long durability
- Fuel economy

Application

This gear oil is specially developed for gearboxes under very heavy duty conditions, together with high temperatures. This oil can also be used for extended drain intervals.

Performance**specifications**

API GL-4

Mil-L-2105

Approval

MAN 341 Typ Z4/E3

ZF TE-ML 01L/02L/16K

Meets the requirements of:

DAF

Volvo 97305

Eaton Europe (extended drain)

Iveco

Renault

**GEAR OIL RPC 75W-80****PROFESSIONAL****Description**

Veedol Gear Oil RPC 75W-80 is a universal, mineral multi-grade lubricating oil for mechanical transmissions, with EP properties. Due to the addition of high quality solvent refined base oils and special additives, this gear oil has the following properties:

- Very high activity against wear, corrosion and foam
- Excellent resistance against oxidation
- Low viscosity at low temperatures
- Very good EP-properties
- High and stable viscosity index

Application

This special transmission oil is used in gearboxes where a good clutch-switch performance is necessary. This gear oil can also be used where the manufacturer of the gearbox prescribes a gear oil with a low viscosity.

Performance**specifications**

API GL-4*+*

Mil-L-2105

Meets the

requirements of:
Citroën

**TRANSMISSION SPECIAL LD 80W-90****PROFESSIONAL****Description**

Veedol Transmission Special LD 80W-90 gear oil is a universal semi-synthetic gear oil based on high quality solvent refined and synthetic base oils and special EP additives to obtain the following properties:

- Excellent activity against high temperature loads
- Very strong activity against wear, corrosion and foam
- Low pour point
- Very special EP-properties
- Widely usable

Application

This is a universal gear oil, special developed for manual transmissions and hypoid differentials in passenger cars, delivery vans and heavy trucks. This "Total Drive Line" oil is a universal product and very widely usable.

Performance specifications

API GL-3/GL-4/GL-5/MT-1

Mil-L-2105A/B/C/D/E,

Mil-PRF-2105E

Meets the

requirements of:
DAF

MAN 341 Typ Z2/E2

Scania STO 1:0

ZF TE-ML

02B/05A/07A/08/12E

ZF TE-ML 16B/16C/16D/

17B/19B/21A

MB 235.0

Mack GO-J

Iveco

**TRANSMISSION LS 80W-90****PROFESSIONAL****Description**

Veedol Transmission LS 80W-90 is a universal gear oil based on high quality solvent refined base oils and special EP additives to obtain the following properties:

- Excellent activity against high temperature loads
- Very strong activity against wear, corrosion and foaming
- Low pour point
- Very special EP-properties
- Excellent "Limited Slip" properties
- Widely usable

Application

This universal gear oil is developed for manual transmissions and hypoid differentials in passenger cars, delivery vans and heavy trucks. This so called "Total Drive Line" oil is a universal product which is widely usable. This product also contains excellent "Limited Slip" properties.

Performance**specifications**

API GL-3/GL-4/GL-5/

MT-1

Mil-L-2105A/B/C/D/E,

Mil-PRF-2105E

Meets the

requirements of:

MAN 341 Typ Z2/E2,

MAN 342 Typ M2

Scania STO 1:0

ZF TE-ML

05C/07A/08/12C/16E



HYPOID GEAR OIL LS 80W-90**PROFESSIONAL****Description**

Veedol Hypoid Gear Oil LS 80W-90 is a mineral lubricating oil for mechanical transmissions, formulated with high quality solvent refined base oils and special EP-additives to obtain the following properties:

- Excellent resistance against oxidation
- Very high activity against wear, corrosion and foaming
- Low pour point
- Very good EP-properties
- Excellent "Limited Slip" properties

Application

This gear oil has especially been developed for the perfect lubrication of so-called "Limited Slip" and "Auto-Locking" hypoid transmissions.

Performance**specifications**

API GL-5
Mil-L-2105D
ZF TE-ML 05C
(suitable for use)

**HYPOID GEAR OIL LS 85W-140****PROFESSIONAL****Description**

Veedol Hypoid Gear Oil LS 85W-140 is a mineral lubricating oil for mechanical transmissions, formulated with high quality solvent refined base oils and special EP additives to obtain the following properties:

- Excellent resistance against oxidation
- Very high activity against wear, corrosion and foaming
- Low pour point
- Very good EP-properties

Application

This gear oil is used in hypoid differentials under very heavy duty conditions and should be used in all transmissions that require EP transmission oils.

Performance**specifications**

API GL-5
Mil-L-2105D

Meets the requirements of:
ZF TE-ML 07A/21A

**PERFORMANCE**

Meets key specifications at an excellent price-performance ratio, with high gearbox wear protection.

EP GEAR OIL 80W**PERFORMANCE****Description**

Veedol EP GEAR OIL 80W is a mineral lubricating oil for mechanical transmissions, formulated with high quality solvent refined base oils and special EP additives to obtain the following properties:

- Good resistance against oxidation
- Good rust preventing, anti-corrosion and foam inhibition
- Low pourpoint
- Good Extreme Pressure (EP-) properties

Application

This gear oil should be used in hypoid differentials, gearboxes and other transmissions, for which an EP transmission oil is advised.

Performance**specifications**

API GL-4
Mil-L-2105

Meets the requirements of:
MB 235.1
ZF TE-ML 17A
MAN 341 Typ Z2/E1

**EP GEAR OIL 85W-90****PERFORMANCE****Description**

Veedol EP Gear Oil 85W-90 is a mineral lubricating oil for mechanical transmissions, formulated with high-quality solvent refined base oils and special EP additives to obtain the following properties:

- Good resistance against oxidation
- Good rust-preventing, anti-corrosion and foam inhibiting properties
- Good Extreme Pressure (EP) properties

Application

This multi purpose gear oil should be used in hypoid differentials, gearboxes and other transmissions, for which an EP transmission oil is advised.

Performance**specifications**

API GL-4
Mil-L-2105

Meets the requirements of:
ZF TE-ML 16A/17A/19A
MB 235.1



EP GEAR OIL 80W-90**PERFORMANCE****Description**

Veedol Ep Gear Oil 80W-90 is a mineral lubricating oil for mechanical transmissions, formulated with high quality solvent refined base oils and special EP additives to obtain the following properties:

- Good resistance against oxidation
- Good rust preventing, corrosion and foam inhibition
- Low pour point
- Good Extreme Pressure (EP-) properties

Application

This multi purpose gear oil should be used in hypoid differentials, gearboxes and other transmissions for which an EP transmission oil is advised.

Performance specifications

API GL-4
Mil-L-2105

Meets the requirements of:
ZF TE-ML 16A/17A/19A

**HYPOID GEAR OIL 80W-90****PERFORMANCE****Description**

Veedol Hypoid Gear Oil 80W-90 is a mineral lubricating oil for mechanical transmissions, formulated with high quality solvent refined base oils and special EP-additives to obtain the following properties:

- Excellent resistance against oxidation
- Very high activity against wear, corrosion and foaming
- Low pour point
- Very good EP-properties

Application

This gear oil is used in hypoid differentials under very heavy duty conditions and should be used in all transmissions that require EP transmission oils.

Performance specifications

API GL-5
Mil-L-2105D

Meets the requirements of:
MAN 342 Typ M1
ZF TE-ML 16B/17B/
19B/21A
MB 235.0

**HYPOID GEAR OIL 85W-90****PERFORMANCE****Description**

Veedol Hypoid Gear Oil 85W-90 is a mineral lubricating oil for mechanical transmissions, formulated with high quality solvent refined base oils and special EP-additives to obtain the following properties:

- Excellent resistance against oxidation
- Very high activity against wear, corrosion and foaming
- Low pour point
- Very good EP-properties

Application

This gear oil is used in hypoid differentials under very heavy duty conditions and should be used in all transmissions that require EP transmission oils.

Performance specifications

API GL-5
Mil-L-2105D
MAN 342 Typ M1

Meets the requirements of:
ZF TE-ML 07A/16B/17B/
19B/21A
MB 235.0

**HYPOID GEAR OIL 85W-140****PERFORMANCE****Description**

Veedol Hypoid Gear Oil 85W-140 is a mineral lubricating oil for mechanical transmissions, formulated with high quality solvent refined base oils and special EP additives to obtain the following properties:

- Excellent resistance against oxidation
- Very high activity against wear, corrosion and foaming
- Low pour point
- Very good EP-properties

Application

This gear oil is used in hypoid differentials under very heavy duty conditions and should be used in all transmissions that require EP transmission oils.

Performance specifications

API GL-5
Mil-L-2105D

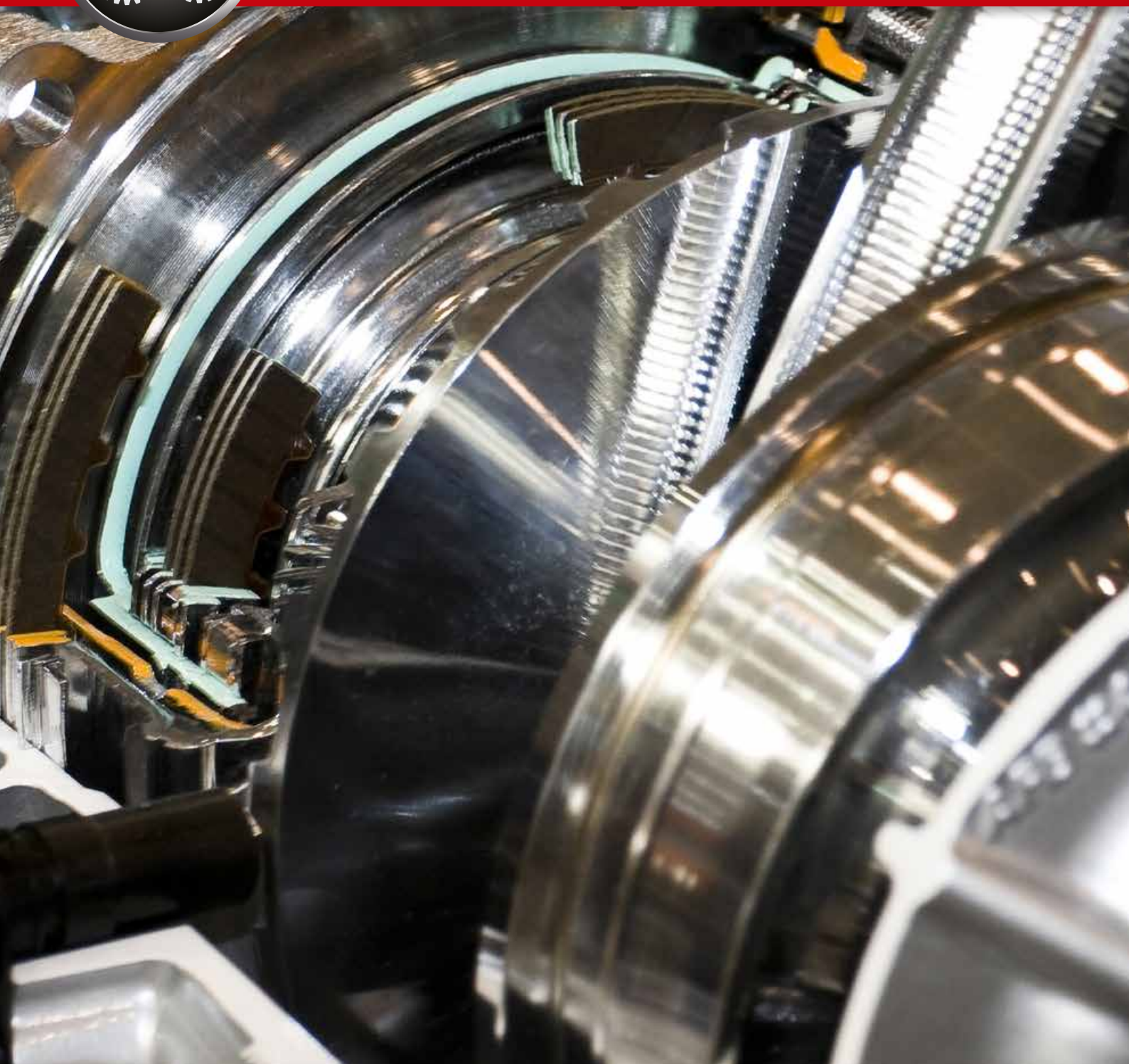
Meets the requirements of:
ZF TE-ML 07A/21A







AUTOMATIC TRANSMISSION FLUIDS



PREMIUM

Meets the highest standard from the world's leading automobile manufacturers.

ATF III-AP**PREMIUM****Description**

Veedol ATF III-AP is a synthetic automatic transmission fluid, based on synthetic base oils and formulated with special friction modifiers to obtain the following properties:

- Very high and stable viscosity index
- Very low pour point
- Excellent stability against oxidation
- Specific friction properties and consequently low noise and smooth switching
- Compatible with synthetic seals
- Quick oil provision at cold start conditions
- Very strong protection against wear, corrosion and foaming

Application

This fluid may be used for the automatic transmissions, of a wide range of cars including Japanese cars with the specifications mentioned below. It is recommended to follow the instructions of the manufacturer.

Performance specifications**Meets the requirements of:**

MB 236.1/236.6/236.7/
236.8/236.9/236.10
BMW 7045E/8072B
GM Dexron IID/IIIE/IIIG/IIIH,
TASA
Allison C4/TES-228
Toyota ATF T-III/T-IV/D-II/WS
Nissan Matic Fluid C/D/J/K
Honda ATF-Z1 (except in
CVT's)
JASO M 315-2013 Type 1A
Chrysler ATF +3/ATF +4

Mazda ATF M-V
Hyundai/Kia SP-II/SP-III
Suzuki ATF 3314
Subaru ATF/ATF 5AT/ATF
HP/Dexron II
Isuzu Besco ATF II/III
Ford Mercon/M2C
138CJ/166H/922A1/924A
Aisin Warner JWS 3309/3324
VAG G-055-025
Volvo 1161540
ZF TE-ML 09/11A/11B

**ATF 8-HP****PREMIUM****Description**

Veedol ATF 8-HP is a very high grade automatic transmission fluid based on special selected synthetic base oils, with a high viscosity index and a number of selected additives. Green coloured Veedol ATF 8 HP gives the following benefits:

- Excellent lubrication
- Very good resistance to oxidation with a very high thermal stability
- Very stable friction characteristics that enable longer oil-replacement intervals
- Excellent resistance to foaming
- Excellent protection against wear
- Very high and stable viscosity index

Application

This premium synthetic product is specially formulated for the lubrication of ZF 8HP transmissions. This oil contributes greatly to realizing fuel saving and can be used amongst others in the ZF 8HP transmissions 8HP45, 8HP55, 8HP70 and 8HP90. It can also be used in certain ZF 6HP transmissions, which are used in various VAG models.

Meets the**requirements of:**

VAG G-060-162,
BMW 8322 2152426,
Jaguar 02JDE 26444,
Land Rover LR023288,
Chrysler 68157995AA,
Fiat 9.55550-AV5

**ATF CVT FLUID****PREMIUM****Description**

Veedol ATF CVT FLUID is designed for modern continuously variable transmissions. It is based on synthetic base oils and formulated with special additives to give the following benefits:

- Very high and stable viscosity index
- Very low pour point
- Excellent stability against oxidation
- High resistance to wear, corrosion and foam
- Ideal friction performance, for both CVT belt and CVT chain
- Seal compatibility for better leakage prevention
- Superior anti-shudder performance
- Extended service interval in combination with a longer transmission life

Application

Veedol ATF CVT Fluid is a premium synthetic product, designed for application in continuously variable automatic gear boxes.

Meets the**requirements of:**

Toyota CVTF TC/FE,
Nissan NS-1/NS-2/NS-3,
Honda HMMF(without starting clutch)/HCF2),
Mitsubishi SP-III (only in
CVT)/CVTF-J1/J4/J4+,
Subaru ECVT/ICVT/ICVT FG/
Lineartronic High Torque,
Daihatsu Amix CVTF DC/
DFE,

Suzuki CVTF TC/3320/NS-2/
Green 1/Green 2,
Mazda JWS 3320, GM DEX-
CVT, Mini Cooper EZL799,
Hyundai/Kia CVT-J1,
MB 236.20, Ford WSS-
M2C928-A,
VW G-052-180/G-052-516,
Chrysler/Dodge/Jeep NS-2/
Mopar CVTF+4



ATF VI**Description**

Veedol ATF VI is a very high grade automatic transmission fluid based on selected synthetic base oils with a high viscosity index together with a number of selected additives. This red coloured ATF gives the following benefits:

- Very strong dispersion restricting sludge to a minimum
- Very low pour point
- High resistance to oxidation and thermal stress
- High resistance to wear, corrosion and foam
- Targeted friction properties
- Perfect compatibility with seals and non-ferro metals
- Longer life time of the fluid
- Exceeds the properties of Dexron III and II fluids

Application

This fluid may be used for automatic gear boxes, power steering units, torque converters and other equipment, for which an ATF exceeding Dexron III and Dexron II is required. This product cannot be used in DCTs and CVTs or when an oil with the Ford Type F/G specification is recommended.

Performance specifications**Meets the requirements of:**

Dexron VI; Mercon LV
MB 236.1/236.5/236.7/
236.8/236.9/236.41;
VAG G-055-025/ G-052-
162; Aisin Warner JWS
3309/3324(WS, Allison TES
228 C3/C4; BMW ETL7045
/ 7045E / 8072B / LA2634 /
Mini Cooper T-IV; Chrysler
Dodge Mopar AS68RC (Type
IV); Chrysler Dodge Mopar
ATF+/-2/+3/+4, Fiat Type IV;
Ford Mercon/WSS-M2C138-
CJ/166-H/922-A1/ 924-A;
GM Dexron IID/IIIE/IIIG/IIIH/
TASA; Honda Acura DW-1/
ATF-Z1 (except in CVT);
Hyundai/Kia SP-II/SP-III/SP-
IV/SP-IV M/SP-IV RR

Hyundai/Kia JWS 3314 /
9683; Isuzu Besco ATF II /
III, Nissan Matic C/D/J/K/S,
Jaguar ATF 3403 M115/JLM
20238; JASO M315-2013
1A/1A-LV/2A, Mazda ATF
DII/M-III/M-V/FZ/F-1/S-
1/N-1/3317; Mitsubishi SK/
SP-II / SP-III / SP-IV / AW /
J2 / J3 /ATF PA; Opel, Por-
sche ATF 3403-M115/Type
IV; Subaru ATF/ ATF 5AT/
ATF HP; Suzuki ATF 3309 /
3314 / 3317 / 2326 / 2384K;
Toyota D-II / D-III / T-II I/ T-IV
/ WS, Voith 55.6335, Volvo
1161540/97340; ZF 5HP
18FL / 19FL / 24A / 30 / 4
HP 20, ZF TE-ML 11A/11B

PREMIUM**PROFESSIONAL**

Meets the latest international specifications.

ATF III-G**Description**

Veedol ATF III-G is a very high grade automatic transmission fluid formulated with solvent refined base oils and a number of select additives to obtain the following properties:

- Very high and stable viscosity index
- Very low pour point
- Very good stability against oxidation
- Positive activity against wear, corrosion and foaming
- Specific friction properties
- Perfect compatibility with seals and non-ferro metals
- Red coloured

Application

This fluid is used for automatic gear boxes, power steering units, torque converters and other equipment for which an ATF Dexron III-F, III-G and/or III-H fluid is required.

Performance specifications

MB-Approval 236.1

Approval

MAN 339 Typ Z1/V1
ZF TE-ML 04D/14A

Meets the requirements of:

GM Dexron IIIG
(performance level IIIG)
Allison C4
Ford Mercon
Cat TO-2
ZF TE-ML 02F/03D/
09/11B/17C
Voith 55.6335
Volvo 97341

PROFESSIONAL**ATF M-14****Description**

Veedol ATF M-14 is a very high grade automatic transmission fluid formulated with a number of special base oils and additives. This red coloured ATF gives the following benefits:

- High shifting comfort
- Very low pour point
- Very good stability against oxidation
- High resistance to wear, corrosion and foam
- Constant friction stability over lifetime ensuring perfect clutch operation
- Perfect compatibility with seals and non-ferro metals
- Strong resistance to 'shudder vibration'

Application

The high grade automotive transmission fluid is recommended for use in the automatic transmissions of cars from a wide range of manufacturers. With optimised viscometrics, it contributes significantly to fuel efficiency. With anti shudder properties, designed for smooth shifting.

Performance specifications**Meets the requirements of:**

Allison C4, Chrysler
ATF+3, Dexron II / IID / IIE
/ IIIG / IIIG, Ford WSS-
M2C922-A, Hyundai/
Kia SP-II/SP-III/SP-IV,
Isuzu ATF II/III, Jaguar JLM
20238/20292/21044, JASO
M315 Type 1A, Honda
ATF-Z1 (except in CVT),
Mazda M-III/Type T-IV, JWS
3309, AW-1, MB 236.10 /
236.11 / 236.12 / 236.14;

MB 236.3 / 236.5 / 236.6
/ 236.7 / 236.8 / 236.9 /
236.91; Mitsubishi SP-II/
SP-III/ ATF J-2; Nissan
Matic D/J/K/S/W; Subaru
ATF/ATF HP, Suzuki ATF
3314/3317; Toyota Type
DII / T / T-III / T-IV; VAG
G-055-025 / G-052-162 /
G-052-990 / G-052-533;
Volvo 1161540, ZF TE-ML
11A/11B.

PROFESSIONAL

PERFORMANCE*Meets key specifications at an excellent price-performance ratio.***ATF II-D****Description**

Veedol ATF II-D is a very high grade automatic transmission fluid formulated with solvent refined base oils and a number of select additives to obtain the following properties:

- High and stable viscosity index
- Very low pour point
- Very good stability against oxidation
- Positive activity against wear, corrosion and foaming
- Specific friction properties
- Perfect compatibility with seals and non-ferro metals
- Red coloured

Application

This fluid is used for automatic gearboxes, power steering units, torque converters and other equipment for which an ATF Dexron II-D fluid is required.

Performance**specifications**

MB-Approval 236.7

MAN 339 Typ Z1

Meets the

requirements of:

GM Dexron IID

Allison C4

Ford M2C138-CJ/166-H

Ford SQM-2C9010-A

ZF TE-ML 09/11A/14A

Cat TO-2

Voith 55.6335 (G607)

Renk

MAN 339 Typ V1

PERFORMANCE



GREASES

GREASE EP BLUE

Description

Veedol Grease EP Blue is a lithium complex thickened lubricating grease based on mineral oil. The grease contains antioxidants, corrosion inhibitors and EP/AW additives. The lithium complex soap makes the product suitable for applications within a very wide temperature range and especially applications at elevated temperatures. The complex soap structure also gives the product a high degree of mechanical stability. This enhances the performance in vibrating housings and prolongs re-lubrications intervals.

Benefits include:

- very good mechanical stability

Application

Veedol Grease EP Blue is a modern high performance product setting a new standard for a truly universal grease. It is suitable for both industrial and automotive applications. The product's allround properties make it the primary choice for various types of bearing applications including heavy load conditions.

Performance specifications

DIN 51502
ISO 6743
KP2N-30
ISO-L-XCDEB2



GREASE EPS**Description**

Veedol Grease EPS is a lithium thickened lubricating grease based on mineral oil. The grease contains antioxidants, corrosion inhibitors and EP/AW additives. This product is a state-of-the-art multipurpose EP grease which can be used in various applications within given temperature limits. This lubricating grease offers good mechanical stability and load carrying capacity, making it suitable for heavily loaded bearings.

Benefits include:

- Good extreme pressure properties
- Wide range of applications
- Good corrosion protection

Application

Veedol Grease EPS is a high quality multipurpose grease that can be used in both industrial and automotive applications. The grease is suitable for a wide range of plain and rolling bearings.

Performance specifications

ISO 12924
DIN 51502
L-XC(F)CHB2
KP2K-30

**GREASE EP****Description**

Veedol Grease EP is a lithium-calcium thickened lubricating grease based on mineral oil. The grease contains antioxidants, corrosion inhibitors and EP/AW additives. The thickener, together with the highly viscous base oil, makes the product suitable for the lubrication of slow moving and heavily loaded bearings.

Benefits include:

- Excellent water resistance
- Excellent load carrying capacity
- Endures high shock loads

Application

Veedol Grease EP is suitable for heavily loaded industrial applications where water wash is a problem. This product is also suitable for heavy-duty vehicles working outdoors in wet and dirty conditions.

Performance specifications

DIN 51502
ISO 6743
KP2K-20
ISO-L-XBCHB2

**GREASE EP-00****Description**

Veedol Grease EP-00 is a lithium thickened lubricating grease based on mineral oil. The grease contains antioxidants, corrosion inhibitors and EP/AW additives. The product is a multipurpose grease, which can be used in various applications within given temperature limits. This lubricating grease offers good load carrying capacity and low temperature performance.

Benefits include:

- Good load carrying capacity
- Easy to pump at low temperatures

Application

Veedol Grease EP-00 is a high quality grease that can be used in both industrial and automotive applications. The consistency and especially the base oil viscosity of the product make it suitable for use in Willy Vogel centralised lubrication systems but also for lubrication of cotton picking machines and lightly loaded closed gears. For gearbox applications a grease with a higher base oil viscosity is recommended instead.

Performance specifications

DIN 51825
ISO 6743-9
KP00 G-50
ISO-L-XEBBB00

**GREASE MP****Description**

Veedol Grease MP is a lithium thickened lubricating grease based on mineral oil. This grease contains antioxidants, corrosion inhibitors and AW additives. This product is a general multipurpose grease which can be used in various applications within given temperature limits. This lubricating grease offers good mechanical stability and corrosion protection, making it suitable for bearing lubrication even in wet environments.

Benefits include:

- Good mechanical stability
- Good corrosion protection
- Wide range of applications

Application

Veedol Grease MP is a high quality multipurpose grease that can be used in both industrial and automotive applications. This grease is suitable for a wide range of plain and rolling bearings.

Performance specifications

DIN 51502
ISO 6743
K2K-30
ISO-L-XCCEA2





HYDRAULIC OILS



HYDRAULIC OIL 32

Description

Veedol Hydraulic Oil 32 is a high grade EP hydraulic oil based on selected, solvent refined base oils with special, with special additives to obtain the following properties:

- Excellent protection against wear
- Very good protection against rust and corrosion
- Excellent stability against oxidation
- Very good demulsification properties
- Very good deaerating and foam-suppressing properties
- Good compatibility with seals and gaskets made from synthetic material
- Low pour point

Application

This type of hydraulic fluid may be used for heavy duty hydraulic equipment, as well as for light duty gear boxes and bearings. This hydraulic oil may also be used for lubrication systems, general lubrication and vacuum pumps (with the exclusion of turbines). This fluid is **NOT** compatible in systems, containing parts or equipment with a silver lining.

Meets the

requirements of:

DIN 51524-2 HLP
AFNOR NF E 48-603 HM
ISO 11158 HM
ASTM D 6158 HM
Denison HF-0/
HF-1/HF-2
Cincinnati Machine
P-68
Eaton Brochure
694 for 35VQ25A
GM LS-2



HYDRAULIC OIL 46**Description**

Veedol Hydraulic Oil 46 is a high grade EP hydraulic oil based on selected solvent refined base oils with special additives to obtain the following properties:

- Excellent protection against wear
- Very good protection against rust and corrosion
- Excellent stability against oxidation
- Very good demulsification properties
- Very good deaerating and foam-suppressing properties
- Good compatibility with seals and gaskets made from synthetic material
- Low pour point

Application

This type of hydraulic fluid may be used for heavy duty hydraulic equipment, as well as for light duty gear boxes and bearings. This hydraulic oil may also be used for lubrication systems, general lubrication and vacuum pumps (with the exclusion of turbines).

This fluid is **NOT** compatible in systems containing parts or equipment with a silver lining.

Meets the**requirements of:**

DIN 51524-2 HLP
AFNOR NF E 48-603 HM
ISO 11158 HM
ASTM D 6158 HM
Denison HF-0/
HF-1/HF-2
Cincinnati Machine
P-70
Eaton Brochure
694 for 35VQ25A
GM LS-2

**HYDRAULIC OIL 68****Description**

Veedol Hydraulic Oil 68 is a high grade EP hydraulic oil based on selected solvent refined base oils and fortified with special additives to obtain the following properties:

- Excellent protection against wear
- Very good protection against rust and corrosion
- Excellent stability against oxidation
- Very good demulsification properties
- Very good deaerating and foam suppressing properties
- Good compatibility with seals and gaskets made from synthetic material
- Low pour point

Application

This type of hydraulic fluid may be used for heavy duty hydraulic equipment, as well as for light duty gearboxes and bearings. This hydraulic oil may also be used for lubrication systems, general lubrication and vacuum pumps (with the exclusion of turbines).

This fluid is **NOT** compatible in systems containing parts or equipment with a silver lining.

Meets the**requirements of:**

DIN 51524-2 HLP
AFNOR NF E 48-603 HM
ISO 11158 HM
ASTM D 6158 HM
Denison HF-0/
HF-1/HF-2
Cincinnati Machine
P-69
Eaton Brochure
694 for 35VQ25A
GM LS-2

**HYDRAULIC OIL D 46****Description**

Veedol Hydraulic Oil D 46 is a high grade hydraulic oil based on carefully selected solvent refined base oils, with good detergency. It has special additives to obtain the following properties:

- Very good wear preventing properties
- Very good resistance to corrosion
- Excellent stability against oxidation
- Very good detergency and dispersion
- Very good deaerating and foam suppressing properties
- Good compatibility with seals and gaskets made from synthetic material
- Ability to absorb small amounts of water
- Low pour point

Application

This detergent hydraulic oil is of tailor-made quality for heavy duty hydraulic systems as well as for gear drives and bearings under light service conditions. It can also be used as circulating lubricant (not in turbines) and for the general lubrication of machinery.

This fluid is **NOT** compatible in systems, containing parts or equipment with a silver lining.

Meets the**requirements of:**

DIN 51524-2 HLPD

**HYDRAULIC OIL HV 46****Description**

Veedol Hydraulic Oil HV 46 is a high quality EP multigrade hydraulic oil based on carefully selected solvent refined base oils with special additives to obtain the following properties:

- High and stable viscosity index
- Excellent wear-preventing properties
- Very good activity against corrosion
- Excellent stability against oxidation
- Very good demulsification properties
- Very good deaerating and foam suppressing properties
- Good compatibility with seals and gaskets made from synthetic material
- Low pour point

Application

This hydraulic fluid is tailor-made for heavy duty hydraulic systems of earth-moving equipment and for permanent installations that have to work under high pressures over a wide temperature range.

This fluid is **NOT** compatible in systems containing parts or equipment with a silver lining.

Meets the**requirements of:**

DIN 51524-3 HVLP
AFNOR NF E 48-603 HV
ISO 11158 HV
ASTM D 6158 HV
Denison HF-0/
HF-1/HF-2
Cincinnati Machine
P-70
Eaton Brochure
694 for 35VQ25A
GM LS-2





BRAKE FLUIDS

BRAKE FLUID DOT 4

Description

Veedol Brakw Fluid DOT 4 is a synthetic brake fluid with the following properties:

- Good resistance against ageing
- Very good compatibility with seals and gaskets
- Minimal corrosion tendency
- High wet boiling point
- Optimal viscosity at low temperatures

Application

Applicable for all hydraulic brake systems with drum or disk brakes requiring a synthetic brake fluid and where a brake fluid of the type DOT 4 is prescribed.

Performance specifications

FMVSS 116 DOT 4
SAE J1703, ISO 4925



COOLANTS



COOLANT

Description

Veedol Coolant is an automotive coolant based on monoethyleneglycol and demineralized water with special additives to obtain the following properties:

- Perfect protection of all types of metals that are used in engines and cooling systems
- Neutral behaviour towards seals, gaskets and hoses
- Very good resistance to formation of foam

Application

This coolant may be used all the year round in the cooling systems of gasoline and diesel engines. This coolant is ready for use and protects against freezing down to -26 °C.

Meets the requirements of:
BS 6580:2010



COOLANT XC

Description

Veedol Coolant XC is a "long life" OAT (Organic Additives Technology) automotive coolant based on monoethyleneglycol and demineralized water with special additives to obtain the following properties:

- Perfect protection of all types of metals that are used in engines and cooling systems
- Neutral behaviour towards seals, gaskets and hoses
- Very good resistance against formation of foam
- Nitrite, amine, phosphate and silicate free

Application

This coolant may be used all the year round in the cooling systems of gasoline and diesel engines. This coolant is ready for use and protects against freezing down to -38°C.

Meets the requirements of:

Ford WSS-M97B44-D
Volkswagen VW TL 774-F ("G12 Plus")
MB 326.3
MAN 324 Typ SNF
Detroit Diesel
DAF 74002
GM 6277M
Leyland Trucks LTS 22 AF 10
Renault 41-01-001/-S Type D
Scania TB 1451
Cummins 85T8-2
Chrysler MS 9176
Volvo VCS
Mack 014GS 17004
John Deere H 24 B1 & C1





MOTORCYCLE OILS



RACING PLUS 2T**Description**

Veedol Racing Plus 2T is a two stroke engine oil formulated with carefully selected high quality mineral and synthetic base oils and special two stroke additives to achieve the following properties:

- Perfect lubrication of all motor parts
- Active detergency, preventing deposits in the combustion zone and in the scavenger ports
- Prevents spark plugs from fouling, thereby securing an optimal output of the engine
- Very effective protection against wear and corrosion
- Very limited formation of smoke
- Self-mixing

Application

This two stroke engine oil is recommended for the lubrication of high speed aircooled two stroke engines under heavy duty loads. It may also be used for water cooled two stroke engines (with radiator type cooling systems).

Performance specifications

API TC
JASO FD
ISO-L-EGD
Global GD
Husqvarna 272
2-Stroke DFI

**RACING PLUS 4T 10W-40****Description**

Veedol Racing Plus 4T 10W-40 is a new generation semi-synthetic engine oil for four-stroke motorcycles formulated with high quality mineral and synthetic base oils combined with specially developed and balanced additives to achieve the following properties:

- High and stable viscosity index
- Good cold start properties
- Optimal friction characteristics
- Very strong protection against wear, corrosion and foaming
- Very good detergency and dispersion

Application

This oil is specially developed for the lubrication of four-stroke motorcycles, and actively prevents sliding, sticking and/or rough changing of the clutch-plates. This oil is developed and tested in co-operation with the most important motorcycle manufacturers and its performance has been well established in the field.

Performance specifications

API SL
Meets the requirements of:
JASO MA2
JASO MA

**RACING PLUS 4T 20W-50****Description**

Veedol Racing Plus 4T 20W-50 is a new generation semi-synthetic engine oil for four-stroke motorcycles formulated with high quality mineral and synthetic base oils combined with specially developed and balanced additives to achieve the following properties:

- High and stable viscosity index
- Optimal friction characteristics
- Very strong protection against wear, corrosion and foaming
- Very good detergency and dispersion

Application

This oil is specially developed for the lubrication of four-stroke motorcycles, and actively prevents sliding, sticking and/or rough changing of the clutch-plates. This oil is developed and tested in co-operation with the most important motorcycle manufacturers and its performance has been well established in the field.

Performance specifications

API SL
Meets the requirements of:
JASO MA2
JASO MA



GENERAL TECHNICAL SPECIFICATIONS

LUBRICANTS

Lubricants are composed of a **Base Oil** and an **Additive Package**.

Base Oils.

Base Oil is made out of crude or used oil (re-refined). The choice of the Base Oil defines the type of lubricant, mineral, non conventional (semi-synthetic) or synthetic. The base oils are classified in 5 groups I, II, III, IV and V.

The group I base oils are more and more replaced by the Group II and III base oils. The group IV base oils are used for the production of synthetic lubricant. Group V is for all base oils not included in Group I to IV.

Group I to III base oil can also be made of re-refined oils and new are the GTL (Gas To Liquid) base oils.

Additives.

Additives give the lubricant the required properties and quality. Additive packages for petrol and Diesel engines are very different. And also gear oils and automatic transmission fluids have different additive packages. Well known additives are VI-improvers, friction modifiers and anti-wear, anti-corrosion/oxidation, anti-foam and detergency and dispersant additives.

Engine oils.

We do not only know mineral, semi-synthetic or synthetic engine oils but also:

- Long drain and oils
- Low & Mid SAPS oils
- Low viscosity oils (FE = Fuel Economy)
- Energy conserving (EC) and Resource Conserving (RC) oils
- OEM branded Lubricants

Most of the oils above are synthetic based and do have a viscosity of SAE 0W-30, SAE 5W-30 or 10W-40 for passenger cars and vans and SAE 5W-30, 10W-40 or 15W-40 for commercial vehicles (trucks & buses).

Important data of the oil specifications are of course the viscosity at various temperatures, the viscosity index and the HTHS (High-Temperature High-Shear) value. The Low and Mid SAPS engine oils are required when the engine is fitted with a DPF (Diesel Particulate Filter).

VISCOSITIES

The Engine and Gear Oil viscosities are presented by **SAE** (Society of Automotive Engineers).

Engine Oil viscosities - SAE J300 - 2015

The SAE J300 table for Engine Oil viscosities shows the following 'summer' and 'winter' SAE grades: SAE 0W, 5W, 10W, 15W, 20W, 25W and 8, 12, 16, 20, 30 40, 50 and 60.

The 'winter' grades have the suffix W. The SAE 16 grade is added in 2014 and the very thin SAE 8 and 12 viscosities in 2015. Any combination of a 'summer' and 'winter' grade creates an all season multi grade engine oil, e.g. SAE 5W-30 for fuel economy oils or SAE 10W-60 for high performance engine oils.

Gear Oil viscosities - SAE J306 - 2005

The SAE J306 table for Gear Oil viscosities shows the following 'summer' and 'winter' SAE grades: SAE 70W, 75W, 80W, 85W and 80, 85, 90, 110, 140, 190 and 250.

The 'winter' grades have the suffix W and the SAE grades 110 and 190 were added in 2005.

Any combination of a 'summer' and 'winter' grade creates all temperature gear oil, e.g. SAE 75W-80 for a fuel economy application or

SAE 75W-140 for a high load application. The SAE 75W/140 gear oils are very often named as Total Drive Line oils.

LUBRICANT SPECIFICATIONS - EUROPE

CCMC - Comité des Constructeurs d'Automobiles du Marché Commun

It lasted till **1982** before the **first European lubricant specifications** entered the market. The initiative was taken by a group of European manufacturers of Passenger Cars and Commercial vehicles called CCMC, the **Comité des Constructeurs d'Automobiles du Marché Commun**

These first engine oil specifications were divided in **3 groups**, each designated by a letter and a number: **G** for **Petrol** engines, **D** for **Heavy Duty Diesel** engines and **PD** for **Passenger Car Diesel** engines. The numbers (1-5) indicated the quality, e.g. **G3**, **D5** or **PD2**.

ACEA - Association des Constructeurs Européens d'Automobiles

The present series of European lubricant specifications date back to 1996 when **ACEA**, the **Association des Constructeurs Européens d'Automobiles** was created. ACEA is the successor of CCMC, the members are still the same as with the start of CCMC but they are now joined with manufacturers from outside Europe (e.g. USA, Japan and Korea) which have production plants in Europe.

From **1996** till **2004** ACEA also had **3 categories** designated by a letter and a number: **A** for **Petrol** engines, **B** for **Light Duty Diesel** engines (Cars & Vans) and **E** for **Heavy Duty Diesel** engines. Again a number indicates the quality, new is the addition of the date of issue, e.g. **A5-02** or **E4-99 Issue 2**.

The ACEA specifications are every 2 years reviewed and if required updated. In drastic revision was made in **2004**, when the **A** and **B** category were joined to **A/B**, a new **C** category for **Light Duty Diesel** engines with an **after treatment** system (PDF= Diesel Particulate Filter) was added and a few specifications were made obsolete.

In **2005** the specifications were extended with **C3**, **E5** and **E6** and in **2007** the C category was extended with **C4** and **E7**. The specification **E9** was added in **2008**. And again some specifications were made obsolete. The introduction of the new E6 and E9 specifications were caused by the introduction of special after treatment systems (DPF and SCR) and the use of (ultra) low sulfur fuel.

The most recent revision/update of the ACEA specifications are from December **2012** due to lower viscosity oils and the use of **Biofuels**. The 2014 update delayed, but can be introduced any moment.

ACEA specifications since 2012

Petrol	Diesel Light Duty	Diesel Heavy Duty
A1/B1-12	C1-12	E4-12
A3/B3-12	C2-12	E6-12
A3/B4-12	C3-12	E7-12
A5/B5-12	C4-12	E9-12

For full details of the ACEA specifications: **See Appendix I**

ACEA 2014 and future ACEA specifications.

The introduction of the new ACEA 2014 specification is late 2014 postponed until further notice. There are proposals for a range of new specifications for fuel-economy oils: C5 for passenger cars and F6 and F9 for trucks and buses.

C5 is proposed for improved fuel economy xW-20 passenger car engine oils (HTHS ≥ 2.6) and F6 and F9 are the low viscosity xW-20, xW-30 (HTHS from 2.6 to 2.9) versions of E6 and E9 for heavy-duty diesel engine oils.

LUBRICANT SPECIFICATIONS - USA**API - American Petroleum Institute**

In 1947 API, the American Petroleum Institute, is the first organization officially developing and publishing engine and gear oil specifications. The first engine oil specifications were: **Regular**, **Premium** and **Heavy Duty**.

The first update followed in 1952 when the first Petrol and Diesel Engine Oil specifications were introduced. For **Petrol** engines **ML**, **MM** and **MS** and for **Diesel** engines **DG**, **DM** and **DS**.

The present API specifications were introduced in 1970, new were the two-cycle engine oil specifications. The specifications for **Petrol** engines start with an **S** and for **Diesel** engines with a **C** followed by a second letter, indicating the quality/requirements and the date of introduction.

API specifications since 2012

Petrol	Diesel
SJ	CH-4
SL	CI-4, CI-4 Plus
SM, Energy Conserving	CJ-4
SN, Resource Conserving	

For full details of the API specifications: **See Appendix II**

New and future API and ILSAC specifications

The new API specifications are still under development as PC-11, *Proposed Category 11*. The draft shows two categories PC-11A (HTHS ≥ 3.5 mPa.s) for the 'older' diesel engines and PC-11B (HTHS from 2.9 to 3.2 mPa.s) for the modern fuel-economy, low viscosity heavy-duty diesel engine oils. The official names for the new API specifications are still under discussion, proposed names are API CK-4 for PC-11-A and FA-4 for PC-11B.

ILSAC is following the same trend for passenger car petrol engine oils with development of GF-6A for xW-20 and heavier oils (HTHS ≥ 2.6) and GF-6B for 0W-16 and 5W-16 oils (HTHS 2.3-2.6)

LUBRICANT SPECIFICATIONS - INTERNATIONAL**ILSAC (USA)****Petrol**

GF-1, GF-2, GF-3 (all obsolete), **GF-5** (2010-)

For full details of the ILSAC specifications: **See Appendix II**

JASO (J)

Diesel Light Duty	Diesel Heavy Duty
DL-1	DH-1 and DH-2
Four Cycle	Two Cycle
MA	FA, FB, FC and FD
MA1, MA2 (wet clutch)	FA, FB, FC and FD
MB (dry clutch)	

GLOBAL (EU - USA - J) - ACEA + AAM (Alliance) + EMA + JAMA

Diesel Light Duty	Diesel Heavy Duty
DLD-1, DLD-2, DLD-3	DHD-1

ISO (International)**Two Cycle**

L-EGB (= JASO FB), L-EGC (= JASO FC)

L-EGD (= JASO FD) and L-EGE

NMMA (BIA) (USA Marine)

Four Cycle	Two Cycle
FC-W	TC-W, TC-WII, TC-W3 and TC-W3R
FC-W Catalyst Compatible	

EMA (USA)**Diesel Heavy Duty**

LGR-1, LGR-2

MILITARY (USA - GB - EU)**USA - MIL-L-**

MIL-L-2104 A, B, CG

MIL-L-46152 A, BF, MIL-PRFG

MIL-L-45199 B

Other military specifications: **DEF-D** (England) and **NATO**.

Abbreviations

CCMC	Comité des Constructeurs d'Automobiles du Marché Commun
ACEA	Association des Constructeurs Européens d'Automobiles
API	American Petroleum Institute
SAE	Society of Automotive Engineers
ILSAC	International Lubricants Standardization and Approval Committee
JASO	Japanese Automobile Standards Organisation
EMA	Engine Manufacturers Association
AAM	Alliance of Automobile Manufacturers
JAMA	Japanese Automobile Manufacturers Association
ISO	International Standardization Organization
NMMA (BIA)	National Marine Manufacturers Association (Boating Industry Association)
OEM	Original Equipment Manufacturers

For a complete overview of all Abbreviations: **See Appendix IV**

LUBRICANT SPECIFICATIONS - OEM

A large number of **OEM's** - Original Equipment Manufacturers, manufacturers of Cars, Vans, Trucks, Buses and also Components such as Engines and Transmissions issue their own specifications or OEM specifications. These OEM specifications are not always related to an ACEA or API specification and therefore need separate testing and approvals.

A selection of OEM specifications.

BMW	Longlife 01 FE, Longlife 04 (LL-04), Longlife-14 FE+
Caterpillar	ECF 2, ECF-3
DAF	HP1, HP2, HP3
Deutz	DQ IV-05, DQC IV-10, DQC IV-10 LA
Fiat	9.555.35.DS1, 9.555.35.G1, 9.555.35.GS1, 9.555.35.M2, 9.555.35.S1, 9.555.35.S2
Ford	WSS-M2C-913-C/D, WSS-M2C-917-A, WSS-M2C-934-B, WSS-M2C-937-A
GM	Dexos, Dexos2, LL-A-025, LL-B-025
Iveco	18-1804 FE, 18-1804 TFE, 18-1804 T2 E7, 18-1804 TLS E6, 18-1804 TLS E9
MACK	EO-N, EO-O Premium Plus
MAN	M3277, M3277 CRT, M3377, M3477, M3677
Mercedes Benz	MB 226.5/51, 228.31, 228.5/51, 229.31, 229.5/51, 235.0/1, 235.6/8
MTU	Type 1, 2, 3/3.1
Porsche	A40, C30
PSA - Peugeot Citroën	PSA B71 2290/2288, B71 2291/2295, B71 2293/2296, B71 2300, B 2312
Renault	RN 0700, RN 0710, RN 0720
Renault/ RVI	RD/RLD-2, RLD-3, RXD
Scania	LDF, LDF-2, LDF-3, STO 1:0, 2:0 A/G
Volvo	VDS-2, VDS-3, VDS-4
VAG	VW 500.00/ 505.00, 505.01, 503/503.01, 504.00/507.00, 506.01, G50, G51
ZF	01, 02, 08, 12, 14, 19, 20

For a complete overview of the major OEM specifications :

See Appendix III

EUROPEAN EMISSION STANDARDS**Euro 1 to 6: Cars & Vans and from Euro 2 (1996) also Motorcycles.**

The European emission standards for passenger cars & vans (Light Duty Vehicle standards) are typically referred to as Euro 1, Euro

2, Euro 3, Euro 4, and Euro 6. Euro 1 dates back till 1993, Euro 6 came into force in 2014. The standards are defined by the driving distance in g/km. The EU emission standards are officially published on the EU website.

Euro I to VI: Trucks & Buses, including OEM engines used in commercial equipment.

The corresponding series of standards for trucks & buses (Heavy Duty Vehicle standards) use Roman, rather than Arabic numerals; Euro I, Euro II, Euro III, Euro IV, Euro V and Euro VI. Euro I dates back till 1992, Euro VI came into force in 2013 for new type approvals and from January 2014 for all new registrations. The Euro VI emission standards are comparable in stringency to the US 2010 standard.

In contrast with cars and vans (Light Duty Vehicle standards) where the emissions standards are defined by the driving distance in g/km are the standards with trucks and buses (Heavy Duty Vehicle standards) defined by the engine output in g/kWh. The EU emission standards are officially published on the EU website.

CATALYTIC CONVERTERS AND AFTER TREATMENT SYSTEMS

TWC, EGR, SCR, DPF, Ad Blue (Urea)

Three Way Catalytic Converter (TWC) systems are used with petrol engines at the time of the introduction of unleaded petrol. EGR, SCR and DPF for Diesel engines are relative new and may need some extra explanation.

- EGR** Exhaust Gas Recirculation (Diesel)
An 'engine(ering)' solution of the combustion process where the a small amount of the exhaust gases are re-circulated back into the inlet manifold and mixed with the fresh intake air cooling the combustion process and so reducing the Nitrogen Oxides (NOx).
- SCR** Selective Catalytic Reduction (Ad Blue/Urea)
An **aftertreatment solution** with a chemical additive, urea + water, injected into the exhaust gases before they reach the catalytic converter. The urea is transformed by the heat of the exhaust gases into ammonia which reacts in the catalytic converter with the Nitrogen Oxides (NOx) converting them into Nitrogen Gas and Water Vapor.
- DPF** The Diesel Particulate Filter
The Diesel Particulate Filter removes the Particulate Matter (soot) from the exhaust gases.

*Passenger Cars & Vans - Summary Low SAPS compatible oils **

- C1** Petrol & Diesel, **Low SAPS**, Fuel Economy Oil, **HTHS 2.9**
C2 Petrol & Diesel, **Mid SAPS**, Fuel Economy Oil, **HTHS 2.9**
C3 Petrol & Diesel, **Mid SAPS** Engine Oil, **HTHS 3.5**
C4 Petrol & Diesel, **Low SAPS** Engine Oil, **HTHS 3.5**
* All ACEA C1, C2, C3 & C4 recommendations may be unsuitable for some engines. Consult owner manual or handbook if in case of doubt.

*Trucks & Buses - Summary Low SAPS and DPF compatible oils ***

- E4** Heavy Duty Diesel, **long drain**, Euro I, II, III, IV, & V,
no DPF – some EGR – some SCR, **HTHS 3.5**
- E6** Heavy Duty Diesel, **long drain**, Euro I, II, III, IV, V & VI,
Low SAPS - Low Sulfur Fuel, **with/without DPF** – all EGR – all SCR, **HTHS 3.5**
- E7** Heavy Duty Diesel, Euro I, II, III, IV, & V,
no DPF – most EGR – most SCR, **HTHS 3.5**
- E9** Heavy Duty Diesel, Euro I, II, III, IV, V & VI
Low SAPS - Low Sulfur Fuel, **with/without DPF** – most EGR – most SCR, **HTHS 3.5**
- ** All ACEA E4, E6, E7 & E9 recommendations may differ between manufacturers. Consult Driver Manuals and/or Dealers in case of doubt.

VEEDOL LUBRICANTS FOR ACEA C AND E CATEGORY ENGINE OILS

- C1** Veedol Sintron C1 5W-30
C2 Veedol Powertron C2 5W-30
C3 Veedol Sintron C3 5W-30
C4 Veedol Sintron C4 5W-30

- E4** Veedol Max-Pro Ultra 5W-30, Max-Pro Extra 10W-40, Max-Pro Plus 10W-40
E6 Veedol Maratlon Ultra LSP 5W-30, Maratlon Extra LSP 10W-40
E7 Veedol Max-Pro Ultra 5W-30, Max-Pro Extra 10W-40, Max-Pro Plus 10W-40, Max-Pro Special LSP 10W-40, Maratlon Ultra LSP 5W-30, Maratlon Extra LSP 10W-40
E9 Veedol Maratlon Ultra LSP 5W-30, Max-Pro Special LSP 10W-40

Abbreviations

- TWC** Three Way Catalyst (Petrol)
EGR Exhaust Gas Recirculation (Diesel)
SCR Selective Catalytic Reduction (Diesel)
DPF Diesel Particulate Filter (Diesel)
SAPS Sulphated Ash, Phosphorus, Sulphur (limits)
HTHS High Temperature / High Shear rate viscosity

For a complete overview of all Abbreviations: **See Appendix IV**

APPENDIX I

ACEA 2012 SPECIFICATIONS

A/B : gasoline and diesel engine oils

- A1/B1** Stable, stay-in-grade oil intended for use at extended drain intervals in gasoline engines and car & light van diesel engines specifically designed to be capable of using low friction low viscosity oils with a high temperature / high shear rate viscosity of 2.6 mPa.s for xW/20 and 2.9 to 3.5 mPa.s for all other viscosity grades. *These oils are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.*
- A3/B3** Stable, stay-in-grade oil intended for use in high performance gasoline engines and car & light van diesel engines and/or for extended drain intervals where specified by the engine manufacturer, and/or for year-round use of low viscosity oils, and/or for severe operating conditions as defined by the engine manufacturer.
- A3/B4** Stable, stay-in-grade oil intended for use in high performance gasoline and direct injection diesel engines, but also suitable for applications described under A3/B3.
- A5/B5** Stable, stay-in-grade oil intended for use at extended drain intervals in high performance gasoline engines and car & light van diesel engines designed to be capable of using low friction low viscosity oils with a High temperature / High shear rate (HTHS) viscosity of 2.9 to 3.5 mPa.s. These oils are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.

C : Catalyst compatibility oils

- C1** Stable, stay-in-grade oil intended for use as catalyst compatible oil in vehicles with DPF and TWC in high performance car and light van diesel and gasoline engines requiring low friction, low viscosity, low SAPS oils with a minimum HTHS viscosity of 2.9 mPa.s. These oils will increase the DPF and TWC life and maintain the vehicles fuel economy. *Warning: these oils have the lowest SAPS limits and are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.*
- C2** Stable, stay-in-grade oil intended for use as catalyst compatible oil in vehicles with DPF and TWC in high performance car and light van diesel and gasoline engines designed to be capable of using low friction, low viscosity oils with a minimum HTHS viscosity of 2.9mPa.s. These oils will increase the DPF and TWC life and maintain the vehicles fuel economy. *Warning: these oils are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.*
- C3** Stable, stay-in-grade oil intended for use as catalyst compatible oil in vehicles with DPF and TWC in high performance car and light van diesel and gasoline engines, with a minimum HTHS viscosity of 3.5mPa.s. These oils will increase the DPF and TWC life. *Warning: these oils are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.*
- C4** Stable, stay-in-grade oil intended for use as catalyst compatible oil in vehicles with DPF and TWC in high performance car and light van diesel and gasoline engines requiring low SAPS oil with a minimum HTHS viscosity of 3.5mPa.s. These oils will increase the DPF and TWC life. *Warning: these oils are unsuitable for use in some engines. Consult owner manual or handbook if in doubt.*

E : 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** 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, e.g. 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. E6 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 shall be consulted if in doubt.*
- 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.*
- E9** 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. E9 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 Drivers Manuals and/or Dealers should be consulted if in doubt.*

APPENDIX II
API SPECIFICATIONS**API's Certification Mark and Service Symbol**

Identify quality motor oils for gasoline and diesel-powered vehicles. Oils displaying these marks meet performance requirements set by U.S. and international vehicle and engine manufacturers and the lubricant industry. More than 500 companies worldwide participate in this voluntary program, which is backed by a marketplace sampling and testing program.

API ENGINE OIL SEQUENCES FOR PETROL ENGINES

- SN Current** Introduced in October 2010, designed to provide improved high temperature deposit protection for pistons, more stringent sludge control, and seal compatibility. API SN with Resource Conserving matches ILSAC GF-5 by combining API SN performance with improved fuel economy, turbocharger protection, emission control system compatibility, and protection of engines operating on ethanol-containing fuels up to E85.
- 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** **OBSOLETE:** For 1996 and older automotive engines.
- SG Obsolete** **CAUTION:** 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** **CAUTION:** 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 most gasoline-powered automotive engines built after 1979.
- SD Obsolete** **CAUTION:** Not suitable for use in most 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 most 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 most 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 most gasoline-powered automotive engines built after 1930. Use in modern engines may cause unsatisfactory performance or equipment harm.

The current and previous ILSAC standards and API Service Categories are listed here. Vehicle owners should refer to their owner's manuals before consulting these charts. Oils may have more than one performance level.

For automotive gasoline engines, the latest ILSAC standard or API Service Category includes the performance properties of each earlier category and can be used to service older engines where earlier category oils were recommended.

API ENGINE OIL SEQUENCES FOR DIESEL ENGINES

- CJ-4 Current** For high-speed four-stroke cycle diesel engines designed to meet 2010 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 (0.05% by weight). However, the use of these oils with greater than 15 ppm (0.0015% by weight) sulfur fuel may impact exhaust after treatment 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.
- 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** **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	OBSELETE: 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	Obsolete	OBSELETE: Introduced in 1994. For severe duty, two-stroke-cycle engines. Can be used in place of CD-II oils.
CF	Obsolete	OBSELETE: Introduced in 1994. For off-road, indirect-injected and other diesel engines including those using fuel with over 0.5% weight sulfur. Can be used in place of CD oils.
CE	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 1994.
CD-II	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 1994.
CD	Obsolete	CAUTION: Not suitable for use in most diesel-powered automotive engines built after 1994.
CC	Obsolete	CAUTION: Not suitable for use in most diesel-powered engines built after 1990.
CB	Obsolete	CAUTION: Not suitable for use in most diesel-powered engines built after 1961.
CA	Obsolete	CAUTION: Not suitable for use in most diesel-powered engines built after 1959.

ILSAC STANDARDS FOR PASSENGER CAR ENGINE OILS

GF-5	Current	Introduced in October 2010, designed to provide improved high temperature deposit protection for pistons and turbochargers, more stringent sludge control, improved fuel economy, enhanced emission control system compatibility, seal compatibility, and protection of engines operating on ethanol-containing fuels up to E85.
GF-4	Obsolete	Use GF-5 where GF-4 is recommended.
GF-3	Obsolete	Use GF-5 where GF-3 is recommended.
GF-2	Obsolete	Use GF-5 where GF-2 is recommended.
GF-1	Obsolete	Use GF-5 where GF-1 is recommended.

APPENDIX III OEM SPECIFICATIONS BMW

BMW High Power Diesel: Engine oil for diesel engines. Introduced for the N47S engine upon introduction in 2007.

BMW Longlife-98: Special long-life engine oil, approved by BMW. ACEA A3/B3, API SJ/CD, EC SAE 5W-40

BMW Longlife-01: Special BMW approval for fully synthetic long-life oil. Product meets ACEA A3/B4.

BMW Longlife-01 FE: Special BMW approval for fully synthetic long-life oil. Product meets ACEA A5/B5. SAE 0W-30 or 5W-30.

BMW Longlife-04: Special BMW approval for fully synthetic long-life oil. Product meets ACEA C3. SAE 0W-30, 0W-40, 5W-30 and 5W-40.

BMW Longlife-14 FE+: BMW gasoline engine oil specification with low HTHS of 2.6 mPa*s. Based on ACEA A1/B1-12.

CATERPILLAR

Caterpillar ECF-1: Caterpillar Engine Crankcase Fluid-1. Caterpillar engine oil specification ECF-1.

Caterpillar ECF-1-A: Caterpillar engine oil specification. Replaces Caterpillar ECF-1 specification. API: CH-4 oil category performance requirements. Cat ECF-2 and ECF-3 specification oils are preferred over Cat ECF-1-a specification oils. Became effective from 1st March 2007.

Caterpillar ECF-2: Caterpillar ECF-2 Specification. Replaces the Caterpillar ECF-1 specification. API: CI-4/CI-4 PLUS oil category performance requirements. ECF-2 became effective from the 1st March 2007.

Caterpillar ECF-3: Caterpillar ECF-3 (Engine Crankcase Fluid-3) Specification, designed for both off and on-road truck engines in the USA, based on API CJ-4 Classification. Caterpillar oils with ECF-3 specifications are strongly recommended for Caterpillar engines with DPF. ECF-3 provides the minimum oil performance and durability requirements for EPA 2007 emission-compliant on-highway Caterpillar diesel engines fitted with after treatment devices. ECF-3 became effective from the 1st March 2007.

DAF

DAF HP1, HP2: Special supplementary approval for use of ACEA E4 engine oil with low viscosities. Oil must be approved by DAF.

DAF HP3: Special supplementary approval for use of ACEA E5 or E7 engine oils. For use with longer service intervals, possibly in combination with low viscosities, xW-40. Only recommended for DAF XE 390kW (530HP) engines. Oil must be approved by DAF.

DEUTZ

Deutz DQC I-02: Deutz lube oil quality class DQC I, minimum oil quality for use with shorter intervals. ACEA E2-96 or API CF/CF-4. Viscosity may include one of the following SAE classes: 0W-30, 5W-30, 10W-30, 15W-30 0W-40, 5W-40, 10W-40, 15W-40 15W-50, 20W-50.

Deutz DQC II-05: Deutz lube oil quality class DQC II. ACEA E3-96 or ACEA E4-99 or ACEA E5-02 or ACEA E6-04 or ACEA E7-04 or API CG-4 or API CH-4 or API CI-4 or API CJ-4 or DHD-1. Viscosity may include one of the following SAE classes: 0W-30, 5W-30, 10W-30, 15W-30 0W-40, 5W-40, 10W-40, 15W-40 20W-50.

Deutz DQC II-10: Standard quality, usually used in engines with open crankcase ventilation. ACEA E3-96, ACEA E4-08 or ACEA E5-02 or ACEA E7-08 or API CG-4 or API CH-4 or API CI-4 or CI-4 Plus or DHD-1. Viscosity may include one of the following SAE classes: 0W-30, 5W-30, 10W-30, 15W-30 0W-40, 5W-40, 10W-40, 15W-40 15W-50, 20W-50.

Deutz DQC II-10 LA: Low-ash diesel engine oil, standard quality. ACEA E6-08, ACEA E9-08 or API CJ-4. Viscosity may include one of the following SAE classes: 0W-30, 5W-30, 10W-30, 15W-30 0W-40, 5W-40, 10W-40, 15W-40 15W-50, 20W-50.

Deutz DQC III-05: Deutz lube oil quality class DQC III. Engine lubricant conforming to ACEA E7-04. The viscosity may be one of the following SAE classes: SAE 0W-30, 5W-30, 0W-40, 5W-40, 10W-40, 10W-30, 15W-30 and 15W-40.

Deutz DQC III-10: High performance diesel engine oil, application for engines with closed crankcase ventilation and/or with high thermal loads. Viscosity may include one of the following SAE classes: 0W-30, 5W-30, 0W-40, 5W-40, 10W-40, 10W-30, 15W-30 and 15W-40.

Deutz DQC III-10 LA: Low ash high performance diesel engine oil for engines with closed crankcase ventilation and/or with high thermal loads. The low-ash engine oil DQC III-10 LA (based on ACEA E6, ACEA E9 or API CJ-4) is required especially for engines with particulate filter (diesel particle filter (DPF) or particle oxidation catalytic converter) or for other exhaust gas after-treatment systems such as SCR and/or the diesel oxidation catalytic converter (DOC). Viscosity may include one of the following SAE classes: 0W-30, 5W-30, 0W-40, 5W-40, 10W-40, 10W-30, 15W-30 and 15W-40.

Deutz DQC IV-05: Deutz lube oil quality class DQC IV. Engine lubricant conforming to ACEA E4-99 / E7-04. The viscosity may be one of the following SAE classes: SAE 0W-30, 5W-30, 0W-40, 5W-40 and 10W-40.

Deutz DQC IV-10: Ultra high performance diesel engine oil for engines with highest level of output with closed crankcase ventilation and/or with the highest thermal loads. Viscosity may include one of the following SAE classes: 0W-30, 5W-30, 0W-40, 5W-40 and 10W-40.

Deutz DQC IV-10 LA: Low-ash ultra high performance diesel engine oil for engines with highest level of output with closed crankcase ventilation and/or with the highest thermal loads.

FIAT

Fiat 9.55535-CR1: Fully synthetic engine oil, SAE 5W-20, performance of ILSAC GF-5 and API: SN.

Fiat 9.55535-DS1: Fiat engine oil specification for diesel engines. General performance: ACEA C2.

Fiat 9.55535-G1: Synthetic-based lubricant for petrol engines, SAE 5W-30, performance API SL and ACEA A1/A5 and important car-makers homologations (FIAT 9.55535-G1 and GM-LL-A 025)

Fiat 9.55535-GH2: Fiat specification for 1750 Turbo engines. General performance level: ACEA C3.

Fiat 9.55535-GS1: Fiat OEM classification for special ACEA C2 oil with viscosity 0W-30.

Fiat 9.55535-H2: Fiat engine oil specification for gasoline engines, performance ACEA A3-04/B3-04 and API: SM.

Fiat 9.55535-M2: Fiat engine oil specification for gasoline engines, meets ACEA B3-04/B4-04 and GM-LL-B-025.

Fiat 9.55535-N2: Fiat engine oil specification, minimum requirement is ACEA A3/B4-04.

Fiat 9.55535-S1: OEM recommended product is also approved to ACEA C2.
Fiat 9.55535-S2: OEM recommended product, meets also ACEA C3-04, MB 229.51 and API: SM/CF.
Fiat 9.55535-S3: Fiat engine oil specification. Meets API: SM/CF, ACEA C3.
Fiat 9.55535-T2: Fully synthetic engine oil also meeting ACEA C3.
Fiat 9.55535-Z2: Fiat engine oil specification. Introduced for Twin Turbo diesel engines. ACEA A3/B3/B4.

FORD

Ford ESP-M2C166-H: Ford Specification ESP-M2C166-H, ATF, friction modified, colour is red. Up to 1990 the Ford recommendation was: SQM-2C9010-A, ESD-M2C138-CJ. (fluids may be mixed).
Ford M2C33-G: Ford Specification M2C33-G. Automatic Transmission Fluid (ATF) introduced in 1972 retaining the high static friction requirement of M2C33-F. This fluid is also not friction modified.
Ford M2C9001-AA: Ford engine oil specification. General performance level: API: SE
Ford M2C912-A1: Engine oil, European initial and service fill, SAE 5W-30, (not to be used for new design, use WSS-M2C913-A). This specification meets the ILSAC GF-2 and the ACEA A1-96 and B1-96 requirements.
Ford M2C913-A: Engine oil, Initial and service fill, SAE 5W-30. This specification meets the ILSAC GF-2 and ACEA A1-98 and B1-98 and additional Ford requirements.
Ford M2C913-B: The Ford M2C913-B specification is released in Europe for initial fill engine oils used for lubrication of spark ignition engines using gasoline and for compression ignition engines using diesel fuels. The specification is also used to define engine oils for servicing Ford engines where applicable. The oil shall meet all the requirements of the ILSAC GF-2 and GF-3 specification, the ACEA A1-98 and B1-98 specification and additional Ford requirements.
Ford M2C913-C: Ford engine oil specification for improved fuel economy. Introduced in 2009. Fully backwards compatible with Ford M2C913-A and Ford M2C913-B. General requirements for M2C913-C: ACEA A5/B5.
Ford M2C913-D: Ford engine oil specification, introduced in the second half of 2011. Successor of Ford M2C913-C.
Ford M2C917-A: Ford code for VW specification 505.01. Engine oil SAE 5W-40 for pump-injector diesel engines. Recently Ford documentation also claims ACEA A3/B4/C3 as equivalents.
Ford M2C931-A: Engine oil, SAE 5W-50, fully synthetic.
Ford M2C950-A: Engine oil with 0W-30 viscosity, applicable for Ford 1.6 Duratorq TDCI Euro 5 engines.
Ford N052145 VX00: Ford Specification for VW G 052 145. Fully-synthetic product that meets API: GL-4, SAE 75W-90.
Ford WSS-M2C200-D2: Special low viscosity transmission fluid specification for use in 5 and 6 speed transmissions and in the DPS6 PowerShift twin dry clutch transmission of Ford. Specification for synthetic based fluid with additives.
Ford WSS-M2C921-A: Ford engine oil specification for diesel engines. For use with high-sulphur fuel (> 350 ppm). API: CH-4 performance level. TBN > 11
Ford WSS-M2C925-B: Ford specification for fully synthetic fuel economy engine oils for engines requiring very low HTHS viscosity oil. This M2C925-B is fully backwards compatible with the M2C925-A specification. Viscosity to go with this specification is SAE 5W-20.
Ford WSS-M2C934-B: Ford specification for low SAPS engine oil. General requirement ACEA C1
Ford WSS-M2C937-A: Ford specification introduced in 2009. General requirement: ACEA A3/B4.
Ford WSS-M2C948-B: Engine oil 5W-20, superceeds Ford M2C913-C. Not suitable for Ford Ka, Focus ST and RS. Specially developed for 2012-> Ecoboost generation engines. General performance level: API: SN.

GENERAL MOTORS

GM 1940182: Manual transmission oil for Opel. General specification: API: GL-4. OEM product: BOT 402
GM 4718M: Synthetic engine oil meeting API: SM and ILSAC GF-4, viscosities 0W-30, 5W-30, 10W-30.
GM 6094M: Specification for Chevrolet gasoline engines.
GM DEXOS 1: GM/Opel global (except Europe for service fill) oil specification introduced for gasoline engines from MY 2011 onwards. Dexos 1 replaces both GM-LL-A-025, GM 6094M and GM 4718M. Dexos 1 is based on ILSAC GF-4 with some additional requirements taken from ACEA C3 together with specific GM/Opel requirements. Viscosity classifications for service fill are:

SAE 0W-20, 5W-20, 0W-30 and 5W-30.

GM DEXOS 2: GM/Opel global oil specification introduced for gasoline and diesel vehicles from MY 2010 onwards. Dexos 2 replaces both GM-LL-A-025 and GM-LL-B-025. Dexos 2 is based on ACEA C3 with some additional requirements taken from ILSAC GF-4 together with specific GM/Opel requirements. Viscosity classifications for service fill are: SAE 0W-30, 5W-30, 0W-40 and 5W-40.
GM-LL-A-025: Special GM approval for long-life engine oil for gasoline engines. Viscosity is SAE 0W-30. Product meets ACEA A3/B3.
GM-LL-B-025: Special GM approval for long-life engine oil for diesel engines. Viscosity is SAE 5W-40. Product meets ACEA A3/B3/B4.

IVECO

Iveco 18-1804 FE: Special Iveco specification additional to ACEA E4 or E5 which allows longer service intervals. TBN is 14.
Iveco 18-1804 T2 E7: Mineral based heavy duty diesel engine oil, meeting ACEA E7-04. Suitable for Euro 4&5 engines with SCR & EGR emission systems. TBN of 14 or higher.
Iveco 18-1804 TFE: Iveco engine oil standard. Fully synthetic ACEA E4/E7. TBN is 16 or higher.
Iveco 18-1804 TLS E6: Iveco engine oil specification. Basic requirements: ACEA E6, TBN ≤ 13.
Iveco 18-1804 TLS E9: Iveco engine oil specification. Basic requirements: ACEA E9 or API: CJ-4
Iveco 18-1811 S1: Iveco engine oil standard. Approved oils must meet ACEA B5-02. TBN >10.
Iveco 18-1811 SC1: Iveco engine oil specification. ACEA C2. TBN > 7.

MACK

Mack EO-N: Heavy duty diesel engine oil which exceeds API CI-4. Also Mack tests T-10 and T-11 must be passed. Available in multiple viscosities, SAE 5W-40 must be fully synthetic.
Mack EO-O Premium Plus: Mack engine oil specification, intended for use in engines which meet the 2007 (EPA 07) and later emissions requirements. These engines are designed with exhaust aftertreatment systems. This quality standard is based on the API: CJ-4 engine oil specification. This specification superceeds Mack EO-N Premium Plus and is comparable with Volvo VDS-4.

MAN

MAN 270: Singlegrade engine oils, approved according to MAN 270 specification.
MAN 271: Multigrade engine oils, approved according to MAN 271 specification.
MAN 3343 M: Multi-purpose mineral based, long-distance gear oils approved by MAN in accordance with 3343 type M standard. This specification is formerly known as MAN 3343 ML.
MAN 3343 S: Multi-purpose fully-synthetic, long-distance gear oils approved by MAN in accordance with 3343 type S standard. This specification is formerly known as MAN 3343 SL.
MAN 341 Z-1: High-pressure transmission oil approved by MAN in accordance with 341 Z-1 standard. This specification is formerly known as MAN 341 N. Since Juli 2011 341-Z1 has become obsolete.
MAN 341 Z-2: High-pressure, mineral long-distance transmission oil approved by MAN in accordance with 341 Z-2 standard. Formerly known as MAN 341 ML
MAN 341 Z-3: High-pressure, semi synthetic long-distance transmission oils, approved by MAN in accordance with 341 Z-3 standard. Formerly known as MAN 341 TL. Since Juli 2011 341-Z3 has become obsolete.
MAN 341 Z-4: This specification is formerly known as MAN 341 SL+.
MAN 341 Z-5: This specification is formerly known as MAN 341 SL+.
MAN 341 Z-E: This specification is formally known as MAN 341 SL. This specification has limited ZF approvals (no AS-Tronic approval).
MAN 342 M-1: Extremely high pressure gearoils, approved by MAN in accordance with 342 type M-1 standard. This specification is formerly known as MAN 342 N.
MAN 342 M-2: Extremely high pressure, mineral, long distance gear oils, approved by MAN in accordance with 342 type M-2 standard. This specification is formerly known as MAN 342 ML.
MAN 342 M-3: Highest level of mineral fluids according to the MAN 342 specification for differentials and transferboxes. These fluids can be used in HY/AP-axes.
MAN 342 S-1: Special fully-synthetic gearoil, for long distance use. Oil has to be on the approval list of MAN. This specification is formerly known as MAN 342 SL.
MAN M3271-1: Special engine oil for CNG/LPG engines, approved by MAN standard M3271.

MAN M3275: High return engine oils, approved according to MAN M3275 specification.

MAN M3277: High return engine oils, approved according to MAN M3277 specification.

MAN M3277 CRT: High performance diesel engine oil specially for engines equipped with particle filter.

MAN M3377: MAN specification for super high performance engines oils which are intended for extended oil change intervals. These oils have better performance on deposits and piston cleanliness compared to MAN M3277 engine oils. Sulfate ash content is limited to max. 1,8%.

MAN M3477: The MAN M3477 specification is applicable to high performance diesel engine oils meeting SAE 0W-XX, 5W-XX or 10W-XX. An oil meeting this specification is suitable for MAN diesel engines equipped with aftertreatment devices up to and including those meeting the Euro 4 emissions standard. This specification is for low SAPS oils and the approved oils match in most cases ACEA E6.

MAN M3677: MAN specification for super high performance engine oils which can be used for extended oil drain intervals for Euro VI engines.

MERCEDES BENZ

MB 226.5: Engine oil for Mercedes-Benz petrol engines, sourced from the Mercedes-Benz/Renault-Nissan partnership.

MB 226.51: Mercedes-Benz engine oil specification, introduced in 10-2012, for specific types of (Renault) diesel engines. The Renault approval RN0720 is the basic requirement for this specification.

MB 226.9: Engine oil specially for LPG and CNG engines.

MB 228.1: Engine oil approved by Mercedes-Benz for MB diesel engines without ASSYST. Meets ACEA E2 and additional MB demands. Oil has to comply with minimum limits at the OM 602 A and OM 364 A tests determined by Mercedes-Benz.

MB 228.31: Multigrade engine oils (Sheet 228.31).

MB 228.51: The Mercedes-Benz service fill specification 228.51 is applicable to high performance multigrade diesel engine oils. An oil meeting this specification is suitable for use in DaimlerChrysler diesel engines meeting Euro 4 emissions standards. Mercedes-Benz 228.51 approved engine oils may also be used in previous generations of DaimlerChrysler diesel engines (Euro 3, Euro 2 and Euro 1).

MB 229.31: Multigrade, low SP-Ash engine oil, advised for both diesel and petrol engines of Mercedes-Benz, Smart and Chrysler. Only low viscosity engine oils which can realize a 1,0% saving on used fuel in the M111 Fuel economy test (CEC L-54-T-96) can get this approval. In this test the fuel savings are compared to the performance of the Reference oil RL 191 (SAE 15W-40).

MB 229.5: MB sheet for energy conserving oils for certain car and van engines. Approved oils must meet ACEA A3, B3 and B4 specification and some additional demands by DaimlerChrysler AG. Oil must be on the approval list.

MB 229.51: Low SAPS Long Life engine oil for diesel engines with particle filter meeting emission EU-4 -> standards.

MB 229.52: Mercedes-Benz specification for BlueTEC OM642.xxx engines. Specification 229.52 is slightly tighter than 229.51.

MB 235.0: Hypoid gear oils (SAE 90, 85 W-90).

MB 235.1: Gear oils (SAE 80, 80W, 80W/85W, 85W-90).

MB 235.31: Mercedes-Benz hypoid gear oil for commercial vehicles.

MB 235.4: Synthetic gear oils (SAE 75W/85W).

MB 235.5: Gear oils (SAE 80, 80W/85W).

MB 235.6: Hypoid gear oils (SAE 90, 85W-90, Sheet 235.6).

MB 235.8: Hypoid gear oils (SAE 75 W-90).

MTU

MTU Type 1: MTU oil category 1: standard oil, single- and multigrades. Minimum specifications: API: CG-4/CH-4 and ACEA E2-96. Oils must meet both the specified API and ACEA specification. TBN: >8.

MTU Type 2: MTU oil category 2: High quality oil, single and multigrades. Minimum specifications: ACEA E5-02 TBN: >8.

MTU Type 2.1: MTU oil category 2.1: Low SAPS multigrade oils. Minimum specifications: ACEA E7-04 TBN: >8.

MTU Type 3: MTU oil category 3: Highest quality multigrade oils. Minimum specifications: ACEA E4-07 TBN: >8.

MTU Type 3.1: MTU oil category 3.1: Low SAPS multigrade oils. Minimum specifications: ACEA E6-04 TBN: >8.

PORSCHE

Porsche A40: Engine oil specification introduced in 2009 for all Porsche gasoline cars from 1994 onwards, except for long drain applications in Cayenne V6.

Porsche C30: Engine oil specification for Porsche models with diesel engines. Porsche C30 is the equivalent of the VW 504.00/507.00 specification.

PSA

PSA B71 2290 / PSA B71 2288: Peugeot/Citroën engine oil specification introduced in 2009. B71 2290 is a low-SAPS oil intended for engines with diesel particulate filters and with Euro 5 emission standards. ACEA C2 or C3 with additional PSA tests.

PSA B71 2295 / PSA B71 2291: Peugeot/Citroën engine oil standard for engine before MY 1998. General specification: ACEA A2/B2.

PSA B71 2296 / PSA B71 2293: Peugeot/Citroën engine oil specification introduced in 2009. ACEA A3/B4 + additional PSA tests.

PSA B71 2300: Peugeot/Citroën engine oil specification introduced in 2010 succeeding PSA B71 2294 / PSA B71 2292 (ACEA A3/B3 + PSA tests). ACEA A3/B4 with additional PSA tests.

PSA B71 2312: PSA specification which complies to ACEA C1/C2 with additional PSA requirements. SAE 0W-30.

RENAULT – RVI

Renault RN0700: Renault engine oil specification; introduced in 2007. ACEA A3/B4 or ACEA A5/B5.

Renault RN0710: Renault engine oil specification; introduced in 2007. ACEA A3/B4 + additional Renault demands.

Renault RN0720: Renault engine oil specification; introduced in 2007. ACEA C4 + additional Renault demands. RN0720 is designed for use in the latest generation diesel engines equipped with DPF.

Renault RD-2: Renault heavy duty engine oil specification complying with ACEA E3-96 issue 4 + Volvo VDS-2. Specification discontinued in 2013; can be replaced by RLD-2.

Renault RLD: RLD (Renault Long Drain): Renault V.I. specification. Meets ACEA E7 + Volvo VDS-3. Specification discontinued in 2013; can be replaced by RLD-2.

Renault RLD-2: Renault heavy duty engine oil specification complying with ACEA E7-02 + Volvo VDS-3.

Renault RLD-3: Renault engine oil specification for Euro 5 engines. General requirements for this specification: ACEA E9-08 + Volvo VDS-4.

Renault RXD: RXD (Renault Extra Long Drain) is a specification of Renault V.I., meets ACEA E4-99 + ACEA E7-04 + Volvo VDS-3. Specification discontinued in 2013; can be replaced by RLD-2 or ACEA E6.

RVI E2R-96: Special Renault specification, based on the ACEA E2-96 specification.

RVI E2R-98: Special Renault specification, based on the ACEA E2-98 specification.

RVI E3R-96: Special specification of Renault V.I., based on the ACEA E3-96 specification.

RVI E3R-98: Special specification of Renault V.I., based on the ACEA E3-98 specification.

SCANIA

Scania LDF: Engine oil that passed the Scania Long Drain Field test. They are approved for longer service intervals.

Scania LDF-2: Heavy duty diesel engine oil for Euro 4 -> vehicles with extended service intervals. Exceeds ACEA E7 requirements.

Scania LDF-3: Heavy duty diesel long-drain engine oil for Euro 6 -> engines with EGR, SCR and DPF. Vehicles with extended service intervals. Exceeds ACEA E7 requirements.

Scania Low Ash: Scania engine oils specification specially for Euro 5 and EEV vehicles.

Scania STO 1:0: Scania STO 1:0 is a special Scania Transmission Oil which meets API: GL-5, but with some additional demands.

Scania STO 2:0 A: High Performance gear oil for differentials. Fully Synthetic API: GL-5 gear oil for extended drain intervals (up to 360.000 km), used in differentials and hub reductions.

Scania STO 2:0 G: High Performance gear oil for gearboxes. Fully Synthetic API: GL-5 gear oil for extended drain intervals (up to 360.000 km), used in manual gearboxes.

VOLVO

Volvo VDS: Volvo Drain Specification VDS. A field test is required in 3 trucks equipped with Volvo 12 litre intercooled engine. The field test is run for a minimum 300 000 km with oil change intervals of 50 000 km. Viscosity shall be SAE 10W-30 or 15W-40. API classification is CD/CE, upgraded with the mentioned fieldtest.

Volvo VDS-3: Volvo Drain Specification VDS-3. Volvo has developed the earlier VDS and VDS-2 specifications and modified them for Euro 3 engines. VDS-3 also includes quality requirements for ACEA E5, which ensures performance requirements not covered by the VDS-3 field test. Consequently, VDS-3 does not only cover field tests of Volvo D12 engines, it also covers the most requirements covered by the ACEA E5 requirement specification.

Volvo VDS-4: Volvo Drain Specification VDS-4. Suitable for Tier III engines using exhaust after treatment. Meets the level of API: CJ-4.

VOLKSWAGEN - VAG

VW 500.00: Volkswagen specification for multigrade engine oils for gasoline engines with SAE 5W-X/10W-X viscosity.

VW 500.00 + 505.00: Oil meets both VW 500.00 and VW 505.00 specification.

VW 501.01: Volkswagen specification for engine oils for gasoline engines.

VW 502.00: Oil for gasoline engines. Successor of VW 501.01 and VW 500.00 specification.

VW 503.00: Long-life gasoline engine oil for VW cars with WIV (system for longer service intervals). Meets ACEA A1, SAE 0W-30 or 5W-30 specification.

VW 503.01: Special engine oil for some VW gasoline engines. Viscosity SAE 5W-30.

VW 504.00: Long-life gasoline engine oil for VW cars with WIV (system for longer service intervals).

VW 505.00: Volkswagen Specification VW 505.00. Passenger car diesel engine oil specification, minimum performance level CCMC PD-2. Lists viscosities SAE 5W-50, 10W-50/60, 15W-40/50, 20W-40/50 and SAE 5W-30/40, 10W-30/40.

VW 505.01: Special engine oil for VW turbodiesel engines with pump-injector-unit and for the V8 Commonrail turbodiesel engines. Meets ACEA B4 SAE 5W-40 specification.

VW 506.00: Special long-life engine oil for turbodiesel engines of VW cars with WIV. (system for longer service intervals) Viscosity is SAE 0W-30.

VW 506.01: Special long-life oil for VW diesel engines with pump-injector-units in cars with WIV. (special system for longer service intervals).

VW 507.00: Long-life diesel engine oil for VW cars with WIV (system for longer service intervals).

VW G 50: Special synthetic gear oil, GL-4+ SAE 75W-90. Also known as VW 501.50

VW G 51: Special synthetic gear oil, SAE 75W-90.

ZF

ZF-01L: ZF approval list for synthetic gear lubricant with viscosity SAE 75W-80.

ZF-02A: ZF Lubricant class 02A. Gear oils (API: GL-4, MIL-L-2015), SAE Viscosity classes: 80W / 80W-85 / 80W-90.

ZF-02B: ZF Lubricant class 02B. Gear oils in accordance with Group standard ZFN 13019. SAE Viscosity classes: 80W / 80W-85 / 80W-90 / 75W-80 / 75W-85 / 75W-90.

ZF-02C: ZF Lubricant class 02C. Monograde engine oils in accordance with Group standard ZFN 13020. SAE Viscosity classes: 30 / 40.

ZF-02D: ZF Lubricant class 02D. Semi-synthetic and synthetic gear oils in accordance with Group standard ZFN 13010.

ZF-02E: ZF Lubricant class 02E. Gear oil of viscosity grades: SAE 75W-80 (synthetic, applicable for Intarder).

ZF-02F: ZF Lubricant class 02F. ATF in accordance with Group standard ZFN 13015 and special requirements.

ZF-02G: ZF Lubricant class 02G. Gear oil in accordance with ZF order specification ZFB 864 (ZF number 0671 071 010) Viscosity grade: SAE 75W (mineral oil-based, not applicable for Intarder)

ZF-02H: ZF Lubricant class 02H. Gear oil of viscosity grade: SAE 80W-90 (mineral oil-based, applicable for Intarder)

ZF-02L: ZF Lubricant class 02L. Gear oil of viscosity grade: SAE 75W-85 (synthetic, applicable for Intarder)

ZF-08A: ZF Lubricant class 08A. Gear oils (API: GL-4, MIL-L-2015). SAE Viscosity classes: 75W-80 / 75W-85 / 75W-90 / 80W / 80W-85 / 80W-90. This class also permits the use of products which are not listed only if they comply with either the quality and viscosity classes above or API GL-5 and MIL-L-

2105D / MIL-PRF-2105F of viscosity classes 75W-90 / 75W-140 / 80W-90 / 80W-140 / 85W-90 / 85W-140 / 90.

ZF-12A: ZF Lubricant class 12A. Mineral oil based and semi-synthetic gear oils in accordance with Group standard ZFN 13016. SAE viscosity classes: 75W-90 / 75W-140 / 80W-90 / 80W-140 / 85W-90 / 85W-140/90.

ZF-12B: ZF Lubricant class 12B. Synthetic gear oils in accordance with Group standard 13016. SAE viscosity classes: 75W-90 / 75W-140.

ZF-12C: ZF Lubricant class 12C. Mineral oil based gear oils in accordance with Group standard ZFN 13016 with limited slip additives.

ZF-12D: ZF Lubricant class 12D. Synthetic gear oils in accordance with Group standard ZFN 13016 with limited slip additives. SAE viscosity classes: 75W-90 / 75W-140.

ZF-12E: ZF Lubricant class 12E. Mineral oil-based and semi-synthetic gear oil in accordance with Group standard ZFN 13016 and subject to intensified wear-protection requirements

ZF-14F: Special oil for very high oil temperatures. ZF product with this specification is ZF-Ecofluid Life.

ZF-19B: Mineral and semi-synthetic gear oil which applies to ZF list TE-ML 19B.

ZF-19C: Synthetic gear oil which complies to ZF list TE-ML 19C.

ZF-20F: ATF for ZF EcoLife transmissions (2010->), ZF TE-ML 20.110.

APPENDIX IV**ABBREVIATIONS**

CCMC	Comité des Constructeurs d'Automobiles du Marché Commun
ACEA	Association des Constructeurs Européens d'Automobiles
API	American Petroleum Institute
SAE	Society of Automotive Engineers
ILSAC	International Lubricants Standardization and Approval Committee
JASO	Japanese Automobile Standards Organisation
EMA	Engine Manufacturers Association
AAM	Alliance of Automobile Manufacturers
JAMA	Japanese Automobile Manufacturers Association
ISO	International Standardization Organization
NMMA (BIA)	National Marine Manufacturers Association (Boating Industry Association)
OEM	Original Equipment Manufacturers
EGR	Exhaust Gas Recirculation (Diesel)
SCR	Selective Catalytic Reduction (Diesel)
DPF	Diesel Particulate Filter (Diesel)
NOx	Nitrogen Oxides
PM	Particulate Matter
Ad Blue	Urea (1/3) and deionised Water (2/3)
TWC	Three Way Catalyst (Petrol)
PCMO	Passenger Car Motor Oil
HDDEO	Heavy Duty Diesel Engine Oil
PAO	PolyAlphaOlefins
HTHS	High Temperature / High Shear rate viscosity
SAPS	Sulphated Ash, Phosphorus, Sulphur (limits)
FE	Fuel Economy
CNG	Compressed Natural Gas
LPG	Liquefied Petrol Gas
GTL	Gas To Liquids
BTL	Biomass To Liquids
CTL	Coal To Liquids
DI	Direct Injection
FSI	Fuel Stratified Injection
TFSI	Turbocharged Fuel Stratified Injector
OBD	On Board Diagnosis
MT	Manual Transmission
AMT	Automated Manual Transmission
DCT	Double Clutch Transmission
AT	Automatic Transmission
(E) CVT	(Electronic) Continuous Variable Transmission



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